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**Gender differences in child sexual abuse characteristics and  
long-term outcomes of mental illness, suicide, and fatal overdose:  
A prospective investigation**

**Josie Spataro**

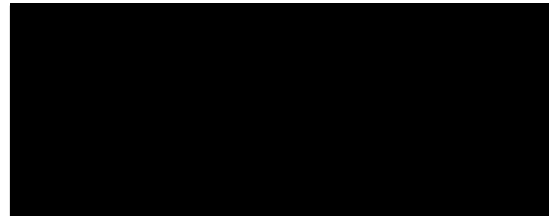
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**A thesis submitted in total fulfillment for the degree of  
Doctor of Philosophy**

**Department of Psychological Medicine  
School of Psychology, Psychiatry, and Psychological Medicine  
Monash University**

### **Statement of authorship**

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Josie Spataro

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## Abstract

Over the past two decades, research attention has been directed towards the phenomenon of child sexual abuse (CSA) and its long-term impacts. Although this research has consistently reported a significant association between a history of CSA and a pervasive range of adverse adult mental health outcomes, it has, until recently, focused on female victims of CSA, to the relative neglect of males. This research has primarily been retrospective in nature, thereby leading to questions surrounding both the validity of adult reports of having been victims of CSA, and the temporal relationship between CSA and adverse outcomes in adulthood.

The present thesis is the first prospective study of gender differences in CSA characteristics. The thesis also examines the association between a history of CSA and the long-term outcomes of psychiatric disorder and death resulting from suicide or overdose. The victim cohort studied is one of the largest to have been investigated systematically. The overall aim of the thesis was to examine, in more detail than has been afforded to date, gender differences in CSA characteristics and, through a prospective methodology, adverse outcomes of mental illness, completed suicide, and fatal overdose.

Three studies were conducted. Study 1 involved exploring official Office of Forensic Medicine (OFM) records of 239 males and 743 females who were sexually abused between 6 and 37 years ago, to determine how the background and nature of CSA differs between male and female victims. Study 2 prospectively linked this victim cohort, and a further 673 older cases, to the Victorian Psychiatric Case Register

(VPCR), which details contacts with Victorian public mental health services. This database enabled the identification of psychiatric disorders that are over-represented in CSA victims relative to those expected in the estimated resident Victorian population over the same nine-year follow-up period. Study 3 linked this cohort of 1655 CSA victims to the Victorian Coronial Information database (VCID), which details all cases of sudden death in Victoria that required an autopsy to determine cause of death. This study compared the frequencies of suicide and fatal overdose in the CSA cohort to those recorded for the comparative Victorian population. Gender differences in psychiatric disorder and death resulting from suicide or overdose were also examined.

The current research highlighted that both males and females are at risk of CSA and, further, that disparate risk factors may be operating across gender. In particular, living in a single-parent family, without a biological father figure, may be a risk factor for pre-pubertal males, who may be vulnerable to the sexual advances of unrelated perpetrators outside the family environment. In contrast, living with a stepfather or family member other than a biological or stepparent may be a particular risk factor for sexually maturing females.

Mental health outcomes were demonstrated to be largely similar for males and females. Major affective disorders, organic disorders, anxiety disorders and acute stress reactions, personality disorders, conduct disorders, and childhood mental disorders, were significantly more likely in both male and female CSA victims than in their counterparts in the Victorian population. These findings suggest non-gender specific mental health outcomes for CSA. However, males and females may express their CSA related trauma in disparate ways and to different degrees, as indicated by the finding

that males in the cohort were more likely, relative to cohort females, to be diagnosed with childhood mental disorders and conduct disorders.

Death resulting from suicide or overdose was found to be equally likely in cohort males and females. However, CSA cohort females were almost three times more likely than females in the comparative Victorian population to be recorded on the VCID as having died from suicide or overdose over the nine-year follow-up period. The implications that can be derived from these findings are somewhat limited, however, given the low frequencies of suicide and fatal overdose that were observed, which may have been influenced by the relatively young age of the victim cohort who may not have reached the peak risk age for these adverse outcomes.

The present research complements the CSA literature in several ways. First, the findings provide important confirmation of results obtained in previous retrospective studies. Second, the results challenge the conceptualisation of the long-term impact of CSA as a specific post-sexual abuse syndrome with clearly defined adverse consequences. Finally, the study suggests that, although the experience of CSA may differ between males and females, the long-term impact may not be gender-specific. Given that current research is at an early stage in understanding the influence of gender on the nature and adverse consequences of CSA, further empirical investigation is clearly warranted.



## Chapter 1      Introduction

### 1.1      Overview

A considerable body of research now exists into child sexual abuse (CSA) and its long-term psychological sequelae (Browne & Finkelhor, 1986; Fergusson, Lynskey, & Horwood, 1996a; Fleming, 1997; Jumper, 1995; Kendall-Tackett, Williams, & Finkelhor, 1993; Kuyken, 1995; Mullen, Martin, Anderson, Romans, & Herbison, 1993; Silverman, Reinherz, & Giaconia, 1996; Yellowlees & Kaushik, 1994). Although this research has highlighted the reality of childhood victimisation and its impact, a number of central issues remain unresolved (Cermak & Molidor, 1996; Dhaliwal, Gauzas, Antonowicz, & Ross, 1996; Genuis, Thomlison, & Bagley, 1991). Perhaps the most pronounced shortfall in this domain concerns the sexual abuse of male children and its long-term psychological impact. To date, the empirical focus has been on female victims of CSA. Although this research has brought many theoretical advances in the understanding of the phenomenon of female sexual victimisation, these developments often disregard male victims (Garnefski & Diekstra, 1997; Holmes, Offen, & Waller, 1997; Violato & Genuis, 1993).

The extensive body of research into CSA is characterised by diverse, and often conflicting, methodologies (Briere, Woo, McRae, Foltz, & Stizman, 1997). As such, various methodological issues need to be considered when interpreting the findings of CSA research. Briefly, these limitations include inconsistent definitions of what constitutes CSA (Cermak & Molidor, 1996), different sampling procedures employed (Violato & Genuis, 1993), the type of data analysed (Gutman, 1997), problems of

disclosure of CSA (Peake, 1989), and the reliance of retrospective recall of CSA, which is dependent on the memories of adult respondents (Briere et al., 1997; Brown, Cohen, Johnson, & Salzinger, 1998). Combined, these methodological variations lead to difficulties in comparing studies, and ultimately result in an area of research characterised by inconsistent findings (Watkins & Bentovim, 1992). Nevertheless, the continuance of such research is warranted, if society is to grapple with the phenomenon of CSA and understand its characteristics and the mechanisms by which it exerts its detrimental influence.

The vast bulk of research into the effects of CSA in adult life have relied on the self-report data of adult community samples, believed to be adequately representative of the population at large (Andrews, Corry, Slade, Issakidis, and Swanston, 2002a; Fergusson & Mullen, 1999; Mullen et al., 1993; Mullen, Martin, Anderson, Romans, & Herbison, 1994). Such an approach requires individuals to recall retrospectively experiences they were subjected to in their childhoods. Although a number of such studies have advanced knowledge in this area, their findings may be confounded by factors such as memory biases (Collings, 1995; Fergusson, Woodward, & Horwood, 2000; Finkelhor, 1994; Horwitz, Spatz-Widom, McLaughlin, & White, 2001), developed coping strategies that may be different to those used at the time of the sexual abuse (Dhaliwal et al., 1996), and changing perceptions of what constitutes abuse in the context of life-course trajectories (Brown & Harris, 1978; Horwitz et al., 2001).

Furthermore, studies into the long-term mental health impact of CSA have concurrently obtained retrospective reports of CSA and information on current psychological functioning. These investigations have consistently demonstrated a significant association between a history of CSA and a wide range of adverse adult outcomes, including mental illness, and suicidal ideation and behaviour (Andrews et al., 2002a; Fergusson & Mullen, 1999). However, given that the temporal order between retrospective reports and current psychological functioning is difficult to ascertain in retrospective studies, the causality of the obtained relationships may be questioned.

The use of official records in examining the epidemiology and long-term effects of CSA primarily overcomes these confounding factors (Horwitz et al., 2001; Widom & White, 1997). Official records, generally compiled soon after the reporting of the alleged event, are independent from the self-reports of adult respondents, and consequently, are less likely than retrospective reports to be biased by distortions in event recollections (Briere et al., 1997; Brown et al., 1998). However, it is recognised that such reports may still be subject to systematic biases. These biases include: the extent to which CSA is regarded as a problem by professionals (in particular for boys); the extent to which people are willing to report alleged cases of sexual abuse to official agencies; the fact that not all officially recorded cases of CSA are ascertained cases of abuse (Finkelhor, 1983; Levesque, 1994; Scott, 1995); and the likelihood that officially reported cases of CSA are more severe than, or fundamentally different to, non-reported cases (Finkelhor, 1983). As a measure of prevalence, this approach is known to underestimate the true extent of CSA within the community. However, as a

window into the concrete experience and nature of more severe forms of abuse, this approach has utility.

The paucity of attention directed to male victims of sexual abuse may be influenced by a number of factors. These factors include: (a) the under-reporting of male sexual abuse (Peake, 1989; Vander Mey, 1988); (b) the under-representativeness of boys in child protection records (males have been shown to be sexually abused outside the family to a greater extent than within the family, therefore, often being out of the scope of child protection agencies) (Donnelly & Kenyon, 1996; Finkelhor, 1983; Holmes et al., 1997); (c) the traditional socialisation of males that conflicts with the perception of 'weakness' associated with being a victim of sexual abuse (Briere, Evans, Runtz, & Wall, 1988; Cermak & Molidor, 1996); and (d) the fact that CSA became an issue and was driven by advocacy for the women's movement (Gordon, 1990; Holmes et al., 1997; Mullen, 1993; Scott, 1995; Young, Bergandi, & Titus, 1994).

It has been argued that official reports are likely to be more representative of the distribution of male and female CSA than are child protection records, as they involve cases of abuse both within and outside the family, and consequently, may entail an increased number of male sexual abuse cases than have been identified and examined in previous research (Cermak & Molidor, 1996; Faller, 1989; Finkelhor, 1983). If an enhanced understanding into gender differences in CSA characteristics and adverse long-term outcomes is a research priority, then such methodology has a part to play in overall research strategies.

## 1.2 Aim and theoretical significance of current research

The primary aim of the current thesis was to examine gender differences in CSA characteristics and long-term outcomes of adult mental health problems and completed suicide or fatal overdose. A prospective cohorts design was employed, in which official records of CSA were explored. The sexual abuse data analysed was that of children 16 years of age or below, who were presented to the Office of Forensic Medicine<sup>1</sup> (OFM) for a medical examination following a report of sexual abuse to the Department of Human Services (social welfare agencies), the Victoria Police (criminal investigators), or both, between the years 1967 to 1995. The measure of adult mental health problems in this study was having had contact with Victorian public mental health services of Victoria. These data were obtained through case linkage with the Victorian Psychiatric Case Register (VPCR). The measure of death from suicide or overdose was being listed on the Victorian Coronial Information database (VCID) as having died from suicide or a fatal drug or alcohol overdose. These data were obtained by linking the CSA cohort to the VCID.

Knowledge of the epidemiology of CSA and its links to disorder and death in adult life is a prerequisite to the development and implementation of sound public policy to address the progression of CSA to these adverse, and even fatal, long-term outcomes. Second, if a link can be established between social and psychological risk factors of CSA, then interventions by which children may be protected from abuse could be devised. Finally, models are needed that address the vulnerability and lack of power of all children, not just girls. As clinicians, we need to believe in the reality of male

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<sup>1</sup> The Office of Forensic Medicine (OFM) was responsible for providing forensic medical services in the State of Victoria from 1957 to 1995.

sexual abuse. As researchers, we need to be prepared to ask questions of males that have so far been largely confined to females. It is only after understanding the differential reactions of males and females to CSA that mental health professionals will be able to develop specific treatment approaches and programs to meet the specific psychological needs of CSA victims.

### 1.3 Approach

The present study into the impact of CSA in adult life and gender differences in the nature of CSA has been approached from both a descriptive and an epidemiological perspective<sup>2</sup>. The descriptive component of the research involved examining gender differences in the nature of CSA in a large cohort of males and females who were sexually abused between 6 and 37 years ago. The epidemiological component involved implementing a prospective cohort design, which involved linking the cohort of identified CSA victims to existing databases on contacts with public mental health services and deaths resulting from suicide and overdose. This methodology goes some way to establishing if a history of CSA is associated significantly with these adverse adult outcomes.

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<sup>2</sup> The main objective of epidemiological studies is to determine whether or not an association between exposure and outcome is causal. While it is acknowledged that the determination of 'cause' is not straightforward, nor simple, but requires a judgement based on a number of criteria, one aim of the current study was to assess the likelihood that any relationship which may be found between CSA and adult outcome is causal.

The prospective design implemented in the current research allowed an examination of the temporal relationship between CSA (exposure) and adult mental illness, completed suicide, and fatal overdose (outcomes), using the largest victim group to have been studied prospectively and systematically. Compared to findings of retrospective studies in which a history of CSA is acknowledged by a sample of adults known to have psychological difficulties in adulthood, the findings of the current prospective cohort study are particularly informative in determining a cause and effect relationship between a history of CSA and negative adult outcome, as these outcomes were not established at the time that sexual abuse was established.

The study has provided a number of new insights. First, it has generated new information about how sexual abuse characteristics differ for boys and girls, where existing research has focused on female victims. Second, it has prospectively provided epidemiological data on the prevalence of a number of psychiatric diagnoses, including the more severe psychiatric illnesses such as the schizophrenias and the major affective disorders. Third, it is the second study to examine how a history of CSA may be related to outcomes of completed suicide or death resulting from drug or alcohol overdose, but the first to do so with such a large victim sample. Finally, it has provided some insight into whether the long-term outcomes of CSA differ for male and female victims of CSA.

#### 1.4 Research questions

The following research questions were addressed in this study:

1. How do sexually abused boys and girls differ on the following variables:
  - i. Victim characteristics;
  - ii. Familial composition
  - iii. Disclosure variables;
  - iv. Sexual abuse characteristics; and,
  - v. Perpetrator characteristics?
2. What is the relationship between an officially reported history of CSA and psychiatric disorder as represented by contact with Victorian public mental health services?
3. What is the prevalence of suicide and fatal overdose in a sample of sexually abused children?
4. Do gender differences exist in the likelihood and type of psychiatric diagnoses, suicide, and fatal overdose, in adults sexually abused as children?
5. Are males and females with a reported history of CSA at increased relative risk of psychiatric diagnoses, suicide, and death resulting from overdose, than individuals in the comparative Victorian population without such a history?



## 1.5 Outline

The thesis is organised as follows. Chapter 2 reviews the literature on CSA, focusing on gender differences in sexual abuse characteristics and adult psychiatric outcome. Chapter 3 presents a conceptual overview of the three studies that make up this thesis, while Chapter 4 provides the methodological details of the study. Chapters 5, 6, and 7, present the results of the study. In particular, Chapter 5 presents the findings in relation to gender differences in CSA characteristics. Chapter 6 presents the findings pertaining to mental illness in the CSA sample. This chapter also details a comparative analysis with the estimated resident Victorian population, including relative risks for receiving public mental health treatment and for each of the nine psychiatric diagnoses examined in this thesis. Chapter 7 details the findings in relation to suicide and fatal overdose, again implementing the estimated resident Victorian population figures to obtain relative risks as a function of gender for suicide and overdose. Chapters 5 to 7 each contain results, a discussion, and a summary. Chapter 8 provides a reconceptualisation of the three studies that constitute this thesis, whereby the main findings of the research are summarised, the theoretical implications of the results are discussed, and future research priorities are delineated. The reference list and Appendix follow.

## Chapter 2 Literature Review<sup>3</sup>

### 2.1 Overview

This literature review commences with a summary of the literature pertaining to varying definitions of CSA and the associated problems of incomparability and inconsistencies between studies. The social construction of CSA is then described, along with its influence on the focus on the sexual abuse of females, to the relative neglect of male victims. The differences in prevalence rates of male and female CSA are then discussed along with the possibility of such prevalence rates being influenced by the particular methodology employed. Various problems that impinge upon research being conducted into male CSA are evaluated, in the hope of explaining social factors that may be perpetuating the relative neglect of male CSA research compared to that of females. Studies examining the context of sexual abuse and related characteristics will then be examined, and the question of whether a constellation of familial and social disadvantages is pathogenic, rather than CSA *per se*, is raised. A review of studies that have focused on gender differences in sexual abuse characteristics is then presented, followed by an analysis of the long-term psychiatric outcomes of childhood sexual victimisation, with emphasis being placed on gender differences where present. Based on the under-representativeness of male victims of CSA in empirical research, the use of official records as an alternative to examining gender differences is discussed along with the utility of using documented cases of abuse to prospectively examine the long-term effects of CSA. Finally, the need for

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<sup>3</sup> This chapter formed the basis of the following published paper: Spataro, J., Moss, S.A., & Welis, D.L. (2001). Child sexual abuse: A reality for both sexes. *Australian Psychologist*, 36 (3), 177-183.

further research into gender differences in the epidemiology and long-term outcomes of CSA is presented. This evidence provides the rationale for the present research.

## **2.2. What constitutes child sexual abuse (CSA)? Issues of definition**

Before presenting the main body of this thesis, it is necessary to define sexual abuse, as it will be referred to in this research, and to provide a brief discourse on problems of definition. It has been argued that the definition of CSA employed strongly influences research findings and subsequent conclusions; consequently systematic comparisons across studies are difficult to make (Cermak & Molidor, 1996; Mullen, King, & Tonge, 2000; Scott, 1995). One of the main problems in the domain of sexual abuse research is the variation in the definitions implemented by different researchers (Fergusson & Mullen, 1999; Scott, 1995; Violato & Genuis, 1993). Primary sources of variations include specificity of definitions, frequency of abuse, age of assailant, and presence or absence of coercion.

It has been postulated by Browne and Finkelhor (1986), and Beitchman, Zucker, Hood, daCosta, Akman, and Cassavia (1992), that few studies of CSA employ compatible definitions. For instance, using police records, Dimock (1988) broadly defined sexual abuse as rape, sodomy, incest, or indecent liberties. Similarly, a broad definition of "the exposure of a child to sexual stimulation inappropriate for the child's age, level of psychosocial development, and role in the family" was implemented by Reinhart (1987, p192). Baker and Duncan (1985) defined childhood as 16 years of age or younger, and CSA as occurring when another person who was sexually mature, involved the child in any activity that person expected to lead to their sexual arousal,

including intercourse, exposure of genitalia, fondling, showing pornographic material, or sex talk. A more specific definition was implemented by Pierce and Pierce (1985) who explicitly defined sexual abuse as "exposure, fondling the child's genitals, masturbation, intercourse, and attempted intercourse" (Pierce & Pierce, 1985, p192). While this definition is more precise than those already discussed, it remains unsatisfactory on a number of levels including the combination of such diverse experiences and the inclusion of exposure; it is difficult to determine whether exposure constitutes abuse in all situations (Violato & Genuis, 1993).

Although it has recently been acknowledged that experiences with peers can be traumatic and as such, should be considered in abuse definitions (Kuyken, 1995), most definitions emphasise experiences with older partners, and often exclude coerced sexual experiences by peers (Condy, Templar, Brown, & Veaco, 1987; Watkins & Bentovim, 1992). It is widely accepted that a sexual relationship between an adult and a child is abusive regardless of coercion, physical force, or the perceptions of the child (Kuyken, 1995). However, it is often unclear whether sexual experiences between children and their peers are similarly 'abusive'. Given these conflicting concepts, a less restrictive definition may take all ages of perpetrators and victims into consideration (Scott, 1995), as well as differing abuse characteristics.

The definition employed by Schechter and Roberge (1976) is inclusive of peer and sibling abuse, as it does not employ an age-differential between perpetrator and victim. These researchers define CSA as "the involvement of developmentally immature children or adolescents in sexual activities they do not truly comprehend, and to which they are unable to give informed consent and that violate the sexual taboos of family

roles" (Schechter & Roberge, 1976, p198) . Although this definition appears more representative of peer and sibling abuse, it focuses implicitly on intra-familial sexual abuse (abuse perpetrated by family members), to the relative neglect of extra-familial abuse (perpetrated by unrelated offenders).

The definition employed by Violato and Genuis (1993) overcomes these problems, as it neither refers to an age differential between perpetrator and victim, nor to whether the abuse occurred within the family. Violato and Genuis operationalised CSA as "unwanted sexual contact (genital touching and fondling to penetration) while the victim is considered a child by legal definition and the perpetrator is in a position of relative power vis a vis the victim" (Violato & Genuis, 1993, p37). However, this definition is broad, leading to ambiguity in what constitutes a sexually abusive act. It is, therefore, necessary, in practice, to go beyond overarching definitions of CSA to more precise behaviourally defined subcategories such as, abuse involving penetration, abuse involving genital contact, and abuse involving neither genital contact nor penetration (Fergusson & Mullen, 1999)

Taking these definitions into account, and given the nature of the CFM data that will be analysed, CSA shall be defined in the present research as any unwanted sexual contact, ranging from genital touching to penetration, of a child 16 years of age or younger. Non-contact sexual experiences such as exposure or pornography will not be considered, given the difficulties in determining whether such experiences constitute abuse in all cases (Violato & Genuis, 1993) and the even more pressing caveat that victims of non-contact sexual experiences are most unlikely to be presented to the CFM for medical examination. No age differential between victim and perpetrator will

be employed, given the possibility of children being abused by their peers or siblings (Violato & Genuis, 1993; Watkins & Bentovim, 1992).

### **2.3 The effect of gender on the social construction of child sexual abuse**

Of particular relevance to the current research is the effect of gender on the social construction of CSA. The women's movement in the 1970s and 1980s was instrumental in raising the consciousness of society and professionals to the incidence of rape and subsequently, CSA (Peake, 1989; Scott, 1995). As a result, the primary focus for treatment programs and research tended to be the female victim of sexual abuse (Young et al., 1994). As the nature of sexual crimes began to be investigated, occasional incidents of male sexual abuse were reported (Browne & Finkelhor, 1986). However, given the absence of any large identified population of male victims, male sexual abuse was not included in the initial and later treatment and research approaches (Browne & Finkelhor, 1986; Holmes et al., 1997; Young et al., 1994).

It is clear that male victims of childhood sexual victimisation have benefited from society's greater awareness of the phenomenon of CSA. However, it is also clear that the social construction of male sexual abuse has lagged behind the process for female victims (Holmes et al., 1997). It is unfortunate that male victims have not been represented by a lobby group to specifically assist them, or a developed ideology from which to make their claims (Holmes et al., 1997; Scott, 1995).

Furthermore, the social construction of males as individuals who are competent, dominant, self-reliant, invulnerable, and not needing help, is inconsistent with the experience of the sexually abused male, and does not lead easily to claims for help by adult males who were sexually abused in childhood (Peake, 1989). Males have not readily been perceived as victims; their role in the ideology of sexual abuse has been that of victimisers (Holmes et al., 1997; Scott, 1995). The dominant ideologies have also precluded contemplation of women as abusers, and of males as suffering adverse effects following unwanted sexual activity (Holmes et al., 1997). Consequently, it has been argued that society's view of sexual victimisation is more compatible with a female socialisation model but is almost opposite to the masculine socialisation process. Exacerbating this problem is the fact that the male socialisation process makes it less likely that male victims will report their abuse voluntarily as disclosure may cause others to question their masculinity and sexuality (Young et al., 1994).

In sum, as the clinical sophistication of mental health providers has expanded, and as a greater number of male sexual abuse victims are beginning to seek treatment, the need to understand the psychological impact that sexual abuse has on male victims has become increasingly critical (Holmes et al., 1997; Young et al., 1994). Society needs to be aware of the reality of male sexual abuse, if it is to curb the impact resulting from such an experience. It is asserted that only through understanding the differential reactions, both immediate and long-term, of male and female CSA victims, will society be able to develop specific treatment approaches and programs to meet their specific psychological needs.

## 2.4 A summary of the prevalence of sexual abuse and the influence of methodological factors

The proportion of the population of children who have been exposed to CSA has been, and continues to be, the focus of ongoing controversy (Fergusson & Mullen, 1999; Finkelhor, 1994). The majority of CSA cases do not come to the official attention of welfare agencies and police, and, therefore, the available prevalence estimates fail to accurately describe the true prevalence of CSA within the community (Finkelhor, 1994). This is further evidenced by the discrepancy between the relatively high rates of CSA within the general community, compared to the generally low rates of reporting (Fleming, 1997), which suggests that official statistics seriously underestimate CSA.

In addition, an examination of research conducted on the prevalence of CSA suggests considerable variation in prevalence estimates. Several reasons may be proposed to explain these variations (Fergusson & Mullen, 1999; Mullen et al., 2000). These include: (a) variations in the definition of CSA (Cermak & Molidor, 1996; Genuis et al., 1991; Scott, 1995); (b) variations in the characteristics of the samples employed (Briere et al., 1997; Gutman, 1997); and (c) unrepresentative samples (Fergusson & Mullen, 1999). While a detailed discourse about the potential sources of these variations is beyond the scope of this thesis, any discussion into the prevalence of CSA should consider these broad issues.



## 2.5 Recent population studies into the prevalence of child sexual abuse

Despite the fact that an examination of research conducted into the prevalence of CSA suggests considerable unexplained variation in prevalence estimates, a number of conclusions may nevertheless be drawn. First, it is clear that for many children, exposure to some form of unwanted sexual attention is common (Fergusson & Mullen, 1999). Second, by no means is sexual abuse confined to females. Although prevalence estimates typically suggest higher rates of all types of female sexual abuse, there are substantial numbers of males who are also exposed to childhood sexual victimisation (Fergusson & Mullen, 1999; Watkins & Bentovim, 1992).

Although research into the sexual abuse of males has clearly lagged behind that of females, a number of recent studies have examined the prevalence of male and female sexual abuse. Prevalence estimates of any CSA and contact CSA will first be provided, followed by prevalence estimates of the more stringent definition of intercourse only.

### 2.5.1 Prevalence estimates of any CSA and contact CSA

Employing a definition of childhood being less than 16 years of age and a definition of sexual abuse that included non-contact as well as contact abuse, Sariola and Uutela (1994) obtained prevalence estimates of 8.0% for females and 3.0% for males sexually abused as children. In a Canadian community sample, Bagley, Wood, and Young (1994) reported that 17.6% of women compared to 8.2% of men had been subjected to contact CSA. Fergusson et al. (1996a) obtained prevalence estimates for any CSA and

contact CSA of 17.3% and 13.0% for women, and 3.4% and 2.8% for men. Slightly higher estimates were obtained by Finkelhor et al. (1990), who conducted the first American national survey of adults concerning a history of CSA, and found that 27.0% of the women and 16.0% of the men reported any type of sexual victimisation before the age of 18 years. Using a convenience sample of college students, Briere, Smiljanich, and Henschel (1994) obtained prevalence estimates for contact sexual abuse of 21.7% for women and 19.8% for men. Peters and Range (1995) obtained prevalence estimates for contact CSA and intercourse of 31.9% and 19.3% for females, and 19.1% and 12.0% for males.

#### 2.5.2 Prevalence estimates of more intrusive CSA involving intercourse

Prevalence rates between 1.3% and 28.7% for females (Finkelhor & Dzuiba-Leatherman, 1994; Zierler, Feingold, Laufer, Velentgas, Kantrowitz-Gordon, & Mayer, 1991) and 1.1% and 14.1% for males (Halperin et al., 1996; Zierler et al., 1991) have been obtained for sexual abuse involving intercourse. Using convenience samples, Nagy, DiClemente, and Adcock (1995) obtained prevalence estimates for intercourse of 12.6% of females and 7.3% of males, and Krugman, Mata, and Krugman (1992) found that 10.8% of females and 6.4% of males had been subjected to sexual intercourse. Employing a community sample, Fergusson et al. (1996a) demonstrated that 5.6% of females and 1.4% of males had been exposed to CSA involving intercourse. Finkelhor et al. (1990) obtained higher estimates whereby 14.6% of females and 9.5% of males had been victim to sexual intercourse.

### 2.5.3 Implications

To account for the findings of higher prevalence rates among female CSA victims than male victims, two broad explanations have been proposed (Dhaliwal et al., 1996). It has been suggested that either male sexual abuse is concealed to a greater extent than female sexual abuse and thus less frequently reported (Vander Mey, 1988), or CSA occurs among females to a greater extent than among males (Browne & Finkelhor, 1986). Discourse into problems of research into male CSA, factors influencing disclosure of male sexual abuse, and gender differences in abuse characteristics, therefore is warranted. A discussion of each of these issues, in turn, will now be offered.

## **2.6 Problems of research into male child sexual abuse**

Given the varying prevalence estimates provided in Section 2.5, it may be asked to what extent these prevalence rates are truly reflective of gender differences in sexual abuse, or rather, whether male sexual abuse is concealed to a greater extent than female sexual abuse. Watkins and Bentovim (1992) argue that possible factors leading to the under-reporting of sexual abuse in males can be conceptualised as either coming from within the victim himself or due to a lack of response by those around him. It is on these factors that the focus of discussion shall now turn.

### 2.6.1 Individual factors that may lead to under-reporting of male CSA

Factors that have been proposed to account for the under-reporting of male victims of CSA, in particular adolescent or older victims, relate to the male ethic of self-reliance and the possible fear of homosexuality (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Young et al., 1994). Males are usually inculcated with an ethos where self-reliance, independence, and sexual prowess are valued, whereas a victim role and homosexuality may be denigrated (Watkins & Bentovim, 1992). Furthermore, adult expectations of children, in terms of the gender of the child, are very different (Peake, 1989). Society's definition of masculinity does not expect males to express feelings of dependency, fear, vulnerability, or helplessness - emotional effects commonly associated with having been sexually abused as a child (Nasjleti, 1980). These expectations commonly lead to differences in the reporting of sexual abuse by males and females. The overwhelming message is that boys and men should be able to handle assaults, and subsequent disclosure would undermine the future regard with which they are held (Peake, 1989).

Similarly, the reporting of male sexual abuse may be affected both by notions of youthful male sexuality (Peake, 1989) and the stigma of abuse and implications for the boys' sexuality (Watkins & Bentovim, 1992). There appears to be a societal sense that early sexual experiences are a part of most male adolescents' lives (Peake, 1989). It is likely that this notion leaves many sexually assaulted male victims feeling quite unclear about whether the experience is a "rite of passage" (Peake, 1989, p46) or a sexual assault. This issue may be further complicated by the fact that males are more likely than females to be assaulted together with siblings or other males (Peake, 1989).

In these circumstances, male victims may be less likely to report because they may be confused about whether the experience is an assault or both typical and appropriate for their gender (Monaco & Gaier, 1988). The presence of other abused males may signify the event was not untoward, and serve to inhibit disclosure, as no one victim may want to be the first to speak up about the sexual experience (Peake, 1989).

Sexual victimisation and subsequent implications for the male victim's developing sexuality may lead many victims to question themselves when they are assaulted (Peake, 1989). This uncertainty may not only lead to fears surrounding homosexuality, but also to self-blame for the abuse. Children's sense of self-doubt, embarrassment, and shame may lead many to feel that they provoked the attack. In fact, their abuser may have implied as much to secure the child's compliance and silence (Peake, 1989).

It is well established that, as is the case for girls, the majority of boys are assaulted by men (Reinhardt, 1987). This may lead to boys perceiving their abuse as indicative of homosexuality (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Young et al., 1994). Because fears and confusion about sexual identity are already so widespread within the general community, subsequent sexual victimisation may have the effect of confirming and possibly fixing such preoccupations and fears (Watkins & Bentovim, 1992). This fear may then lead to powerful repression or deletion of the experience, with a consequent failure to report.

It may be postulated that, compared to girls, differential emotional responses of boys to sexual abuse may make them less likely to disclose their abusive experiences. This gender distinction in the reactions of children to stressful events has been emphasised

in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) framework. Disruptive behaviour disorders, or externalising disorders, are generally reported more commonly amongst boys than girls, whilst anxiety or depressive disorders, or internalising disorders, are either equally likely or more commonly reported amongst girls (American Psychiatric Association, 1994; Dykman, McPherson, Ackerman, Newton, Mooney, Wherry, & Chaffin, 1997; Kendall-Tackett et al., 1993). While research does not yet provide support for this hypothesis, it has been suggested that distressed responses may tend to elicit more sympathetic and concerned inquiry, and perhaps subsequent disclosure, than 'acting out' responses (Watkins & Bentovim, 1992). Hence, the higher reported prevalence of sexual abuse in girls may be partly due to increased attention towards their manifesting internalising symptoms.

Furthermore, men who have been victims of CSA often seek help from services other than the 'helping professions', commonly in the context of other physical or behavioural problems (Holmes et al., 1997; Watkins & Bentovim, 1992). Such problems may include physical consequences resulting from the abuse or in the context of the criminal justice system. In such situations, it is often left to the professionals involved to inquire about possible sexual abuse. Given the general lack of acknowledgment of male sexual abuse, such victims may often fail to be identified and their disclosure is rarely facilitated (Holmes et al., 1997; Watkins & Bentovim, 1992).

### 2.6.2 Lack of response of those around the sexually abused male

In addition to individual factors relevant to the under-reporting of male sexual abuse, various other explanations have been offered that focus on the lack of response of those around the sexually abused male. These factors include lack of supervision, blaming the male victim, missing indicators of abuse, and denial of female perpetrator: father-son, as well as child-child sexual abuse. Each of these propositions warrants a brief discussion.

The shortfall of adult supervision of older boys in the community has been said to increase their vulnerability to extra-familial sexual abuse (Budin & Johnson, 1989; Vander Mey, 1988). However, given that police, rather than services dealing directly with families, usually receive most reports of extra-familial abuse, it is not surprising that this increased vulnerability fails to be evidenced in child protection records or clinical reports, who disproportionately represent female victims (Cermak & Molidor, 1996; Faller, 1989). This issue has implications not only for the reliance on child protection services or clinical data, but also in terms of the amount of freedom typically afforded to boys. Families tend to supervise and restrict the freedom of girls more than boys. The under-reporting of assaults on boys, together with the ethos of self-reliance, has led parents being more apt to warn their daughters, rather than sons, of the dangers of sexual assault (Monaco & Gaier, 1988). The absence of strategies specifically directed towards males to seek help and disclose may leave them vulnerable and unsure about what they should do in the case of being a victim (Peake, 1989).

The ethic of self-reliance may also lead to male victims blaming themselves for their own sexual victimisation (Pierce & Pierce, 1985; Watkins & Bentovim, 1992). Whereas, in the past, the 'seductive child' notion has led to girls being blamed for their own abuse (Meiselman, 1978), boys are expected to be 'tough' and it is considered their own fault if they put themselves at risk. Indirect evidence to support a 'blaming hypothesis' was demonstrated by Broussard and Wagner (1988). In this study, written vignettes, which both varied the sex of the perpetrator and the 15-year-old victim and manipulated whether the victim was encouraging, passive, resistant, or upset, were presented to a college undergraduate sample. It was found that male victims were penalised more by male respondents, who rated perpetrators less responsible whenever the victim was male, rather than female, and least responsible when the male victim was encouraging. Clearly, these findings have implications not only for the amount of self-blame possibly attributed to male victims of sexual assault, but also for rates of reporting such sexual victimisation (Holmes et al., 1997; Violato & Genuis, 1993; Young et al., 1994).

The focus on female victims has tended to ignore and facilitate ongoing denial of alternative forms of sexual abuse (Watkins & Bentovim, 1992). Sexual abuse perpetrated by females, father-son abuse, and child-child abuse, have all been inconsistent with the traditional father-daughter incestuous perception of sexual abuse (Faller, 1989). Abuse by women, particularly mothers, has been an especially difficult possibility to contemplate for society and professionals (Watkins & Bentovim, 1992). Of particular relevance is a study conducted by Fromuth and Burkhart (1989) who demonstrated that over 70.0% of college men reporting sexual abuse were victimised by a woman. Similar findings were obtained in a study conducted by Fritz, Stoll, and



Wagner (1981) who employed a college sample and found that 60.0% of the perpetrators were female. It was interesting that the researchers did not question the high number of female perpetrators, nor did they attempt to explain their findings.

This conclusion, and the corresponding denial of important information regarding the high number of female perpetrators, is interesting for several reasons. Evidence suggests that the community tends to employ a double standard in which attitudes towards male socialisation risk permitting the re-definition of female-perpetrated male sexual abuse as: (a) simply a normative sexual experience (Dimock, 1988; Peake, 1989); (b) inconsequential because the abuse may be regarded positively by the male victims (Fromuth & Burkhart, 1989); or (c) rated retrospectively by the men as ineffectual (Baker & Duncan, 1985). Denial of abuse by female perpetrators and professional disbelief of female perpetration is therefore contributing to under-reporting of both male and female CSA. However, given the notions of youthful male sexuality proposed by Peake (1989) and, that culturally, women are permitted a much freer range of sexual contact with their sons than are men with their daughters, it may be suggested that this under-reporting is more pronounced for male CSA. This claim would be further strengthened if the initial trend towards female perpetrators abusing boys more frequently than girls is confirmed by future research (Watkins & Bentovim, 1992).

Recently, the notion that perpetrators must be adults to satisfy definitions of CSA has been challenged, due to the increased acknowledgment of the significance and potential effects of child-child and adolescent-child sexual abuse (Kuyken, 1995; Watkins & Bentovim, 1992). However, the poor recognition of child-child sexual

abuse to date has most likely contributed to the under-reporting of sexual abuse of both males and females (Scott, 1995). As previously stated in Section 2.2, the important point in defining CSA is that contact is unwanted, which embraces child-child sexual abuse. Given the findings of DeJong (1989), and Smith and Israel (1987) who both demonstrated a perpetrator age of 9 years, child-child sexual abuse is a real phenomenon in need of recognition.

### 2.6.3 Professional under-identification of male CSA

In the context of the social phenomena that discourage disclosure of male sexual abuse, one may question whether clinicians fail to suspect or enquire about sexual abuse in adult male clients (Black & DeBlassie, 1993; Holmes et al., 1997). To answer this question, three issues warrant discussion. First, are clinicians less likely to hypothesise and enquire about sexual abuse if the client is a male? Second, is the male client believed if he does disclose? Finally, if a male client is believed following disclosure, does the clinician respond appropriately? These questions will be addressed in turn.

It has been postulated that cultural norms discourage clinicians from enquiring about sexual abuse in male clients (Cermak & Molidor, 1996; Dhaliwal et al., 1996; Finkelhor, 1984). These cultural norms appear to stem from society's perception of males as perpetrators of sexual violence and females as victims (Scott, 1995; Wellman, 1993). Although the majority of perpetrators are male and the majority of victims are female (Reinhart, 1987), reliance on this imbalance may preclude some

clinicians from entertaining the possibility that the converse also arises (Holmes et al., 1997).

Of alarming concern is the evidence that clinicians are not alert to the reality of male sexual abuse, are less likely to suspect sexual abuse in male clients, and are therefore more likely to contribute to the non-disclosure and subsequent underestimation of male CSA (Darves-Bornoz, Choquet, Ledoux, Gasquet, & Manfredi, 1998; Donnelly & Kenyon, 1996; Heath, Bean, & Feinauer, 1996; Holmes & Offen, 1996; Wellman, 1993). A study conducted by Holmes and Offen (1996) in Britain demonstrated that the apparent scarcity of male victims of sexual abuse involved with helping professionals might, in part, be explained by a lack of awareness in clinicians as to the possibility that males are sexually abused. Sixty-one clinical psychologists were presented with vignettes describing case material, which included several indicators of sexual abuse and in which the gender of the adult client was manipulated. Clinicians were asked to hypothesise about possible childhood etiological factors of the client's presentations. It was found that significantly more clinicians hypothesised a possible history of CSA where the client was female, even though the presenting features of both genders were identical. In addition, while clinicians rated the potential CSA as the most important issue to address in therapy for females, this was not the for males.

Donnelly and Kenyon (1996) provided further support for the failure to suspect sexual abuse in male clients. This study investigated the responses of law enforcement, medical professionals, rape crisis centers, and mental health professionals to male sexual abuse victims. The ten agencies that reported they had never seen male victims believed that male sexual assault was not really a problem. Common stereotypes

prevailed. Many professionals believed that men could not be raped or they were raped because they "wanted to be" (Donnelly & Kenyon, 1996, p444). Other respondents indicated that they did not treat men because they saw no need for such a service.

In addition to the problems of failing to suspect and enquire about sexual abuse in male clients, clinicians' responses to the disclosure of male sexual abuse warrant discussion. It has been suggested that some clinicians believe erroneously that males are not damaged by childhood sexual victimisation. Such clinicians may too readily accept a male client's denial, not only of his sexual experience as abusive, but also of its association to presenting psychological problems (Black & DeBlassie, 1993; Holmes et al., 1997). This denial, which often reflects a male's strong need to protect himself from the specific trauma, and to spare himself the social sanctions and isolation he imagines would be forthcoming if others were to know, hampers disclosure and subsequent rates of reporting (Black & DeBlassie, 1993).

Even when male victims disclose, research suggests that some clinicians rate CSA to be more damaging for females than males. This phenomenon was demonstrated in the study of Pierce and Pierce (1985) who found that male victims of CSA were provided with less counselling than girls. A study conducted by Eisenberg, Owens, and Dewey (1987) found that a substantial majority of clinicians believed that females would be more adversely affected by CSA than their male counterparts. In addition, parent-daughter incest was ranked as more serious than parent-son incest. Taken together, these findings suggest that gender stereotypes both maintain and perpetuate traditional views of CSA victims and perpetrators.

## 2.7 The social and familial context of CSA

Before proceeding to an analysis of gender differences in CSA characteristics, it becomes necessary to consider the context in which abuse often occurs. This focus is important given the significant association that has been demonstrated between reporting a history of CSA and increased psychopathology in adult life. An examination of the research pertaining to long-term psychiatric outcomes of CSA indicates that CSA is more likely to occur in disrupted and disadvantaged families (Andrews, Gould, & Corry, 2002b; Mullen et al., 1993; Mullen et al., 1994; Mullen et al., 2000; Romans, Martin, Anderson, Herbison, & Mullen, 1995). This possibility creates problems for interpreting long-term outcome data, given that adverse outcomes in adulthood may partly be influenced by problematic home and family background factors predisposing to CSA, and not solely by the sexual abuse.

An increasing body of literature has accumulated concerning the social and familial characteristics of children exposed to CSA (Fergusson & Mullen, 1999). A consistent finding has been the relationship between abuse and poor relationships with parents (Fergusson & Mullen, 1999; Finkelhor et al., 1990; Kuyken, 1995). This pattern was evidenced in a study conducted by Finkelhor (1984), which found that women who reported not being close to their mothers, or who received little parental affection, have been over-represented in cases of CSA. It may be that an uncaring and unprotective family directly increases the risk of sexual abuse because it leaves children vulnerable to approaches from perpetrators who appear to offer some sort of attention and affection (Fergusson & Mullen, 1999). A deficiency in the parental care and protection required by the developing child may also militate against providing effective support

and aid to a child who has fallen victim to sexual abuse (Mullen, Martin, Anderson, Romans, & Herbison, 1993).

A growing body of evidence exists that has linked CSA to a number of measures of family function and dysfunctions. A number of studies have demonstrated a relationship between patterns of family change, and particularly, the presence of stepparents within the family, and CSA. Finkelhor et al. (1990) demonstrated that female victims of sexual abuse were more likely than males to have lived with a stepfather. In addition, Brown et al. (1998) found that along with familial risk factors of harsh punishment, maternal sociopathy, and negative life events, the presence of a stepfather was significantly associated with increased risks of sexual abuse.

A link has also been reported between measures of marital dysfunction, including marital conflict and parental divorce or separation, parental adjustment, and CSA. This finding was reported in the studies of Harter, Alexander, and Neimeyer (1988), Fergusson et al. (1996a), and Mullen et al. (1994), who independently claimed that the risk of CSA was elevated among those exposed to high marital conflict. Furthermore, parental adjustment, and in particular, parental alcoholism, substance abuse and the sexual abuse of one's mother, have been found to be associated with a reported history of CSA (Brown et al., 1998; Fergusson et al., 1996a; Fergusson & Mullen, 1999; Mullen et al., 1993).

It is interesting that although clear associations have been demonstrated between measures of social class and risk of physical and emotional abuse, this association does not hold for CSA, where weak, or even no associations, have been found (Brown et al., 1998; Fergusson et al., 1996a; Fleming, Mullen, & Bammer, 1997). Various studies have reported that children who are exposed to CSA have often been concurrently physically and emotionally abused (Fergusson, Horwood, & Lynskey, 1997; Fleming et al., 1997). This finding was demonstrated by Mullen, Martin, Anderson, Romans, and Herbison (1996) who found that women with histories of CSA reported respective rates of physical and emotional abuse that were 5.3 and 3.0 times higher than women not reporting a history of CSA. These comorbidities of abuse may be reflective of family circumstances that encourage risk for one type of abuse, which in turn encourage exposure to other forms of abuse, and the fact that those who are prepared to disclose one type of abuse may also be more willing to disclose other forms of abuse (Fergusson & Mullen, 1999). Given these comorbidities of different types of abuse, it may be that when physical abuse is controlled, SES has no influence on the potential for risk of CSA. Even in the absence of controlling for comorbid types of abuse, it has been suggested that the risk of CSA is largely unrelated to social class and that children from different social strata may be at generally similar risks of CSA (Fergusson & Mullen, 1999).

Overall, although the extent to which one may postulate a causal relationship between CSA and family factors is in doubt, it appears that sexual victimisation occurs more frequently to children from disadvantaged families (Mullen et al., 1993). It is this matrix of childhood disadvantage, which contributes, in some individuals, to the adult development of psychological or psychiatric disturbance (Calam, Horne, Glasgow, &

Cox., 1998). As a result, family background variables need to be considered as possible mediators of the effects of sexual abuse (Mullen et al., 1993).

## **2.8 Gender differences in sexual abuse characteristics**

The impact of sexual abuse in childhood has received appreciable research attention over the past two decades. Clinical and community studies have generally demonstrated that children exposed to CSA display more emotional and behavioural difficulties than their non-abused counterparts (Dhaliwal et al., 1996; Fontaneila, Harrington, & Zuravin, 2000; Garnefski & Arends, 1998; Garnefski & Diekstra, 1997; Kendall-Tackett et al., 1994; Levesque, 1994; Pierce & Pierce, 1985; Vander Mey, 1988; Watkins & Bentovim, 1992). Until recently, most research has focused on sexually abused females. Therefore, most of the assumed characteristics and consequences of sexual abuse are based on reports of female victims. The purpose of the following section is to review studies that have examined gender differences directly in sexual abuse characteristics. It is argued that this focus is necessary, to gain an enhanced understanding into both the contexts in which male and female CSA occurs, and how characteristics of the sexual abuse may differ as a function of gender.



### 2.8.1 Age of onset of CSA

Research findings into the most frequent age at which children are first victimised vary, with comparable results for males and females within studies, but wide variations between studies. Pierce and Pierce (1985), in their investigation of substantiated cases of sexual abuse, reported the mean age of the sexually abused male child to be 8.6 years, compared with 10.6 years for sexually abused females. In their review of the literature on men who had been sexually abused in childhood, Dhaliwal et al. (1996) identified the typical victim age when male sexual abuse first occurred to be between 8 and 9 years. Finkelhor et al. (1990), in their American national survey of adults reporting a history of CSA, reported the median age of abuse to be 9.9 for male CSA, and 9.6 years for female CSA. Baker and Duncan (1985) reported 12.0 years for males versus 10.7 years for females, and Faller (1989), using validated cases of sexual abuse identified the mean age of onset of sexual abuse to be 6.3 and 5.5 years for male and female sexual abuse, respectively.

These within-study findings of similar age of CSA onset across gender may imply that young children are perceived as physically alike during their early developmental stages. Gender differences may surface as a function of progressive physical and sexual development (Dhaliwal et al., 1996). Between-studies differences in age of CSA onset may have arisen because of contrasting methodologies and differences in true population rates in different settings.

It has been reported that the duration of sexual abuse is typically longer for females than for males (Briere et al., 1988; Kendall-Tackett & Simon, 1992). This earlier termination of male sexual abuse has been explained in terms of males possibly being more able to ward off sexual abuse much sooner than female victims (Dhaliwal et al., 1996; Pierce & Pierce, 1985). An alternative explanation may be that most perpetrators of female victims are family members who have more opportunities for contact with their victims than perpetrators of male victims who typically are friends or strangers (Dhaliwal et al., 1996; Faller, 1989).

#### 2.8.2 Where CSA occurs

It has been suggested that to gain a greater understanding of intra- and extra-familial CSA, data should not focus on child protection records, which disproportionately represent intra-familial sexual abuse. Given the consistent finding that boys are more likely than girls to be abused outside the family (Faller, 1989; Tong et al., 1987; Violato & Genuis, 1993), child protection records under-represent male victims.

Faller (1989) and Gordon (1990) demonstrated that boys are more likely than girls to be sexually abused outside the home. Faller reported that although the majority of male and female victims were sexually maltreated within the family (63.2% and 89.1%, respectively), boys were more likely than girls to be victimised extra-familially (36.8% vs. 10.9%). Similarly, Gordon demonstrated in his retrospective community sample, that females were more likely to be abused by family members, whereas the perpetrators of male victims were more commonly strangers or acquaintances.

These results are interesting to consider, given Pierce and Pierce's (1985) findings that 38% of the male victims in their sample lacked a father figure in the home, compared with only 12% of the female victims. Males without a father figure may be more vulnerable because of their need and desire for a male model. This desire may place them in a position where they are vulnerable to the sexual advances of another person, for fear of losing the associated attention of the perpetrator, therefore raising the likelihood of extra-familial sexual abuse (Pierce & Pierce, 1985).

Another possible interpretation is that mothers in single-parent families may have less time to supervise and monitor their children, due to greater economic strain. Given misconceptions regarding the risk of sexual abuse of young boys, mothers may be less likely to restrict the freedom of their sons, thereby possibly increasing the likelihood of sexual abuse outside the home (Budin & Johnson, 1989; Monaco & Gaier, 1988; Vander Mey, 1988).

### 2.8.3 Relationships between offenders and CSA victims as a function of gender

Studies have been consistent in demonstrating that males are less likely than females to report being subject to incestuous sexual abuse (Dhaliwal et al., 1996; Kendall-Tackett & Simon, 1992; Violato & Genuis, 1993; Tong, Oates, & McDowell, 1987). In terms of relationships between offenders and victims, however, results have been inconsistent. Employing a sample from the state protective service agency, in which all of the perpetrators were family members, relatives, or caretakers, Pierce and Pierce (1985) reported that boys were more likely to be abused by stepfathers, whereas girls were more likely to be subject to father-daughter incest. Contrary to these findings, Kendall-Tackett

and Simon (1992) reported similar rates of perpetration by natural fathers for male and female adults CSA victims (33.0% for male victims and 39.0% for female victims), whereas 8.0% of male victims, compared to 22.0% of female victims, were abused by their stepfathers. These researchers also reported that family friends were significantly more likely to sexually abuse males (38.0%) as compared to females (10.0%).

In a retrospective community study, Gordon (1990) demonstrated that of the 14.3% of male victims of CSA abused by a relative, 56.5% were victimised by a cousin or sibling closer in age to them, compared with 27.9% of female CSA victims. In contrast, female CSA victims were more likely than males to be victimised by a family member who was much older, such as a parent, grandparent, or uncle (72.1% vs. 43.5%). These findings confirm the importance of removing the age differential in definitions of CSA to raise awareness as to the possibilities of sibling-sibling and peer-peer sexual abuse. Many definitions of CSA rely on a difference in age, typically of 5 years, between perpetrator and victim for the relationship to be considered abusive. Such differentials are not necessary because they do not capture many abusive situations, especially for males and consequently, under-emphasise the prevalence of male CSA.

#### 2.8.4 Gender of perpetrator

Numerous studies have been conducted to ascertain the ratio of male and female perpetrators, with most studies reporting that over 90% of perpetrators are male (Dhaliwal et al., 1996; Gordon, 1990; Kendall-Tackett & Simon, 1992). The likelihood of a perpetrator being female, however, rises when the victim is male (Anderson, Martin,

Mullen, Romans, & Herbison, 1993; Kinzl, Traweger, & Bieble, 1995). Partly as a result of the feminist movement in the 1970s and 1980s, which emphasised the gendered nature of CSA and the significance of male supremacy and female oppression (Scott, 1995), females are generally viewed as victims and males as perpetrators of CSA. Women may, therefore, be less likely to be perceived as perpetrators of sexual victimisation (Cermak & Molitor, 1996; Dhaliwal et al., 1996; Watkins & Bentovim, 1992). In addition, society's encouragement of males to seek early sexual experiences with females may decrease the likelihood of females being perceived as offenders (Dhaliwal et al., 1996; Gordon, 1990; Peake, 1989).

#### 2.8.5 Severity of CSA

Gender differences in the severity of sexual abuse are relatively consistent. Gordon (1990) reported that men were more often victims of serious abuse, which involved penetration and force, whereas women were more likely to be the victim of fondling or exhibitionism. Finkelhor et al. (1990) reported that 62.0% of male victims, compared to 49.0% of female victims, had experienced more intrusive abuse, including actual or attempted intercourse. Similarly, Pierce and Pierce (1985) and Dhaliwal et al. (1996) demonstrated that fondling occurred much less frequently to males than females. These findings are also consistent with those of Kendall-Tackett and Simon (1992) and Levesque (1994) who independently demonstrated that sexually abused males were more likely than sexually abused females to have been victims of more serious forms of sexual abuse involving attempted or completed oral and anal intercourse.

It may be that male victims who are experiencing exceptionally high levels of distress resulting from more severely intrusive abuse are those who acknowledge a history of CSA. An associated implication is that although male victims are generally under-represented in community surveys, those experiencing more severe abuse are likely to be over-represented. The possibility that males are also subject to less severe forms of abuse should therefore be examined further. Failure to recognise this possibility would promote (a) a disproportionate representation of severely intrusive abuse being perpetrated against male victims, and (b) the impression of more extreme levels of psychopathology in male victims of CSA than may generally be the case.

#### 2.8.6 Outcomes following identification of CSA

Information regarding action taken following disclosure of sexual abuse is consistent with society remaining oblivious to the reality of male CSA (Cermak & Molitor, 1996; Dhaliwal et al., 1996; Watkins & Bentovim, 1992). Using a sample in which males were more likely to be abused extra-familially than females (20.0% vs. 6.0%), Pierce and Pierce (1985) reported that only 4.0% of the male victims, compared with 20.0% of the female victims, were removed from their homes as a precaution against further abuse following reports of alleged sexual abuse. Likewise, Rogers and Terry (1984) revealed that once identified, fewer males than females were removed from their abusive homes, and that females were more likely than males to receive counselling.

Although it is possible that outcomes following identification of CSA differ between males and females, alternative explanations need to be considered. If, as research suggests, males are more likely to be abused outside the home (Faller, 1989; Tong et al., 1987; Violato & Genuis, 1993), they will be less likely to be removed from their home as a precaution against further abuse. A further explanation is that protective service workers may not view the vulnerability of male victims to CSA as seriously as they might with female victims (Pierce & Pierce, 1985).

#### 2.8.7 Summary

This section has explored gender differences in CSA characteristics. From the literature, it can be seen that increased research efforts need to be directed towards examining gender differences in vulnerability factors for childhood sexual victimisation, given the current inconsistencies in research findings. When all previous research is considered together, however, several conclusions can be made about gender differences in sexual abuse characteristics:

1. Conflicting results surround gender differences in relation to age of CSA onset, with similar ages for males and females within, but different ages between, studies.
2. Females are more likely than males to have been abused by a relative, whereas males are more likely than females to be abused by an unrelated offender.
3. The duration of female CSA is longer than that of male CSA. However, males are more often victims of more serious abuse, involving penetration and force.
4. The absence of a male model within the family home may increase children's vulnerability to the sexual advances of others, especially for males.

5. Males are more likely than females to be abused outside the family home, although the rates of male CSA within the home may still be higher than those for abuse outside the home.
6. When males are subject to abuse within the home, their abusers are more likely to be closer to their own age. In contrast, females are more likely to be abused by an older family member.
7. Boys tend to receive less intervention following disclosure of sexual abuse than their female counterparts.

Taken together, the above findings have important implications for this area of research, as they clearly demonstrate that CSA characteristics differ between males and females. Hence, to adequately predict and treat CSA across gender, these differences and their sources need to be understood. Given that a clear picture into gender differences in CSA characteristics has not been achieved, further research regarding gender specific effects of CSA is required.

## **2.9 A review of findings pertaining to CSA and childhood adjustment<sup>4</sup>**

While the effect of CSA on childhood adjustment was not examined in much detail in the current research, a brief review of key findings in the literature is warranted before proceeding to an examination of gender differences in adult adjustment following CSA. As a victim group, sexually abused children are reported to exhibit more

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<sup>4</sup> Sections 2.9 to 2.12 are based on the 'Effects on Victims' section, completed by the current author, in the following published paper: Berah, E.F., Bigelow, E., McCarthy, J., & Spataro, J. (2000). Paraphilias: Offenders and their victims. In I. Freckleton & J. Selby (Eds.), Expert Evidence: Practice and Advocacy, Looseleaf Service, Law Book: Sydney.



emotional and behavioural problems than their non-abused counterparts (Berah, Bigelow, McCarthy & Spataro, 2000; Deblinger, McLeer, Atkins, Ralphe, & Foa, 1989; Einbender & Friedrich, 1989; Gomes-Schwartz, Horwitz, Cardarelli & Sauzier, 1990; Kendall-Tackett et al., 1993; Kolko & Moser., 1988; Mannarino, Cohen, & Gregor., 1989 Mian, Marton, & LeBaron., 1996; Tong et al., 1987). From the literature, a number of conclusions can be drawn:

1. Research into the effects of CSA on child adjustment has almost exclusively focused on female victims of CSA.
2. A wide variety of emotional and behavioural problems have been found to characterise the female victims who have been investigated. Such evidence has included more distress on measures of somatic complaints, depression, anxiety, social withdrawal, and sexual behaviour.
3. Research suggests that exposure to CSA may have deleterious effects on personality development. This possibility may have implications for the ability of victims to develop and maintain interpersonal relationships in adulthood.
4. A consistent finding is that poorer outcomes of CSA are associated with a more dysfunctional family environment, and with repeated, more invasive abuse.
5. It has been found that not all children manifest adjustment problems following exposure to CSA. Factors influencing resiliency to sexual abuse may include the severity of the abuse, the extent of familial support, and the child's attitude and coping mechanisms.

6. The findings on gender differences in outcomes associated with CSA are limited. The key conclusions of these studies will now be presented.

### **2.10 Gender differences in childhood adjustment following CSA**

The question of whether sex differences exist in childhood adjustment following sexual abuse remains unanswered, as studies have produced inconsistent results. In particular, the relationship between gender and the manifestation of internalising responses appears to be less than straightforward. Although some researchers posit that internalising symptoms are more likely to be demonstrated by female rather than male victims of CSA (Darves-Bornoz et al., 1998; Feiring, Taska, & Lewis, 1999), some studies report the converse to be true (Garnefski & Diekstra, 1997), and others report no significant differences (Garnefski & Arends, 1998). However, results pertaining to externalising symptoms are consistent. Most studies report higher levels of behavioural problems in sexually abused males as compared to females (Darves-Bornoz et al., 1988; Garnefski & Arends, 1998; Garnefski & Diekstra, 1997).

Support for the internalising-externalising notion was provided by Darves-Bornoz et al. (1998) who conducted the first French national survey examining gender differences in symptoms of adolescents reporting a history of CSA. It was found that externalising symptoms, including repeated suicide attempts, running away, violent behaviour, and substance use, were more likely to be demonstrated by males. Females, on the other hand, were more likely to experience nightmares, be depressed, feel like crying, and

exhibit multiple somatic complaints. Similarly, Friedrich, Urquiza, and Beilke (1986) demonstrated that sexually abused females had significantly elevated scores on the internalising scales of the Child Behavior Checklist, while males had elevated scores on the externalising scales. Consistent with these findings, a recent study conducted by Fontanella et al. (2000) demonstrated that sexually abused males were more likely than their female counterparts to exhibit aggressive symptoms, including verbal and physical aggression and temper tantrums.

The results of Darves-Bornoz et al. (1998) and Friedrich et al. (1986) were not supported by Feiring et al. (1999), who examined gender differences in the internalising responses of shame, attribution style, depression, and self-esteem within 8 weeks of the disclosure or identification of sexual abuse. Females reported higher levels of intrusive thoughts, hyperarousal, sexual anxiety, and personal vulnerability than males. They also reported lower levels of eroticism. Given the claim that males are more likely than females to manifest externalising symptoms, one may question whether the results would have been different had externalising responses also been measured in the study. Accordingly, the conclusions drawn from this study are somewhat limited.

Research has recently begun to examine whether the aftermath of CSA is more damaging for male as compared with female victims. This claim was proposed by Garnefski and Diekstra (1997) who administered a self-report questionnaire to a sample of 15,245 adolescents from 212 randomly selected secondary schools in the Netherlands. Six percent reported a history of sexual abuse (being forced into sexual acts, assaulted, or raped). A strong association, irrespective of gender, was demonstrated between a reported

history of CSA and emotional and behavioural problems in adolescence, including suicidality. However, sexually abused males were considerably more likely to report these problems than sexually abused females.

Using the same data as Garnefski and Diekstra (1997), Garnefski and Arends (1998) examined the means of 11 outcome measures under the broad categories of emotional and behavioural problems and suicidality. Males reported more feelings of loneliness than girls, whereas females reported more anxiety than boys. Sexually abused males and females were equally likely to report low self-esteem and more depressed mood. Findings pertaining to behavioural problems and suicidality were consistent with Garnefski and Diekstra (1997) and Darves-Bornoz et al. (1998), with sexually abused males reporting more alcohol and drug use, aggressive and criminal behaviour, truancy, and suicide attempts, than their female counterparts.

Differences between male and female victims in their likelihood of disclosure and of subsequent treatment may influence the types of symptoms reported after CSA. First, male and female victims of CSA may be reluctant to disclose their abusive experiences, and may therefore internalise feelings of shame, loneliness, anxiety, and lowered self-esteem. If so, males and females may not differ significantly on measures of internalising symptoms.

Alternatively, given the misconceptions at the professional and general level regarding the risks, characteristics, and consequences of male sexual abuse, male victims may be less likely to disclose and receive help than their female counterparts. They may continue

to internalise their abusive experiences and eventually deal with them by externalising, or acting out, their emotions.

A third alternative focuses on the likelihood of treatment after disclosure. The existence of emotional and behavioural problems in female victims who have received help may be ameliorated, whereas the continued manifestation of problems in male victims who have not received appropriate intervention may imply erroneously that CSA has a more traumatic influence on male victims (Briere et al., 1988; Garnefski & Arends, 1998; Garnefski & Diekstra, 1997). Further research into the nature and determinants of gender differences in outcomes following identification of CSA is required, to assess whether observations of differential outcomes reflect true differences or effects of confounding variables.

### **2.11 The long-term effects of CSA on adults: a review of findings**

Over the last decade, numerous studies have examined the relationship between reports of CSA and measures of adult psychological and social adjustment. The evidence obtained from this research has consistently demonstrated associations between reporting a history of CSA and a wide range of long-term outcomes including increased rates of depressive symptoms, anxiety disorders, substance use disorders, eating disorders, antisocial behaviours, suicidal and self-damaging behaviour, post-traumatic stress disorders, dissociative disorders, and problems of sexual adjustment (Andrews et al., 2002a; Bagley et al., 1994; Beautrais, Joyce, & Mulder, 1994; Briere & Runtz, 1988; Burnam et al., 1998; Bushnell, Wells, & Oakley-Browne, 1992; Fergusson et al., 1997; Fergusson, Lynskey, & Horwood, 1996b; Kinzl et al., 1995;

Mullen et al., 1993; Mullen et al., 1994; Putnam, Post, & Guroff, 1983; Romans et al., 1995; Silverman, et al., 1996; Widom & White, 1997; Wonderlich, Wilsnack, Wilsnack, & Harris, 1996).

Although it is acknowledged that individuals reporting exposure to CSA are at higher risk of these problems in adulthood, issues of confounding variables, measurement error, and sampling biases may diminish certainty about whether these associations reflect a causal link. A detailed discussion of these factors is beyond the scope of this thesis and have been presented elsewhere (Fergusson & Mullen, 1999). The association between a reported history of CSA and having a range of adult disorders and difficulties is now firmly established (Andrews et al., 2002a). However, given the likelihood of potentially confounding variables, it is relatively premature to accept the proposition that CSA causes adult adjustment problems. Rather, the causal link between CSA and later psychopathology and interpersonal adjustment should be accepted as a working hypothesis.

It is recognised that lifetime problems and disorders including eating disorders, sexual disturbances, and criminal behaviour, are likely long-term effects of CSA. However, given the nature of the information available in the VPCR, an examination of these disorders, which have been discussed elsewhere, was not possible in the present study (Beitchman, Zucker, Hood, daCosta, Akman, & Cassavia, 1992; Berah et al., 2000; Bushnell et al., 1992; Kinzl et al., 1995; Maxfield & Widom, 1996; Mullen et al., 1993; Paolucci, Genuis & Violato, 2001; Widom, 1996; Widom & Ames, 1994; Widom & White, 1997; Wonderlich et al., 1996).

The focus of discussion will now turn to a review of findings pertaining to depression, psychosis and schizophrenia, anxiety and phobias, personality disorders, alcohol and drug related disorders, and suicide, as these are areas where the current research may have some contribution to make.

#### 2.11.1. Depression

Perhaps one of the most consistently reported adverse outcomes of CSA is depression. Bifulco, Brown, and Adler (1991) found that of 25 women who reported sexual abuse involving physical contact before the age of 17, 64.0% had case depression. While also related to other earlier stressful experiences, such as parental indifference, violence to the child, and institutional stay, sexual abuse was found to be associated with an increased risk of depression over and above these factors. In a longitudinal study of 187 female participants, Silverman et al. (1996) demonstrated that abused 21-year-olds of both genders reported significantly more major depression than non-abused controls. In a community survey in New Zealand, Mullen, Romans-Clarkson, Walton, and Herbison (1988) found that compared with non-abused controls, women reporting CSA were more frequently identified as requiring treatment, usually for depression. In another community sample of adult women, Mullen et al. (1996) found that women reporting CSA were more likely to have histories of depression than those not reporting a history of abuse (73.6% vs. 42.3%). Similarly, in a birth cohort of more than 1000 New Zealand children studied to the age of 18 years, major depression was reported by 18.0% of those not exposed to CSA, 50.0% of children exposed to non-contact and contact forms of sexual abuse, and 63.9% of those exposed to sexual

intercourse (Fergusson et al., 1996b). Consistent with these findings, major depression was reported for 13.4% of sexually assaulted individuals, compared to 5.6% of those not exposed to sexual abuse, in a cross-sectional probability survey representing two Los Angeles communities conducted by Burnam et al. (1988). In a study of 93 adult women presenting to an urban psychiatric emergency room conducted by Briere et al. (1997), 46.9% of women reporting a history of CSA, compared to 18.2% of non-abused women, reported a depressive disorder. Finally, in a recent meta-analysis conducted by Paolucci et al. (2001), a substantial effect of CSA on depression was demonstrated, with unweighted and weighted effect sizes of 0.63 and 0.44, respectively.

Recently, several twin studies have been conducted into the relationship between CSA and adult depression (Dinwiddie et al., 2000; Kendler, Bulik, Silberg, Hettema, Myers, & Prescott, 2000; Nelson et al., 2002). Twin studies are informative in that they control for both genetic and family environmental factors that are also associated with mental disorders, and accordingly, provide strong evidence of a causal relationship between CSA and adult psychiatric outcome. In their Australian twin study, Dinwiddie et al. (2000) reported significant relationships between contact CSA or intercourse and depression for both males (OR 3.9) and females (OR 2.2), following adjustment for potentially confounding family background variables. When the analyses were restricted to twin pairs discordant for CSA, males and females were still at increased risk for depression, although this relationship was no longer statistically significant. Similarly, Kendler et al. (2000) obtained significant odds ratios for abuse involving genital contact (OR 1.6) and intercourse (OR 2.8) in abused female twins compared to non-abused twins, with only risk in the intercourse category of abuse remaining



statistically significant following restriction to twins discordant for CSA. Finally, in their twin study, Nelson et al. (2002) reported significantly increased risks of depression for both males (OR 1.9) and females (OR 1.9). Furthermore, while non-abused co-twins were found to be at greater risk of developing depression than twin pairs with no history of abuse, abused co-twins were found to have higher risk for depression than their non-abused co-twin, suggesting that CSA causes increased risk of developing major depression over familial background variables.

The recent World Health Organisation meta-analysis conducted by Andrews et al. (2002a) provides compelling evidence for the relationship between a history of CSA and psychiatric outcome, above the influence of potentially confounding family background variables and other types of abuse. These researchers identified a large number of relevant studies and calculated both unadjusted and adjusted relative risks across disorder (depression, panic disorder, alcohol abuse/dependence, drug abuse/dependence, PTSD, and suicide attempts) and abuse categories (non-contact, contact, and intercourse). Unadjusted relative risks for depression increased with severity of abuse (1.4 for non-contact abuse, 1.8 for contact abuse, and 2.8 for intercourse). Relative risks of depression decreased when adjusted for family dysfunction and other types of abuse (1.1 for non-contact abuse, 1.3 for contact abuse, and 2.0 for intercourse) with risks for contact abuse and intercourse remaining significant following statistical adjustment.

These findings are consistent with the meta-analysis of Fergusson and Mullen (1999) who re-analysed the findings of a series of 12 studies published since 1990 that examined the associations between CSA and psychological problems in adult life using

data from community samples. In all of the seven studies that examined the relationship between depressive responses and reported CSA, significant associations were found with odds ratio estimates ranging from 2.1 to 7.0. Although Fergusson and Mullen did not statistically combine the odds ratio estimates in each of the 12 studies, and consequently, were unable to control for potentially confounding familial background variables, consistent and pervasive relationships between CSA and a range of adult psychopathology were reported. Consistent with the studies discussed in this section, moderate to strong relationships were apparent between risks of depressive symptoms and reports of CSA.

#### 2.11.2 Psychosis and schizophrenia

A paucity of studies have examined whether a relationship exists between sexual abuse and diagnostic categories or symptoms indicative of more severe disturbance such as schizophrenia. The findings of existing studies are mixed, with some researchers reporting a significant association between CSA and schizophrenic symptoms (Briere et al., 1997; Read, Agar, Argyle, & Aderhold, in press; Read & Argyle, 1999; Sansonett-Hayden, Haley, Marriage, & Fine, 1987) and others reporting no relationship (Burnam et al., 1992; Carmen, Rieker, & Mills, 1984).

Studies that have failed to demonstrate a significant association between a history of CSA and schizophrenic disorders have typically examined relatively small victim samples. For example, in their cross-sectional probability survey of 3,132 Los Angeles households, Burnam et al. (1992) identified 413 cases (13.2%) that had been sexually

assaulted over their lifetime. Using this victim sample, these researchers failed to uncover a significant difference between sexually abused and non-abused individuals on DSM-III measures of schizophrenia or schizophreniform disorders (1.63% and 0.41%, respectively). The authors explained this finding in terms of a genetically transmitted vulnerability to develop psychotic disorders, which may be unaffected by the trauma associated with having been a victim of CSA. However, the sample size that was employed would have little power to answer a question pertaining to the association between CSA and such an uncommon disorder.

Negative findings were also reported by Carmen et al. (1984) who examined the psychiatric inpatient records of 188 adult and adolescent male and female patients and found that 80 cases (43.0%) had histories of sexual or physical abuse or both. Fifteen cases (18.8%) had been sexually abused, 42 (52.5%) had been physically abused, and 23 (28.8%) had been both physically and sexually abused. These researchers reported non-significant differences between the prevalence of psychotic disorders in abused and non-abused females, and a significant difference between abused and non-abused males, with psychotic disorder being more prevalent in non-abused males (36.0%) than abused males (0.0%). However, given that only 15 abused males were included in the analyses, of which none were reported as having a psychotic disorder, these researchers concluded that this finding should be interpreted with caution. In addition, breakdowns of type of abuse (physical, sexual, or both) by gender were not provided, which may have provided useful information in terms of the direct effect that different types of abuse may have on the development of psychotic symptoms following childhood abuse.

Results inconsistent with those of Burnam et al. (1992) and Carmen et al. (1984) were reported by Briere et al. (1997) and Sansonnet-Hayden et al. (1987). Briere et al. examined the admission charts of 93 adult women presenting to an urban psychiatric emergency room for relevant demographic and psychiatric variables. Of the sample, 52.7% (49 cases) had a history of CSA, while 4.9% (39 cases) had a history of physical abuse. After controlling for significant demographic variables, self-reports of CSA were related significantly to non-manic psychotic disorders, including schizophrenia and psychotic disorders not otherwise specified, with 53.1% of sexually abused inpatients compared to 25.0% of controls, diagnosed with a psychotic disorder. Childhood physical abuse was not significantly associated with the development of psychotic disorders. Similarly, Sansonnet-Hayden et al. examined 54 consecutive admissions to an inpatient adolescent psychiatric unit within two weeks of hospitalisation to determine the impact of CSA on psychopathology. The sexually abused group, constituting 31.5% of the sample, had significantly more hallucinations, but not delusions, than the non-sexually abused group. Sexually abused females were more likely than their non-abused counterparts to exhibit more schizoid or psychotic symptoms. Similar comparisons between males were not conducted given that only six sexually abused males were identified in the sample.

These findings of increased hallucinations among adult psychiatric inpatients with a history of CSA (Sansonnet-Hayden et al., 1987) were supported by a recent study conducted by Read and Argyle (1999). In this investigation, 100 consecutive admissions to an acute psychiatric inpatient unit in a New Zealand general hospital were examined for evidence of a history of either physical or sexual abuse. Twenty-two cases were identified; 17 of which exhibited one or more of hallucinations,

delusions, and thought disorder. Hallucinations were found to be significantly more common in patients with a history of incest (86.0%) than in patients subjected to non-incestuous sexual abuse (53.0%). No other significant differences emerged, although trends were demonstrated in that thought disorder was more common in sexually abused victims (35.0%) than in physically abused victims (17.0%), and delusions were more related to having been physically (50.0%) than sexually abused (35.0%).

Similar findings were obtained by Read et al. (2002) in the most recent study conducted into childhood and adulthood abuse as predictors of hallucinations, delusions, and thought disorder. In this study, the clinically evaluated symptomatology of 92 community mental health center clients with a documented lifetime history of sexual or physical abuse was compared to that of 108 non-abused community mental health center clients. It was found that hallucinations (auditory, command, visual, olfactory, and tactile) were significantly more common in the 60 patients abused in childhood than in their non-abused counterparts, while delusions and thought disorder were not. Adult sexual abuse, on the other hand, was significantly related to hallucinations, delusions (paranoid/persecutory, grandiose, ideas of reference, thought insertion, and reading others' minds), and thought disorder (or disorganised speech).

A number of possible theoretical explanations for the manner in which CSA influences negative outcomes of psychotic disorders have been proposed. Read and Argyle (1999) postulated that the distressed confusion of many people who experience hallucinations, delusions, or disordered thinking, might be better understood if a psychosocial perspective were given as much emphasis as a biological or genetic framework. Consistent with this hypothesis is the Self-Trauma Model proposed by Briere (in

press), which postulates that abuse memories and flashbacks are attempts to integrate the trauma associated with childhood abuse, while avoidance strategies aim to regulate the affect triggered by attempting to integrate the trauma.

In addition, Briere et al. (1997) and Goodman, Rosenberg, Mueser, and Drake (1997) raised the possibility that as might be predicted by a diathesis-stress model, an inherited predisposition toward psychosis might be exacerbated by the trauma and developmental disturbances associated with CSA. This possibility is consistent with the hypotheses of Ross, Anderson, and Clark (1994) who investigated the relationship between reported child physical and sexual abuse and types of symptoms within a sample of inpatient and outpatient respondents diagnosed with schizophrenia. These researchers postulated that positive symptoms of schizophrenia, including ideas of reference, commenting voices, paranoid ideation, thought insertion, and visual hallucinations, may be related specifically to a history of childhood trauma. Conversely, negative symptoms may be primarily endogenously driven (Ross et al., 1994), or caused by consequences of abuse-related positive symptoms such as stigma and neuroleptic induced deficits (Read et al., 2002).

Alternatively, dissociative symptoms of sexual trauma may be mistakenly equated with psychotic symptoms in some individuals, resulting in a misdiagnosis of psychotic disorder (Atlas, Wolfson, & Lipschitz, 1995; Briere et al., 1997). This is consistent with the possibility proposed by Read (1998) that the relationship between child abuse and psychotic conditions is often masked because patients identified as abused are frequently re-diagnosed from 'psychotic' to 'non-psychotic'. This tendency may be motivated by a desire to formulate a diagnosis more likely to result in abuse-focused

psychological interventions, or by the belief that abuse is not related to the types of mental illness believed to be predominantly biogenetic in origin, such as schizophrenia. These beliefs have the effect of leaving biological explanations of psychosis, which tend to mask the importance of psychosocial factors, unchallenged in inpatient settings characterised by a high number of abused individuals.

Nevertheless, neurobiological frameworks have been proposed to explain the long-term impact of CSA on schizophrenia (Burnam et al., 1992; Read et al., 2002). The most recent model is that of Read et al. (2002) who proposed the traumagenic neurodevelopmental model of schizophrenia. This model hypothesises that the long-lasting neurodevelopmental changes caused by childhood trauma leads to the heightened sensitivity to stress found in schizophrenia. This model is supported by the similarities found between the effects of childhood trauma on the developing brain and brain abnormalities in adult patients with schizophrenia. Given that a psychosocial approach has been adopted in this thesis, neurodevelopmental explanations of schizophrenia will not be addressed specifically.

Further research into the relationship between a history of CSA and schizophrenic disorders is warranted, given the paucity of studies that have examined this apparent association directly and the inconsistent findings of studies that have been conducted using small sample sizes. Future research should ideally focus on large victim cohorts in order to (a) ask questions that community studies and research involving samples of convenience have thus far been unable to investigate, such as whether sexually abused males or females are more likely to develop psychotic disorders in adulthood, and (b)

to increase the likelihood of supporting a relationship between CSA and schizophrenic disorders, if one exists.

### 2.11.3 Anxiety disorders and phobias

Various studies have addressed the relationship between a history of CSA and anxiety disorders or phobias. These studies have reported that women with a history of CSA, compared with non-abused women, suffer from generalised emotional symptoms such as fear and anxiety. For instance, Briere (1984) observed that CSA victims were more likely than non-abused controls to report fear of men and panic attacks. However, 49.0% of the sample had also been battered in an adult relationship, and thus, whether the anxiety symptoms are related to the CSA, the physical abuse, or both, is not clear. Similarly, Silverman et al. (1996) reported that at age 15, 18.8% of females sexually abused in childhood were anxious-depressed, compared to 3.7% of non-abused controls. This significant difference persisted to age 21, where 17.4% of the sexually abused females, compared to 9.8% of controls, reported a simple phobia. Fergusson et al. (1996b) reported rates of anxiety disorder consistent with the results discussed above: 41.7% of those exposed to non-contact sexual abuse, 39.1% of contact sexual abuse cases, and 44.4% of those exposed to intercourse, were identified by the various measures as exhibiting an anxiety disorder. In contrast, only 14.2% of non-sexually abused controls were classified as having an anxiety disorder. Nelson et al. (2000) reported significant odds ratios for women acknowledging a history of CSA and social anxiety, being 1.9 times at increased risk of developing a lifetime DSM-IV diagnosis of social anxiety compared to non-abused women. Non-significant odds ratios were



claimed for male victims of CSA and outcome of social anxiety. Mullen et al. (1993) also reported a significant relationship between a self-reported history of CSA and an anxiety disorder. Similarly, Burnam et al. (1992) posited that 22.2% of sexually abused subjects met DSM-III criteria for a phobia, compared to 9.7% of non-abused subjects. Finally, Fergusson and Mullen (1999) reported significant odds ratios ranging between 1.3 to 4.4 for the associations between CSA and anxiety disorders or phobias.

A significant relationship between a history of CSA and adult panic disorder has also been claimed by several researchers, with panic disorder being more strongly predicted by abuse involving penetration. For example, Burnam et al. (1988) reported significant differences between sexually abused and non-sexually abused persons in meeting DSM-III criteria for panic disorder, with 4.6% of the sexually abused subjects meeting criteria for panic disorder, compared to only 0.8% of the non-abused subjects. Defining sexual abuse as contact abuse or intercourse, Dinwiddie et al. (2000) also claimed significant relationships between CSA and panic disorder for female (OR 3.5) and male twins (OR 5.0). When analyses were restricted to twin pairs discordant for CSA, however, which could only be conducted for women due to the small sample size of men, the relationship between CSA and panic disorder was no longer significant. Although a significant relationship between panic disorder and CSA involving both non-genital abuse and genital contact was not reported by Kendler et al. (2000), significant odds ratios were demonstrated for intercourse and panic disorder (OR 2.6). In their recent WHO meta-analysis, Andrews et al. (2002a) obtained significant relative risks of panic disorder for individuals exposed to non-contact abuse, contact abuse, and intercourse, to be 1.5, 2.3, and 3.6, respectively. When these relative risks

were adjusted for family dysfunction and other types of abuse, they remained significant for contact abuse (OR 1.6) and intercourse (OR 2.6).

Several studies have found a significant relationship between CSA and adult post-traumatic stress disorder (PTSD), particularly for those who have endured more severe abuse involving penetration. For example, in their 17-year follow-up study of sexually abused children, Silverman et al. (1996) reported a significant relationship between CSA and lifetime history of PTSD for females at age 21. These findings were consistent with those of Molnar, Berkman, and Buka (2001) who adjusted for demographic and family variables, and found that contact CSA and abuse involving penetration was significantly related to a lifetime history of PTSD in both women and men. These researchers found that the risk of PTSD was greater for penetrative than for non-penetrative abuse. Similarly, Saunders, Kilpatrick, Hanson, Resnick, and Walker (1999) found that following adjustments for age, CSA involving intercourse significantly increased the risk of lifetime and recent PTSD. Andrews et al. (2002a) also calculated a significant relative risk of developing PTSD (RR 6.2), for individuals subjected to intercourse, which remained significant following adjustment for family background variables and other types of abuse (RR 4.5). For contact abuse, significant unadjusted and adjusted relative risks were obtained (RRs 4.1 and 3.0, respectively), while relative risks for non-contact abuse did not remain significant following adjustment for potentially confounding variables (RRs 2.1 compared to 2.0).

Only one study, to the researcher's knowledge, has found a significant relationship between CSA under the age of 18 years and a lifetime history of obsessive-compulsive disorder (OCD). Saunders, Villepontoux, Lipovsky, and Kilpatrick (1992)

demonstrated that women were 6.0 times more likely to have a lifetime history of OCD if they experienced intercourse, and 4.5 times more likely if they experienced contact CSA. These findings are in contrast to those of Stein, Golding, Siegel, Burnam, and Sorenson (1988) and Arata (1999) who independently found non-significant relationships between CSA and lifetime or 6-month history of OCD and lifetime or 1-month history of OCD, respectively.

Although existing research indicates the presence of a positive relationship between a history of CSA and anxiety or phobic disorders in women, it is unclear whether this finding can be applied to male victims of CSA. While it would seem reasonably intuitive to assume that male victims of CSA are at increased risk of suffering from anxiety related symptoms in later life, studies examining gender differences in the manifestation of anxiety disorders are yet to be conducted. Consequently, future research should examine whether gender differences exist in the adult manifestation of anxiety disorders following childhood sexual victimisation, or rather, whether males and females are equally as likely to suffer from anxiety related symptomatology.

#### 2.11.4 Personality disorders

Several studies have reported a link between CSA and the development of personality disorders including Multiple Personality Disorder (MPD), Borderline Personality Disorder (BPD), and Antisocial Personality Disorder (APD). A recent study conducted by Johnson, Cohen, Brown, Smailes, and Bernstein (1999), in which psychosocial and psychiatric interviews were administered to a representative community sample of 639

youths and their mothers, reported that persons with documented childhood abuse or neglect were more than four times as likely as those without such a history to be diagnosed with personality disorders during early adulthood. Sexual abuse, in particular, was associated with elevated symptom levels of borderline, histrionic, and depressive personality disorders, after controlling for offspring sex, parental educations, parental psychiatric disorders, physical abuse, and neglect. This study did not provide comparative data by gender, which would have been useful in determining whether these outcomes were more likely for males or females.

It appears, however, that insufficient evidence exists to support a specific link between MPD and a history of childhood sexual victimisation. Bliss (1984) reported that 60.0% and 50.0%, respectively, of female inpatients with MPD reported a history of CSA and physical abuse. Similarly, Coons and Milstein (1986) compared a small sample of 20 patients (17 female and 3 male) who met DSM-III criteria for MPD with 20 non-schizophrenic inpatients. These researchers found that while 75.0% of the patients with MPD, compared with only 5.0% of the psychiatric controls, had a positive history of CSA, 55.0% of the MPD patients also had a history of physical abuse. It was therefore impossible to determine the independent effects of CSA. A similar conclusion arose from a study conducted by Putnam et al. (1983) in which an 83.0% incidence of sexual abuse and a 75.0% incidence of physical abuse was found in a series of 100 patients with MPD. Gender comparisons were not conducted in either of these investigations.

Various authors have proposed an association between CSA and adult symptomatology reflecting BPD. Goldman, D'Angelo, DeMaso, and Mezzacappa (1992) reported that BPD had a significantly greater prevalence of physical and combined physical and

sexual abuse in a sample of 32 males and 12 females with BPD. While the subjects with BPD had a significantly greater frequency of abuse than the comparison group, gender did not contribute to this outcome. Furthermore, sexual abuse rates alone did not differ significantly between the groups. Although the findings suggest that BPD is associated with a history of childhood trauma, comorbidity of sexual and physical abuse may have obscured the relationship between BPD and CSA per se.

Specific analyses for sexual abuse and BPD have been conducted by several researchers. For example, Barnard and Hirsch (1985) found that 57.0% of 30 incest victims sampled received a primary diagnosis of BPD. Similarly, Bryer, Nelson, Miller, and Krol (1987) reported that among 14 patients with BPD, 86.0% were victims of early sexual abuse. However, these studies neither provide information about whether a standardised diagnostic process was implemented nor reliability data. In addition, perceived associations between BPD and CSA may be confounded by disturbed parent-child relationships, which are characteristic of the borderline syndrome (Beitchman et al., 1992). Given these methodological limitations, specific support for a causal relationship between CSA and BPD remains to be established.

Significant relationships have been found between a reported history of CSA and APD. Luntz and Widom (1994) reported that child abuse, neglect, or both, was a significant predictor of the number of lifetime symptoms of APD and of a diagnosis of APD. The specific effects of sexual abuse and gender, however, could not be determined, given that the authors neither reported outcome comparisons for the different types of abuse, nor frequencies as a function of gender. Silverman et al. (1996) specifically examined the relationship between APD and a history of sexual abuse and found that of 23

sexually abused females, 8.7% met the DSM-III criteria for antisocial behaviour at age 21 compared to none of the non-abused controls. Unfortunately, comparative data on sexually abused males was not provided in this study, although it was found that 20.0% of ten physically abused males met criteria for antisocial behaviour, compared to 3.9% of non-physically abused males.

Weiler and Widom (1996) reported an association between early childhood victimisation and psychopathy (or APD) on the Hare's Psychopathy Checklist Revised (PCL-R). These researchers suggested that the relationship between childhood victimisation and violence might be mediated through psychopathy; although childhood victimisation significantly predicted violence, when PCL-R scores were taken into account, this was no longer significant. Hence, the importance of identifying individuals with elevated antisocial traits to prevent future violence.

In sum, while several studies have reported a link between a history of CSA and the development of personality disorders, other studies have been confounded by concurrent forms of abuse. Furthermore, the possibility that personality disorders vary as a function of gender is yet to be given adequate empirical focus. In terms of determining the independent effects of CSA on adult personality disorders, it is necessary to examine the prevalence of these disorders in a sample of sexually abused victims. In addition, assuming a life-course trajectory in which the manifestation of personality disorders may be influenced by a cumulative effect of negative life experiences, the implementation of a prospective research design using a large sample of sexually abused males and females, would be ideal. This research design would not only enable an examination of the causality of CSA on the development of personality

disorders, but would also shed light on whether certain personality disorders are more prevalent in male or in female victims of CSA.

#### 2.11.5 Alcohol and drug related disorders

A number of studies have addressed the relationship between a history of CSA and substance and alcohol abuse. These studies suggest that individuals with a history of CSA, compared to non-abused persons, are a population at increased risk of alcohol or drug use, even after controlling for potentially confounding factors. For example, in their twin investigation, Dinwiddie et al. (2000) reported significant relationships for contact abuse or intercourse following adjustment for demographic factors, with abused males and females, respectively, being almost twice as likely and three times as likely to have a lifetime alcohol dependence. Similarly, Kendler et al. (2000) adjusted for family functioning and parental psychopathology in a sample of female twins. These researchers reported significant odds ratios for alcohol abuse or dependence and for drug abuse or dependence, respectively, for non-genital abuse (ORs 3.2 and 3.6) and intercourse (ORs 6.5 and 6.6). Odds ratios for genital contact and both alcohol and drug abuse or dependence were not significant (ORs 1.9 and 1.2, respectively). Another twin study conducted by Nelson et al. (2002) found that individuals reporting a history of CSA had increased risk of subsequently occurring alcohol or nicotine dependence. Abused males and females were more likely to have lifetime DSM-IV diagnoses of alcohol (ORs of 1.7 and 3.0, respectively) and nicotine dependence (ORs of 2.2 and 1.9, respectively) than their non-abused counterparts.

While twin studies have provided methodologically robust evidence of a relationship between a history of CSA and alcohol or drug problems in adulthood, a number of non-twin studies have further confirmed this association. For example, Silverman et al. (1996) claimed that 43.5% of sexually abused females had a current (1-year) DSM-III-R diagnosis of alcohol abuse/dependence, compared to 7.9% of non-sexually abused females. These researchers failed to show a relationship between CSA and drug abuse or dependence.

Fergusson et al. (1996b) reported that 17.6% of control subjects, 29.2% of non-contact sexual abuse victims, 34.8% of contact sexual abuse victims, and 41.4% of intercourse victims, fulfilled DSM-IV criteria for a diagnosis of alcohol abuse/dependence. Odds ratios were significant for contact abuse (OR 2.5) and the intercourse (OR 3.3) categories, but non-significant for non-contact abuse. Regarding other substance abuse or dependence, Fergusson et al. reported a significant odds ratio for the intercourse category only, with individuals subjected to penetrative abuse being 5.1 times more likely to have a DSM-IV diagnosis of other substance abuse/dependence.

Compared to non-sexually assaulted women, Yellowlees and Kaushik (1994) obtained odds ratios of 3.0 and 4.6 for sexually abused women abusing alcohol and tranquilisers, respectively. Burnam et al. (1988) found that 15.7% and 18.4% of CSA victims compared to 6.7% and 7.5% of control subjects, respectively, met DSM-III criteria for an alcohol or drug abuse or dependence diagnosis. Briere et al. (1997) reported higher rates of addiction and alcohol problems in sexually abused patients (24.5% and 34.7%, respectively) than in patients not reporting CSA (9.1% and 18.2%, respectively). Similarly, Zierler et al. (1991) observed that survivors of CSA had a



70.0% and 80.0% excess of use of tranquilisers and heavy alcohol use, respectively, relative to people reporting no sexual abuse.

In their prospective cohort study, Widom and White (1997) claimed that abused and neglected women were significantly more likely than their male counterparts to have a lifetime DSM-III diagnosis of alcohol abuse or dependence. No significant differences were demonstrated for drug abuse or dependence. Fergusson and Mullen (1999) claimed odds ratios ranging from 1.0 to 8.9 for substance use and CSA. Finally, in their comprehensive meta-analysis, Andrews et al. (2002a) reported significant associations between contact abuse and intercourse for alcohol abuse/dependence. Prior to adjustment for family dysfunction and other types of abuse, odds ratios for contact abuse and intercourse were 1.6 and 2.6, respectively. Following adjustment, odds ratios decreased, but were still significant, to 1.3 for contact abuse and 1.9 for abuse involving intercourse. For drug abuse/dependence, unadjusted odds ratios were significant for all three categories of abuse (ORs 1.6 for non-contact abuse, 1.7 for contact abuse, and 3.0 for intercourse). Following adjustment, only the intercourse category remained significant, with an odds ratio of 2.4.

Although the above studies suggest that an increased risk of alcohol or drug use is associated with a history of CSA, the findings of a study by Fleming et al. (1997) warrant brief mention. These researchers suggest that the direct nature of the association between CSA and alcohol abuse is unclear because it may be that exposure to CSA increases the risk of forming a relationship with an alcoholic partner, which in turn, increases the risk of alcohol abuse. Furthermore, in an Australian case-control study conducted by Fleming, Mullen, Sibthorpe, Attewell, and Bammer (1998), it was

found that a history of CSA was not, alone, sufficient to cause alcohol dependency in women. For example, in combination with the perception of a mother who was uncaring and overly controlling, being exposed to CSA did increase the risk of alcohol abuse in women. Conversely, having a caring and loving mother helped to overcome some of the potentially adverse effects of CSA on subsequent vulnerability to alcohol abuse. Given these findings, it was postulated that the relationship between CSA and alcohol abuse more likely reflects a complex interplay between CSA and a range of other factors in a woman's life. This possibility emphasises the complexity of the interactions between CSA and the emergence of adult problems, and as such, further confirms the difficulties inherent in inferring a direct causal relationship between childhood trauma and adverse psychological adjustment in adulthood (Mullen & Fleming, 1998).

#### 2.11.6 Suicide

Suicidality has also been associated with CSA. A number of studies have investigated the relationship between a history of CSA and suicide attempts/ideation and have reported consistent relationships between these measures (Santa Mina & Gallop, 1998). Only one study to date has examined the relationship between a history of CSA and completed suicide (Plunkett, O'Toole, Swanston, Oates, Shrimpton, & Parkinson, 2001). While this study will be described in this section, the research presented will focus predominantly on suicidal ideation and behaviour, given the paucity of studies into completed suicide.

A number of twin studies have been conducted into the relationship between a history of CSA and suicidal behaviour. Nelson et al. (2002) reported that male (OR 5.4) and female (OR 4.1) twins who had been sexually abused were at significantly increased risk of suicide attempts compared to their non-abused twin. These findings are consistent with those of Dinwiddie et al. (2000) who adjusted for demographic factors and found significant relationships between contact abuse or abuse involving intercourse and both female (OR 7.7) and male (OR 7.1) twins. When restricting the analyses to discordant twin pairs, the relationship was no longer significant for females, and could not be computed for males due to the small number of CSA discordant twin males.

Although not implementing twin study designs, a number of other studies have provided strong evidence for a relationship between CSA and suicide attempts and suicidal ideation. Briere and Runtz (1986) found that 56.0% of women with a history of CSA, compared with 23.0% of non-abused women, had attempted suicide. Mullen et al. (1993) reported that suicidal behaviour was present in 8.0% of sexually abused females, compared to only one non-sexually abused control woman. Yellowlees and Kaushik (1994) stated that sexually assaulted women made suicide attempts 3.4 times more than non-sexually assaulted women (34.1% compared to 11.4%, respectively). Similarly, Silverman et al. (1996) found that 87.5% of sexually abused, and only 26.0% of non-abused, 15-year-old females were ascertained as having suicidal ideation on the Youth Self Report and the Children's Depression Inventory. At age 21, these differences persisted, with 21.7% of sexually abused females, and 8.8% of controls, identified as having suicidal ideation according to DSM-III-R and the Young Adult Self Report. Suicide attempts, according to DSM-III-R, were found in 26.1% and 2.4% of

victims and controls, respectively. Fergusson et al. (1996b) reported that 10.9% of individuals exposed to contact sexual abuse and 33.3% of those exposed to intercourse reported a suicide attempt at some stage in their life. This is consistent with the findings of Bensley, Van Eenwyk, Spieker, and Schoder (1999) who found a significant association between a reported abuse history and suicidal ideation and behaviour, being stronger when abuse and sexual molestation occurred together, and at higher levels of severity (e.g. suicidal attempts compared to suicidal thoughts).

Briere et al. (1997) also claimed a significant association between a self-reported history of CSA and greater suicidal ideation and attempts: after controlling for demographic variables, CSA was significantly related to both suicide attempts and suicidal ideation. Beautris et al. (1994) found that before adjustment for social and other related factors, individuals exposed to CSA were more than 11 times more likely to attempt suicide than controls. After statistical adjustment for family and social background factors, the risk of suicide attempts decreased to 3.6. In reviewing the files of 200 outpatients, Read, Agar, Barker-Collo, Davies, and Moskowitz (2001) claimed that a history of child abuse was significantly related to past and present suicidality. Of interest was the finding that current suicidality was better predicted by CSA (experienced on average 20 years earlier) than by a current diagnosis of depression. In their meta-analysis, Fergusson and Mullen (1999) calculated significant odds ratios for CSA and suicidal behaviour ranging between 5.0 and 74.0. Finally, Andrews et al. (2002a) reported significant odds ratios of suicide attempts for sexual abuse spanning non-contact (OR 2.8), contact (OR 3.3), and intercourse (OR 5.6), with odds ratios for contact abuse and intercourse remaining significant following adjustment for family dysfunction and other types of abuse (ORs 1.3 and 2.2, respectively).

A prospective study into the association between completed suicide and CSA was conducted in Australia by Plunkett, O'Toole, Swanston, Oates, Shrimpton, and Parkinson (2001). To the researcher's knowledge, this is the only study to date, with the exception of the current thesis, to examine the relationship between completed suicide and CSA. Two cohorts of sexually abused adolescents and young adults, mostly women, who presented to two specialist Child Protection Units following sexual abuse, were independently followed for 18 months and 5 years ( $n = 84$ ) and nine years ( $n = 103$ ) after intake to the study and compared to a control group of non-abused people ( $n = 84$ ) within the community for rates of suicidal attempts and ideation. At follow-up, 32.0% of the abused subjects had attempted suicide and 43.0% had thought about suicide since they were sexually abused. A national death search was conducted for persons in both cohorts who could not be contacted nine years after the abuse to ascertain the number of completed suicides. A history of CSA was found to increase the risk of completed suicide (179.5 per 100,000 person-years, compared to the national suicide death rate of 13.8 to 16.7 per 100,000 person-years for the same age range and time period) (Dudley, Kelk, Florio, Howard, & Waters, 1998). The observed suicide rate in the study was 10.7 to 13.0 times that of the Australian national suicide rate. This finding provides compelling evidence for the negative impact that CSA has on the likelihood of completed suicide in later life.

Mental disorders have been found to be consistent predictors of suicide attempts and completed suicide (Andrews et al., 2002a; Fergusson et al., 2000; Molnar et al., 2001). To the researcher's knowledge, only two recent studies have attempted to control for psychopathology when examining the relationship between CSA and suicidal behaviour (Fergusson et al., 2000; Molnar et al., 2001). Molnar et al. (2001) reported

that among sexually abused children, the odds of suicide attempts were two to four times higher for women and four to eleven times higher for men, compared with their non-abused counterparts. When adjusting for lifetime psychiatric illnesses preceding suicide attempts, the odds ratios were reduced, but most remained statistically significant. Similarly, Fergusson et al. (2000) supported a life-course model of the etiology of suicidal behaviour in which an accumulative exposure to a matrix of social, family, personality, and mental health factors interact to produce increased risk of developing suicidal behaviour. In their 21-year longitudinal study, 28.8% of the sample reported suicidal ideation and 7.5% reported suicide attempts by the age of 21 years. These researchers concluded that mental health problems, including depression, anxiety disorders, substance use disorder and in some instances conduct disorder, in addition to exposure to other negative life events, were significantly associated with the onset of suicidal behaviours.

Taken together, these findings suggest that CSA, in addition to a series of other factors, increases vulnerability to suicidal behaviour in adulthood. The relationship between CSA and suicidal behaviour is, therefore, less than straightforward, and the impact of other lifetime stressors on the development of suicidal behaviour should be considered when interpreting research pertaining to attempted or completed suicide.

## 2.12 Gender differences in long-term psychiatric outcome

Extensive data exists on the long-term effects of CSA on females; however, studies on the long-term effects of the sexual abuse of males are somewhat limited (Spataro, Moss, & Wells, 2001). Few studies have specifically examined gender differences in adult mental health effects of CSA, and the findings of these studies are mixed. Some researchers have posited higher rates of depression, self-harm (Boudewyn & Liem, 1995), alcoholism, and "active psychiatric disorders" (Silverman et al., 1996, 720), in sexually abused women as compared to sexually abused men. Other investigators have suggested that male and female survivors of CSA are equally likely to use tranquilisers and abuse alcohol (Zierler et al., 1991). Yet, other studies report that male victims of CSA are more likely than their female counterparts to experience anxiety and rumination (Hunter, 1991). These inconsistent findings suggest that the relationship between a reported history of CSA and adult psychological adjustment is less than straightforward, and may be influenced by methodological considerations, theoretical complexities, or both.

An early study that directly compared the responses of males and females who were subject to childhood abuse was conducted by Carmen et al. (1984). While this study examined childhood abuse generally, and did not examine differences between types of abuse and behavioural outcomes specifically, the findings are of interest in terms of the potential gender effect on the internalising-externalising behavioural paradigm. In this study, the life experiences of 188 male and female psychiatric patients were reconstructed through in-depth examinations of their psychiatric inpatient records. Eighty cases of childhood abuse were identified with abused patients being more likely

to be female. Admission behaviours for abused males and females were compared. Thirty-three percent of the abused males coped with anger by directing it aggressively toward others, while only 14.0% of the abused females did so. The majority of abused females (66.0%) directed their anger inwards, with these behaviours forming a continuum from passivity and depression to repeated episodes of self-mutilation and suicide attempts. Only 20.0% of the abused males directed their hatred and aggression toward themselves.

Carmen et al. (1984) concluded that the differential responses of males and females to a history of abuse are most probably shaped by patterns of sex role socialisation. It was also perceived that as most of the abused males were adolescents, and if their behavioural response pattern continued into adulthood, they may become inmates in structured environments such as prisons, and may be coerced into treatment only after they have become dangerous and assaultive. In such instances, the treatment focus would be placed on their abusive behaviours, and their histories of victimisation would continue to remain unrecognised. Research should therefore be directed towards recognising how chronic childhood abuse, in particular different types of abuse, constructs the individual's social identity as a victim and how the survival strategies employed by victims may interfere with their social and psychological development.

Consistent with this ideal research strategy, an increasing number of studies have been conducted to examine how males and females differ in their responses to CSA. However, few studies have utilised standardised symptom measures to examine gender differences in the long-term effects of CSA. One exception, conducted by Briere et al. (1988), investigated the possible long-term sequelae of sexual abuse in 40 male and 40



female clients of crisis centers, selected on the basis of self-reported sexual abuse. Males reported less severe and less extensive abuse than females, yet no gender differences in previous suicide attempts or Trauma Symptom Checklist-33 (TSC-33) subscale scores were reported. This finding may suggest that CSA exerts an equal impact on males and females, despite differences in the severity or duration of abuse. An alternative interpretation is that sexual abuse may be more traumatic for males, given that their scores on the TSC-33 were equivalent to those of females who had endured more severe sexual abuse.

Heath et al. (1996) examined several aspects of CSA to determine the "best model" for predicting long-term symptomatology for male and female survivors of CSA. Using a random community sample, respondents completed the Severity of Abuse Scale and the TSC-33. Severity of sexual abuse accounted for the most variation in long-term trauma symptomatology as measured by the TSC-33. Further, the association between the type of abuse and trauma symptomatology was common to both genders. The researchers concluded that because the TSC-33 largely measures internalising types of behaviour, and men's symptomatology seems to be characterised by more externalising behaviours, the TSC-33 may not be a valid representation of their long-term trauma. More research is therefore needed that focuses on externalising behaviours associated with CSA.

Roesler and McKenzie (1994) administered a number of standardised symptom measures to a sample of 169 women and 20 men sexually abused in childhood. Even after controlling for non-sexual trauma, CSA contributed significantly to increased adult symptom levels. A comparison of mean scores on symptom measures of

depression, self-esteem, trauma, sexual dysfunction, post-traumatic stress disorder, and dissociation, demonstrated that men did not differ from women on any of these scales, despite equivalent levels of abuse, except for sexual dysfunction where men scored significantly worse than females. Although this finding of similar long-term outcomes for male and female survivors of CSA may be genuine, it should be interpreted with some caution because of the small sample of men who participated in the study.

A recent study conducted by Gold, Lucenko, Elhai, Swingle, and Sellers (1999) investigated gender differences in the psychological symptomatology of 162 women and 25 men entering an outpatient treatment program for adult survivors of CSA. The Symptom Checklist 90 - Revised (SCL-90-R) was administered to examine gender differences in symptomatology following a reported history of CSA. No gender differences were found on the SCL-90-R raw scale scores. Analysis of T-scores, however, revealed that male survivors of CSA differed more from other males than female survivors differed from other females (Derogatis, 1994). An unverified interpretation of these findings is that CSA is more traumatic for males than females and leads to more damaging psychological outcomes in adulthood (Briere et al., 1988). In particular, the findings that men exhibited more interpersonal sensitivity, depression, and anxiety, warrant further empirical exploration.

Very few studies to date have implemented a prospective cohort design to directly examine gender differences in outcomes of childhood abuse and neglect, rather than almost exclusively depend on the retrospective acknowledgement of a history of CSA in known patient populations and community samples. While some methodologically robust prospective studies have been conducted, these have not specifically examined

gender differences in long-term outcomes of CSA (Fergusson et al., 1996a,b; Silverman et al., 1996). Two informative studies that have implemented a prospective cohort design and have specifically examined how the long-term impact of CSA differs for males and females, have been conducted by Widom and White (1997) and Horwitz et al. (2001). Each of these studies will now be discussed, as they are the only studies, to the researcher's knowledge, with methodology comparable to that of the current thesis.

Widom and White (1997) investigated the impact of childhood abuse and neglect on problem behaviours of substance abuse, crime, and violence. A total of 672 individuals with documented cases of child abuse and neglect approximately 20 years prior were identified and compared to a control group of 518 children matched on age, sex, race, and approximate family social class during the period of the study. The total cohort of 1,190 individuals was interviewed in a double blind procedure. Similar outcomes for rates of comorbidity for substance use and non-violent arrests were reported for both abused and neglected males and females, compared to matched control subjects. However, a number of gender differences were demonstrated in relation to substance abuse and violent arrests. Abused and neglected females, but not males, were at a significantly increased risk of being arrested for violent crimes and having DSM-III-R substance abuse/dependence diagnoses. In addition, compared with control females, abused and neglected females were at greater risk of comorbidity for substance abuse and violent arrests. Given these findings, Widom and White suggested that childhood abuse and neglect might have a more detrimental impact on female, than male, victims. Alternatively, the gender differences may be explained, in part, by a 'saturation effect', whereby childhood abuse and neglect might increase the risk of experiencing

symptoms that might not otherwise occur, rather than exerting an additional effect on these outcomes (Widom, Ireland, & Glynn, 1995; Widom & White, 1997).

A similar study was conducted recently by Horwitz et al. (2001). Again, a prospective cohorts design was implemented whereby subjects with documented cases of child abuse and neglect were interviewed approximately 20 years later. The cohort consisted of 1,151 individuals, of which 641 had been maltreated and 510 had not (control subjects). Consistent with existing literature on gender specific mental health outcomes (Widom, 1984; Horwitz, White, & Howell-White, 1996), it was found that abused and neglected females were more likely than their male counterparts to report lifetime dysthymic symptoms, whereas abused and neglected males were more likely than their female counterparts to report symptoms of alcohol abuse or dependence and APD. Gender anomalous mental health outcomes were exhibited, however. Abused and neglected males were more likely than control males to be dysthymic as adults, whereas abused and neglected females were more likely than control females to have alcohol problems in adulthood. In addition, men and women who were victimised as children reported more stressful life events over their lifetime and were more likely to be raised in families that received welfare, than control subjects. This suggests that much of the perceived impact of childhood abuse and neglect can be explained in part, by the matrix of disadvantage to which abused and neglected children are often subject (Andrews et al., 2002b; Fergusson & Mullen, 1999; Mullen et al., 1993; Romans et al., 1995).

Consistent with the theoretical explanations offered by Widom and White (1997) and Widom et al. (1995), the findings of Horwitz et al. (2001) may be a product of a saturation effect. In particular, elevated rates of alcohol abuse or dependence and dysthymia may not be observed in males and females, respectively, given that these genders already have high rates of these outcomes. Hence, in addition to comparing abused males with abused females, future research should also compare abused males with non-abused males and abused females with non-abused females to examine whether gender anomalous mental health outcomes can be explained, in part, by a 'saturation effect'.

In sum, the conclusions of studies that have examined gender differences directly in the long-term psychiatric outcome of CSA are mixed. While some studies hypothesise that CSA may exert an equal impact on males and females (Briere et al., 1988; Gold et al., 2001; Roesler & McKenzie, 1994), others suggest that CSA may be more traumatic for males given equivalent mental health outcomes but less severe sexual abuse (Briere et al., 1988), and yet others posit that childhood abuse and neglect may be more detrimental to female victims, given the possibility that females are more vulnerable to stressors than males (Widom & White, 1997). Furthermore, while some studies have supported the internalising-externalising behavioural paradigm for female and males, respectively (Carmen et al., 1984; Horwitz et al., 2001), other researchers suggest that internalising measures used to examine the long-term impact of CSA on males may be inappropriate (Heath et al., 1996). Finally, it has been implied that the findings of existing studies may be difficult to interpret, given the possibility of a saturation effect whereby a high pre-existing threshold for an outcome may mask any significant gender differences from emerging (Horwitz et al., 2001; Widom & White, 1997). In any case,

it is clear that increased research efforts need to be directed towards examining gender differences in the long-term impact of CSA, to further elucidate the various theoretical explanations offered to account for current research findings in this area.

### **2.13 Summary of CSA and adult mental health**

Taking all of the above findings into consideration, it is clear that pervasive, rather than highly specific, associations between CSA and psychiatric disorder exist. A summary of the major findings of sections 2.11 and 2.12 are outlined below:

1. A strong relationship exists between CSA, depression, and anxiety, with consistent results between various studies.
2. There is sparse evidence about the relationship between CSA and psychosis or schizophrenia.
3. Mixed evidence exists about the role that CSA has on the development of personality disorders.
4. It appears that CSA increases risk of alcohol and drug use. However, the direct nature of this association is unclear.
5. Research supports a strong association between CSA and risk of suicidal ideation and attempts. Only one study has examined the relationship between CSA and completed suicide, and a significant association was demonstrated.
6. Long-term mental health effects may stem, in part, from a broad range of childhood disadvantages, of which CSA may be only one. As such, a life course trajectory should be taken when considering the impact of CSA on adult mental health.

7. There is extremely limited research that directly, and prospectively, compares the long-term psychiatric outcomes of male and female CSA.

#### **2.14 Hypothetical models concerning the effects of CSA.**

Taken as a whole, the evidence reviewed provides a compelling case for a positive association between CSA and adult psychiatric disorder (Andrews et al., 2002a; Fergusson & Mullen, 1999; Kuyken, 1995). However, current research is at an early stage in understanding the mechanisms by which CSA exerts its effect. Beyond describing the long-term outcomes of CSA, it is difficult to move from description to explanation of adult outcomes (Kuyken, 1995). Nevertheless, several researchers have attempted to explain the associations between CSA and adult adjustment problems. Hypothetical models that have been proposed to explicate the long-term impact of CSA include the child sexual abuse accommodation syndrome (Summit, 1983), post-traumatic stress theories (Lindsberg & Distad, 1985; McLeer, Deblinger, Atkins, Foa, & Ralphe, 1988; Wolfe, Gentile, & Wolfe, 1989), the traumatogenic model (Finkelhor, 1987), the developmental coping model (Cole & Putnam, 1992), the social developmental model (Mullen & Fleming, 1998), attachment theory (Alexander, 1992; Bowlby, 1951), and the transactional model (Spaccarelli, 1994). While the current study does not test these theories specifically, they may assist in explaining the possible mechanisms by which CSA exerts its long-term impact. A brief discussion of relevant theories is therefore warranted.

#### 2.14.1 The child sexual abuse accommodation syndrome

This theory was proposed by Summit (1983) to explain why some sexually abused children delay their disclosure of abuse for lengthy periods, and further, why they often retract allegations of abuse once made. According to Summit, five mutually dependent variables – secrecy, helplessness, entrapment and accommodation, delayed disclosure, and retraction – serve to allow immediate survival of the child within the family. The theory postulates that secrecy, which often accompanies sexual abuse, affects the child's self-concept and leads to difficulties with trust, intimacy, and self-validation. The fact that the perpetrator is often in a trusted position increases this imbalance of power and exacerbates the helplessness of an already dependent child. The child is entrapped in terms of having the power to destroy the family and the responsibility to keep it together. Thus, the child accommodates to the abuse until capable of being independent from the family, and may even retract allegations of abuse in the absence of immediate support and intervention.

While this theory seems plausible for children who are sexually abused within the family, it does not apply to extra-familial abuse where the same issues of trust, dependency, and responsibility may not as pronounced. In addition, although it explains the coping mechanisms of an abused child until the point of disclosure, it does not explain the traumatic state often encountered in victims of CSA.



### 2.14.2 Post-traumatic stress theories

An etiological model that has been used to explain the long-term effects of CSA is the PTSD formulation (Lindberg & Distad, 1985; McLeer, et al., 1988; Wolfe et al., 1989). In essence, this theory postulates that PTSD is an appropriate diagnosis for adult victims of CSA, given the broadly similar pattern of responses for CSA victims and victims of other trauma, such as rape and involvement in disasters. These responses include intense fear, helplessness, a persistent re-experiencing of the traumatic incident, avoidance of stimuli associated with the trauma, a numbing of general responsiveness and symptoms of increased arousal (American Psychiatric Association, 1994). In addition, proponents of PTSD theories believe that accommodating the stress of CSA may lead to a range of dissociative phenomena and disorders in the long-term, which constitute a specific post-abuse syndrome in adult life (Lindberg & Distad, 1985; McLeer, et al., 1988; Rowan, Foy, Rodriguez, & Ryan, 1994; Silverman et al., 1996; Wolfe et al., 1989).

Although CSA victims may report similar symptoms to PTSD, the model is limited as an explanatory framework. Difficulties with sex, relationships, and suicidal ideation, which are common symptom patterns manifested by victims of CSA, do not fit comfortably within the PTSD framework. PTSD is not found in all cases of CSA and it does not account for the maladaptive attributions to self and others that are so often found in sexually abused victims (Nurcombe, 2000). Further, the theory is poorly supported to the extent that victims of CSA are characterised by a heightened vulnerability to a wide range of mental health outcomes, rather than exhibiting a

common syndrome with dissociative symptoms characteristic of PTSD (Fergusson & Mullen, 1999).

In addition, the conceptualisation of the long-term impact of CSA as a specific post-sexual abuse syndrome suggests that CSA is independent of the social circumstances and family background in which it occurs. Hence, the reliance on post-traumatic stress theories potentially impoverishes research aimed at identifying the social and family correlates of CSA that constitute risk factors for such abuse, and which affect the outcomes of abuse, when such knowledge is essential to the development of primary and secondary prevention programs (Mullen & Fleming, 1998).

#### 2.14.3 The traumatogenic model

A comprehensive attempt to explain the progression from CSA to adult outcomes has been made by Finkelhor (1987) who postulated that four causal processes associated with CSA - traumatic sexualisation, betrayal, stigmatisation, and powerlessness - are involved in influencing long-term outcomes. The notion of traumatic sexualisation denotes dysfunctional ways in which exposure to CSA influences a child's sexuality. Betrayal involves the realisation that someone on whom the child is dependent has caused them harm, which may lead to depression, overdependency, impaired judgement in interpersonal relationships, and hostility. Stigmatisation refers to the development of a negative self-view subsequent to the sexual abuse, resulting in low self-esteem, self-harming behaviour, and suicide. Finally, powerlessness involves the child's wishes being ignored and the child experiencing the threat of harm, which may

subsequently entail fear and anxiety, less effective coping skills, and compensatory reactions such as delinquent behaviour.

Finkelhor (1987) argues that the combination of these four traumatogenic dynamics is unique to the experience of CSA. Furthermore, research demonstrates that CSA produces multifaceted long-term effects, rather than a specific sexual abuse syndrome involving clear PTSD outcomes or sexualised behaviour (Paolucci et al., 2001). Consequently, distinct mechanisms and processes, such as those posited by Finkelhor may operate to account for the variety of outcomes.

While this model has provided a conceptually sound systematic framework in which to compare the long-term effects of CSA, it is based on retrospective data, problems of which will be described in Section 2.15. Accordingly, the influence of other life events may serve to mask its causality. In addition, although the model proposed by Finkelhor (1987) is less symptom-bound than the post-traumatic stress model, it directs minimal attention to victims' development preceding the abuse and their pre- and post-abuse social environment. Only in recent years have attempts been made to articulate the long-term effects of CSA within a developmental framework (Cole & Putnam, 1992) and to attend to the interactions between CSA and the victims' overall psychological, social, and interpersonal development (Mullen & Fleming, 1998).

#### 2.14.4 The developmental coping model

More recently, there have been attempts to postulate a developmental theoretical perspective to understanding and explaining the long-term effects of CSA. One particular theory, proposed by Cole and Putnam (1992), suggests that CSA interferes not only with the normal processes of self-definition, integration, and regulation, but also with the development of a sense of trust and security in early relationships. This theory postulates that outcomes of CSA may be dependent upon the developmental stage of the child at the time of abuse. For example, sexual abuse during the preschool years may be dealt with by denial or dissociation, leading to difficulties in integrating personality and forming a coherent sense of self. Sexual victimisation during middle childhood may cause intense guilt or shame, which may interfere with social relationships. Finally, sexual abuse during adolescence may impede identity formation, which may be dealt with by externalisation, including sexual behaviour, substance abuse, or running away. While this model seems theoretically plausible, there is no empirical evidence, to the researcher's knowledge, concerning the attachment patterns of children sexually abused at different developmental stages. Furthermore, while it pays attention to the developmental perspective, which the post-traumatic stress and traumatogenic models do not, it does not explain how the victims' overall psychological, social, and interpersonal functioning interact to produce negative long-term outcomes following CSA (Mullen & Fleming, 1998).

#### 2.14.5 The social-developmental model

The social-developmental model proposed by Mullen and Fleming (1998) posits that CSA contributes to developmental disruptions that lay the foundation for interpersonal and social problems in adult life, which in turn, increase the risk of adult psychiatric problems and disorders. The model proposes that a child's reaction to CSA is dependent on both pre- and post-abuse experiences, which may lead to the development of mental health problems. In particular, a combination of self-esteem, a sense of agency, capacity for intimacy, sexuality, and early family and social experiences, interact to influence the effects of CSA, which are, in turn, influenced by post-abuse experiences including academic and sport success, adult intimacy, and positive relationships with parents. This model proposes that CSA is damaging, and if not always reparable, is open to amelioration and limitation (Mullen & Fleming, 1998). The social-developmental model further suggests that in most cases, the fundamental damage inflicted by CSA is to the child's developing capacities for trust, intimacy, agency, and sexuality, and that many of the mental health problems of adult life associated with CSA are second-order effects.

This social-developmental perspective runs counter to the post-traumatic stress model as it places CSA in the social and familial context in which it occurs, rather than assume independence from these factors. It also suggests that a range of outcomes, both negative and positive, may be possible following CSA, rather than indicate a specific post-abuse syndrome. This model is more encompassing than the traumatogenic and developmental perspectives proposed by Finkelhor (1987) and Cole and Putnam (1992), respectively, as it places CSA in a pre- and post-abuse

developmental and social framework, rather than postulate how the long-term effects of CSA are mediated by the victims' responses to a sexually abusive experience with disregard to how these responses may be influenced by pre- and post-abuse experiences.

Furthermore, the social-developmental model is supported by research, which has demonstrated that the potential effects of CSA are open to amelioration and limitation. It has been found that CSA victims who subsequently have positive experiences where they have succeeded academically, socially, or at sport, whose relationships with their mothers subsequent to the abuse were positive and supportive, and who have been able to establish stable and satisfactory adult intimate relationships, have significantly lowered rates of adult difficulties (Mullen & Fleming, 1998; Romans et al., 1995). Hence, the social-developmental perspective is a sophisticated model in terms of emphasising the impact of CSA on social and interpersonal functioning, and its potential role in mediating the more widely recognised impacts on mental health.

#### 2.14.6 Attachment theory

Bowlby's (1951) theory of attachment has also been used to explain associations between CSA and adult psychological adjustment. Specifically, a reciprocal relationship between parent-child attachment and sexual abuse has been posited: although poor parental attachment may increase the child's risk of CSA, sexual abuse may also lead to poor parent-child attachment. This is evident in the claim of Alexander (1992) who posited that an insecure parent-child attachment may not only

be a risk factor for CSA and exacerbate its effects, but may also complicate the child's ability to terminate the sexual abuse.

Although such theories provide considerable heuristic appeal, their application as mechanisms by which CSA exerts its long-term influence has been criticised (Fergusson & Mullen, 1999). Attachment theory can only be applied to intra-familial abuse. Therefore, it cannot directly examine the link between extra-familial CSA and adult outcome. In addition, as with the developmental coping model (Cole & Putnam, 1992) with which it overlaps, there is a paucity of scientific evidence of the role of attachment theory in adult mental illness.

#### 2.14.7 The transactional model

A model that encompasses most of those discussed above has been posited by Spaccarelli (1994). The transactional model stipulates that the outcome of CSA is determined by a transactional matrix of variables. These include: (a) the effect of the abuse on the child, including the child's appraisals of self and others, and the child's coping strategies; (b) factors preceding the abuse, such as developmental level, attributional style, and familial support; and (c) the effect of the abuse on the child's family and community. To the extent that the environment shapes the child's resources and vulnerabilities, it also interacts with them. Therefore, the risk of poor outcome following disclosure of CSA increases as a function of the stress involved in the abusive experience, and the reaction of the child, family and community to the abuse. This model is thus consistent with the social-developmental model proposed by

Mullen and Fleming (1998) in that it places CSA, and the associated reactions of the victims, in the social and familial context in which it occurs.

As discussed in Section 2.6, the traditional male socialisation process is inconsistent with the perception of 'weakness' associated with being a victim of CSA (Briere et al., 1988; Cermak & Molitor, 1996; Peake, 1989). Males may be discouraged from disclosing their abusive experiences for a variety of reasons, including the male ethos of self-reliance, the possible fear of homosexuality, and social and cultural factors that prevent challenging the engendered nature of CSA where men are typically seen as perpetrators, and women as victims, of sexual abuse (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Scott, 1995; Vander Mey 1988; Young et al., 1994). Throughout this literature review, it has been argued that males have remained sadly undeserved in research into and treatment of CSA, relative to their female counterparts. As such, the self-appraisals and coping strategies of male victims of CSA may be fundamentally different to those of female victims. Further, the implications of male CSA in terms of meaning afforded to the abuse by the family and community, and subsequent outcomes following disclosure, may be different to those involving female victims.

Accordingly, the transactional model proposed by Spaccarelli (1994) may be useful in explaining gender differences in CSA outcomes where different perceptions of male and female sexual abuse exist. However, given that long-term outcomes of CSA are determined by multiple, reciprocal transactions between moderating and mediating variables, and the abusive experience itself, the causal framework of this model may be difficult to empirically validate. Therefore, future prospective studies involving increased numbers of male CSA victims than has been possible to date, and which



control for a host of potentially confounding social and familial factors, may be a useful starting point in testing the validity of this model.

### **2.15 The use of official prospective records in examining gender differences in the nature and long-term impact of CSA: the present study**

The previous discussion has highlighted the need for prospective research to be conducted into gender differences in CSA characteristics and long-term mental health outcomes (Dhaliwal et al., 1996; Holmes et al., 1997; Violato & Genuis, 1993). As discussed previously in Section 2.6, the predominant methodology employed in CSA research, including the use of child protection records and retrospective reports of CSA, may not be appropriate when the primary focus is shifted from female to male victims of sexual abuse. This is the case for a variety of reasons. First, as the sexual abuse of boys is said to occur more frequently outside the home than within the family (Faller, 19889; Tong et al., 1987; Violato & Genuis, 1993), child protection records are less applicable to male than female CSA, given their disproportionate representation of intra-familial abuse (Finkelhor, 1983). Second, as males are less likely to disclose sexual abuse, reliance on retrospective reports that depend on the self-identification as a victim, may further underestimate the prevalence of male CSA relative to female CSA (Horwitz et al., 2001; Peake, 1989; Widom & White, 1997). Given these factors, the sexual abuse of young males may be more likely to come to the attention of official agencies, such as police, through indirect disclosure rather than to the attention of child protective agencies (Calam et al., 1988; Cermak & Molitor, 1996; Levesque, 1994; Reinhart, 1987). Accordingly, the use of official records that represent both social welfare bodies, such as Community Services agencies, and criminal investigators, such

as police, may more adequately represent the distribution of both intra- and extra-familial sexual abuse.

Most studies into the long-term impact of CSA have involved samples of adults who have been required to recall experiences of abusive events in childhood. This almost exclusive reliance on retrospective data to establish the impact of CSA on adult mental health raises issues about the reliability of the findings of these studies (Fergusson et al., 2000; Horwitz et al., 2001; Widom & White, 1997). It has been demonstrated that retrospective reports of CSA may be influenced by errors of recall bias that may, in turn, adversely influence estimates of the prevalence, correlates, and consequences of CSA (Fergusson et al., 2000; Finkelhor, 1994; Horwitz et al., 2001). For example, autobiographical memories of traumatic events such as CSA may be subject to forgetting and reconstruction, and may be influenced by both a conscious reluctance of a respondent to report painful or embarrassing experiences (Femina, Yeager, & Lewis, 1990; Melchert & Parker, 1997), as well as a repression of memories of CSA as a self-protecting mechanism (Holmes, 1990; Loftus et al., 1998; Pope & Hudson, 1995).

It has also been postulated that traumatic events in childhood may not be encoded in memory as objective occurrences, but may change in light of subsequent life events and perceptions of abuse (Horwitz et al., 2001). Therefore, studies that concurrently obtain retrospective reports of CSA and information on current psychological functioning may be confounded in that earlier life events may be interpreted as abusive in an attempt to explain current psychological difficulties (Brown & Harris, 1978; Horwitz et al., 2001). Furthermore, the temporal order, and therefore causality,

between retrospective reports and current psychological functioning, becomes ambiguous and difficult to ascertain.

Prospective studies overcome some of the limitations associated with retrospective investigations and consequently, may be more informative in examining the relationship between childhood abuse and adult mental health problems. The most methodologically robust prospective investigations have been conducted by Widom and White (1997) and Horwitz et al. (2001) who used official, court ascertained, records of childhood abuse and neglect to identify, trace, and interview a cohort of individuals who had been subject to child abuse, neglect, or both, approximately 20 years earlier. The studies conducted by Widom and White and Horwitz and colleagues, described in more detail in Section 2.12, differed from previous prospective investigations (Fergusson et al., 1996b; Silverman et al., 1996) in that not only were males and females compared specifically on a number of outcome measures, but official records of abuse were used to identify the cohort. Official records, generally compiled soon after the reporting of the alleged event, are independent from the self-reports of adult respondents, and consequently, are less likely than retrospective reports to be biased by distortions in event recollections.

Although potentially offering various advantages, the use of official records in examining CSA may nevertheless be subject to systematic biases (Brown et al., 1998; Fleming, 1997; Horwitz et al., 2001; Reinhart, 1987). One of the limitations of this research approach is the issue of representativeness as only the most severe cases of sexual abuse are reported to public agencies (Finkelhor, 1983). Consequently, the extent to which findings are generalisable to unreported or unascertained cases of CSA

may be questioned (Horwitz et al., 2001; Widom & White, 1997). Furthermore, because there is often limited scope to ascertain the reliability of unsubstantiated official reports (Fleming, 1997; Scott, 1995), it remains that such reports are not necessarily confirmed cases of sexual abuse. Other sources of bias may include the extent to which professionals regard CSA as a problem, in particular for boys, and the extent to which third parties are willing to report cases of sexual abuse to official agencies (Holmes & Offen, 1996; Holmes et al., 1997). In addition, many sexual abuse cases may be referred to agencies other than police. Accordingly, it is likely that official statistics, including those dealing with a greater number of male victims, underestimate the true extent of CSA (Brown et al., 1998; Pierce & Pierce, 1985).

Whilst acknowledging the limitations of the use of official reports, and given the current paucity of information pertaining to male sexual abuse, it is argued that official records can provide valuable baseline information about the characteristics of male CSA. If the sexual abuse of males is indeed reported to official agencies, such as police, to a greater extent than agencies dealing with intra-familial abuse (Calam et al., 1988; Cermak & Molidor, 1996; Levesque, 1994; Reinhart, 1987), and by implication, more male victims are included in such records, then examining official records may be a productive starting point in understanding gender differences in the nature of CSA. Such research may then lead to prospective investigations that contrast this identified group of CSA victims with others who have not disclosed in childhood, but who are identified as adults in other contexts, including psychiatric, coronial, and criminal populations (Fergusson & Mullen, 1999; Mullen et al., 1996).

Worthy of particular examination is the relationship between CSA and severe mental illness, including the schizophrenias and the major affective disorders. Furthermore, only one study to date has examined the relationship between a history of CSA and completed suicide (Plunkett et al., 2001). No study into CSA has prospectively investigated a large sample of males and females who were examined for sexual abuse in childhood, whose later treatment by psychiatric services is known, and who have been at risk of suicide and fatal overdose for a number of years. These gaps in existing knowledge form the rationale of the current thesis.

The overall aim of the current study was to examine gender differences in both the nature and long-term impact of CSA. This research objective was achieved by identifying, through official records, a large cohort of males and females who were allegedly sexually abused between 6 and 37 years ago and prospectively linking this cohort to existing databases on psychiatric contacts and completed suicide or overdose. The study was inspired, in part, by the prospective investigations conducted by Widom and White (1997) and Horwitz et al. (2001), but more generally, by the gaps in existing research into gender differences in both the characteristics and adverse long-term consequences of CSA.

## **Chapter 3                      Conceptual overview.**

This chapter provides a conceptual overview of the three studies in this thesis. It is argued here that, although a considerable knowledge base has emerged regarding the epidemiology of CSA, several questions remain. These questions include whether CSA involving males differs in nature and impact to CSA in females, and the extent to which sexual abuse in childhood influences adult mental health problems, given that knowledge of the long-term impact of CSA depends almost entirely on retrospective studies.

The chapter begins by summarising current knowledge and identifying gaps in the literature pertaining to gender differences in CSA. The overall aims of the research and definitions of exposure (CSA) and long-term outcomes (mental health problems, suicide, and fatal overdose) are then presented. Eleven specific research questions are stipulated, relating to each of the three studies in this research. Finally, implications of possible findings pertaining to these research questions are discussed.

### **3.1      Addressing gaps in current knowledge on gender differences in CSA characteristics of long-term outcome.**

The experience ~~and~~ long-term impact of sexual abuse in childhood has received appreciable research attention over the past two decades. However, most of this research has focused on sexually abused females and has depended on correlating adults memories of whether they have or have not experienced CSA with measures of current mental health (Andrews et al., 2002a; Fergusson & Mullen, 1999; Mullen et al.,

1993; Mullen et al., 1994). Although the characteristics of female sexual abuse are fairly well understood, this understanding does not extend to male victims, whose CSA characteristics and long-term consequences have, until recently, been assumed to be similar to their female counterparts (Garnefski & Diekstra, 1997; Holmes et al., 1997; Violato & Genuis, 1993). Furthermore, the majority of studies that have examined gender differences in CSA characteristics have employed samples that have over-represented female victims, such as victims of intra-familial sexual abuse and those who have retrospectively self-reported or disclosed (Finkelhor, 1983). In doing so, these studies have contributed to the underestimation and misconceptions of male CSA.

Chapter 2 reviewed the growing body of literature pertaining to gender differences in the prevalence, characteristics, and long-term outcomes of CSA. This review highlighted that, not only has the research into male CSA clearly lagged behind that of their female counterparts, but also that social attitudes discourage male victims from disclosing their abusive experiences (Peake, 1989; Watkins & Bentovim, 1992). The implications of this relative neglect are that male victims are not directly identified as effectively as their female counterparts, and even when identified, they may not receive appropriate treatment in a predominantly female-focused area (Browne & Finkelhor, 1986; Holmes et al., 1997; Young et al., 1994). Furthermore, as a consequence of this shortfall, the progression of knowledge concerning gender differences in characteristics and adult outcomes of CSA continues to be hampered.

An understanding of how the experience and impact of CSA differs for males and females is important for several reasons. First, knowledge of gender differences in the nature of CSA is a prerequisite to the development and implementation of sound public policy to combat the problem. Second, if a link can be established between CSA characteristics and mental health outcomes of CSA, in males and females separately, specific gender-based treatment approaches can be developed to ameliorate the adverse long-term impact. Finally, models are needed that address the vulnerability and lack of power of all sexually abused children, not just girls. It is only after understanding the disparate reactions of males and females to sexual abuse that mental health professionals will be able to develop specific treatment programs to meet their specific psychological needs.

### **3.2 Overall aim and unique features of the current research**

The overall aim of the current thesis was to examine, in more detail than has been afforded to date, gender differences in CSA characteristics and associated long-term outcomes of psychiatric illness, suicide, and fatal drug or alcohol overdose.

In involving the largest group of CSA victims studied to date, the project has the potential to generate a risk assessment tool that could serve to identify children and adolescents at particular risk of CSA. In addition, academics and practitioners widely recognise that children and adults who have been sexually abused are a population at increased risk of a wide range of behaviour and adjustment problems and long-term mental health outcomes (Andrews et al., 2002a; Berah et al., 2000; Fergusson &



Mullen, 1999; Spataro et al., 2001). However, the exact nature of this association for each gender is yet to be determined.

The prospective design implemented in the current research, with a large cohort of males and females identified as sexually abused approximately 17 years ago, and prior to the manifestation of negative adult outcomes, is different from the vast majority of studies in this area, which depend on retrospective reports of CSA. Some researchers argue that it is not the experience of abuse that is pathogenic in retrospective studies of CSA, but the self-definition in adolescence and adult life as a victim of CSA, which induces the negative outcomes (Horwitz et al., 2001; Widom & White, 1997). Retrospective studies are further confounded by factors including forgotten or non-disclosed abuse, the fallibility of memory which may exaggerate or reconstruct abusive experiences, and the search for meaning and cause in those distressed and disturbed by mental health problems (Brown & Harris, 1978; Femina et al., 1990; Fergusson et al., 2000; Horwitz et al., 2001; Loftus et al., 1998; Melchert & Parker, 1997; Pope & Hudson, 1995).

The present investigation, despite some limitations, is less likely to be influenced by the confounding variables inherent in the vast majority of studies into the long-term impact of CSA. No study into CSA has examined prospectively a large sample of male and female victims of CSA, whose later treatment by psychiatric services is known, and who have been at risk of suicide and fatal overdose for a number of years. Therefore, the findings of prospective studies, such as the present research, may be able to better equip clinicians to identify and treat victims of CSA before they are identified many years later in the psychiatric or coronial systems.

### 3.3 Specific research questions and implications of potential findings

The overall aim of the present thesis was operationalised into 11 research questions, which either specifically examined gender differences in CSA characteristics or long-term outcomes of CSA on mental illness, suicide, and fatal overdose. This research objective is imperative, given that a clear picture into gender differences in both the nature and impact of CSA does not exist, partly because of the small samples of abused males that have been empirically investigated.

Although a comprehensive investigation into the effect of gender on CSA characteristics and outcomes has not yet been completed, several conclusions can be extracted from the extant research and theoretical propositions. For example, research findings into the most frequent age at which children are first victimised vary, with comparable results for males and females within studies, but wide variations across studies (Baker & Duncan, 1985; Dhaliwal et al., 1996; Faller, 1989; Finkelhor et al., 1990; Pierce & Pierce, 1985). Also, several theories suggest that males are more likely than females to be victimised by someone outside the family home, although the rates of intra-familial male sexual abuse may still be higher than those for extra-familial sexual abuse (Faller, 1989; Gordon, 1990; Tong et al., 1987; Violato & Genuis, 1993). Furthermore, researchers have claimed that the duration of CSA may be longer for females than males (Briere et al., 1988; Kendall-Tackett & Simon, 1993). This has been explained in terms of most perpetrators of female victims being family members who have more opportunities for contact with their victims than perpetrators of male victims who are more likely to be friends or strangers. It has also been demonstrated that males are more often victims of more serious abuse,

involving penetration and force (Dhaliwal et al., 1996; Finkelhor et al., 1990; Gordon, 1990; Kendall-Tackett & Simon, 1992; Levesque, 1994; Pierce & Pierce, 1985).

A review of the literature pertaining to the effect of CSA on adult mental health clearly demonstrates that pervasive, rather than highly specific, associations between CSA and adult psychological adjustment exist. Research supports strong associations between CSA and depression, anxiety disorders, and risk of suicidal ideation and attempts, with consistent results across studies (Andrews et al., 2002a; Fergusson & Mullen, 1999). Only one study to date has investigated, and demonstrated a significant association between, the effect of CSA on completed suicide (Plunkett et al., 2001). Moreover, the relationship between CSA and personality disorders is mixed (Barnard & Hirsch, 1985; Bliss, 1984; Bryer et al., 1987; Coons & Milstein, 1996; Goldman et al., 1992; Johnson et al., 1999; Luntz & Widom, 1994; Putnam et al., 1983; Silverman et al., 1996; Weiler & Widom, 1996). Similarly, the direct nature of the demonstrated association of CSA with alcohol and drug use is unclear (Fleming et al., 1997). Minimal research has been conducted into the long-term effect of CSA on schizophrenic disorders, although existing studies suggest that positive symptoms of schizophrenia are related to a history of CSA (Read et al., 2002; Read & Argyle, 1999; Sansonett-Hayden et al., 1987). Finally, a consistent conclusion in most studies is that there is extremely limited research that has directly, and prospectively, compared the long-term psychiatric outcomes of male and female CSA (Carmen et al., 1984; Briere et al., 1988; Gold et al., 1999; Heath et al., 1996; Horwitz et al., 2001; Roesler & McKenzie, 1994; Widom & White, 1997).

The 11 research questions in the current thesis were designed to address gaps and inconsistencies in the literature on CSA characteristics and long-term outcomes. Research questions 1 to 4 were addressed in Study 1, which investigated gender differences in CSA characteristics in a cohort of sexually abused males and females. Research questions 5 to 8 were addressed in Study 2, which examined the association between CSA and adult mental illness. Research questions 8 to 11 were addressed in Study 3, which investigated the impact of CSA on outcomes of completed suicide and fatal drug or alcohol overdose.

It is believed that the analysis of official investigative records in the present study would entail many more male victims than have been studied to date. Consequently, the present study may serve to confirm previous findings, evaluate theoretical propositions, and reconcile inconsistencies in previous research into gender differences in the nature and long-term consequences of CSA. The questions that were addressed in each of the studies will now be presented.

### **3.3.1 Research questions pertaining to Study 1**

Research questions 1 to 4 were addressed in Study 1, which investigated gender differences in victim characteristics, familial composition, the manner in which concerns about sexual abuse were raised, child sexual abuse characteristics, and perpetrator characteristics. The specific research questions, and the theoretical significance of potential findings, will now be presented.

1. How do male and female CSA victims differ on the following victim characteristics?

- a. Stage of sexual development.
- b. Age at the time of the medical examination.
- c. Previous professional agency involvement, including Community Services of Victoria (CSV), and intellectual disability, psychiatric, psychological, and special education services.
- d. Having a protection application in force at the time of CSA.
- e. Exhibiting a physical or intellectual impairment.
- f. Records of previous concerns of physical and sexual abuse.

2. How do male and female CSA victims differ on the following familial composition variables?

- a. Number of adults living with the child at the time of the abuse.
- b. The relationship/s between the child and adult/s residing together.
- c. Parental employment status.
- d. Employment capacity (professional/non-professional) of employed parents.
- e. Type of government benefits received by unemployed parents.

Findings pertaining to victim characteristics (Question 1) and familial composition variables (Question 2) may provide some insight into the disadvantages of sexually abused children (Andrews et al., 2002b; Fergusson & Mullen, 1999; Mullen et al., 1993; Mullen et al., 1994; Mullen et al., 2000; Romans et al., 1995). For example, previous professional agency involvement, including having a protection application

in force at the time of the abuse and having previous concerns of physical or sexual abuse, may indicate the level of dysfunction to which the child was exposed, prior to their alleged sexual abuse (Fergusson et al., 1997; Fergusson & Mullen, 1999; Fleming et al., 1997; Mullen et al., 1996). The presence of either a physical or an intellectual impairment may suggest vulnerability in the child. Similarly, number of, and relationships with, adults living with the child at the time of the abuse may suggest whether the absence of important role models, or instability in the home environment, leads to heightened vulnerability of children to sexual victimisation (Brown et al., 1998; Budin & Johnson, 1989; Fergusson et al., 1996a; Finkelhor et al., 1990; Harter et al., 1988; Monaco & Gaier, 1988; Mullen et al., 1994; Pierce & Pierce, 1985; Vander Mey, 1988). The employment status of parents or caregivers, including type of employment or benefits received, may provide useful information about the socio-economic status of families in which children are sexually abused (Fergusson & Mullen, 1999; Fleming et al., 1997), whereas stage of sexual development or age of onset of abuse may correspond with how the victim is perceived by the offender (Baker & Duncan, 1985; Dhaliwal et al., 1996; Finkelhor et al., 1990; Pierce & Pierce, 1985). For instance, younger pre-pubertal children may be perceived as 'innocent', vulnerable, and readily available relative to older children, while peri- or post-pubertal children may also be seen as vulnerable, but more sexually developed than their younger counterparts. In short, these questions both assess the proposition that the perceived vulnerability of children influences the likelihood of sexual abuse, as well as identify the determinants of this vulnerability.

3. How do male and female CSA victims differ on the manner in which concerns of sexual abuse were raised? Variables of interest include:

- a. Direct disclosure of CSA.
- b. Physical and behavioural indicators of CSA.
- c. Contact with a known sex offender.
- d. The sexual assault of a sibling.

Findings pertaining to the manner in which concerns of sexual abuse were raised (Question 3) may be dependent on both the age and sex of the child involved. Given the social phenomena that discourage acceptance of the victim role by males, direct disclosure may be more common in female than in male victims (Black & DeBlassie, 1993; Dhaliwal et al., 1996; Faller, 1989; Peake, 1989; Vander Mey, 1988; Watkins & Bentovim, 1992; Young et al., 1994). Concerns about male CSA, on the other hand, may be raised through indirect means, such as following the sexual assault of a sibling or contact with a known sex offender (Holmes et al., 1997; Watkins & Bentovim, 1992).

Disclosure of sexual abuse may also be dependent on the age of the child. For example, older victims may be more likely than younger victims to remember their abuse, interpret the event as abusive in light of subsequent life events and meanings of abuse. Accordingly, the self-identification as a victim may be increasingly possible in older victims, thereby increasing the likelihood of disclosure (Brown & Harris, 1978; Horwitz et al., 2001; Widom & White, 1997). The increased cognitive and linguistic capacities of older children may also render them more likely than younger children to communicate the details of their abuse. Older children may also be less

dependent on their parents relative to younger children, and thus, may be less fearful of consequences following disclosure.

Conversely, an increased awareness of the potential consequences of disclosure, such as familial dissolution, may discourage older children from disclosing their sexually abusive experiences. In addition, older children may be more capable of concealing the abuse than their younger counterparts who may not fully appreciate the ramifications of their disclosures, in addition to potentially being more embarrassed of their involvement in the unwanted sexual acts.

In short, this set of questions determines whether or not disclosure is facilitated by age, which in turn influences both the likelihood of self-identification as a CSA victim, as well as cognitive or linguistic capacities, or rather hindered by the perceived consequences of disclosing and shame of having been a victim of sexual abuse.

4. How do male and female CSA victims differ on the following sexual abuse characteristics?
  - a. Type of abuse.
  - b. The time period over which the alleged incidents of CSA occurred.
  - c. Where the abuse occurred.
  - d. The concurrent presence of physical abuse.
  - e. The number of offenders involved in the alleged incident.
  - f. Sex of perpetrator.
  - g. The relationship between the child and perpetrator.



Findings pertaining to CSA characteristics (Question 4) may provide some insight as to how the sexually abusive experience differs between males and females. For example, intra-familial abuse, believed to be more common amongst female victims of CSA and perpetrated by family members, may correspond with a younger age of onset and a longer duration of abuse involving penetration because of increased opportunities for contact by the offender (Briere et al., 1988; Dhaliwal et al., 1996; Faller, 1989; Kendall-Tackett & Simon, 1992). Extra-familial abuse, on the other hand, which may be more characteristic of male rather than female CSA (Gordon, 1990; Faller, 1989; Tong et al., 1987; Violato & Genuis, 1993, may be associated with less parental supervision (Budin & Johnson, 1989; Monaco & Gaier, 1988; Vander Mey, 1988), such as living in a single-parent household and a corresponding absence of an important male role model (Pierce & Pierce, 1985), which may signal a child's vulnerability to the attention of non-relatives or strangers outside the family environment. In addition, although duration of abuse may be shorter and less severe for male victims who are extra-familially abused, the number of offenders involved may be greater, because of the possibility of contact with more people outside the family environment. Male victims may be perceived as more physically resistive than their female counterparts, and as such, they may be more likely to be subjected to concurrent physical abuse (Gordon, 1990). Finally, findings pertaining to perpetrator characteristics may indicate whether traditional perpetrator (male) - victim (female) dyads (Holmes et al., 1997; Scott, 1995) apply in a sample believed to be more representative of both male and female victims of CSA, or rather, whether the likelihood of female-perpetrated abuse is greater when the victim is a male.

### 3.3.2 Research questions pertaining to Study 2

Research questions 5 to 8 were addressed in Study 2, which implemented a prospective-cohort design to examine the long-term outcomes of CSA on adult mental illness and to compare both the prevalence rates and relative risks of mental illness of individuals in the CSA cohort with the comparative Victorian estimated resident population. This research objective was achieved by linking the details of males and females identified in Study 1, and a further 673 older cases, to an already existing database on contacts with Victorian public mental health services, the VPCR. The questions that were addressed include:

5. What is the prevalence of psychiatric diagnoses for male and female victims of CSA?
6. What are the relative risks of male and female victims of CSA utilising public mental health services in adulthood?
7. How does the prevalence of mental illness in sexually abused males and females differ to that of males and females in the general Victorian population?
8. What are the relative risks of male and female victims of CSA displaying certain psychiatric diagnoses in adulthood?

These questions could yield vital theoretic implications, which warrant discussion. If gender differences exist in the types of disorders and outcomes likely to be manifested following CSA, then males and females must react differently to the experience of sexual abuse (Widom & White, 1997). However, the question of whether the severity of abuse and differences in the likelihood of disclosure and subsequent treatment

influence these outcomes needs to be raised (Dhaliwal et al., 1996; Gordon, 1990; Kendall-Tackett & Simon, 1992; Levesque, 1994; Peake, 1989; Vander Mey, 1988). For example, if females endured repeated, more invasive abuse when younger, and no significant gender differences in long-term outcome emerge, then the consequences of CSA may be more detrimental for males, who experienced less severe abuse (Briere et al., 1988). Conversely, if the long-term effects are greater for females, CSA may have a more detrimental effect on them relative to male victims. Alternatively, no significant gender differences in long-term outcomes may suggest that the impact of CSA is equivalent for males and females, despite differences in severity of abuse (Gold et al., 2001; Hunter, 1991; Roesler & McKenzie, 1994).

If childhood disorders are more likely in male than in female victims, it may be that male victims are reluctant to directly seek treatment in adulthood relative to their female counterparts (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Watkins & Bentovim, 1992; Young et al., 1994). This proposition would be evidenced if concerns about the sexual abuse of these males were more likely to be raised in childhood, through indirect means, rather than through direct disclosure (Holmes et al., 1997; Watkins & Bentovim, 1992), and further, if males are more likely to be younger than females at first contact with Victorian public mental health services.

### 3.3.4 Research questions pertaining to Study 3

The final three questions were addressed in Study 3, which investigated the impact of CSA on outcomes of completed suicide and death resulting from drug and alcohol overdose. This objective was achieved by prospectively linking the CSA cohort to the existing Victorian Coroner's database (the VCID), which details all unnatural and sudden deaths in Victoria that required an autopsy to determine cause of death. The following research questions were addressed:

9. What is the prevalence of suicide and death resulting from drug or alcohol overdose for male and female victims in the CSA cohort?
10. How does the prevalence of suicide and fatal overdose in males and females in the CSA cohort differ to that of males and females in the general Victorian population?
11. What are the relative risks of male and female victims of CSA having died from suicide or overdose in later life?

Findings pertaining to research questions 9 to 11 may be useful in further elucidating the relationship between a history of CSA and death resulting from suicide or overdose in later life. To date, only one study has examined the association between a history of CSA and completed suicide, in which a significant association was demonstrated (Plunkett et al., 2001). To the researcher's knowledge, the relationship between CSA and death resulting from drug or alcohol overdose has not been examined. A significant association between CSA and death resulting from suicide or overdose in the current study would be consistent with previous research in

demonstrating that CSA is associated with increased risk of suicidal behaviour (Andrews et al., 2002a; Fergusson & Mullen, 1999; Santa Mina & Gallop, 1998) as well as drug and alcohol abuse (Andrews et al., 2002a; Fergusson & Mullen, 1999). Such a finding would also demonstrate that CSA may have a progressive impact on the relatively infrequent outcome of death resulting from suicide and overdose (Plunkett et al., 2001). A non-significant relationship, on the other hand, would appear to refute this prediction. However, such a finding should be interpreted in light of whether the peak risk period for suicide and fatal overdose had been reached in this sample, rather than be accepted as evidence of no relationship between CSA and these outcomes. A non-significant relationship may also be an artefact of the scarcity of suicides and fatal overdoses in the general population (Fergusson & Mullen, 1999).

Finally, although an interactive relationship between CSA, psychiatric illness, and suicide or fatal overdose was not specifically investigated, a brief qualitative review of whether CSA cases identified on the VCID were also registered on the VPCR may provide useful information about the temporal relationship between these outcomes. This analysis is important given that mental disorders have been demonstrated to be consistent predictors of suicide attempts and completed suicides (Andrews et al., 2002a; Fergusson et al., 2000; Molnar et al., 2001). For example, if most suicide and overdose cases also have a history of psychiatric illness, then it may be that the experience of having a psychiatric illness has a role to play in the development of suicidal behavior. Alternatively, if no psychiatric service contact is registered for individuals identified on the VCID, then it may be that these outcomes are relatively independent of each other.

### 3.4 Summary

This chapter provided a conceptual overview of the three studies in this thesis. Study 1 investigates gender differences in a number of social and family background variables as well as CSA characteristics, in a cohort of sexually abused children. This cohort was used in all studies of the present thesis. Study 2 employs a prospective-cohort design in which the long-term outcomes of CSA on adult mental illness are examined by linking the cohort established in Study 1, and a further 673 older cases, to an already existing psychiatric database on known contacts with public mental health services (the VPCR). Study 3 examines the impact of CSA on outcomes of completed suicide and death resulting from drug and alcohol overdose. This objective is achieved by prospectively linking the CSA cohort to the existing Victorian Coroner's database (the VCID) on cases of sudden and unnatural death that required an autopsy.

The overall aim of these studies was to address gaps in existing research, which not only has focused almost exclusively on sexually abused females but also has depended predominantly on retrospective reports of CSA. The present research sought to address these gaps by implementing a prospective methodology to examine how the nature and long-term impact of CSA differs for a large sample of males and females who were allegedly sexually abused between 6 and 37 years earlier.

## **Chapter 4            Methodology**

This chapter provides the overall methodology of the studies in this thesis. Further methodological details regarding the specific studies are provided in context within subsequent chapters. This chapter begins by presenting the guiding principles of the research and describing the prospective cohorts design that was implemented. The three databases that were used in the research are delineated, along with the respective matching procedures employed. Ethical issues in conducting the present research are discussed. The chapter concludes with an overview of the data-analytic procedures.

### **4.1            Guiding principles of the current research**

The current research was conducted via the analysis of data that were routinely collected during medical examinations of children referred by CSV and the Victorian police following an allegation of sexual abuse. Gender differences in CSA characteristics and background variables were examined. Children identified as sexually abused between 6 and 37 years ago were traced, using name and date of birth, to the current registers of contact with Victorian public mental health services (the VPCR) and Victorian Coronial information (the VCID). These linkages were employed to determine if a history of CSA is associated significantly with both mental health treatment and increased levels of suicide and death resulting from drug or alcohol overdose in adulthood. These databases, described in more detail below, provided comprehensive information from substantial samples.

#### 4.2 Prospective cohorts design

The access to data that were routinely collected at the OFM allowed a database of a broad range of demographic and CSA-specific information to be created. Given that the sexual abuse of males is more likely to be reported to official agencies, such as police, rather than agencies dealing with intra-familial abuse (Calam et al., 1988; Cermak & Molidor, 1996; Levesque, 1994; Reinhart, 1987), this sample of sexually abused children would probably entail more male victims of CSA than would be possible if traditional methodology was employed. Cases identified from the OFM records constituted the CSA cohort, which was linked to existing psychiatric and Coronial databases, between 6 and 37 years after the sexual abuse of each case (mean time difference from CSA to data-matching 16.8 years, SD 10.2).

The implementation of a prospective-cohorts design would seem to entail the strongest methodology from which to examine long-term outcomes. Most studies into gender differences in CSA characteristics and outcomes have employed samples more representative of female, rather than male, victims. In addition, most studies into CSA have implemented retrospective designs, the drawbacks of which were presented in Section 2.15 of this thesis. With the exception of two studies conducted by Widom and White (1997) and Horwitz and colleagues (2001), which implemented prospective designs to examine the impact of childhood abuse and neglect on adult mental health and problem behaviours, the present research is unique in its ability to examine prospectively gender differences in CSA characteristics and adult outcomes of mental illness, suicide, and fatal overdose, in the largest cohort of sexually abused children to have been investigated systematically.



### 4.3 Definitions of exposure and outcomes

#### 4.3.1 Definition of CSA (exposure)

In this thesis, CSA is defined as any unwanted sexual contact, ranging from genital touching to penetration, of a child 16 years of age or younger. No age differential between victim and perpetrator will be employed, given that children can be abused by perpetrators of a similar age (Watkins & Bentovim, 1992). Because medical examinations of children subject to non-contact sexual abuse are most unlikely to occur at the OFM, these experiences will not be considered in the current thesis.

The OFM does not investigate and ascertain cases of sexual abuse. Rather, its role is to provide a medical opinion of whether penetration had occurred. This opinion is often dependent on the period since the last incident of CSA and examination, with medical evidence of CSA more likely to be obtained shortly after sexual assault. Hence, the data in this thesis do not pertain to ascertained cases of CSA, but rather, children examined following an allegation of CSA where the Victorian police, CSV, or both were involved. Accordingly, although not overtly stated in all instances, the term 'alleged' is implied in all references made to victims and perpetrators.

#### 4.3.2 Definition of psychiatric illness, suicide, and overdose (outcomes)

Long-term outcome is operationalised in two ways: adult mental illness and death resulting from suicide and/or overdose. To be deemed as experiencing a mental illness, the person must be registered on the VPCR and had contact with Victorian public mental health services, during the period 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000. Suicide and fatal overdose were defined as self-imposed deaths recorded on the VCID, and operationalised as having occurred between 1<sup>st</sup> July 1991 and 30<sup>th</sup> June 2000. In this study, suicide refers to completed suicide, not suicidal ideation or attempts. Overdose could involve death resulting from the toxic effects of alcohol, drugs, or both.

The treatment and death restrictions were implemented for two reasons. First, the information on both the VPCR and the VCID over the period 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000 is more robust than for earlier years. Second, these restrictions enable the data in the CSA cohort to be compared to (a) a defined population of contacts with Victorian public mental health services and (b) deaths resulting from drug or alcohol overdose reported to the Victorian Coroner during this period, representing the known population of sudden deaths in the State that required an autopsy during this timeframe.

#### **4.4 Available databases**

Data for the studies in this thesis were extracted from three key sources. The first source involved creating two CSA databases from existing OFM file data, which spanned the periods 1967 to 1975 and 1989 to 1995. The data pertaining to the 1989 to 1995 period were used in Study 1, and the data spanning both periods were used in Studies 2 and 3.

The second and third data-sources, the VPCR and the VCID, are administrative databases that enable the analysis of routinely collected data pertaining to contact with Victorian public mental health services (Study 2) and Victorian Coronial information (Study 3), respectively. Each of these data-sources will be described in more detail below.

##### **4.4.1 OFM Child Sexual Assault data: Constitution of CSA cohort**

The CSA data that were used in the present investigation constituted the cohort that was later compared to existing psychiatric and coronial databases. The CSA cohort data involved file records of 1655 children who were brought to the OFM for medical examination following an allegation of sexual assault. The OFM was responsible for providing all forensic medical services in the State of Victoria from 1957 to 1995, and is called upon by Victorian social welfare bodies, such as community services agencies, and police, following a report of sexual abuse to these agencies.

Two classes of information were derived. From 1989 to 1995, information was available on standard forms that the examining OFM doctors were routinely required to complete during a medical examination of CSA (Data source 2). These forms involve a broad range of demographic and CSA-specific information (refer to Appendix). This sample constituted the basis from which Study 1 was conducted.

Given that the majority of this cohort had not yet reached the maximum risk period for adverse adult outcomes, earlier cases were sought, which were available from as early as 1967. The data of a further 835 cases, between the years 1967 to 1975, were coded. For this period, details of the alleged incident of CSA were available on file cards on which demographic information was not recorded (Data source 1). The primary researcher manually entered information from these two data sources (1837 cases) into two separate SPSS data files to enable separate analyses to be conducted.

Following the creation of the two data files, a series of data integrity checks were undertaken with a fellow researcher who was not involved in the initial data coding process<sup>5</sup>. These tests uncovered a number of duplicate cases. Where ambiguities arose in relation to dates (dates of birth or service dates), or names (slightly different spelling, or same first name but different surname, and vice-versa), the respective files were consulted and a collaborative decision was made regarding the inclusion (if the two records pertained to the same person) or exclusion (if the records pertained to separate individuals) of the case. Cases were also excluded if the person was 17 years of age or above at the time of medical examination. For the 1967 to 1975 data, the

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<sup>5</sup> Associate Professor Philip Burgess, Mental Health Research Institute (MHRI), Parkville, Australia.

sample size decreased from 835 to 673 (57 males and 616 females). For the 1989 to 1995 data, the sample size decreased from 1002 to 982 (743 females and 239 males).

The study into gender differences in CSA characteristics (Study 1) involved examining the data of the 982 cases for which Child Sexual Assault Examination forms were completed. The prospective investigation into the long-term effects of CSA on adult mental illness (Study 2) and suicide and fatal overdose (Study 3) involved the creation of a third data-file that combined all 1655 cases of CSA.

#### **4.4.2 The Victorian Psychiatric Case Register (VPCR)**

The VPCR was used in Study 2 to prospectively examine the long-term effects of CSA on adult mental health using the CSA cohort described in Section 4.4.1. This database was established in 1961 and has been described as one of the largest psychiatric databases in the world (Eaton et al., 1992). This database records the contacts of individuals with all public inpatient and community mental health services in Victoria and the diagnosis or diagnoses coded according to ICD-9 (until July, 1998) or ICD-10 diagnostic criteria (World Health Organisation, 1978, 1992).

The register contains the details of approximately 506,000 people who had contact with Victorian public mental health services since establishment of the register in 1961 (Burgess, Joyce, Pattison, & Finch, 1992). The register does not include admissions to inpatient beds in the private sector (6% of total number of beds) or the provision of private outpatient services. Based on criteria for cohort restriction, described later in

Section 4.6, 177,892 individuals had received public mental health treatment between 1<sup>st</sup> July 1991 and 30<sup>th</sup> June 2000 and, of these, 172,573 were born prior to 1<sup>st</sup> July 1991.

Given the number of diagnoses possible according to ICD-9 and ICD-10 criteria, and the low frequencies of some diagnoses in the current study, several diagnoses were collapsed into related categories. The implementation of a diagnostic hierarchy was also necessary to specify a single diagnosis for cases in which multiple diagnoses were recorded. The diagnostic categories implemented, in order of hierarchical rules taking precedence, were as follows:

- (a) Schizophrenic disorders;
- (b) Major affective disorders;
- (c) Organic disorders;
- (d) Other affective and somatoform disorders;
- (e) Anxiety disorders and acute stress reactions;
- (f) Childhood mental disorders;
- (g) Personality disorders;
- (h) Conduct disorders; and
- (i) Alcohol/drug related disorders.

This hierarchy differs from the more usual order in placing organic disorders third rather than first. This position in the hierarchy was implemented because of the researcher's greater interest in the major mental disorders, thereby taking precedence over organic disorders.

Using this diagnostic hierarchy, a case with multiple diagnoses of schizophrenia, major affective disorder, and personality disorder, would be diagnosed as having schizophrenia. Similarly, according to the hierarchy, a case with diagnoses of an anxiety disorder and an alcohol or drug related disorder would be diagnosed with an anxiety disorder.

By linking the CSA cohort to the VPCR, the frequency with which individuals who had been sexually abused between 6 and 37 years ago appear on the register in the various diagnostic categories could be determined. This information was utilised to identify the disorders that are over-represented in CSA victims, relative to the frequencies predicted from the Victorian population.

#### **4.4.3 The Victorian Coronial Information database (VCID)**

The VCID was used to examine the long-term effect of suicide and fatal overdose on victims of CSA. This database details information on all cases of sudden death reported to the State Coroner, who has a statutory responsibility to investigate all deaths that were unexpected, unnatural, violent or resulted from accident or injury, and thus required an autopsy. Other deaths reportable to the coroner include deaths under investigation, where the body is not identified, where the cause of death is unknown, and where the person died whilst held in State care (Ruschena et al., 1998).

The VCID was established as a case management tool, where data pertaining to deaths according to the above-mentioned circumstances in Victoria were entered from as early as 1989. Country cases were entered into the VCID as a matter of process in 1992. Approximately 6,000 deaths are investigated and recorded on the VCID each year, with approximately half of these instances determined by the reporting Coroner as 'natural' deaths and the remaining half being deaths resulting from 'accident', including suicide and overdose. Data on the VCID includes details of death, the Coroner's report, and autopsy results. In combination, these records enable a determination of both cause (e.g. carbon monoxide poisoning) and manner (e.g. suicide) of death.

#### **4.5 Data matching procedures employed**

##### **4.5.1 Data matching procedure for CSA cohort and VPCR (Study 2)**

The CSA and VPCR linkage study was performed via the implementation of a computer-matching algorithm, which was developed independently of the current project for use on the VPCR with a range of other datasets and applications<sup>6,7</sup>. The general principles of the matching algorithm were developed outside of the current study and were based on previous manual work where common errors had been made in the matching process (e.g. an extra or wrong letter in a name, days and months switched in dates).

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<sup>6</sup> Developed by Strategic Data Pty. Ltd. on behalf of the Policy and Analysis group, MHRI

<sup>7</sup> Execution of the linkage study by Strategic Data Pty. Ltd. was jointly funded by Forensicare and the Department of Psychological Medicine, Monash University



The development of the algorithm involved calculating the probability of each of these errors occurring in a file of matches and non-matches and then obtaining scores for each of these possible errors using the formula:  $\log (P \text{ match} / P \text{ non-match})$ . The matching algorithm is adapted specifically for each application for which it is used.

The matching procedure initially involved examining the CSA cohort data for duplicate cases. As previous data integrity checks had been conducted to address this issue, no further pairs were excluded from analysis. Information from Structured Query Language (SQL) scripts<sup>8</sup> extracted potential matches from both the CSA database and the VPCR. Using the matching algorithm, a score denoting the probability that the two records (CSA and VPCR) pertained to the same person (i.e. a match) was calculated for each potential match. Complete psychiatric record details for the 'matches' were then extracted from the register and downloaded into a single file, from which diagnostic information could be derived.

The implementation of the computer algorithm in the matching process allowed CSA cases to be identified prospectively as psychiatric clients with greater certainty than other methods commonly used, such as the retrospective acknowledgement of sexually abusive experiences of current psychiatric clients and the manual linkage of cases to existing databases. The current linkage study is, therefore, the first of its kind in Australia, using the largest victim group to have been studied systematically, and implementing a precise matching algorithm to link these data prospectively to one of the largest psychiatric databases in the world (Eaton et al., 1992).

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<sup>8</sup> An SQL file containing the scores for each of the events that discriminated between matches and non-matches was created independently of the current project. It was this file, which clearly stipulates case inclusion rules, which was adapted and used in the current matching application.

#### 4.5.2 Data matching procedures for CSA cohort and VCID (Study 3)

The CSA and VCID linkage study was performed both manually and via the execution of SQL scripts that were customised for the current study<sup>9</sup>. The principal researcher conducted the manual searches. This process involved accessing the Coroner's records from the Victorian Institute of Forensic Medicine (VIFM)<sup>10</sup> intranet. Given that the researcher found the intranet Coroner's records to be unreliable over time, detecting matches on some days but not on others, it was deemed methodologically necessary to rerun the searches electronically. As such, the SQL scripts were written and executed.

Three different SQL searches were conducted based on identifying information in the CSA cohort and the VCID. They were: (a) exact matching on date of birth and surname; (b) matching on first four characters of surname and date of birth; and (c) matching on exact surname and year of birth. Matching was also conducted on date of birth and sex only, but far too many matches were generated<sup>11</sup>. Only one ambiguity arose where the surname and year of birth were identical but the day and month of birth were dissimilar. In this case, the respective OFM and Coroner's files were consulted, and the 'match' was ignored because it related to separate individuals.

By linking the CSA cohort to the VCID, it was possible to examine whether a history of CSA is related significantly to completed suicide and death resulting from drug or alcohol overdose, where only one previous study has done so for completed suicide.

<sup>9</sup> Customised by Vicky Winship, Informatics Manager, Victorian Institute of Forensic Medicine.

<sup>10</sup> The VIFM took over the role of the OFM in providing forensic medical services to the State of Victoria from 1995.

<sup>11</sup> Relaxing the matching criteria generates many more false 'matches'

#### 4.6 Comparative data

One of the aims of the current research was to compare the prevalences of psychiatric illness, suicide, and fatal overdose in the CSA cohort with expected rates of these outcomes in the Victorian population. To do so, comparison groups were established for Studies 2 and 3. The comparison groups matched the CSA cohort on:

- (a) mental health treatment (Study 2) and suicide or fatal overdose (Study 3) during the period 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000; and
- (b) age, including cases born before 1<sup>st</sup> July 1991.

Similar restrictions were applied to the comparative Victorian estimated resident population groups. These restrictions ensured fair comparisons between those on the VPCR and VCID who were examined for CSA to those in the general Victorian population who were not medically examined for CSA. These comparison groups were restricted by age. Specifically, the oldest person in the CSA cohort was born in 1950 and, hence, older individuals (i.e. born before 1950) were excluded from the Victorian population figures. In addition, individuals born after commencement of the nine-year follow-up period (i.e. 1<sup>st</sup> July 1991) were excluded from population statistics for the nine-year follow-up period (1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000).

Australian Bureau of Statistics (ABS) population data for the nine-year follow-up period were obtained for 44-year age bands<sup>12</sup> (0 to 44 years, 5 to 49 years, and 10 to 54 years). For each of the first, second, and third years of the nine-year follow-up (1992 to 1994), the estimated resident population, as at 30<sup>th</sup> June, for males and females aged 0 to 44 years was obtained. For the fourth to eight years of follow-up (1995 to 1999), the population data for males and females aged 5 to 49 years were obtained. Similarly, in the final year of the follow-up period (2000), population data for males and females aged between 10 and 54 years were obtained. The population data by age bands were comparable to the increasing age range of the CSA cohort in each of the nine years of follow-up.

A growth factor, which could be negative, was then calculated for each year and added to the final year population to obtain a single figure for the total Victorian estimated resident population (3,139,745) as well as for males (1,566,972) and females (1,572,773) separately, for the nine-year follow-up period. These population figures were used as comparative follow-up data.

#### **4.7 Summary of overall research design**

Figure 4.1 presents the overall research design for all studies in the current investigation.

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<sup>12</sup> These statistics were readily available from the ABS. While the age restrictions that were applied to the comparison groups constituted a 41-year age range (1950 – 1991), the closest available population data was for 44-year age bands. Hence, these data were consistently applied for all comparative analyses

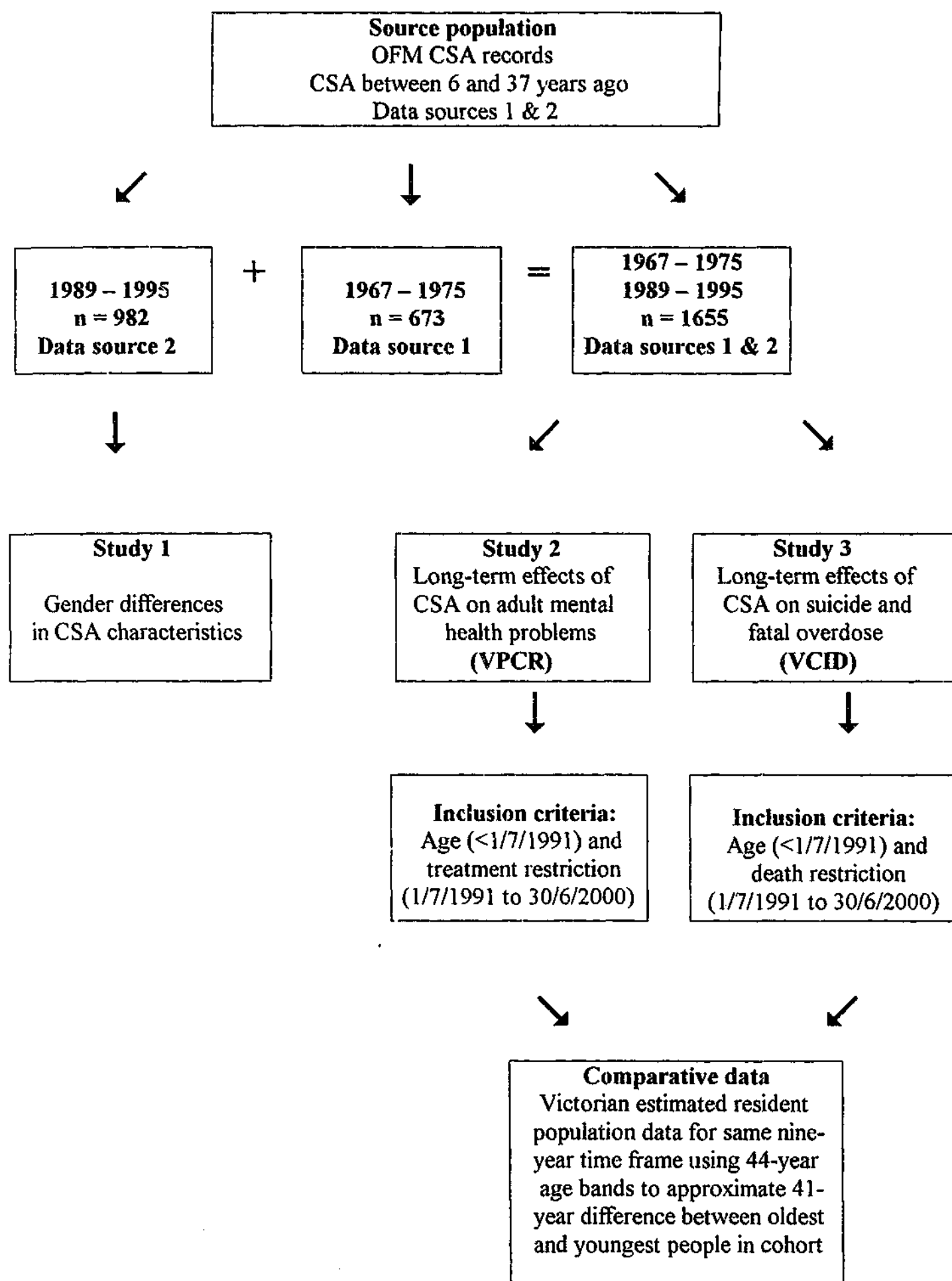


Figure 4.1

Overall research design.

#### 4.8 Ethical issues

Ethics approval was granted by three independent bodies: the Monash University Standing Committee on Ethics in Research on Humans (for all phases of the project), and the ethics committees of the Department of Human Services (for VPCR data matching) and the VIFM (for access to OFM files and VCID data matching).

The main potential risk to subjects was a breach of privacy and confidentiality because of the researcher's access to individual, routinely collected, administrative records of a personal nature without their consent. In a case-register study of this magnitude, where subjects are not directly contacted, recruited, and subsequently interviewed, it is not feasible to obtain the informed consent of all potential cases. As such, the current study was undertaken with rigorous regard for the privacy and confidentiality of individuals included in the cohort. Several safeguards were implemented to ensure the privacy and confidentiality of cases.

To ensure confidentiality, names were removed from each record immediately following identification. Individuals were identified only by their record number associated with the database (OFM, VPCR, or VCID) in all of the studies conducted. A separate data file, which was stored on a different computer to the other databases, contained only the names of the CSA cases and their record numbers. This record of names was deemed necessary to assist in subsequent data matching and to assist in file retrieval in the event of data ambiguities.

The database created from the CSA files was held on a password-protected computer in a locked office, to which only the primary researcher had access. Paper documents, such as the matching procedure results, were filed in locked cabinets at both the VIFM and the Victorian Institute of Forensic Mental Health. Only the principal researcher could access these cabinets.

Given the safeguards that were implemented to ensure the privacy and confidentiality of cases, the risks to subjects were deemed relatively small, while the benefits to the community are potentially appreciable. CSA is a major public issue, which has considerable emotional and economic costs. In examining such a large CSA victim group, the current study has the potential to generate a risk assessment tool that could serve to identify children, both male and female, at particular risk of CSA. In addition to its descriptive value, the prospective utility offered by the current research should not be overlooked in the context of the paucity of studies that have specifically examined gender differences in adult outcomes of CSA. As such, while privacy issues relevant to the current investigation are in no way underestimated, it is believed that with the implementation of appropriate safeguards to ensure privacy and confidentiality, potential benefits to the public outweigh the potential risk to subjects. It is on this basis that the three relevant ethics committees granted ethics approval for the current investigation to be conducted.

## **4.9 Data analysis**

### **4.9.1 Data entry**

The principal researcher manually entered data from each Child Sexual Assault Examination form ( $n = 1002$ ) and CSA file card ( $n = 835$ ) into Statistical Packages for Social Science (SPSS) Release 10.0. With the exception of ages and dates, all variables were categorical.

### **4.9.2 Data analysis**

Data analysis was undertaken predominantly using SPSS Version 10. For Study 1, the extent to which continuous variables, such as age, differed between two groups, such as males and females, was analysed using t-tests. Chi-square analyses were conducted to determine whether the distinction of some categorical variable, such as type of abuse, varied as a function of another categorical variable, such as gender. The Fisher's exact test was used when one or more cells in the  $2 \times 2$  cross-tabulations had an expected count of less than five. In such instances, the probability value of the Fisher's exact test (e.g.  $p = .03$ ), rather than the chi-square data, has been provided. The exceptions were cases where further collapsing of variables would lead to a significant loss of information and as such, could not be collapsed into a  $2 \times 2$  design. In such instances, footnotes have been provided to indicate that the sampling distribution had departed from continuity.



For Studies 2 and 3, chi-square goodness of fit tests were conducted to examine both gender differences in the predicted and observed frequencies of outcomes and differences between the CSA cohort and the Victorian comparative samples for each outcome. Chi square analyses and t-tests were used to examine the association between categorical and continuous variables, respectively. STATA Release 6 for Windows (Stata, 2000) was used to obtain relative risks for mental health treatment, psychiatric diagnoses, as well as suicide and fatal overdose. For all analyses, the significance level was set at  $\alpha = 0.05$ .

## **Chapter 5: Gender differences in child sexual abuse characteristics**

### **5.1 Overview**

This chapter describes Study 1, which was conducted to examine gender differences in CSA characteristics in a cohort of sexually abused males and females. The results are based on the data of 982 OFM Child Sexual Assault examination forms (refer to Appendix) that were completed by the examining doctor at the time of the 982 sequential medical examinations at the OFM following an allegation of CSA by social welfare agencies, the police, or both.

The results presented in this chapter pertain to:

- (a) victim characteristics;
- (b) familial composition;
- (c) the manner in which concerns about sexual abuse were raised;
- (d) characteristics of CSA experiences; and
- (e) perpetrator characteristics.

### **5.2 Results**

#### **5.2.1 Victim characteristics**

A total of 982 children (743 females and 239 males) were medically examined at the OFM following an allegation of CSA. The mean age at examination for females and

males, respectively, was 7.0 (SD = 3.8) and 7.1 years (SD = 3.9) ( $t_{(980)} = -.47, p = .64$ ). Most children were pre-pubertal at examination (78.0%), followed by peri- and post-pubertal (19.9% and 2.1%, respectively). Males were more likely to be pre-pubertal than females, and females more likely than males to be peri- and post-pubertal at examination ( $\chi^2_{(2)} = 8.40, p = .02^{13}$ ).

CSV were involved in 27.2% of cases at the time of examination, and protection applications were in force for 12.6% of females and 17.8% of males. No gender differences in either having CSV involvement ( $\chi^2_{(1)} = 0.16, p = .69$ ) or a protection application in force ( $\chi^2_{(1)} = 2.82, p = .09$ ) at the time of examination were exhibited. Gender comparisons did not reveal any significant differences in weight of the child at the time of examination ( $\chi^2_{(4)} = 6.79, p = .15$ )<sup>14</sup>. Similarly for height, gender differences were not demonstrated ( $\chi^2_{(4)} = 9.00, p = .06$ )<sup>15</sup>.

The OFM conducts child sexual assault examinations at several sites in Victoria. Table 5.1 presents frequencies and percentages of examinations at each of these sites during the years 1989 to 1995.

<sup>13</sup> The sampling distribution of  $\chi^2$  for the data has departed from continuity as one cell had an expected count less than 5, where the minimum expected count is 4.67.

<sup>14</sup> Two cells had an expected count less than 5 where the minimum expected count is 4.12.

<sup>15</sup> One cell had an expected count less than 5 where the minimum expected count is 4.55.

Table 5.1

Frequencies and percentages of sites at which examinations were conducted

Site of examination	n <sup>#</sup>	%
Office of Forensic Medicine	860	88.2
Monash Medical Centre	67	6.9
Royal Childrens' Hospital	13	1.3
Queen Victoria Hospital	1	0.1
Bellarat Base Hospital	15	1.5
Austin Hospital	6	0.6
Youth Training Centre	1	0.1
Royal Women's Hospital	3	0.3
Western Hospital	1	0.1
Traralgon Hospital	2	0.2
Wangaratta Hospital	6	0.6
Preston and Northcote Community Hospital	1	0.1
Total	975	100.0

<sup>#</sup> Data were unavailable for 7 cases

Twenty-one cases (2.4%) had a significant physical impairment at the time of examination (14 females and 7 males). The proportion of cases with a physical impairment did not differ between the two genders ( $\chi^2_{(1)} = 1.05$ ,  $p = .31$ ). Similarly, gender differences were not demonstrated in the likelihood of having an intellectual impairment ( $\chi^2_{(1)} = 1.75$ ,  $p = .19$ ), with 4.9 % of females and 7.3% of males deemed to be intellectually impaired.

Table 5.2 presents frequencies and percentages of previous professional agency involvement. The majority of children brought to the OFM for medical examination following an allegation of CSA had previously been involved with CSV. Overall, no significant gender differences in previous professional agency involvement were demonstrated ( $\chi^2_{(1)} = 3.52, p = .06$ ). However, when data were dichotomised by type of professional agency, males were significantly more likely than females to have had previous Intellectual Disability Services involvement ( $p = .01$ ). No other gender differences were demonstrated.

Table 5.2

Frequencies and percentages of previous professional agency involvement.

Previous Professional Agency Involvement	n <sup>#</sup>	% <sup>£</sup> (n = 859)
Community Services of Victoria (CSV)	174	20.3
Intellectual Disability Services	12	1.4**
Special Education Services	13	1.5
Psychiatric Services	11	1.3
Psychological Services	12	1.4
Paediatric Hospital	29	3.4
No previous professional agency involvement	609	70.8
Total	859	100.0

\*\*  $p = 0.01$

# Data were unavailable for 123 of 982 cases

£ More than one category may apply Therefore, the percentages do not total 100

Previous concerns of physical abuse were recorded for 6.7% of females and 8.5% of males. These differences were not statistically significant ( $\chi^2_{(1)} = .79, p = .38$ ). Previous concerns of sexual abuse, on the other hand, were significantly more likely to have occurred for females (14.9%) than males (8.6%) ( $\chi^2_{(1)} = 5.24, p = .02$ ).

### 5.2.2 Familial composition

Three hundred and seventeen children (39.2%) were living with one adult at the time of the alleged incident of sexual abuse, 449 (55.5%) were living with two adults, and 43 (5.3%) were living with more than 2 adults at the time of the incident. The likelihood of living in a nuclear family arrangement did not differ according to gender ( $\chi^2_{(1)} = 3.68$ ,  $p = .06$ ), although the proportion of females living with both biological parents (34.4%) exceeded the proportion associated with their male counterparts (27.0%). Furthermore, males were significantly less likely than females to be living with two adults at the time of the abuse ( $\chi^2_{(2)} = 7.13$ ,  $p = .03$ ).

Frequencies and percentages of adults living at home at the time of the alleged incident are presented in Table 5.3. Males who were examined for CSA were significantly less likely than females to be living with their biological father (33.2% vs 41.6%, respectively,  $\chi^2_{(1)} = 4.42$ ,  $p = .04$ ), whereas females were more likely than males to be living with a family member other than a biological or stepparent (12.1% vs 4.6%, respectively,  $\chi^2_{(1)} = 9.03$ ,  $p = .003$ ).

Table 5.3

Frequencies and percentages of adults living with the child at time of the alleged CSA

Adults residing with child at time of abuse	n <sup>#</sup>	% of sample (n = 809) <sup>£</sup>
Biological mother	721	89.1
Biological father	320	39.6
Nuclear family (biological mother and father)	264	32.6
Defacto/step father	150	18.5
Defacto/step mother	19	2.3
Other family	83	10.3
Other non-family	57	7.0

<sup>#</sup> Data were unavailable for 173 of 982 cases

<sup>£</sup> More than one category may apply. Therefore, the percentages do not total 100.

Two hundred and sixty three children (36.7%) were living with another child at the time of the incident, 25.2% were living with two or more children, 22.6% were living with 3 or more children, and 15.5% were the only child in the household at the time of the incident. The number of children living at home did not vary as a function of gender ( $t_{(715)} = .43, p = .67$ ). In 48.4% of cases, the child was first born in his/her family, second born in 32.3% of cases, and third born or later in 19.3% of cases. Child's birth position did not differ between males and females ( $t_{(707)} = .29, p = .77$ ).

The family's primary income earner was employed in 46.2% of cases and unemployed in 53.8% of cases. No significant relationship between sex of child and caregiver employment status were demonstrated ( $\chi^2_{(1)} = 1.88, p = .17$ ). Of the cases where the

child's primary caregiver was employed<sup>16</sup>, 20.1% were employed in a professional capacity, whereas the remaining 79.9% were employed in an unprofessional role. No association between sex of child and type of employment was demonstrated ( $\chi^2_{(1)} = .40, p = .53$ ).

Table 5.4 presents the government benefits received by the unemployed sample. Almost half (49.7%) of the primary income earners in the children's families were in receipt of single/supporting parent pensions at the time of the child's examination, while over one third (37.2%) were receiving unemployment benefits. No significant gender differences in type of benefit received by family's primary income earner were demonstrated ( $\chi^2_{(9)} = 9.09, p = .43$ )<sup>17</sup>.

Table 5.4

Frequencies and percentages of benefits received by the unemployed sample

Benefit	n	% (n = 320) <sup>#</sup>
Unemployment benefits	119	37.2
Invalid pension	14	4.4
Single/supporting parent pension	159	49.7
Sickness benefits / disability pension	12	3.8
Old age pension / retired	8	2.5
Widow's pension	3	0.9
Family allowance	1	0.3
Carer's pension	1	0.3
Workcare	1	0.3
Student benefits	2	0.6

<sup>#</sup> Benefit information not available for 28 of the 348 unemployed cases.

<sup>16</sup> Data were not available for 50 of the 299 cases whose primary caregivers were employed.

<sup>17</sup> This result is tenuous as 13 cells in the crosstabulation had an expected count less than 5 where the minimum expected count is 0.25.



### 5.2.3 The manner in which concerns of CSA were raised

Data were available for 814 of the 982 cases. Almost three-quarters (73.2%) of the children disclosed their alleged incident of sexual abuse compared to 26.8% who did not disclose. An independent samples t-test revealed that children who disclosed were significantly more likely to be older than those who did not disclose ( $t_{(437.22)} = -9.95$ ,  $p < .001$ ), with the mean age of those who did and did not disclose being 7.7 (SD 3.8) and 5.0 (SD = 3.3) years, respectively.

Table 5.5 presents frequencies and percentages of male and female disclosures. There were more disclosures than not for both males and females. The proportion of females who disclosed was greater than that of males (74.9% versus 68.1%), although this disparity did not achieve significance ( $\chi^2_{(4)} = 3.59$ ,  $p = .06$ ).

Table 5.5

Frequencies and percentages of male and female disclosures.

Disclosure	M	% n=204	F	% n=610	Total	% n=814 <sup>#</sup>
Yes	139	68.1	457	74.9	596	73.2
No	65	31.9	153	25.1	218	26.8

<sup>#</sup> Data were unavailable for 168 of 982 cases

The frequencies and percentages of the sources to which males and females disclosed are presented in Table 5.6. Children most often disclosed their alleged sexual abuse to their parents before they did so to others. Similar rates of disclosure to siblings, other

family members, and other individuals were reported for males and females. Disclosures to peers/friends/'other' were significantly more likely for females than males. In contrast, males were significantly more likely than females to disclose to a professional source ( $\chi^2_{(4)}=16.02, p = .003$ ).

Table 5.6

Frequencies and percentages of disclosure sources as a function of gender of victim

To whom did child disclose?	M	% n=146	F	% n=503	Total	% n=649 <sup>#</sup>
Parent	99	67.8	306	60.8	405	62.4
Sibling	5	3.4	22	4.4	27	4.2
Other family member	9	6.2	43	8.6	52	8.0
Professional	28	19.2 <sup>***</sup>	63	12.5	91	14.0
Peer/ friend/'other'	5	3.4	69	13.7 <sup>***</sup>	74	11.4

<sup>\*\*\*</sup>  $p < .01$

<sup>#</sup> Data on disclosure sources were available for 649 cases, despite the frequency of disclosure (n = 596) in a previous analysis (Table 5.5)

In addition to disclosure, concerns about sexual abuse were manifested through other avenues, including physical and behavioural indicators, contact with a known sex offender, a sibling being sexually assaulted, and 'other'. These data are presented in Table 5.7.

Table 5.7

The relationship between gender of victim and the manner in which concerns of sexual abuse were raised.

How were concerns of sexual abuse raised? <sup>#</sup>	M	% n=219	F	% n=666	Total	% n=885 <sup>£</sup>
Physical indicators	17	7.8	55	8.3	72	8.1
Behavioural indicators	39	17.8	101	15.2	140	15.8
Contact with known sex offender	23	10.5 <sup>***</sup>	34	5.1	57	6.4
Sexual assault of sibling	29	13.2 <sup>***</sup>	41	6.2	70	7.9
Other	19	8.7	51	7.7	70	7.9

<sup>\*\*\*</sup>  $p < .001$

<sup>#</sup> Data were unavailable for 97 of 982 cases

<sup>£</sup> More than one category may apply, as children who disclosed may have had more than one indicator of CSA. Therefore, the percentages do not total 100

Although the proportions of males and females whose concerns of sexual abuse were manifested by physical and behavioural indicators as well as 'other' were similar, the proportions of males whose concerns of sexual abuse were raised following previous contact with a known sex offender (10.5%) and the sexual assault of a sibling (13.2%) were more than double the proportions of females for both of these measures (5.1% and 6.2%, respectively). These differences were significant ( $\chi^2_{(1)} = 7.97$ ,  $p = .01$  for previous contact with a known sex offender and  $\chi^2_{(1)} = 11.36$ ,  $p = .001$  for the sexual assault of a sibling).

#### 5.2.4 Characteristics of sexual abuse experiences of males and females.

The children who were medically examined for CSA at the OFM experienced a range of abusive behaviours. These behaviours were categorised as: non-genital contact, such as touching breasts or kissing; genital contact of child, such as touching or oral sex; contact of offender by child; and penetrative CSA, including attempted or completed penile/digital penetration. Table 5.8 presents the frequencies and percentages by gender of the type of abusive acts experienced by the sample.

Table 5.8

The relationship between gender of victim and types of abusive acts experienced

Abuse experience	M	% n=147	F	% n=505	Total	% n=652 <sup>#</sup>
Non-genital contact	0	0.0	1	0.2	1	0.2
Genital contact of child	27	18.4 <sup>***</sup>	11	2.2	38	5.8
Contact of offender	4	2.7	5	1.0	9	1.4
Penetrative CSA	116	78.9	488	96.6 <sup>***</sup>	604	92.6

\*\*\*  $p < .001$

<sup>#</sup> Data on type of abuse were not available for 330 of the 982 examined children

As can be seen from Table 5.8, the majority of the sample experienced penetrative CSA (92.6%). This finding could, however, have arisen because more serious cases of CSA involving penetration are likely to be brought to the OFM for medical examination following an allegation of CSA. A chi-square revealed that type of abuse varied with gender ( $\chi^2_{(3)} = 57.82, p < .001$ )<sup>18</sup>. Males were more likely than females to have been

<sup>18</sup> Three cells had expected count less than 5, where minimum expected count is 0.23.

subjected to genital touching by the offender, and females were more likely than males to have experienced attempted/completed penetration.

Frequencies and percentages of whether the abuse was penetrative or non-penetrative are presented in Table 5.9. Although both males and females were more likely to have been subjected to penetrative, than non-penetrative, CSA (78.8% and 21.2% for males, and 96.6% and 3.4% for females, respectively), females were more likely than males to have experienced penetrative CSA ( $\chi^2_{(1)} = 52.94, p < .001$ ).

Table 5.9

Frequencies and percentages by gender of penetrative and non-penetrative abuse

Abuse experience	M	% n=147	F	% n=505	Total	% n=652 <sup>#</sup>
Non-penetrative CSA	31	21.1 <sup>***</sup>	17	3.4	48	7.4
Penetrative CSA	116	78.9	488	96.6 <sup>***</sup>	604	92.6

<sup>\*\*\*</sup>  $p < .001$

<sup>#</sup> Data were unavailable for 330 of the 982 children who were examined.

The period over which the alleged incidents of sexual abuse occurred were defined as one incident only, less than one week, one week to three months, three months to one year, and greater than one year. Data are presented in Table 5.10.

Table 5.10

The duration of abuse for male and female CSA victims

Time period	M	% n=114	F	% n=369	Total	% n=483 <sup>#</sup>
One incident only	31	27.2	114	30.9	145	30.0
Less than one week	12	10.5	38	10.3	50	10.4
1 week to 3 months	22	19.3	65	17.6	87	18.0
3 months to 1 year	40	35.1	130	35.2	170	35.2
Greater than 1 year	9	7.9	22	6.0	31	6.4

<sup>#</sup> Data were unavailable for 499 of the 982 cases examined at the OFM

The majority of participants' abuse lasted from between three months to one year, followed by one incident only, one week to three months, less than one week, and greater than one year. Males and females did not differ on the time period over which the incidents of CSA were alleged to have occurred ( $\chi^2_{(4)} = 1.05$ ,  $p = .90$ ).

Abuse was defined as having occurred in the child's home or not. Table 5.11 presents the frequencies and percentages by gender of where the incidents of CSA occurred. Although the majority of children (60.9%) were allegedly abused in a place other than their home, females (41.7%) were significantly more likely than males (30.8%) to be abused in their home ( $\chi^2_{(1)} = 5.95$ ,  $p = .02$ ).

Table 5.11

The relationship between gender of victim and place of abuse

Where CSA occurred	M	% n=156	F	% n=499	Total	% n=655 <sup>#</sup>
Child's home	48	30.8	208	41.7 <sup>*</sup>	256	39.1
Other	108	69.2 <sup>*</sup>	291	58.3	399	60.9

<sup>\*</sup> p < .05

<sup>#</sup> Data were unavailable for 327 of the 982 cases

Frequencies and percentages of number of offenders as a function of gender are presented in Table 5.12. One offender was involved in 96.8% of cases, two offenders were involved in 2.6% of cases, and more than two offenders were involved in 0.6% of cases. Gender differences were not demonstrated ( $\chi^2_{(2)} = 2.54$ ,  $p = .28$ )<sup>19</sup>.

Table 5.12

The relationship between gender of victim and number of offenders.

No. of offenders	M	% n=204	F	% n=639	Total	% n=843 <sup>#</sup>
One offender	194	95.1	622	97.3	816	96.8
Two offenders	8	3.9	14	2.2	22	2.6
> two offenders	2	1.0	3	0.5	5	0.6

<sup>#</sup> Data were unavailable for 139 of 982 cases

<sup>19</sup> Two cells had an expected count less than 5, where the minimum expected count is 1.21.

Concurrent presence of physical abuse was recorded for 38.7% of cases where data were available. Table 5.13 demonstrates that males were significantly more likely than females to have been concurrently subjected to physical and sexual abuse ( $\chi^2_{(1)} = 12.01, p = .001$ ).

Table 5.13

The relationship between gender of victim and concurrent presence of physical abuse

Concurrent presence of physical abuse	M	% n = 18	F	% n = 44	Total	% n = 62 #
No	5	27.8	33	75.0***	38	61.3
Yes	13	72.2***	11	25.0	24	38.7

\*\*\*  $p < .001$

# Data on concurrent presence of physical abuse available for 62 of the 982 cases

### 5.2.5 Perpetrator characteristics

Data regarding sex of offender were available for 815 cases. Male offenders were involved in 98.4% of cases, and female offenders were involved in 1.6% of cases. Table 5.14 presents the frequencies of male and female offenders. Sex of offender was independent of sex of victim ( $p = .75$ ).



Table 5.14

The relationship between gender of offender and gender of victim

Sex of offender	M	% n=200	F	% n=615	Total	% n=815 <sup>#</sup>
Male	198	99.0	604	98.2	802	98.4
Female	2	1.0	11	1.8	13	1.6

<sup>#</sup> Data were unavailable for 167 of 982 cases

The frequencies and percentages by gender of whether or not the offender was related are presented in Table 5.15. Offenders were related (intra-familial CSA) in 53.9% and unrelated (extra-familial CSA) in 46.1% of cases. Females were significantly more likely than males to have been abused by a relative (56.8% and 45.2%, respectively,  $\chi^2_{(1)} = 8.93, p < .01$ ).

Table 5.15

The relationship between gender of victim and intra-/extra-familial CSA

Offender related or not?	M	% n = 219	F	% n = 669	Total	% n = 888 <sup>#</sup>
Yes	99	45.2	380	56.8 <sup>**</sup>	479	53.9
No	120	54.8 <sup>**</sup>	289	43.2	409	46.1

<sup>\*\*</sup>  $p < .01$

<sup>#</sup> Data were unavailable for 94 of 982 cases

Table 5.16 presents the specific relationship of offenders to child, for each gender separately. Children were abused by a stranger or non-relative in 46.1% of cases, a biological parent in 22.2% of cases, another family member in 13.7% of cases, a stepparent in 13.3% of cases, and a biological grandparent in 4.7% of cases. Females were significantly more likely than males to have been abused by a biological grandparent or stepparent, and males being more likely than females to have been abused by a non-relative ( $\chi^2_{(5)} = 14.37, p = .01$ ).

Table 5.16

The relationship between offender and victim as a function of gender of victim

Relationship of offender to child #	M	% n=219	F	% n=669	Total	% n=888
Biological parent	42	19.2	155	23.2	197	22.2
Step- / defacto parent	22	10.0	96	14.3**	118	13.3
Biological grandparent	4	1.8	38	5.7**	42	4.7
Other family	31	14.2	91	13.6	122	13.7
'Stranger' / unknown	29	13.2	82	12.2	111	12.5
No relation	91	41.6**	207	30.9	298	33.6

\*\* p = .01

# Data were unavailable for 94 of 982 cases

Table 5.17 presents frequencies and percentages of the place of abuse by the relationship of the offender to the victim. Abuse occurred within the home in 39.1% of cases, while the remaining 60.9% involved abuse outside the home. Where the abuse occurred varied as a function of relationship of offender to child ( $\chi^2_{(4)} = 33.85, p < .001$ ). Stepparents were more likely to abuse their children within the home than outside the home, and biological grandparents and strangers/unrelated offenders were more likely to abuse their victims outside the home, than within the home.

Table 5.17

The place of abuse by relationship of offender to victim

Relationship of offender to child <sup>#</sup>	Within the home (n = 256 )	%	Outside the home (n = 399)	% (n=655)
Biological parent	51	19.9	92	23.1
Step-parent	63	24.6 <sup>***</sup>	36	9.0
Biological grandparent	7	2.7	27	6.8 <sup>***</sup>
Other family	40	15.6	59	14.8
Stranger / unrelated	95	37.1	185	46.4 <sup>***</sup>

<sup>\*\*\*</sup> p < .001

<sup>#</sup> Data were unavailable for 327 of 982 cases

Table 5.18 presents the duration of abuse by the relationship of the offender to the child. A significant association between these variables was demonstrated ( $\chi^2_{(16)} = 112.44, p < .001$ )<sup>20</sup>. Abuse was more likely to span between three months and one year when the offender was a biological parent, a biological grandparent, or another family member, and between three months and one year, and greater than one year when the offender was a stepparent. When the offender was a stranger, abuse was more likely to occur on one incident only, compared to a longer duration of abuse. When the relationship categories were collapsed into related/unrelated, abuse was more likely to occur for a period of between three months and one year for related offenders, and on one incident only and for less than one week for unrelated offenders ( $\chi^2_{(4)} = 100.20, p < .001$ ).

<sup>20</sup> 5 cells had an expected count less than 5, where minimum expected count is 1.29.

Table 5.18

The duration of abuse by relationship of offender to victim

Relationship of offender to child <sup>#</sup>	One incident		< 1 week		1 week - 3 months		3 months - 1 year		> 1 year	
	(n=143)	%	(n=50)	%	(n=87)	%	(n=168)	%	(n=31)	%
Biological parent	12	8.4	9	18.0	12	13.8	50	29.8 <sup>***</sup>	5	18.4
Step-parent	8	5.6	5	10.0	13	14.9	39	23.2 <sup>***</sup>	10	32.3 <sup>***</sup>
Biological grandparent	2	1.4	0	0.0	4	4.6	12	7.1 <sup>***</sup>	2	6.5
Other family	12	8.4	6	12.0	17	19.5	32	19.0 <sup>***</sup>	3	9.7
Unknown / no relation	109	76.2 <sup>***</sup>	30	60.0	41	20.8	35	20.8	11	35.5

<sup>\*\*\*</sup> p < .001

<sup>#</sup> Data were unavailable for 4 of the 483 cases where information pertaining to duration of abuse was available

Analyses did not reveal any significant association between the relationship of offender to the child and the type of abuse (penetrative/non-penetrative) ( $\chi^2_{(4)} = 9.15, p = .06$ )<sup>21</sup>. However, the relationship between the offender and child varied as a function of the child's stage of sexual development ( $\chi^2_{(8)} = 20.88, p = .01$ )<sup>22</sup>, with stepparents being more likely to abuse peri-, rather than pre- or post-pubertal children, and strangers being more likely to abuse pre-pubertal children. For both of these analyses, when the relationship category was collapsed into related/unrelated, to fulfil assumptions of normality, neither comparisons attained significance ( $\chi^2_{(1)} = 2.23, p = .14$  for type of abuse, and  $\chi^2_{(2)} = 5.51, p = .06$  for stage of sexual development).

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<sup>21</sup> 1 cell had an expected count less than 5, where minimum expected count is 2.62.

<sup>22</sup> 4 cells had an expected count less than 5, where minimum expected count is 0.86

### 5.3 Discussion

Study 1 was designed to examine gender differences in the background and nature of CSA in a large cohort of sexually abused males and females. This research objective was considered important, given the paucity of studies that have specifically investigated how the nature of sexual abuse differs between males and females (Holmes et al., 1997; Kendall-Tackett & Simon, 1992; Pierce & Pierce, 1985; Watkins & Bentovim, 1992). Until recently, the characteristics of male sexual abuse have been assumed to be similar to their female counterparts. However, the possibility that the nature of CSA differs between males and females has been increasingly raised, in an attempt to develop models that address the vulnerability and lack of power of all children exposed to sexual victimisation.

In the following section, the findings pertaining to gender differences in victim characteristics, familial composition, the manner in which concerns about sexual abuse were raised, CSA characteristics, and perpetrator characteristics, will be discussed. Comparisons to the literature presented in Chapter 2 will be undertaken, and theoretical implications of findings will be presented.

#### 5.3.1 Victim characteristics

Research Question 1 examined whether male and female victims of CSA differ on victim characteristics, such as stage of sexual development, age at the time of medical examination following CSA, involvement of previous professional agencies, having a

protection application in force at the time of CSA examination, exhibiting a physical or an intellectual impairment, and having previous concerns of physical or sexual abuse.

Several gender differences were observed. Males were more likely to be pre-pubertal, whereas females were more likely to be peri- or post-pubertal, at the time of the abuse. Males were also more likely than females to have had previous Intellectual Disability Services involvement, whereas females were more likely than males to have had previous concerns of sexual abuse. No gender differences were demonstrated in relation to age at the time of the examination, previous CSV involvement, having a protection application in force at the time of the medical examination, exhibiting a physical or an intellectual impairment, or previous concerns of physical abuse. The theoretical implications pertaining to each of these findings will now be discussed.

#### 5.3.1.1 Age at time of examination

The findings pertaining to age at the time of examination are consistent with the literature, which suggests that the mean age of sexually abused males and females does not differ significantly within studies, despite some variations across studies (Baker & Duncan, 1985; Dhaliwal et al., 1996; Faller, 1989; Finkelhor et al., 1990; Pierce & Pierce, 1985). The current study demonstrated that the mean age at examination for females and males, respectively, was 7.0 and 7.1 years. Admittedly, this finding pertains to the mean age at examination, rather than mean age at abuse. Nevertheless, the two constructs can be effectively regarded as similar, given that children are brought to the OFM for medical examination shortly after their alleged CSA for the

purpose of determining whether penetration had occurred. As such, future reference in this thesis to age of CSA onset will be operationalised as age at CSA examination.

While this finding is consistent with investigations that have not demonstrated gender differences in the age of CSA (Baker & Duncan, 1985; Dhaliwal et al., 1996; Faller, 1989; Finkelhor et al., 1990; Pierce & Pierce, 1985), the current mean ages at examination of males and females differ from those obtained by some researchers. For example, Pierce and Pierce (1985) reported an older mean age at abuse for male and female CSA victims (8.6 and 10.6 years, respectively). Similarly, Finkelhor et al. (1990) demonstrated that males and females in their sample were likely to be older at the time of abuse (9.9 years for males and 9.6 years for female CSA) than individuals in the current cohort. Dhaliwal et al. (1996), who investigated male CSA only, identified an older victim age of between 8 and 9 years. Likewise, Baker and Duncan (1985) reported an older age at abuse for both males and females (12.0 and 10.7 years, respectively), and Faller (1989) reported a younger age of CSA onset being 6.3 and 5.5 years for male and female victims, respectively.

Although a detailed discussion on the potential sources of these variations is beyond the scope of this thesis, it is likely that these between-study differences in age of CSA onset may have arose because of contrasting methodologies. Of particular relevance is the finding that males and females in the current study, in addition to previous research, have been found not to differ in age of CSA onset. The potential theoretical implications of this finding will now be discussed.



Differences in the age of CSA onset are most likely influenced by the manner in which victims are perceived by their offenders. For example, the current findings of similar age of CSA onset across genders may imply that males and females are perceived as physically alike during their early developmental stages and that gender differences may surface as a function of progressive physical and sexual development (Dhaliwal et al., 1996). Indeed, this possibility was supported in the present investigation. Although gender differences in age of CSA onset were not demonstrated for the cohort as a whole, a different picture emerged when the findings pertaining to stage of sexual development were examined: males were more likely to be pre-pubertal than females when abused, and females were more likely than males to be peri- or post-pubertal.

These findings indicate that stage of sexual development, rather than age, may be a risk factor for CSA. For example, pre-pubertal children may be perceived as 'innocent', vulnerable, and readily available, relative to older children, whereas peri- or post-pubertal children may also be perceived as vulnerable, but more sexually developed than their counterparts. Applied to the findings of the current thesis, this speculation supports the possibility raised by Dhaliwal et al. (1996) that gender differences in CSA onset may surface as a function of progressive physical and sexual development, with pre-pubertal males being at greater risk of CSA than their female counterparts, and peri- or post-pubertal females being at greater risk than their male counterparts. This proposition suggests that childlike innocence and vulnerability may be a risk factor for male CSA, whereas sexual maturity may be a risk factor for female CSA. In addition, sexual development may be more obvious in females than in males, despite similar ages, thereby increasing the risk of CSA in sexually developed females relative to males.

The possibility that stage of sexual development is a risk factor for CSA should be further investigated. Conceivably, the exclusive focus in previous research on victim age at abuse has failed to recognise that the sexual development of males and females may occur at different ages, and consequently, that the risk of CSA may differ between males and females, respectively, despite similar ages. An alternative explanation would be that males and females of similar age, despite differences in sexual maturity, are at equal risk of CSA. However, this possibility was not supported by the current findings.

#### 5.3.1.2 Professional agency involvement

The findings pertaining to current or previous professional agency involvement are consistent with research that suggests that CSA is more likely to occur in disadvantaged families (Andrews et al., 2002b; Mullen et al., 2000; Mullen et al., 1993; Mullen et al., 1994; Romans et al., 1995). The current thesis did not specifically examine potential sources of familial disadvantage to which CSA has been linked, including poor relationships with parents (Fergusson & Mullen, 1999; Finkelhor, 1984; Finkelhor et al., 1990; Kuyken, 1995), parental marital dysfunction (Fergusson et al., 1996a; Harter et al., 1988; Mullen et al., 1994), parental adjustment problems (Brown et al., 1988; Fergusson & Mullen, 1999; Fergusson et al., 1996a; Mullen et al., 1993), and abusive family circumstances that encourage exposure to other forms of abuse (Fergusson et al., 1997; Fleming et al., 1997; Mullen et al., 1996). However, at the time of medical examination, CSV were involved with over one quarter of the sample (27.2%) and protection applications were in force for 12.6% of females and 17.8% of males. Furthermore, professional agency involvement prior to the time of examination was

recorded for almost one third (29.2%) of the sample, with CSV being involved in 69.9% of these cases.

These findings suggest that familial disruption and disadvantage was prevalent for children in the CSA cohort and that, for a large proportion of these children, this disadvantage was severe enough to warrant involvement of professional agencies including CSV, psychiatric facilities, psychological services, special education services, Intellectual Disability Services, and paediatric hospitals. Accordingly, the social and familial backgrounds of children who were referred to the OFM seem to be fundamentally different to their non-referred counterparts. This possibility will be further elucidated later in this discussion.

With the exception of Intellectual Disability Services, where males were significantly more likely than females to have had previous involvement (3.4% vs 0.8%, respectively), gender differences were not demonstrated in the likelihood of previous contact with these agencies. This finding suggests that the disadvantages that each of these services address were equally disruptive for males and females. However, the finding that males were more likely than females to have previous Intellectual Disability Services involvement, despite no apparent differences in the likelihood of being intellectually impaired, raises several possibilities. Previous involvement with such services for male CSA victims may indicate an increased vulnerability to CSA in these males. Alternatively, the emotional and behavioural presentations of males may be erroneously imputed to intellectual difficulties, rather than to other more appropriate disadvantages. However, in the absence of information pertaining to the temporal order of contacts with these services, conclusions about whether intellectual difficulties

increase vulnerability to CSA, or rather, whether CSA influences emotional and behavioural outcomes that are incorrectly ascribed to intellectual difficulties, cannot be offered.

The finding that males and females were found not to differ in relation to intellectual impairment, despite gender differences in previous Intellectual Disability Services involvement, may have been a function of the OFM examination and interview process. Perhaps the examining doctors were unable to detect subtle intellectual difficulties in some children, especially in clients who were unwilling to engage in conversation, or who were represented by another person who was either unwilling to acknowledge, or unaware of, intellectual problems. These possibilities may have been responsible for an underestimation of the proportion of males and females with intellectual disabilities, despite gender differences in previous involvement of Intellectual Disability Services. In any case, further research into how the backgrounds of children exposed to CSA differ is warranted, to gain an enhanced understanding into how the vulnerability to, and determinants of, sexual victimisation vary as a function of gender.

The finding that females in the CSA sample were more likely to have had previous concerns of sexual abuse than their male counterparts is expected, given the type of abuse that females are more likely to endure. The duration of abuse has been demonstrated to be typically longer for females than males (Briere et al., 1988; Kendall-Tackett & Simon, 1992). This longer duration of abuse may be a function of female CSA being more likely to occur within, rather than outside, the family, thereby leading to increased opportunity for contact by offenders and, in turn, increased risk of repeated CSA (Dhaliwal et al., 1996; Faller, 1989). Male CSA, on the other hand, may

be more likely to occur outside the family as single incidents, involving unrelated offenders or strangers rather than family members (Faller, 1989; Kendall-Tackett & Simon, 1992; Tong et al., 1987; Violato & Genuis, 1993). Hence, the likelihood of previous concerns of CSA is reduced in males because of the reduced opportunity for contact by offenders.

Although females may be at increased risk of sexual abuse, relative to males, these findings may be influenced by limited awareness of the reality of male CSA, in a climate that discourages disclosure of male sexual abuse (Black & DeBlassie, 1993; Peake, 1989; Vander Mey, 1988; Watkins & Bentovim, 1992). In the current study, either the child or the caretaker who was present at the time of the examination provided information in relation to previous concerns of CSA. Given that this information was not verified by corroborating sources, previous concerns of CSA are likely to be underestimated for both males and females, for fear of the potential consequences of such a disclosure. Furthermore, factors such as the male ethic of self-reliance and the possible fear of perceived homosexuality (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Young et al., 1994) may have further obstructed disclosure of previous concerns of sexual abuse in males. However, it should be noted that many factors might influence the expression of concerns of previous sexual abuse by either the alleged victim or the person present at the time of the medical examination. Accordingly, the reliability of this source of data may be questioned, and conclusions about possible gender differences in relation to previous concerns of sexual abuse should be made with caution.

The possibility raised in the literature that professionals do not view male CSA as serious as that of females (Black & DeBlassie, 1993; Darves-Bornoz et al., 1998; Donnelly & Kenyon, 1996; Heath et al., 1996; Holmes & Offen, 1996; Holmes et al., 1997) was not supported by the current research. Of the professional agencies examined in the current thesis, CSV would be the agency most likely to deal with concerns of sexual abuse soon after they were raised. Accordingly, professional agency involvement following concerns of CSA did not differ for males and females. Before proceeding to a discussion of the possibility that CSV employees may view the vulnerability of male CSA equally to that of females, a brief discourse into the manner in which the OFM sample may have influenced the findings pertaining to CSV involvement at the time of medical examination is warranted.

The non-significant gender differences in current CSV involvement may have been a function of the OFM sample, which was derived from reports by both CSV and police of alleged CSA. In addition, although CSV typically addresses intra-familial CSA, to which female victims are more likely to be subjected (Faller, 1989; Gordon, 1990), it is likely that CSV were also involved in the more severe cases of male CSA in the current investigation. This possibility may be due to several reasons. First, if the sexual abuse of males is more likely to be reported to police, rather than agencies dealing with abuse within the family (Calam et al., 1988; Cermak & Molidor, 1996; Levesque, 1994; Reinhart, 1987), then increased reports of alleged male CSA to the OFM, relative to agencies dealing with intra-familial abuse, are likely to be made. Second, following initial contact with the alleged victim, it is possible that police sought the involvement of CSV, to determine previous concerns of abuse or concurrent CSV involvement, prior to requesting a medical examination at the OFM. This procedure may have had the

effect of increasing the likelihood of CSV involvement in cases that may not have otherwise been associated with CSV. Finally, given the possibility that clinicians may not be alert to the reality of male sexual abuse (Black & DeBlassie, 1993; Darves-Bornoz et al., 1998; Donnelly & Kenyon, 1996; Heath et al., 1996; Holmes & Offen, 1996; Holmes et al., 1997), CSV involvement in cases of male CSA may primarily have arisen through indirect mechanisms, such as following the sexual assault of a sibling or after contact with a known sex offender. Indeed, these possibilities were supported by the current research and will be discussed in the section pertaining to the manner in which concerns of CSA were raised.

However, although the nature of the OFM sample may have influenced the findings that male and female victims of alleged CSA were equally likely to have CSV involvement at the time of their medical examination, no significant gender differences were demonstrated in previous CSV involvement. In addition, males and females were equally likely to have been previously involved with special education services, paediatric hospitals, and psychiatric or psychological services. However, the frequencies of involvement by these services were minimal, which may have mitigated statistical power. The observation that 17.7% of the children in the cohort had previously been involved with CSV indicates that previous CSV involvement was sufficiently frequent to detect significant differences if they indeed existed. Therefore, confidence can be placed in the current finding that males and females were equally likely to have previously been involved with CSV. However, whether this finding suggests that clinicians view the vulnerability to CSA equally for males and females, or whether it was largely a function of the protocol requiring CSV to notify the police of all suspected sexual abuse cases, remains unanswered in the context of this thesis.

### 5.3.2 Familial composition

The current study examined whether male and female victims of CSA differed on several variables pertaining to familial composition. These variables include the number of adults living with the child at the time of the alleged abuse, the relationships between the children and adults residing together, parental employment status, and the types of social welfare benefits received. Findings pertaining to these variables are important because they provide some insight into the familial disadvantages to which children in the CSA sample were exposed prior to their alleged sexual abuse. The findings may also suggest whether the absence of important role models, instability in the home environment, or low socio-economic status, leads to heightened vulnerability of children to sexual victimisation.

A close examination of each of the variables pertaining to familial composition suggests that males and females in the CSA sample were similarly exposed to a number of disadvantages. Gender differences were not demonstrated in the likelihood of living in a nuclear family arrangement, the number of children living with the alleged victim at the time of the abuse, the child's birth position within the family, the employment status of parents, and the type of social welfare benefit received by unemployed parents. These findings suggest that instability within the family environment may be an equal risk factor for male and female CSA. However, males were less likely than females to be living with their biological father, and more likely to be living with only one adult at the time of the abuse. Females, on the other hand, were more likely than males to be living with a stepparent or family member other than a biological or stepparent. These findings suggest that the absence of important male role models may



be a particular risk factor for male CSA, whereas the presence of a stepparent or another family member may be a risk factor for female CSA. The theoretical implications of the findings pertaining to Research Question 2 will now be discussed.

#### 5.3.2.1 The effect of marital disruption on familial composition

Findings pertaining to whether the children in the sample were living with both of their biological parents provide useful information about the level of familial disruption to which these children were exposed. Given that only one third of the sample were living in a nuclear family at the time of the abuse, many of these children had probably been exposed to marital conflict and may have had previous Family Court involvement. Although not specifically investigated, given the constraints of the existing OFM data, this possibility is consistent with the findings of Harter et al. (1988), Fergusson et al. (1996a), and Mullen et al. (1994), who independently reported that the risk of CSA was elevated among those exposed to high marital conflict. Although 89.1% of children in the sample were living with their biological mothers at the time of the abuse, only 32.6% of these individuals were also living with their biological father. Consistent with the results of Pierce and Pierce (1985), who found that 38.0% of the male victims in their sample did not live with a father figure, compared with only 12.0% of the female victims, males in the current study were significantly less likely than females to be living with their biological father. Hence, although a large proportion of children in the current study were not exposed to a male role model within the family, this absence was significantly more pronounced for males.

In addition to the increased vulnerability associated with the absence of a father figure, males in the current sample were also more likely than females to be living in a single-parent family. Accordingly, males may have been granted less opportunity than females of resolving the abusive experience because of limited access to important role models and carers living with the male child at the time of the abuse. Furthermore, mothers in single-parent families may have less time to supervise and monitor their children, due to the increased responsibilities and subsequent demands on time associated with being a sole parent. Given the misconceptions regarding the risk of CSA for young males, mothers may be less likely to restrict the freedom of their sons, thereby possibly increasing the likelihood of sexual abuse outside the home (Budin & Johnson, 1989; Monaco & Gaier, 1988; Vander Mey, 1988). These findings indicate that the absence of important role models, especially male role models, may further increase vulnerability to CSA for males. Males without a father figure may be more vulnerable to CSA because of their need and desire for a male model. Given the potentially limited parental supervision of males, which may be characteristic of single-parent families, this desire may place young males in a position where they are vulnerable to the sexual advances of others, for fear of losing the associated attention and perceived affection of the perpetrator.

Although both males and females were equally likely to be living with their biological mothers at the time of the abuse (90.3% and 88.7%, respectively), females were significantly more likely than males to be living with a stepparent or another family member. This finding is consistent with the results of Finkelhor et al. (1990) who reported that female victims of CSA were more likely to have lived with a stepfather, rather than a biological father. Furthermore, the current study also supports the findings

of Brown et al. (1988) who found that, along with familial risk factors of harsh punishment, maternal sociopathy, and negative life events, the presence of a stepfather significantly increased the risk of CSA.

Given that the OFM CSA examination forms do not include specific information about the relationships of 'other family members' to the child, it is difficult to determine which family members, apart from parents, stepparents, and grandparents, constitute an increased risk of female CSA. Although the present study demonstrated that females were more likely than males to be living with another family member, which could include a grandparent, uncle, aunt, or cousin, specific information about the relationships with, or the ages of, these family members was not available. Consequently, conclusions that can be drawn are somewhat limited. Future research should examine whether the presence of other family members constitutes different risk factors for male and female CSA, and further, whether this risk is likely to vary as a function of the age of the family member involved.

The observation that over half of the children were first-born in their family indicates that an increased amount of sibling responsibility may be placed on these children. This possibility may be a result of the oldest sibling supporting his or her younger siblings in the context of familial breakdown following parental separation or divorce. In addition, in the event of CSA, siblings may wish to protect their brothers or sisters from similar abusive experiences, thereby potentially resulting in continued abuse. The present finding that children in the CSA sample were more likely to be first born in a family of two siblings suggests that risk of CSA may vary depending on the amount of sibling responsibility involved. Future research should not only examine whether CSA victims

assume the responsibility of protecting their younger siblings from similar experiences, but also whether the risk of CSA increases with greater economic strain, as measured by larger, and potentially disrupted, families.

#### 5.3.2.2 The effect of socio-economic status on risk of CSA

An examination of the variables pertaining to the socio-economic status (SES) of families in the CSA sample demonstrated that over half of the children's parents were unemployed at the time of the medical examination. Almost half of these cases were in receipt of a single or supporting parent pension and over one third were in receipt of unemployment benefits. Of the 46.2% of cases in which primary caregivers were employed, 79.9% were employed in a non-professional capacity. Although these findings suggest that, as a whole, the CSA sample were of low SES, males and females did not differ on any of these measures.

Given that all of the children in the sample had allegedly experienced CSA, whether these measures of SES were significantly predictive of risk of CSA could not be examined, because there was no comparison group in which CSA was absent. Furthermore, the current study did not control for the concurrent presence of physical or emotional abuse, and as such, these potential comorbid types of abuse may have obscured an adequately representative association between SES and risk of CSA. This possibility is further evidenced when considering that children who are exposed to CSA have often been physically and emotionally abused as well (Fergusson et al., 1997;

Fleming et al., 1997), and that when comorbidities of abuse are controlled, SES may have no influence on the potential risk of CSA (Fergusson & Mullen, 1999).

These findings indicate that, as a whole, the CSA sample was characterised by a low SES, as evidenced by both a high rate of unemployment and a heavy reliance on social welfare payments. However, given that weak or no associations have been demonstrated between social class and risks of CSA (Fergusson et al., 1996a; Fleming, Mullen, & Bammer, 1997; Finkelhor, 1993; Mullen et al., 1996), it is unclear whether SES contributed to the risk of CSA in the current sample, or rather, whether the low SES demonstrated was largely a function of the OFM sample, which not only relied heavily on CSV and police records of more serious abuse involving alleged penetration, but may also have been representative of disadvantaged family circumstances that increase the risk of sexual abuse (Fergusson et al., 1997; Fleming et al., 1997; Mullen et al., 1996).

In any case, a more adequate examination of the association between SES and risk of CSA is warranted. Future research should: (a) include a more representative sample, which does not focus on the more severe allegations of abuse reported by social welfare agencies and police; (b) implement a no-abuse control group, to statistically examine the predictive relationship between social class and risk of CSA; (c) control for the potentially confounding factors of comorbid types of abuse; and (d) utilise an increased number of measures of social class, rather than employment status and social welfare payments only. Although the present study did not statistically compare the sexual abuse sample with other populations, future research may also benefit from using demographic data from the ABS or the Australian Institute of Family Studies as a point

of comparison in relation to factors such as familial composition, unemployment, and number of children in the family. In addition, the use of comparative data obtainable from CSV may have been useful in further examining the association between SES and various forms of abuse, including neglect, physical abuse, and sexual abuse. Such research may not only shed further light on the effect of SES on risk of childhood abuse generally, but may also further elucidate whether children from different social strata are at varied risk of CSA.

### **5.3.3 The manner in which concerns of sexual abuse were raised**

In the context of the social phenomena that discourage disclosure of male sexual abuse, researchers may question whether the mechanisms by which concerns of CSA are raised differ for male and female victims. The current investigation sought to address this possibility by examining whether gender differences exist on a number of relevant measures. These measures included the likelihood of direct disclosure following CSA, the sources to which disclosures of CSA are directed, and other ways in which concerns of male and female CSA were raised. The possibility that age of the victim is instrumental in facilitating subsequent disclosure was also explored.

Several important findings were revealed. First, males and females did not differ significantly in the likelihood of disclosure following CSA. Second, although both males and females were similarly likely to disclose their experience of CSA to their parents than to other disclosure sources (67.8% and 60.8%, respectively), males were significantly more likely than females to disclose to a professional source (19.2% vs

12.5%, respectively), whereas females were more likely than males to disclose to peers, friends or 'other' unrelated persons (11.9% vs 2.1%, respectively). Third, the likelihood of disclosure was significantly related to age, with older children (mean disclosure age 7.7 years) being more likely than their younger counterparts (mean disclosure age 5.0 years) to disclose. Finally, in addition to disclosure, concerns about male CSA were more likely to be raised through indirect means, such as following contact with a known sex offender and after the sexual assault of a sibling, than concerns about female CSA. The theoretical implications of the findings pertaining to Research Question 3 will now be discussed.

#### 5.3.3.1 Disclosure versus non-disclosure

A high likelihood of disclosure was demonstrated in the present study, with almost three-quarters of the children having disclosed their alleged incident of CSA. The proportion of females who disclosed exceeded that of males (74.9% vs 68.1%, respectively), although this disparity did not achieve significance. This finding is interesting to consider, given that the social construction of males as competent, dominant, and self-reliant, is inconsistent with the experience of the sexually abused male, and does not foster claims for help (Holmes et al., 1997; Peake, 1989). Furthermore, the male socialisation process has been postulated to discourage male victims from reporting their abuse voluntarily, because such disclosure may induce others to question their masculinity and sexuality (Young et al., 1994). However, this possibility was not supported by the present study, as males and females were equally likely to have disclosed their sexually abusive experience.

Several factors could have obscured the gender differences in relation to the likelihood of disclosure. Particularly noteworthy is that the overall cohort was relatively young at the time of examination and, therefore, at the time of abuse. The mean age of children at examination was 7.0 years with no significant gender difference in age being demonstrated. Given this relatively young age, young males may be unaffected by the social phenomena and issues of masculinity and sexuality that discourage acceptance of the victim role (Peake, 1989; Young et al., 1994). Conceivably, gender differences in disclosure rates may become apparent as a consequence of understanding the personal and social implications of having been sexually abused, which may be more likely in late childhood and adolescence, rather than in early childhood. If this speculation is correct, potential gender differences in the present investigation may have been obscured by the young age of children in the cohort and, in turn, by their naivety concerning the implications of sexual abuse. Future research would benefit from examining whether gender differences in CSA disclosure rates surface as a function of increased awareness of the implications associated with self-identification as a victim of CSA.

#### 5.3.3.2 Disclosure as a function of the age of the victim

Although the young age of males and females in the CSA cohort may have masked gender differences in disclosure rates, a significant relationship was demonstrated between the likelihood of disclosure and the age of the victim. Specifically, the mean age of children who disclosed their abuse was 7.7 years, compared to 5.0 years for victims who did not disclose. These findings are particularly informative because they



imply that the likelihood of disclosure may be dependent upon the age of the child at the time of abuse. In particular, children who are older when abused may be more likely to disclose their sexually abusive experiences than their younger counterparts. Potential theoretical explanations for this possibility will now be offered.

Older victims of CSA may be more likely than younger victims to remember their abuse as well as interpret the event as abusive in light of subsequent life events and meanings of abuse (Brown & Harris, 1978; Horwitz et al., 2001). Accordingly, the possibility of victim self-identification may have increased the likelihood of disclosure in older children in the current study. Children who disclosed were on average almost eight years of age. These children would most likely be attending school, where the likelihood of education about both the concept of 'stranger danger' and the implications of sexual abuse may be greater than for children not attending school. Given that the children who did not disclose were of an age at which they may have just commenced school (five years), they may not yet have developed a mental framework in which sexual experiences could be interpreted as abusive. An alternative, yet related, explanation is that the increased cognitive and linguistic capacities of older school-aged children may render them more capable than younger children to communicate the details of their abuse. Furthermore, the likelihood of school staff involvement where concerns of child abuse were raised may also have facilitated the disclosure of CSA relative to younger children.

Future research should further investigate the relationship between age of victim and likelihood of disclosure to determine whether the findings of the present study are generalisable to an older sample in which all of the victims have had equal opportunity

to interpret sexually exploitative acts as abusive. Such findings may further elucidate whether disclosure of CSA is dependent upon age per se, or rather, upon life events that are experienced at certain ages, which in turn, may help to shape definitions of what constitutes a sexually abusive act. Other confounding variables, such as cognitive development, could also be investigated to explore this issue.

#### 5.3.3.3 Disclosure sources

Although males and females did not differ in the likelihood of disclosure, significant gender differences were exhibited in their disclosure sources. Males were more likely than females to disclose to a professional source, whereas females were more likely than males to disclose to a friend, peer, or 'other' unrelated person. Gender differences were not demonstrated in male and female disclosures to related persons, including parents, siblings, or other family members.

These findings suggest that the willingness to communicate emotionally laden information may be inherently different for males and females. For example, females may generally be encouraged to seek emotional support from all available individuals, both related and unrelated, following a stressful event. The traditional male socialisation model, on the other hand, which does not expect males to express feelings of dependency, fear, vulnerability, or helplessness - emotional effects commonly associated with sexual abuse (Nasjleti, 1980; Peake, 1989) - may hinder the likelihood of disclosure to unrelated persons. Although males in the current investigation were as likely as females to disclose their sexual abuse to family members, their rates of

disclosure to peers, friends, or other people were significantly less than those of females. This finding may imply a concern of male CSA victims about the future regard with which they might be held by these unrelated people.

This possibility is further evidenced by the finding that males were more likely than females to have disclosed to professional sources. This observation suggests that males may be more likely than females to seek assistance from persons whose evaluations may be less judgemental or consequential to their reputation when the emotional and behavioural consequences of CSA have become problematic. The possibility that disclosure to professionals may occur in the context of other physical or behavioural problems is recognised (Holmes et al., 1997; Watkins & Bentovim, 1992) and will now be discussed.

#### 5.3.3.4 Indirect mechanisms by which concerns of CSA were raised

The possibility that concerns of the sexual abuse of males are likely to be raised through indirect means (Holmes et al., 1997; Peake, 1989) was supported by the present research. In addition to disclosure, concerns about male and female CSA were equally likely to be raised by physical and behavioural indicators. Accordingly, in the presence of external changes to the child, male and female victims may be equally likely to be identified. However, consistent with the proposition of Holmes et al. (1997) and Watkins and Bentovim (1992), that male CSA victims are likely to be identified in contexts other than in the helping professions, concerns of male sexual abuse were more likely than female sexual abuse to have been raised following either the sexual

assault of a sibling or contact with a known sex offender. These findings are concerning, as one may ask whether the sexual abuse of these males would have been identified in the absence of these indirect, less emotionally laden, mechanisms, or rather, whether these males would have been left to carry the emotional burden of their victimisation into adulthood.

#### **5.3.4 CSA and perpetrator characteristics**

One aim of the current study was to examine how the sexually abusive experience differs between males and females. This aim was achieved by comparing the data of males and females in the CSA sample on a number of CSA characteristics, including the type of abuse, the time period over which the alleged incident of CSA occurred, where the abuse occurred, whether there was concurrent physical abuse, the number of offenders involved in the incident, the sex of the perpetrator, and the relationship between the child and the perpetrator.

Significant gender differences were demonstrated. Males were more likely than females to be subjected to genital touching, whereas females were more likely than males to be subjected to attempted or completed penetration. Males were also more likely to be abused by an unrelated offender outside the family home. Females, on the other hand, were more likely to be abused within the home, by a relative. Finally, concurrent presence of physical abuse was also more likely for males, than for females. Gender differences were not demonstrated in the duration of CSA, the number of offenders

involved in the alleged incident, or the gender of the perpetrator. The theoretical implications of these findings pertaining to Research Question 4 will now be discussed.

#### 5.3.4.1      Severity of abuse

An examination of the type of abuse to which children in the sample had been exposed demonstrated that the majority of the sample had experienced penetrative abuse (96.6% of females and 78.9% of males). This finding may be specific to this sample, given that referrals to the OFM for medical examination are likely to be made following severe cases of CSA involving penetration. This possibility is further substantiated by the claim of Pierce and Pierce (1985) that a report to a police department usually requires direct evidence that has been observed, rather than derived from one's suspicions, to activate the reporting process. Accordingly, the current sample, which was derived from reports by both CSV and police, would entail cases of severe CSA that may not have otherwise been identified if official records were not examined.

This sample bias may also have influenced the findings pertaining to the type of abuse to which males and females were more likely to be subjected. Although the majority of the sample had experienced penetrative abuse, males were more likely than females to have been subjected to genital touching, whereas females were more likely than males to have been subjected to attempted or completed penetration. This finding is inconsistent with previous research, which has demonstrated that males are more often victims of serious abuse, involving penetration and force, whereas females are more often victims of fondling or exhibitionism (Dhaliwal et al., 1996; Finkelhor et al., 1990;

Gordon, 1990; Kendall-Tackett & Simon, 1992; Levesque, 1994; Pierce & Pierce, 1985). Furthermore, males were significantly more likely than females to have been exposed to concurrent physical abuse. Therefore, the findings of previous research that males are more likely to be concurrently subjected to force when sexually abused have been corroborated (Gordon, 1990; Finkelhor et al., 1990; Kendall-Tackett & Simon, 1992).

The inconsistent findings pertaining to type of abuse may be ascribed to the reluctance of males to disclose their sexually abusive experiences (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Watkins & Bentovim, 1992; Young et al., 1994). Male victims who are experiencing high levels of distress resulting from more severely intrusive CSA may be more likely to acknowledge a history of CSA than males experiencing less intrusive forms of abuse. This finding is especially pertinent given that several studies, which have demonstrated that males are more likely to be victims of more serious CSA (Gordon, 1990; Finkelhor et al., 1990; Kendall-Tackett & Simon, 1992), have examined the prevalence of abusive experiences in random community or national samples. These samples rely on the retrospective self-identification and disclosure as a victim of CSA. In contrast, given the general acceptance of female CSA, all types of abusive experiences to which females are exposed are likely to be acknowledged. These possibilities may be instrumental in the disproportionate over-representation of more intrusive abuse being perpetrated against males, whilst adequately representing the types of abuse characteristic of female CSA.

The current study did not rely on the self-identification as a CSA victim. Hence, the possibility that only severe cases of male CSA are disclosed does not apply. The

observation that most victims had been exposed to penetrative abuse can be ascribed to the process that created the OFM sample, such as the inclusion of CSV and police records, and not a reluctance of victims to disclose less severe forms of abuse. Although the current sample was biased towards more severe abuse, the finding that males were also subject to less severe, non-penetrative, forms of abuse warrants future research attention. Such research should implement a methodology that neither depends on the self-disclosure of a history of CSA, nor is biased towards more severe forms of CSA. This research approach may not only increase the likelihood of identifying a wide variety of abusive experiences for both males and females, but may consequently enable an adequately representative investigation into whether the severity of CSA differs as a function of gender.

#### 5.3.4.2 Duration of abuse

Gender differences were not demonstrated in the time period over which the incidents of alleged CSA occurred. This non-significant gender difference is inconsistent with previous research that suggests that the duration of CSA is typically longer for females than for males (Briere et al., 1988; Kendall-Tackett & Simon, 1992). The shorter duration of abuse typically reported for males has been ascribed by some researchers to their ability to ward off sexual abuse much sooner than females (Dhaliwal et al., 1996; Pierce & Pierce, 1985). However, this speculation was not supported by the present study.

Conceivably, the duration of CSA may differ as a function of gender for some types of abuse, but not for the more serious forms that involve penetration. Although males were more likely than females to be subjected to less intrusive abuse involving genital contact, they were also equally likely as females to have been exposed to penetrative, rather than non-penetrative, abuse. In addition, the duration of CSA did not vary significantly as a function of gender. Hence, the type of abuse to which a CSA victim is exposed may be instrumental in influencing the duration of abuse. For example, the most frequently recorded duration of abuse in the current study was found to last between three months and one year. Given that the majority of the sample had experienced penetrative abuse, a question may be raised as to whether more severely intrusive forms of abuse involve a longer preparatory period, compared to non-penetrative abuse. These speculations warrant future research attention, as such findings may indicate that less severely intrusive forms of CSA may be risk factors for subsequent penetrative abuse.

#### 5.3.4.3 Gender of perpetrator

Consistent with the results of previous studies (Dhaliwal et al., 1996; Gordon, 1990; Kendall-Tackett & Simon, 1992), 98.4% of perpetrators in the current investigation were male. In addition, perpetrator sex was independent of victim sex. Given that the current study examined the data of 296 male victims, who constituted approximately one quarter of the CSA sample, the proposition raised by some researchers that the likelihood of a perpetrator being a female rises when the victim is male, was not supported (Anderson et al., 1993; Kinzl et al., 1995). Hence, although female-



perpetrated CSA may be underestimated in a climate that emphasises the significance of male supremacy and female oppression (Scott, 1995), males still appear to be the more likely offenders of CSA.

Nevertheless, in a society that is beginning to challenge the gendered nature of CSA, in which males are appropriately seen as potential victims and females as perpetrators of CSA, an increase in female perpetrated CSA will accordingly be identified. Indeed, future research should examine this possibility, in order to determine whether societal expectations preclude contemplation of the possibility that female-perpetrated CSA occurs.

#### 5.3.4.4 The status of intra- and extra-familial sexual abuse

An examination of the variable pertaining to where the abuse occurred revealed that most of the children in the sample had been abused outside, rather than within, their family home. This finding may have been a function of the sample, which relied heavily upon police reports to the OFM and, therefore, entailed a large number of cases in which sexual abuse occurred outside the home. However, whether abuse occurred within or outside the home does not indicate that it was intra- or extra-familial abuse, respectively. For instance, a child may be abused in a relative's home by that relative. Although this abuse did not occur in the child's home, it is clearly intra-familial as it was perpetrated by a family member. Hence, an examination of both of these variables, that is, whether or not the abuse occurred within the home, as well as the relationship between the offender and child, is warranted.

Although the majority of the sample had been abused outside their home, males were significantly more likely than females to have been subjected to abuse outside, rather than within, the home (69.2% vs 58.3%). These findings accord with the results observed by Faller (1989) and Gordon (1990) who both demonstrated that boys were more likely than girls to be sexually maltreated outside, rather than within, the immediate family environment. The results are also consistent with the findings discussed previously that males were significantly more likely than females to be living in a single-parent family, and significantly less likely to be living with their biological father. The theoretical implications that were offered to explain the significant gender differences in familial composition may also be applied here. Specifically, males without a father figure may be especially vulnerable to CSA because of their need and desire for a male role model. Accompanied by the potentially limited parental supervision that may be characteristic of single-parent families, this desire may place young males in a position where they seek a male role model external to the family, consequently increasing their vulnerability to the sexual advances of other people home (Budin & Johnson, 1989; Monaco & Gaier, 1988; Pierce & Pierce, 1985; Vander Mey, 1988). The number of offenders involved may also be greater, because of the possibility of contact with more people outside the family environment. However, this speculation was not supported, as the number of offenders neither differed as a function of gender nor as a function of where the abuse occurred.

An examination of findings pertaining to the relationship between the offender and the victim yielded several significant gender differences. When data were dichotomised around whether or not the offender and child were related, females were more likely than males to have been subjected to CSA by a family member, defined as a biological,

step- or defacto-parent or grandparent, uncle, aunt, cousin, or sibling. This finding is consistent with previous research, which has found that males are less likely than females to be subjected to incestuous CSA (Dhaliwal et al., 1996; Kendall-Tackett & Simon, 1992, Violato & Genuis, 1993). In particular, although similar rates of perpetration by biological fathers were demonstrated for males and females (19.2% and 23.2%, respectively), females were significantly more likely than males to be sexually abused by a stepparent (14.3% vs 10.0%, respectively) or a biological grandparent (5.7% vs 1.8%, respectively). Males, on the other hand, were more likely than females to have been abused by a non-relative (54.8% vs 43.2%, respectively). These findings are consistent with those of Kendall-Tackett and Simon (1992), who reported similar rates of perpetration by natural fathers for male and female adults molested as children, but higher rates of perpetration by stepfathers for female victims and by unrelated offenders for male victims. In addition, the finding that females were more likely than males to have been abused by a biological grandparent supports the findings of Gordon (1990) who reported that female CSA victims were more likely than males to be victimised by a family member who was much older.

The current study demonstrated several significant associations between the relationship of the offender to the child and whether or not the abuse occurred in the child's home. For example, abuse by a biological grandparent or an unrelated offender was more likely to occur outside, rather than inside, the child's home. This finding was expected, given that grandparents and unrelated individuals would be less likely to be living with the child than a biological parent or stepparent. Furthermore, unrelated offenders were more likely than related offenders to abuse pre-pubertal children. This finding suggests that that the perceived innocence and sexual immaturity of children in

their early developmental stages may attract unrelated offenders to the child. Younger pre-pubertal children may, therefore, be more vulnerable to the sexual advances of offenders than older, more sexually developed, children who may have an increased awareness of both the concept of 'stranger danger' and the implications of sexual abuse.

As would be expected, abuse by stepparents was not only more likely to occur within, rather than outside, the child's home, but also more likely for females than males. These results are consistent with the findings of Finkelhor et al. (1990) and Brown et al. (1998) that the presence of a stepfather is significantly associated with increased risk of female sexual abuse. The present study also revealed that stepparents were significantly more likely to abuse peri- rather than pre- or post-pubertal children. Hence, although the risk of sexual abuse is greater for females than males, this risk may be even greater for sexually developing females. However, whether the greater likelihood of sexual abuse by stepparents is influenced by the progressive physical and sexual maturity of children, or rather, by the point at which the stepparent enters the family, remains unknown.

Findings pertaining to the relationship between the offender and the child also yield implications in relation to the duration of abuse to which children are exposed. Although gender differences were not demonstrated in the duration of CSA, significant associations emerged between the relationship of the offender to the child and the duration of sexual abuse, with a longer duration of abuse being recorded when the offender was related. In particular, when the offender was a biological parent, a biological grandparent, or another family member, CSA was more likely to occur for

between three months and one year, relative to other durations. When the offender was a stepparent, abuse was more likely to occur over a longer period, spanning over three months. Finally, when the offender was either unknown or unrelated, abuse was significantly more likely to occur on one incident only, rather than over an extended period. Thus, where increased opportunity for contact is available, the risk of continued CSA is likely to be greater than where contact is limited. Consequently, a related offender may entail an increased risk of repeated sexual abuse.

The current findings accord with previous research in demonstrating that the duration of abuse is longer when family members are perpetrators due to increased opportunities for contact with the victim (Dhaliwal et al., 1996; Faller, 1989). These findings suggest that in a sample in which males and females were equally likely to have experienced penetrative abuse, the relationship between the offender and the victim was more likely to be associated with duration of abuse, then gender alone. Future research should, therefore, examine the likelihood that duration of abuse is not influenced by gender per se, but rather by the nature of the relationships that males and females are likely to share with their abusers.

### **5.3.5 Limitations of current study**

The present investigation into gender differences into CSA characteristics demonstrated that the both the risk and nature of CSA differed between males and females in the CSA cohort. However, despite the theoretical significance of these findings in an area

of research that has almost exclusively focused on female CSA, the present study was subject to several methodological limitations, which will now be discussed.

One of the main limitations of the present study was the use of official OFM records. Although the use of existing records removes potentially confounding variables that are associated with the reliance of retrospective reports of CSA, they may still be subject to several systematic biases (Brown et al., 1998; Fleming, 1997; Horwitz et al., 2001; Reinhart, 1987). One of the main limitations of this research approach is the issue of representativeness as a consequence of the method-dependent bias it entails (Horwitz et al., 2001; Widom & White, 1997). For example, only the more severe cases of alleged CSA would have been identified by social welfare agencies and police, and therefore included in the OFM records (Finkelhor, 1983). Furthermore, under the "dual track child protection system" still in operation during a significant part of the 1989 to 1995 period, some professionals preferred to report cases of alleged CSA to CSV rather than the police, and the CSV-police protocol in this period required CSV to refer all cases of suspected CSA to the police. Therefore, these cases may not necessarily be indicative of previous CSV involvement as they are indicative of a pathway of referral to the police and thus to the OFM, and accordingly are quite different from cases in which there was previous CSV involvement independent of the alleged CSA.

In addition, the validity of the OFM reports may be dependent upon the extent to which third parties were willing to report CSA to public agencies between 1989 and 1995, as well as the extent to which CSA was regarded as a problem, especially for males, over these years (Holmes & Offen, 1996; Holmes et al., 1997). The children who were referred to the OFM for CSA examination were likely to be raised in a disadvantaged

familial and social environment, in which risk for one type of abuse may have encouraged other forms of abuse and disadvantages (Fergusson & Mullen, 1999; Mullen et al., 1993). Accordingly, the current CSA sample may be biased in that, not only does this database underestimate the true extent of CSA within the population, given that not all cases of alleged CSA are reported to the OFM, but it also over-represents the more severe cases of sexual abuse, which are likely to be predictors of a host of other childhood disadvantages (Finkelhor, 1983; Mullen et al., 1993).

A related limitation of the present study is that the CSA data that were examined pertained to non-ascertained cases of sexual abuse; that is, the OFM does not investigate and ascertain cases of CSA. Although it is possible that some of the reports of sexual abuse to CSV or police were fabricated as a result of ulterior motives to alter access arrangements or inflict mortal damage to an estranged partner, the prevalence to which this occurs is unknown. However, the observation that 92.6% of the children were deemed by the examining OFM doctor to have been either 'probably' or 'definitely' penetrated, suggests that the majority of the sample had been subjected to intrusive sexual abuse, which is inconsistent with the likelihood of falsified allegations.

A final limitation pertains to the examination of data on existing standard OFM CSA Examination forms (refer to Appendix). Although the exclusive use of these predominantly categorical data that were routinely collected between the years 1989 to 1995 enabled a breadth of information to be examined, depth of investigation was not possible, as questions that were not addressed in the standard forms could not be asked of victims. Furthermore, the diligence of examining doctors in completing all sections of the form is unknown, as responses to some questions were either inconsistent or

missing. For example, data on sources to which the children disclosed were available for 649 cases, although 596 cases were recorded as having disclosed their sexual abuse, suggesting missing data for 53 cases. Missing information was also present for a variety of other questions, which challenges the assumption of underlying normality and thus tempers the accuracy of chi-square statistics. These missing data may also yield sampling biases, depending on the source of these oversights, which can distort the findings.

In combination, as a measure of prevalence, the OFM sample may have underestimated the true extent of CSA within the community, but overestimated more severe cases of CSA that typically occur in environments characteristic of a host of other childhood disadvantages. As such, the extent to which the current descriptive findings are generalisable to less severe forms of abuse and to a more representative population may be questioned. However, as a window into the concrete experience of more severe forms of abuse that may be a marker for other social and familial disadvantages, the present methodology has utility. Future research should continue to examine gender differences in the background and characteristics of CSA, as such knowledge is a minimum for the development and implementation of public policy that may assist in the identification and treatment of its victims.



## 5.4 Summary

This chapter described Study 1, which was conducted to examine gender differences in CSA characteristics in the largest CSA victim cohort to have been systematically examined. The study was inspired by the gaps in existing research into gender differences in the characteristics of CSA. The majority of studies that have examined gender differences in CSA characteristics have employed samples that have over-represented female victims, such as victims of intra-familial sexual abuse (Finkelhor, 1983) and those who have retrospectively self-reported or disclosed (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Young et al., 1994). In doing so, these studies have contributed to the underestimation and misconceptions of male CSA.

Despite being subject to certain methodological biases, the analysis of official OFM records in the current study enabled the examination of many more male victims than have been studied to date. In addition, the sample was believed to be more representative of both male and female CSA, because the OFM entails reports of alleged CSA by police (traditionally addressing abuse outside of the family) and CSV (addressing abuse within the family). Therefore, the present study served to confirm previous findings, evaluate theoretical propositions, and reconcile inconsistencies in the limited research that has directly examined gender differences in CSA.

The study demonstrated that both the risk and experience of CSA differed between males and females in the OFM sample. The current findings imply that males who are pre-pubertal, living in single-parent families, lacking a male role model, and who have

had previous contact with Intellectual Disability Services, may be particularly vulnerable to non-penetrative abuse by unrelated perpetrators outside the family home. Sexually developing, or developed, females, on the other hand, who have had previous concerns of sexual abuse, and who are living with a stepfather or family member other than a biological or stepparent, may be at risk of penetrative CSA by related offenders within the home.

Although these findings may have been influenced by methodological factors that were discussed in Section 5.3.5, the present investigation demonstrated that, contrary to the almost exclusive empirical focus on female sexual abuse, a large number of males are clearly exposed to this potentially damaging experience. It is, therefore, clear that models of CSA are needed that address the vulnerability of all children, not just females (Holmes et al., 1997). It is only after understanding how the risk factors and nature of CSA differs between males and females that children may potentially be identified as being at risk of CSA and appropriate measures may be introduced to protect these children from further or future sexual exploitation (Collings, 1995; Young et al., 1994).

From an academic viewpoint further research into gender differences in the risk factors and experience of CSA is required. From a clinical viewpoint, acknowledgement of the possibility of sexual abuse in all children, including males, is warranted. These future directions would not only challenge society's misfounded perceptions that males are not, or cannot be, sexually abused, but they may also pave the way for future acceptance of CSA as a reality for both sexes (Spataro et al., 2001).

## **Chapter 6: Mental illness in CSA sample.**

### **6.1 Overview**

This chapter describes Study 2, which used the OFM CSA data that were obtained over the years 1967 to 1975 and 1989 to 1995, to prospectively investigate mental health outcomes approximately 17 years following CSA.

The following results, for the total sample and by gender, are presented in this chapter:

- (a) Prevalence of psychiatric diagnoses, as registered on the VPCR, in each of: total CSA cohort, age-restricted cohort (for comparative purposes), and the total Victorian estimated resident population for same follow-up period (comparative group);
- (b) Comparison of the prevalence of psychiatric diagnoses in the age-restricted CSA cohort with the comparative group;
- (c) Relative risks of contact with Victorian public mental health services during the period 1<sup>st</sup> July 1991 and 30<sup>th</sup> June 2000; and
- (d) Relative risks of each of the nine psychiatric diagnoses examined in this thesis.

### **6.2 Method**

Data matching with the VPCR was performed via a computer-matching algorithm for the 1655 cases (1359 females and 296 males) identified as having been sexually abused and medically examined at the OFM during the years 1967 to 1975 and 1989 to 1995. The mean age of the sample at the time of data matching was 26.7 years (SD 13.4),

with a minimum age of 8.6 years and a maximum age of 51.7 years. For females the mean age at the time of data matching was 27.9 years (8.6 – 51.7, SD 13.6), whereas for males the mean age was 20.9 years (8.8 – 49.3, SD 10.2). These differences in mean age were significant ( $t_{(548.82)} = 10.09$ ,  $p < .001$ ).

For the purpose of this study, registration status refers to whether or not the person has had any contact with the Victorian public mental health system (community treatment or psychiatric hospital admissions) during the nine-year follow-up period spanning 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000.

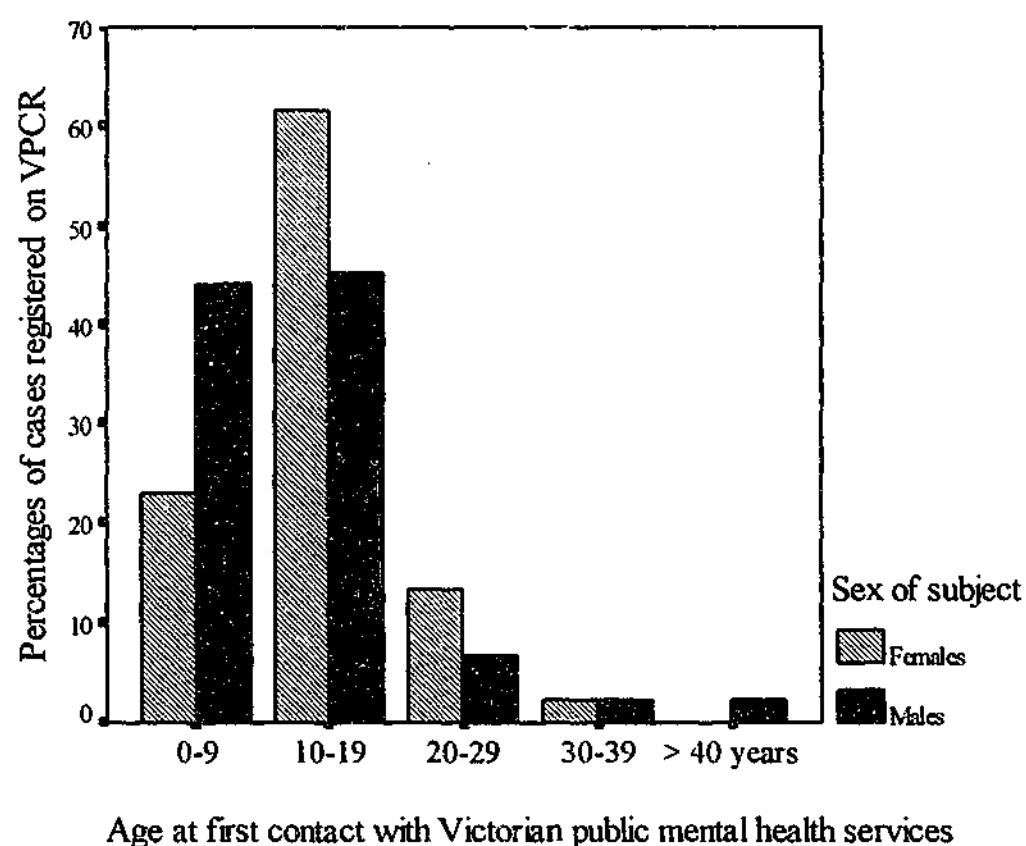
The Victorian estimated resident population for the period 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000 was obtained from the ABS. These figures were used for comparative analyses with the CSA cohort, which was restricted by age and mental health treatment between 1<sup>st</sup> July 1991 and 30<sup>th</sup> June 2000, to constitute a valid comparison group.

## 6.3 Results

### 6.3.1 Prevalence of mental illness in the registered sample

Of the 1655 cases, 1274 (77.0%) were not registered, whereas the remaining 381 (23.0%) were registered psychiatric clients. Of the 296 males in the sample, 91 (30.8%) were registered, compared to 290 of the 1359 females (21.3%). These gender differences were significant ( $\chi^2_{(1)} = 12.13$ ,  $p < .001$ ) with male victims of CSA being more likely than female victims to be registered psychiatric clients in adulthood.

Significant differences were demonstrated in the age categories at which registered males and females had their first contact with Victorian public mental health services ( $\chi^2_{(4)} = 23.07, p < .001$ ). Male victims of CSA were more likely than female victims to have had their first contact with Victorian public mental health services before the age of ten (44.0% vs 23.0%) and after forty years of age (2.2% vs 0.0%). Females were more likely than males to have had their first contact with public mental health services between the ages of 10 and 19 (61.7% vs 45.1%). The percentages of registered male and female CSA victims who had their first contact with public mental health services between the age brackets of 0-9 years, 10-19 years, 20-39 years, 30-39 years, and above 40 years are presented in Figure 6.1.



**Figure 6.1** Percentages by gender of age at first contact with Victorian public mental health services.

Of the 381 registered clients, 271 (71.7%) were examined for CSA at OFM prior to being registered on the VPCR and 107 (28.3%) were registered psychiatric clients before being examined for CSA. The likelihood of being first registered on either the OFM database for CSA or the VPCR differed between males and females ( $\chi^2_{(1)} = 4.843$ ,  $p = .03$ ) with females being more likely than males to be first registered on the OFM database for CSA, and males being more likely to be first registered on the VPCR. This likelihood also varied across diagnosis ( $\chi^2_{(8)} = 26.66$ ,  $p = .001$ ), with clients diagnosed with conduct disorders and organic disorders being more likely to be first registered on the VPCR than the OFM database for CSA, and clients diagnosed with alcohol/drug related disorders being more likely to be first registered on the OFM database than the VPCR.<sup>23</sup>

### 6.3.2 Prevalence of mental illness in the total CSA sample

Table 6.1 presents diagnostic breakdowns and percentages as a function of gender for the entire sample of children who were examined for CSA. Chi square goodness of fit analyses were conducted to examine gender differences between the predicted and observed frequencies of each diagnosis. Males were more likely than females to be diagnosed with conduct disorders ( $\chi^2_{(1)} = 21.96$ ,  $p < .001$ ) and non-psychiatric or unknown disorders ( $\chi^2_{(1)} = 7.64$ ,  $p = .01$ ). No other significant differences were demonstrated.

<sup>23</sup> 5 cells in the crosstabulation had an expected count less than 5 when the minimum expected count is 2.55. Therefore, the sampling distribution of  $\chi^2$  for the data has departed from continuity. Given the number of diagnoses of interest, the data could not be collapsed in order to conduct a Fisher Exact Test (2 x 2 design).

Table 6.1

Prevalence of mental illness by gender for the total CSA sample

DIAGNOSIS	F n=1359	%	M n=296	%	Total n=1655	%
Schizophrenic disorders	12	0.9	3	1.0	15	0.9
Major affective disorders	14	1.0	2	0.7	16	1.0
Organic disorders	15	1.1	2	0.7	17	1.0
Other affective & Somatoform disorders	17	1.3	1	0.3	18	1.1
Anxiety disorders & Acute Stress Reactions	47	3.5	13	4.4	60	3.6
Childhood mental disorders	62	4.6	20	6.8	82	5.0
Personality disorders	17	1.3	6	2.0	23	1.4
Conduct disorders	2	0.2	7	2.4	9***	0.5
Alcohol / drug related disorders	14	1.0	3	1.0	17	1.0
Non-psychiatric or unknown	90	6.6	34	11.5	124***	7.5
<b>TOTAL:</b>	<b>290</b>	<b>21.3</b>	<b>91</b>	<b>30.7</b>	<b>381</b>	<b>23.0</b>

\*\*\* p &lt; .001

NB: The significant findings indicate a difference between the predicted and observed frequencies of the diagnosis for males and females.

### 6.3.3 Criteria for cohort restriction

To establish a valid comparison group, a constant time frame was specified by which to compare the populations of interest, in this case the OFM CSA cases and the VPCR clients. A nine-year time frame, spanning 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000, was applied, due to robust information for this period being available on the VPCR. Criteria for cohort inclusion were as follows:

1. Born before 1<sup>st</sup> July 1991, and;
2. Being treated in the Victorian public mental health system between 1<sup>st</sup> July 1991 and 30<sup>th</sup> June 2000 (Table 6.2).

Table 6.2

Frequencies of cases born before 1<sup>st</sup> July 1991 who were treated in the Victorian public mental health system over the period 1/7/1991 to 30/6/2000.

		Age Restricted Cohort		Total
		No	Yes	
<b>Treated in mental health system 1/7/1991 to 30/6/2000</b>	<b>No</b>	40	1412	1452
	<b>Yes</b>	3	200	203
<b>Total</b>		43	1612	1655

As can be seen in Table 6.2, of the 1655 cases who were examined at the OFM for child sexual abuse, 1612 cases were born prior to 1<sup>st</sup> July 1991, with 200 (12.4%) of these cases having been treated in the mental health system during the specified 9-year time frame. These 1612 cases (1327 females and 285 males) constituted the cohort that



was compared to the Victorian estimated resident population for the same follow-up period. The mean age of the age-restricted cohort at the time of data matching was 27.1 years (10.6 – 51.7, SD 13.3). For females, the mean age was 28.4 (10.6 – 51.7, SD 13.5), whereas for males the mean age was 21.3 (10.6 – 49.3, SD 10.2) ( $t_{(521.58)} = 10.00, p < .001$ ).

#### 6.3.4 Relationship between CSA examination and first psychiatric contact

Of the 200 individuals in the age-restricted cohort who had contact with Victorian public mental health services between 1/7/1991 to 30/6/2000, 151 (75.5%) were registered on the VPCR following their CSA examination at the OFM. Table 6.3 reports diagnostic frequencies for cases that were registered on the VPCR prior to their CSA examination.

Table 6.3

Diagnostic frequencies of cases whose VPCR registration predated their CSA examination.

Diagnosis	F	M	Total
Schizophrenic disorders	2	0	2
Major affective disorders	3	0	3
Organic disorders	2	0	2
Other affective & somatoform disorders	1	0	1
Anxiety disorders & acute stress reactions	2	3	5
Childhood mental disorders	1	4	5
Personality disorders	1	2	3
Conduct disorders	1	4	5
Alcohol/drug related disorders	0	0	0
Non-psychiatric or unknown	14	9	23
<b>TOTAL:</b>	<b>27</b>	<b>22</b>	<b>49</b>

Table 6.4 reports descriptive statistics for age at examination and initial database registration by gender. The mean age at examination for cases examined for CSA prior to their psychiatric registration was 9.2 years ( $SD = 4.1$ ) and 10.1 years ( $SD = 4.1$ ) for cases with psychiatric registration predating CSA examination. This difference was not significant ( $t_{(198)} = -1.30, p = .19$ ). Females were significantly more likely than males (80.0% versus 66.2%) to first be examined for CSA and then be registered on the VPCR ( $\chi^2_{(1)} = 4.55, p = .03$ ).

Table 6.4

Means and standard deviations for age at examination and initial database registration by gender.

Sex	Initial database registration	N	Mean Age	SD
Female	CSA < VPCR	108	9.7	4.1
	VPCR < CSA	27	10.2	4.1
	Total	135	9.8	4.1
Male	CSA < VPCR	43	7.9	4.0
	VPCR < CSA	22	9.9	4.2
	Total	65	8.6	4.1
Total	CSA < VPCR	151	9.2	4.1
	VPCR < CSA	49	10.1	4.1
	Total	200	9.4	4.1

The time difference between date of examination at the OFM and initial contact with the VPCR was computed for the cohort. The mean time difference between being examined for CSA prior to psychiatric registration was 5.6 years ( $SD = 5.8$ ) and for individuals whose initial contact with psychiatric services predated their CSA examination the mean time difference was 4.2 years ( $SD = 12.8$ ). These time differences did not differ significantly from each other ( $t_{(198)} = 1.00, p = .32$ ).

### 6.3.5 Relative risks for mental health treatment for the age-restricted cohort

Of the 1612 cases in the age-restricted CSA cohort, 12.4% (200 cases) received public mental health treatment during the period spanning 1/7/1991 to 30/6/2000. This value compares to 2.7% of the Victorian estimated resident population who received mental health treatment during the same period (84,203 cases of 3,139,745 Victorians).

Relative risks were calculated to examine the likelihood of mental health treatment in the Victorian public mental health system in the age-restricted CSA cohort, relative to that of the comparative Victorian estimated resident population, for the same nine-year follow-up period. These relative risks and 95% confidence intervals are presented in Table 6.5.

Table 6.5

Relative risks of Victorian public mental health treatment by gender for the age-restricted cohort between 1/7/1991 and 30/6/2000

	n	RR	95% CI
<b>Males</b>	65	7.2 <sup>***</sup>	5.5, 9.6
<b>Females</b>	135	3.3 <sup>***</sup>	2.8, 3.9
<b>TOTAL</b>	200	3.8 <sup>***</sup>	3.3, 4.4

\*\*\* p < .001

Children who were examined for CSA at the OFM and were born before 1<sup>st</sup> July 1991 were 3.8 times more likely than non-examined Victorian children to have received mental health treatment during the period 1/7/1991 to 30/6/2000. For males and females, the relative risks were 7.2 and 3.3, respectively.

### 6.3.6 Prevalence of psychiatric diagnoses in the age-restricted cohort

Frequencies and percentages of psychiatric diagnoses during the period 1/7/1991 to 30/6/2000 for the age-restricted cohort are presented in Table 6.6. Chi square goodness of fit analyses revealed a number of significant differences. Based on what would be expected, given the proportion of males and females in the CSA cohort and the total number of cases with each of the diagnoses, males were more likely than females to be diagnosed with childhood mental disorders ( $\chi^2_{(1)} = 27.95, p < .001$ ), conduct disorders ( $\chi^2_{(1)} = 13.87, p < .001$ ), and non psychiatric or unknown disorders ( $\chi^2_{(1)} = 8.72, p < .01$ ). No other significant differences were demonstrated.

A one-way ANOVA indicated that diagnoses differed according to age at the time of data matching ( $F = 7.29, df = 8, p < .001$ ). Post-hoc comparisons revealed several diagnoses that were significantly more likely to be diagnosed in younger individuals: childhood mental disorders (mean age 16.6) relative to other affective and somatoform disorders (mean age 30.0), schizophrenic disorders (mean age 32.2), alcohol/drug related disorders (mean age 36.0), and personality disorders (mean age 36.1); conduct disorders (mean age 18.4) relative to schizophrenic disorders (mean age 32.2), and personality disorders (mean age 36.1); and anxiety disorders and acute stress reactions (mean age 22.7) relative to personality disorders (mean age 36.1).

Table 6.6

Prevalence of mental illness by gender in the age-restricted CSA cohort between 1/7/1991 and 30/6/2000

DIAGNOSIS	F n=1327	%	M n = 285	%	Total n=1612	%
Schizophrenic disorders	10	0.8	3	1.1	13	0.8
Major affective disorders	14	1.1	2	0.7	16	1.0
Organic disorders	4	0.3	2	0.7	6	0.4
Other affective & somatoform disorders	6	0.5	1	0.4	7	0.4
Anxiety disorders & acute stress reactions	23	1.7	8	2.8	31	1.9
Childhood mental disorders	13	1.0	16	5.6	29 <sup>***</sup>	1.8
Personality disorders	5	0.4	3	1.1	8	0.5
Conduct disorders	2	0.2	5	1.8	7 <sup>***</sup>	0.4
Alcohol / drug related disorders	3	0.2	1	0.4	4	0.2
Non psychiatric or unknown	55	4.1	24	8.4	79 <sup>**</sup>	4.9

<sup>\*\*\*</sup> p < .001, <sup>\*\*</sup> p < .01

NB: Significance represents difference between males and females on the diagnosis

### **6.3.7 Prevalence of psychiatric diagnoses in the total Victorian estimated resident population**

Frequencies and percentages of VPCR psychiatric diagnoses of Victorian estimated resident population for the period 1/7/1991 to 30/6/2000 for individuals whose birthdates were between 8/3/1950 (oldest person in CSA cohort) and 30/6/1991 (youngest person in CSA cohort) are presented in Table 6.7.

### **6.3.8 A comparison of psychiatric diagnostic percentages between the CSA cohort and the estimated Victorian resident population**

A comparison of psychiatric diagnostic percentages between the age-restricted CSA cohort (Table 6.6) and the age-restricted Victorian resident population (Table 6.7) is presented in Table 6.8. Although the CSA sample overlaps with the Victorian population, the two samples can be effectively regarded as independent of each other, because of the very high numbers in the Victorian estimated resident population.

Chi square goodness of fit analyses were conducted to examine whether each of the nine diagnoses were more prevalent in the CSA cohort than in the estimated resident Victorian population. No significant differences were demonstrated between the CSA cohort and the comparative Victorian population for schizophrenic disorders ( $\chi^2_{(1)} = 0.51$ ,  $p = .48$ ), other affective and somatoform disorders ( $\chi^2_{(1)} = 3.68$ ,  $p = .05$ ), and alcohol/drug related disorders ( $\chi^2_{(1)} = 0.004$ ,  $p = .95$ ). Males in the CSA cohort were equally as likely as males in the Victorian population to be diagnosed with a major affective disorder ( $\chi^2_{(1)} = 0.85$ ,  $p = .36$ ). All other diagnoses were significantly more likely in the CSA cohort than in the general Victorian population.

Table 6.7

Prevalence of VPCR recorded mental illness by gender in the age-restricted Victorian estimated resident population for the period 1/7/1991 to 30/6/2000

DIAGNOSIS	F n=1572773	%	M n=1566972	%	Total n=3139745	%
Schizophrenic disorders	7815	0.5	12990	0.8	20805	0.7
Major affective disorders	9360	0.6	5799	0.4	15159	0.5
Organic disorders	696	0.04	1257	0.1	1953	0.1
Other affective & somatoform disorders	3922	0.3	2780	0.2	6702	0.2
Anxiety disorders & acute stress reactions	10552	0.7	8723	0.6	19275	0.6
Childhood mental disorders	1909	0.1	5524	0.4	7433	0.2
Personality disorders	1389	0.1	1969	0.1	3358	0.1
Conduct disorders	560	0.04	1352	0.1	1920	0.1
Alcohol / drug related disorders	1949	0.1	5649	0.4	7598	0.2

Table 6.8

A comparison of the prevalence of VPCR recorded mental illness between the age-restricted CSA cohort and the age-restricted Victorian estimated resident population for the period 1/7/1991 to 30/6/2000.

DIAGNOSIS	Females		Males		Total	
	CSA	Victoria	CSA	Victoria	CSA	Victoria
Schizophrenic disorders	0.8	0.5	1.1	0.8	0.8	0.7
Major affective disorders	1.1*	0.6	0.7	0.4	1.0**	0.5
Organic disorders	0.3***	0.04	0.7***	0.1	0.4***	0.1
Other affective & somatoform disorders	0.5	0.3	0.4	0.2	0.4	0.2
Anxiety disorders & acute stress reactions	1.7***	0.7	2.8***	0.6	1.9***	0.6
Childhood mental disorders	1.0***	0.1	5.6***	0.4	1.8***	0.2
Personality disorders	0.4***	0.1	1.1***	0.1	0.5***	0.1
Conduct disorders	0.2*	0.04	1.8***	0.1	0.4***	0.1
Alcohol / drug related disorders	0.2	0.1	0.4	0.4	0.2	0.2

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

NB: Significance represents difference between CSA and Victorian samples for the particular diagnosis



### 6.3.9 Relative risks for psychiatric diagnoses for the age-restricted cohort

The data used in the current linkage study was derived from two sources: the OFM data (1989 to 1995), where descriptive information was available, and the OFM file record cards (1967 to 1975), which did not include descriptive information. As sufficient data pertaining to variables that could contribute to the development of mental illness were not available in the two data sources, potentially confounding variables were not controlled when obtaining relative risks for psychiatric diagnoses. Consequently, Table 6.9 presents unadjusted relative risks, which were calculated to examine the likelihood of psychiatric disorder in individuals in the CSA cohort relative to those in the general Victorian population not in the CSA cohort.

When compared to persons who were not in the CSA cohort but had contact with Victorian public mental health services during the follow-up period, CSA cohort individuals were at significantly increased relative risk for a number of diagnoses: 2.1 times for major affective disorders, 6.0 times for organic disorders, 3.2 times for anxiety disorders and acute stress reactions, 7.7 times for childhood mental disorders, 4.7 times for personality disorders, and 7.2 times for conduct disorders. Non-significant relative risks were demonstrated for schizophrenic disorders, other affective and somatoform disorders, alcohol/drug related disorders, and the male comparison of major affective disorders. As indicated by non-overlapping confidence intervals, gender differences in relative risks were not demonstrated.

Table 6.9

Relative risks of mental illness by gender in the age-restricted CSA cohort between 1/7/1991 and 30/6/2000

DIAGNOSES	TOTAL SAMPLE (n = 1612)			MALES (n = 285)			FEMALES (n = 1327)		
	n	RR	95%CI	n	RR	95%CI	n	RR	95%CI
Schizophrenic disorders	13	1.2	0.7, 2.1	3	1.3	0.4, 4.0	10	1.5	0.8, 2.8
Major affective disorders	16	2.1**	1.3, 3.4	2	1.9	0.5, 7.7	14	1.8*	1.1, 3.0
Organic disorders	6	6.0***	2.7, 13.4	2	8.8***	2.2, 35.5	4	6.9***	2.6, 18.4
Other affective & somatoform disorders	7	2.0	1.0, 4.3	1	2.0	0.3, 14.1	6	1.8	0.8, 4.1
Anxiety disorders & acute stress reactions	31	3.2***	2.2, 4.5	8	5.2***	2.6, 10.4	23	2.6***	1.7, 4.0
Childhood mental disorders	29	7.7***	5.4, 11.2	16	16.9***	10.2, 27.9	13	8.2***	4.7, 14.2
Personality disorders	8	4.7***	2.3, 9.4	3	8.5***	2.7, 26.4	5	4.3**	1.8, 10.3
Conduct disorders	7	7.2***	3.4, 15.0	5	20.8***	8.6, 50.3	2	4.2*	1.0, 16.8
Alcohol / drug related disorders	4	1.0	0.4, 2.7	1	1.0	1.0, 6.9	3	1.8	0.6, 5.7

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

NB: Significance represents difference between the likelihood of those in the OFM CSA cohort being registered with the diagnosis, relative to individuals in the age-restricted estimated resident Victorian population not examined for CSA at the OFM

## 6.4 Discussion

This study documents elevated rates of adult mental illness in victims of CSA who were medically examined at the OFM shortly after their abuse was reported to the Victoria police or CSV, between 6 and 37 years prior to the study being conducted. This finding accords with the majority of previous studies in demonstrating an association between a history of CSA and a wide range of adult mental health outcomes.

The current research was different from the vast majority of studies in this area for several reasons. First, the present investigation employed the largest cohort of known sexually abused children, both males and females, to have been studied systematically. This breadth enabled an examination of the association between a history of CSA and the more severe mental illnesses, including the schizophrenias and the major affective disorders. Second, the study did not depend on the retrospective self-identification of CSA in adulthood. Rather, this research prospectively identified a cohort of known CSA victims, whose abuse was documented shortly after it occurred, and whose contacts with Victorian public mental health services were recorded, as they occurred, on the largest psychiatric database in the world (the VPCR). Third, the study implemented a precise computer-matching algorithm. Despite some limitations that will be discussed in a later section of this chapter, this matching algorithm allowed CSA cases to be identified prospectively with greater certainty than other methods commonly used, such as the retrospective acknowledgement of CSA in current

psychiatric clients and the manual linkage of cases to existing databases. Together, these unique features of the current study present important implications to both the theories and practices in this field.

The discussion shall now turn to the prevalence of mental illness in the CSA cohort, and in particular, that not all children exposed to CSA will develop mental health problems in later life. Although not constituting a major component of this thesis, factors that may mediate and moderate adverse long-term mental health consequences will be briefly presented before a detailed discussion of the association between CSA and contact with Victorian public mental health service, and overall rates of mental disorder, will be offered.

#### **6.4.1 Prevalence of mental illness in the CSA cohort**

Of the 1612 cases in the age-restricted CSA cohort, 12.4% received public mental health treatment during the nine-year follow-up period of the study. This value compares to 2.7% of the Victorian estimated resident population who received mental health treatment during the same period. Although as a group, individuals in the CSA cohort were almost four times at increased relative risk of having contact with public mental health services than their non-abused counterparts, 87.6% of children examined for CSA did not have any contact with public mental health services during the nine-year follow-up period of the study.

Consistent with the findings of previous research, it is likely that the experience of CSA in the cohort, although potentially damaging, was open to amelioration and limitation by a number of both positive and negative pre- and post-abuse experiences (Cole & Putnam, 1992; Mullen & Fleming, 1998; Mullen et al., 1993; Mullen et al., 1994; Romans et al., 1995). Whilst not specifically examined, these factors may include the resiliency and developmental stage of the child at which CSA occurred, and the child's experience both prior, and subsequent, to the abuse. For example, a child exposed to a problematic family background or prior emotional and physical abuse may be more vulnerable to the additional trauma associated with CSA (Brown et al., 1998; Fergusson & Mullen, 1999; Finkelhor, 1984; Finkelhor et al., 1990; Kuyken, 1995; Mullen & Fleming, 1998). In contrast, a child from a more secure background, and who experienced a supportive and confiding parental relationship subsequent to the abuse, as well as school or social success, may be more resilient to long-term developmental damage (Mullen & Fleming, 1998; Romans et al. 1995). It has been suggested that negative pre- and post-abuse experiences interact with the experience of CSA, to disrupt a child's developing self-esteem and sense of mastery of the world. It is therefore a combination of these deficits, and not solely the experience of CSA itself, that increase the likelihood of psychological problems in later life (Mullen & Fleming, 1998; Peters, 1988).

Although this model of developmental deficits is intuitive, a comprehensive review of this model was beyond the scope of this thesis. The current study did not examine the mechanisms by which the long-term impact of CSA may be modified, as limited

descriptive information was available for the relatively young CSA cases that were examined between the years 1989 to 1995, of which only 49 cases were registered on the VPCR. Hence, whilst recognising the possibility that individuals in the CSA cohort that were identified on the VPCR may have come from disrupted and disadvantaged backgrounds, statistically meaningful analyses pertaining to pre-abuse and CSA-specific factors that predicted mental health problems in later life could not be conducted. Therefore, the remainder of this chapter will focus on the association between CSA and mental health outcomes, rather than examine the nature of this relationship. Unless specified otherwise, data comparisons will be made to unadjusted rates of mental illness in the literature, given their comparability to the unadjusted rates in the present study.

#### **6.4.2 The association between CSA and contact with Victorian public mental health services**

Children who were examined at the OFM for sexual abuse and who met the age-restriction criterion (i.e. born before 1<sup>st</sup> July 1991) were almost four times more likely to have had contact with Victorian public mental health services than individuals in the Victorian population who were not examined for CSA at the OFM. Males in the CSA cohort were more than seven times at increased relative risk than Victorian males not in the cohort, whereas females in the CSA cohort were more than three times at increased risk of having contact with Victorian public mental health services relative to non-CSA cohort females. These findings are consistent with those of the meta-analysis conducted

by Fergusson and Mullen (1999) in which victims of non-contact, contact and penetrative CSA were found to be almost two to ten times at increased risk of later psychiatric disorder or of seeking help from psychiatric services.

The finding that males in the CSA cohort were significantly more likely than females to have had contact with Victorian public mental health services during the nine-year follow-up period is interesting, given the literature which suggests that female victims of CSA are more likely than male victims to disclose their sexually abusive experiences, whereas male victims may be more likely than their female counterparts to deny CSA. This reluctance of disclosure in males may stem from their ethic of self-reliance and the possible fear of homosexuality often associated with having been a victim of CSA (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Young et al., 1994). The finding that males were significantly more likely than females to have been registered on the VPCR before being examined for CSA at the OFM (33.8% versus 20.0%) raises the possibility that the mental health system may not only serve as a source of identification of suspected male CSA, but also as a source of referral to child protection and police authorities.

An implication of these gender differences in the likelihood of disclosure and identification of CSA is that female victims may be more likely than males to have received emotional and/or professional support following disclosure of CSA, thereby reducing the number of female victims who have had contact with public mental health services in later life. The continued denial of CSA in male victims, on the other hand,

may lead to an exacerbation of the psychological difficulties with which CSA is often associated, thereby over-representing the likelihood of mental health treatment in adult males, and possibly creating the perception of more detrimental consequences of CSA for male, as compared to female, victims.

Moreover, it is possible that a 'saturation effect' was operating (Horwitz et al., 2001; Widom, Ireland, & Glynn, 1995; Widom & White, 1997), whereby CSA elevated the risk of behaviours that would not otherwise occur in abused males relative to non-abused males, such as having contact with mental health services and receiving treatment for mental health problems. Accordingly, although CSA may have exerted an additional risk of mental health treatment for both males and females, the risk of male CSA victims receiving mental health treatment relative to non-abused males was greater than that of female victims relative to non-abused females. This possibility highlights the need for increased research and awareness into the reality of male sexual abuse to promote a climate in which male CSA victims are prepared to disclose their sexual victimisation and subsequently receive treatment, which may in turn ameliorate the possible adverse consequences of continued denial of a history of childhood sexual victimisation.



### 6.4.3 Overall rates of mental illness in the CSA cohort

The findings of the current investigation are consistent with the extant research that has consistently demonstrated pervasive associations between CSA and adult mental health outcomes (Andrews et al., 2002a; Fergusson & Mullen, 1999). Clearly, individuals exposed to CSA are a population at increased risk of a wide range of adult mental health problems. However, because most studies into the long-term mental health outcomes of CSA have depended on correlating adults' retrospective memories of CSA with current psychological difficulties, the causality of this relationship in prior research may be uncertain. Although the determination of cause is not straightforward, nor simple, but requires a judgement based on several criteria, one aim of the current thesis was to assess the likelihood that any relationship that may be found between CSA and adult outcome is causal.

The following discussion will separately consider each of the diagnostic categories of schizophrenic disorders, affective disorders, organic disorders, anxiety disorders and acute stress reactions, disorders of childhood, personality disorders, and alcohol or drug related disorders. Comparisons to the literature presented in Chapter 2 will be undertaken and theoretical implications of findings will be discussed.

While it is recognised that relative risks are a better comparison than absolute percentages when comparing data that have been derived differently, relative risks were not identified in the literature for some of the diagnostic categories in the current thesis.

Indeed, only two comprehensive meta-analyses have been conducted, in which relative risks and odds ratios, respectively, were calculated (Andrews et al., 2002a; Fergusson & Mullen, 1999). Where possible, direct comparisons to these studies will be made. For diagnostic categories for which relative risks or odds ratios have not been provided in the literature, including schizophrenic, organic, personality, and childhood disorders, a comparison of prevalence rates will be conducted. All results that are presented in this discussion pertain to VPCR information during the study's nine-year follow-up period, spanning 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000.

#### 6.4.3.1 Schizophrenic disorders

In the present study, 0.8% of the age-restricted CSA cohort had an ICD-9 or ICD-10 diagnosis of a schizophrenic disorder. Analyses revealed that the prevalence of schizophrenic disorders in the cohort did not vary as a function of gender, with 0.8% of females and 1.1% of males in the CSA cohort recorded on the VPCR as exhibiting a schizophrenic disorder. Furthermore, individuals in the CSA cohort were not at increased relative risk of being recorded on the VPCR with a schizophrenic disorder compared to individuals in the estimated resident Victorian population (0.8% vs 0.7%).

The findings of the current study demonstrated that, in a relatively young victim cohort, with a mean age of 27.1 years at the time of data matching, CSA did not bestow an effect on the manifestation of schizophrenic disorders in early adulthood.

Consequently, psychosocial explanations of schizophrenic disorders, in which an inherited predisposition towards psychosis might be exacerbated by the trauma and developmental disturbances associated with CSA have not been supported (Briere et al., 1997; Goodman et al., 1997). In contrast, the current findings are consistent with those of Burnam et al. (1988) and Carmen et al. (1984), who independently reported a non-significant association between CSA and adult schizophrenic disorders.

However, it is unclear whether the same explanations for these findings can be applied to this research. For example, Burnam et al. (1988) explained their non-significant findings in terms of a genetically transmitted vulnerability to develop psychotic disorders, which may be unaffected by the trauma associated with having been a victim of CSA. If this purely biological explanation were applicable, one may question why some researchers have demonstrated significant associations between a history of CSA and schizophrenic disorders or symptoms in later life (Briere et al., 1997; Read et al., 2002; Read & Argyle, 1999; Sansonett-Hayden et al., 1987). This inconsistency indicates that certain methodological factors may have masked any significant findings from emerging in the present study, if they indeed existed. This possibility warrants some discussion.

Although the current findings appear to support the proposition of some researchers of no association between CSA and schizophrenia (Burnam et al., 1988; Carmen et al., 1984), they should be considered in the context of the relatively young age of the CSA cohort at the time of data matching. The mean age of the cohort was 27.1 years,

whereas the mean age of those in the CSA cohort with a VPCR diagnosis of a schizophrenic disorder was 33.3 years. Hence, the CSA sample may not have reached the peak risk period of developing a schizophrenic disorder. This possibility may have been further influenced by the relatively short follow-up period of only nine years, possibly resulting in a decreased likelihood of being diagnosed with disorders more likely to be manifested in later adult life. To address this possibility, the current study should be conducted in approximately ten years' time, using the same CSA victim cohort and a longer follow-up period, to explore an increased number of years at risk of developing a schizophrenic disorder in older victims. This methodology would shed further light on whether a relationship indeed exists between CSA and adult schizophrenic disorders, and in doing so, may further elucidate whether the manifestation of schizophrenic disorders is influenced by biological (no relationship with CSA) or psychosocial (significant association with CSA) pathways.

Another interesting possibility that has been raised by various researchers, and which may have influenced the current findings, is that the relationship between CSA and psychotic conditions may be masked because individuals identified as abused are frequently re-diagnosed from 'psychotic' to 'non-psychotic' (Atlas et al., 1995; Briere et al., 1997; Read, 1998). This approach reflects the prevailing view that mental illnesses believed to be predominantly biogenetic in origin, such as the schizophrenic disorders, are unrelated to various forms of social and developmental trauma. This belief may, in turn, motivate a desire to formulate a diagnosis more likely to result in abuse-focused psychological interventions, such as non-psychotic disorders like PTSD or anxiety

related disorders (Read, 1998). Given that individuals who present to mental health services are generally seeking treatment for their psychological difficulties, it seems reasonable to assume that some CSA victims who report dissociative symptoms and who would otherwise be diagnosed with a schizophrenic disorder are incorrectly diagnosed with PTSD (Fergusson & Mullen, 1999). As such, the prevalence of schizophrenic disorders in adult survivors of CSA may be underestimated, the role of social and developmental trauma on the manifestation of schizophrenic disorders is consequently minimised, and the predominant biological explanations of the schizophrenic disorders remain unchallenged.

Further research into the long-term effect of CSA on schizophrenic disorders is warranted for several reasons. Few investigations have been conducted into the relationship between CSA and the more severe forms of mental illness, such as the psychotic disorders, and even fewer have examined this link using large victim samples. Furthermore, those that have been conducted have produced inconsistent results. In studies that have demonstrated a significant association between CSA and schizophrenic disorders (Briere et al., 1997; Read et al., 2002; Read & Argyle, 1999; Sansonett-Hayden et al., 1987), it is unclear whether CSA is a causal factor in the onset of these disorders, or a marker for a range of childhood disadvantages, such as the absence of important parental role models or suboptimal parenting, which could combine to increase risk of developing schizophrenic disorders in later life. Similarly, in studies reporting no relationship between CSA and schizophrenic disorders (Burnam et al., 1987; Carmen et al., 1984), it is unclear whether schizophrenia is caused by a

genetic vulnerability to the disorder, or whether methodological limitations masked any significant findings from emerging.

Future research would benefit from employing large samples of CSA victims, both males and females, who have reached the maximum risk period for the development of schizophrenic disorders to address the unanswered question of whether childhood sexual trauma is associated significantly with the subsequent development of schizophrenic disorders. Although the current study failed to demonstrate a significant association between CSA and schizophrenic disorders, and in the context of the limited and inconsistent research that has directly examined this association, it is premature to discount the possibility that childhood sexual trauma may lead to the development of schizophrenic disorders in later life.

#### 6.4.3.2 Affective disorders

The present investigation demonstrated that 1.0% of the CSA cohort were recorded on the VPCR as having a major affective disorder (1.1% of females and 0.7% of males), and a further 0.4% were recorded as having a diagnosis in the 'other affective and somatoform disorder' category (0.5% of females and 0.4% of males). Analyses revealed that the prevalence of major affective disorders and other affective and somatoform disorders in the cohort did not vary as a function of gender.

Individuals in the CSA cohort were over two times at increased relative risk of having a major affective disorder than those in the comparative Victorian estimated resident population (1.0% vs 0.5%, respectively). Although females in the CSA cohort were almost two times at increased relative risk of having a major affective disorder than Victorian females, CSA cohort males were not at significantly increased risk of a major affective disorder relative to Victorian males. Other affective and somatoform disorders were equally as likely to occur in the CSA cohort relative to the Victorian population, which could be an artefact of the VPCR dealing primarily with the severe end of psychopathology. Gender differences were not demonstrated in the relative risks of being diagnosed with these disorders.

The current findings of a significant relationship between CSA and major affective disorders in early adult life are consistent with the literature (Bifulco et al., 1991; Briere et al., 1997; Burnam et al., 1992; Dinwiddie et al., 2000; Fergusson et al., 1996b; Kendler et al., 2000; Mullen et al., 1988; Mullen et al., 1996; Nelson et al., 2002; Silverman et al., 1996). In particular, the current unadjusted relative risk of 2.1 for major affective disorders is consistent with the unadjusted odds ratio estimates ranging from 2.1 to 7.0 calculated by Fergusson and Mullen (1999), and the unadjusted relative risks ranging from 1.4 to 2.8 calculated by Andrews et al. (2002a). These ranges of odds ratios and relative risks can be attributed to a broader definition of CSA spanning non-contact abuse, contact abuse, and intercourse, that was implemented in the meta-analyses of Fergusson and Mullen and Andrews et al., compared to the more restrictive definition implemented in the current investigation of contact and penetrative CSA.

Although most studies have reported a significant association between CSA and major depression, the majority of these studies have examined only female victims. In the current study, females, but not males, in the CSA cohort were at significantly increased relative risk of major affective disorders than their female and male counterparts, respectively, in the Victorian population. However, consistent with the findings of Briere et al. (1988), Heath et al. (1996), Roesler and McKenzie (1994), and Gold et al. (1999), males and females did not differ significantly from each other in the likelihood of having a VPCR diagnosis of major affective disorder. This latter finding should be interpreted with some caution, however, given that 0.7% of males in the CSA cohort, compared to 1.1% of females, were diagnosed with a major affective disorder. Consequently, limited statistical power may have obscured the attainment of more robust significant findings.

It may be that, consistent with the findings of Carmen et al. (1984) and Horwitz et al. (2001), the symptomatology associated with depressive disorders is more characteristic of females, rather than males, and that CSA may exacerbate a pre-existing risk of developing major depression in females. Alternatively, males and females may not differ on internalising disorders following CSA. In any case, given the young age of the CSA cohort and the relatively short follow-up period of nine years, the current study should be conducted in the future to determine whether the prevalence of major depression rises with an increasing age of the cohort, which would, in turn, allow a more methodologically robust investigation into gender differences in the likelihood of major depression.



Although the current findings of a significant relationship between the CSA cohort and the Victorian population on major affective disorders are consistent with the literature, some differences across studies in prevalence rates of affective disorders have been demonstrated. While it is recognised that relative risks are a better comparison than absolute percentages when comparing data that have been derived differently, the following discussion will attempt to explain the effect of varying methodologies on the prevalence rates of mental illness. For example, Bifulco et al. (1991) reported that 64.0% of 25 women, who reported sexual abuse involving physical contact before the age of 17, had case depression on the Present State Examination (PSE) in the three-year period prior to interview. This prevalence rate is much higher than the 1.1% demonstrated in the current study and is likely to have been influenced by methodological factors. For example, all of the women in the study conducted by Bifulco et al. had at least one child under the age of 16 living at home, and were either married to men in manual occupations or were single mothers. Furthermore, over half of the instances of CSA occurred in the context of other negative experiences, including parental indifference, violence, or institutional stay. Consequently, the high prevalence of depression reported might have been a function of the sample of women who were exposed to a number of social disadvantages, and who may have been expressing depressive symptomatology even in the absence of a history of CSA.

Similarly, other studies have obtained prevalence rates of major depression that are higher than those obtained in the current investigation. For example, Silverman et al. (1996) reported a current (1-year) prevalence of DSM-III-R major depression of 21.7%.

In this study, the Diagnostic Interview Schedule (DIS-III-R) was administered to a representative community sample of 345 21-year-old females. Mullen et al. (1988) administered the General Health Questionnaire (GHQ) and the PSE to 2000 women in a random community sample in New Zealand. These researchers demonstrated that 20.0% of women exposed to CSA were identified as having psychiatric disorders, predominantly depressive in type, compared with 6.3% of the non-abused population. Fergusson et al. (1996b) administered the Composite International Diagnostic Interview (CIDI) and obtained rates of major depression in 63.9% of individuals exposed to penetration. Finally, using the Diagnostic Interview Schedule (DIS), Burnam et al. (1988) demonstrated that 13.4% of individuals exposed to CSA, compared to 5.6% of control subjects, had major depression based on DSM-III diagnostic criteria.

Although the above studies have been consistent in demonstrating that a history of CSA is significantly related to affective disorders in later life, one may question why the associated prevalence rates are higher than those obtained in the current research. Although the current study examined the registered diagnoses of individuals who had contact with Victorian public mental health services, this research did not address the number of CSA victims with major depression who have not been registered on the VPCR, but are being treated in contexts other than the public psychiatric system, or are not receiving treatment at all. As such, the VPCR sample may be an under-representation of psychiatric illness within the community, but an over-representation of more serious psychopathology. This possible explanation may also account for the non-significant association between CSA and the manifestation of other affective and

somatoform disorders demonstrated in the current study. In contrast, the studies described above administered diagnostic measures to random community samples, thereby increasing the likelihood of identifying individuals with depressive symptoms who may not have otherwise been recorded in official psychiatric records.

Furthermore, major affective disorders and other affective and somatoform disorders were second and fourth, respectively, in the diagnostic hierarchy that was implemented. Hence, some cases of affective disorders may have been lost to diagnoses higher in the hierarchy, including the schizophrenic and organic disorders, thereby leading to an under-representation of the affective disorders. This possibility may have been more likely for other affective and somatoform disorders, which not only may be less severe, but also were lower than major affective disorders in the diagnostic hierarchy.

Despite these methodological disparities, the significant association between CSA and affective disorders demonstrated in the present study is important, given that major depression has been found to increase risk of suicidal behaviour and attempts (Andrews et al., 2002a; Fergusson et al., 2000; Molnar et al., 2001). Consistent with the social-developmental model of the long-term effects of CSA proposed by Mullen and Fleming (1998), a combination of several childhood disadvantages (such as family dysfunction and parental separation), the sexually abusive experience itself, and adverse post-abuse experiences (including poor parental relationships and academic difficulties), may lead to impaired self-esteem, an inadequate sense of agency, difficulties with intimacy, and sexual problems. Combined with the embarrassment and self-blame often associated

with victims of sexual abuse, these factors may increase the risk of developing affective disorders, which, if left untreated, may lead to an increased risk of suicidal ideation and attempts in later life.

#### 6.4.3.3 Organic disorders

Although the literature on the relationship between CSA and organic disorders in adulthood was not presented in Chapter 2 of this thesis, given that most studies in this area focus on psychologically, rather than biologically based, disorders, VPCR data were available for the association between CSA and organic disorders in later life. The diagnoses of 'dementia and global disturbances of cerebral function' and 'other disorders of the nervous system' comprised the diagnostic category of organic disorder in the current thesis. Although not constituting a major component of this section, these data will be presented and potential implications of the findings will be briefly discussed.

Of the age-restricted CSA cohort, 0.4% were recorded as having a VPCR diagnosis of organic disorder. The prevalence of organic disorders did not vary as a function of gender, with 0.3% of females and 0.7% of males in the cohort recorded on the VPCR as having an organic disorder. Individuals in the CSA cohort were six times at increased relative risk of having an organic disorder than those in the comparative Victorian population without an OFM documented history of CSA (0.4% vs 0.1%, respectively).

Gender differences in the relative risk of being diagnosed with an organic disorder were not demonstrated.

Although the increased rates of all diagnoses in CSA victims that were obtained in the current study were expected, the findings pertaining to organic disorders have not previously been uncovered, possibly because of the predominant focus in the CSA literature on the more psychologically, rather than biologically based, mental illnesses. Although the experience of CSA in the manifestation of biologically based organic disorders cannot be inferred as causal, the trauma associated with CSA may exacerbate a pre-existing vulnerability to developing an organic disorder. This possibility emphasises the importance of explaining mental illness from both a biological and psychosocial perspective.

An alternative explanation for these unexpected findings is that organic disorders increase the risk of sexual abuse, possibly because of an increased vulnerability in individuals with these disorders. In fact, in the current study, individuals with organic disorders were more likely to be first registered on the VPCR than the OFM database for CSA, suggesting that these disorders were already present when these individuals were sexually abused. This finding highlights the importance of not only protecting vulnerable children from the sexually exploitative advances of others, but also of recognising, and appropriately addressing, possible indicators of sexual abuse in vulnerable populations. In any case, further research into the prevalence and temporal order of CSA in vulnerable populations, such as those with organic disorders or

intellectual disabilities, is warranted, in order to protect these children from unnecessary and potentially damaging sexual exploitation.

#### 6.4.3.4 Anxiety disorders and acute stress reactions

In the present study, anxiety disorders and acute stress reactions were the most frequently recorded diagnostic category, constituting 1.9% of the CSA cohort. Analyses revealed that the prevalence of anxiety disorders or acute stress reactions did not vary as a function of gender, with 1.7% of females and 2.8% of males in the CSA cohort recorded on the VPCR with an anxiety disorder or an acute stress reaction.

Relative risks of individuals developing an anxiety disorder or an acute stress reaction were elevated in the CSA cohort compared to the estimated resident Victorian population. Individuals in the CSA cohort were more than three times at increased relative risk of being diagnosed with an anxiety disorder or an acute stress reaction than those in the comparative Victorian population without an OFM documented history of CSA (1.9% vs. 0.6%, respectively). Gender differences in these relative risks were not obtained.

These findings are consistent with those of Fergusson and Mullen (1999) who obtained odds ratios ranging from between 1.3 to 4.4 for the association between non-contact, contact and penetrative CSA and the general category of anxiety disorders and phobias.

Although the current study did not specifically examine the prevalence of panic disorder or PTSD, the general findings obtained are similar to the relative risks of 1.4 to 2.8 for panic disorder and 2.7 to 6.2 for PTSD obtained by Andrews et al. (2002a).

The current finding of a significant association between CSA and anxiety disorders is consistent with the literature, which has predominantly focused on female victims of CSA. Although many studies have demonstrated that a history of CSA is related to mental health outcomes of panic disorder (Andrews et al., 2002a; Burnam et al., 1988; Dinwiddie et al., 2000; Kendler et al., 2000), PTSD (Andrews et al., 2002a; Molnar et al., 2001; Saunders et al., 1999; Silverman et al., 1996), and OCD (Saunders et al., 1992), the following discussion will focus on the more general category of anxiety disorders. This broader focus is necessary, given that the data matching procedure employed in the present investigation coded diagnostic information into similar categories, some of which were further collapsed (e.g. sexual dysfunction disorders, eating disorders, and OCD into anxiety disorders and acute stress reactions) to increase frequencies and subsequently meet the assumptions of normality.

Previous research has demonstrated that women with a history of CSA, compared with non-abused women, suffer from generalised emotional symptoms such as fear and anxiety. Although research into the effects of CSA on anxiety disorders has focused almost exclusively on female victims of CSA, it is reasonably intuitive to assume that anxiety disorders may also be present in male victims. Given the damage that CSA can inflict on a child's perception of the world as a safe place, and on their expectations and

fears for the future, it is not surprising that anxiety disorders and acute stress reactions were significantly more likely to be diagnosed in both males and females in the CSA cohort relative to their counterparts in the general Victorian population.

Although the findings of the present investigation are consistent with the literature in demonstrating a significant association between CSA and anxiety disorders, the prevalence of anxiety disorders that were demonstrated were lower than what would be expected given the literature. For example, although 1.9% of individuals in the CSA cohort were diagnosed with an anxiety disorder or an acute stress reaction, prevalence rates in the literature have varied from between 17.4% (Silverman et al., 1996) and 44.4%, (Fergusson et al., 1996b). These higher prevalence rates may be influenced by several factors. These factors include: longer follow-up periods (17 years for Silverman et al., 1996, and 18 years for Fergusson et al., 1996b) than the nine years of the current study; the administration of diagnostic measures to random community samples, in which the likelihood of identifying individuals suffering from symptoms of anxiety who are not registered on official psychiatric databases is increased; and the concurrent examination of a history of CSA and current anxiety related symptomatology (Fergusson et al., 1996b), which may increase anxiety levels at the time of interview in those exposed to CSA. Furthermore, as previously discussed in the section on affective disorders, the VPCR may be an under-representation of the extent of anxiety disorders in the community, because it excludes the details of individuals treated in contexts other than the public system, as well as individuals who are not receiving psychological treatment.



Despite the methodological limitations of previous research and the current investigation, sexual abuse in childhood clearly increases the risk of anxiety related disorders in later life. Although the current study examined anxiety disorders in general, future prospective research should investigate whether CSA is more likely to have adverse long-term consequences on specific anxiety disorders, such as PTSD, agoraphobia, and social anxiety.

#### 6.4.3.5 Disorders of childhood

Two diagnostic categories of the nine that were examined in the current thesis pertain to childhood mental disorders and conduct disorders. Childhood mental disorders were diagnosed in 1.8% of individuals in the CSA cohort, and were significantly more likely to be diagnosed in male (5.6%) compared to female victims (1.0 %). Conduct disorders were diagnosed in 0.4% of the CSA cohort, and were also significantly more likely to be diagnosed in male (1.8%) than in female victims (0.2%).

Although significant gender differences in the prevalences of these disorders were demonstrated, a comparison of the relative risks of these disorders revealed that both males and females in the CSA cohort were at a significantly increased risk of developing a childhood mental disorder or a conduct disorder, relative to their counterparts in the Victorian population without an OFM documented history of CSA. Individuals in the CSA cohort were almost eight times more likely to be diagnosed with

a childhood mental disorder than persons in the comparative Victorian population (1.8% vs 0.2%, respectively). Similarly, CSA cohort individuals were more than seven times more likely to be diagnosed with a conduct disorder than non-CSA cohort individuals (0.4% vs 0.1%, respectively). Gender differences were not demonstrated in the relative risks of being diagnosed with these disorders.

The finding that individuals in the CSA cohort were more likely than those in the comparative Victorian population to be diagnosed with childhood mental disorders was expected. However, research into the effects of CSA on childhood adjustment has almost exclusively focused on female victims. A wide variety of emotional and behavioural problems, including depression, anxiety, social withdrawal, somatic complaints, and sexual behaviour, have been found to characterise female victims of CSA (Kolko & Moser, 1988; Mannarino et al., 1989; Mian et al., 1996; Tong et al., 1987). Given the damage that CSA can cause to a child's self concept, sense of trust, and perception of the world as a relatively safe place, irrespective of gender, it is reasonable to assume that male victims will also experience childhood adjustment difficulties. Indeed, the present investigation demonstrated that childhood mental disorders were the second most frequently recorded diagnostic category on the VPCR for both males and females in the CSA cohort.

Although the diagnostic information that was derived from the VPCR during the data-matching procedure did not provide a breakdown of specific diagnoses in the broader category of childhood mental disorders, this information would have been useful in

determining the specific childhood disorders in which males and females are likely to differ. Future research should attempt to examine the nature of this association as such information would shed further light on the psychological adjustment in children exposed to CSA. This research objective could, in turn, assist in the development of appropriate treatment programs based on gender, and hopefully would serve to ameliorate adverse consequences extending into adulthood.

The present findings pertaining to conduct disorders accord with research that has consistently demonstrated higher levels of behavioural problems in sexually abused males as compared to females (Carmen et al., 1984; Darves-Bornoz et al., 1988; Friedrich et al., 1986; Garnefski & Arends, 1998; Garnefski & Diekstra, 1997; Horwitz et al., 2001). However, the present study also demonstrated that conduct disorders are significantly more likely in sexually abused females relative to their non-abused counterparts. These findings suggest that when compared to the frequencies of these disorders in the general population, childhood mental disorders and conduct disorders are equally likely in males and females. Accordingly, rather than these disorders being exclusive to males, the significant gender differences in the prevalences of these disorders in the CSA cohort may be due to differences in the degree to which these disorders are manifested, recognised, and reported across gender.

It is noteworthy that males in the age-restricted CSA cohort who were diagnosed with a conduct disorder were significantly more likely to have been first registered on the VPCR than on the OFM database for CSA. This finding raises the question of whether

concerns of male sexual abuse are raised in contexts other than direct disclosure, such as when presenting to services for behavioural problems or for treatment of physical complications resulting from the abuse itself (Holmes et al., 1997; Watkins & Bentovim, 1992). It could also be asked whether children with behavioural problems are at increased vulnerability to CSA, and whether it is these children that are more likely to be abused by strangers outside of the immediate family environment. These speculations must be examined in future research if an understanding into the determinants, risk factors, and consequences of male sexual abuse is a priority.

#### 6.1.3.6 Personality disorders

The prevalence of personality disorders in the CSA cohort was 0.5% (0.4% of females and 1.1% of males), with no significant gender differences being demonstrated. Individuals in the CSA cohort were almost five times at increased risk of having a personality disorder relative to those in the comparative Victorian population without an OFM documented history of CSA (0.5% vs 0.1%, respectively). The risk of being diagnosed with a personality disorder did not vary as a function of gender.

The finding of a significantly increased likelihood of personality disorders in sexually abused individuals than in the comparative Victorian population is consistent with existing research that has supported an association between CSA and personality disorders in adulthood (Goldman et al., 1992; Johnson et al., 1999; Luntz & Widom,

1994; Silverman et al., 1996; Weiler & Widom, 1996). Given the potential damage that CSA can cause to the personality structure of victims during their childhood, it is not surprising that these children have difficulties in developing and maintaining interpersonal adult relationships - a characteristic symptom of personality disorders. Furthermore, emotional effects that are often associated with the trauma of sexual abuse, including fears of abandonment, reduced trust of self and others, and compromised perception of safety, may lead to difficulties in coping with, and integrating, both positive and negative life experiences. These impaired adult relationships, coping difficulties, and reduced sense of socially acceptable behaviour may potentially result in an elevated risk of personality disorders in individuals subjected to childhood sexual victimisation.

It is reasonable to assume that different forms of abuse, as well as gender, may be associated with different types of personality disorder symptoms (Bliss, 1984; Coons & Milstein, 1986; Goldman et al., 1992; Johnson et al., 1999; Luntz & Widom, 1994; Putnam et al., 1983; Weiler & Widom, 1996). Numerous studies have examined the combined influence of different types of abuse and neglect on multiple, borderline, and antisocial personality disorders (Bliss, 1984; Coons & Milstein, 1986; Goldman et al., 1992; Luntz & Widom, 1994; Putnam et al., 1983; Weiler & Widom, 1996). These investigations have demonstrated that these specific personality disorders may be associated with a history of both sexual and physical abuse. Although specific etiologic models for each of the different personality disorders, and the associated influence of type of abuse and gender, should be investigated to gain an informative understanding

into the adverse consequences of CSA, this research objective was outside the scope of the present investigation, which examined the effect of CSA on the more general category of personality disorders. Furthermore, given that information on comorbid types of abuse was not available for the combined OFM cohort data, the influence of physical abuse on the development of personality disorders could not be controlled. Consequently, the independent effects of CSA could not be determined, and valid comparisons between the general findings of the present study and the more specific results of previous research could not be conducted.

A study conducted by Johnson et al. (1999) controlled the presence of other types of abuse and thus allowed a direct examination of the independent effects of CSA. After type of abuse, offspring sex, and parental education and psychiatric disorders were controlled, persons with documented CSA were more than four times as likely as those without such a history to be diagnosed with personality disorders during adulthood. This finding is comparable to the relative risk of 4.7 obtained in the present investigation, which did not control for the influence of other potentially confounding variables. This methodological disparity suggests that if confounding variables were controlled in the present study, the relative risk obtained would have been lower than that of Johnson et al. This supposition may be likely for at least three reasons.

First, it is possible that individuals with personality disorders are treated in contexts other than the Victorian public mental health system, and as such, the VPCR may be an under-representation of personality disorders within the community. In contrast,

Johnson et al. (1999) examined the risk of personality disorder in a representative community sample of youths and their mothers, thereby increasing the likelihood of identifying individuals with personality disorders who may not otherwise have been identified in official psychiatric databases. Second, the category of personality disorders was closer to the lower end of the diagnostic hierarchy that was implemented to specify a single diagnosis for cases where comorbid diagnoses were recorded. It is, therefore, likely that the obtained prevalence rate is an underestimation of the proportion of individuals in the CSA cohort who were diagnosed with a personality disorder, in addition to a disorder that took precedence in the diagnostic hierarchy. Finally, the relatively young age of the CSA cohort, combined with the limited follow-up period of nine years, may have had the effect of underestimating the frequency of personality disorders in the victim sample. The mean age at the time of data matching of those in the CSA cohort with a personality disorder was 41.0 years, compared to the mean age of the cohort, being 27.1 years. Hence, at the time of data matching, the CSA sample may not have reached the maximum risk period of developing personality disorders, thereby underestimating the effect of CSA on this mental health outcome.

Despite these methodological limitations, the findings of the present study are informative in demonstrating that sexually abused children, both males and females, are a population at increased risk of developing personality disorders in early adulthood. In addition, although most previous research has almost exclusively examined personality disorders in females, or did not provide comparative data for males, the present investigation demonstrated that personality disorders are likely to manifest in both

genders following CSA. Furthermore, it is reasonable to assume that gender differences may exist in the type of personality disorders likely to be manifested in adult survivors of CSA. This possibility should be considered in future research, especially for borderline and antisocial personality disorders, which may be more likely in females and males, respectively. Such information may not only shed further light on whether certain personality disorders are more prevalent in male or in female victims of CSA, but may also assist in identifying individuals at risk of destructive behaviour, either to themselves or towards others.

#### 6.4.3.7 Alcohol and drug related disorders

Alcohol and drug related disorders were diagnosed in 0.2% of individuals in the CSA cohort. This prevalence rate was equal to that of the comparative Victorian population who had a VPCR diagnosis of an alcohol or drug related disorder. Males and females did not differ in the likelihood of being diagnosed with an alcohol or drug related disorder during the follow-up period, with 0.2% of females and 0.4% of males having such a diagnosis. Furthermore, individuals in the CSA cohort, both males and females, were not at significantly increased relative risk of a VPCR diagnosis of an alcohol or drug related disorder.

The current findings of no significant difference between the likelihood of individuals in the CSA cohort being diagnosed with alcohol or drug related disorders relative to the



comparative Victorian population were unexpected, based on the relevant literature presented in Chapter 2. The current findings do not support research that has consistently demonstrated that individuals with a history of contact or penetrative CSA, are a population at increased risk of alcohol or drug dependence (Andrews et al, 2002a; Briere et al., 1997; Burnam et al., 1988; Dinwiddie et al., 2000; Fergusson et al., 1996; Fergusson & Mullen, 1999; Kendler et al., 2000; Nelson et al., 2002; Silverman et al., 1996; Widom & White, 1997; Yellowlees & Kaushik, 1994; Zierler et al., 1991). In particular, the current findings neither support those of Fergusson and Mullen (1999) in which odds ratios for substance abuse ranged from 1.0 to 8.9, nor of Andrews et al. (2002a), in which relative risks for alcohol and drug abuse/dependence ranged from 1.6 and 1.7, respectively, for contact abuse to 2.6 and 3.0, respectively, for intercourse.

Although individuals exposed to CSA may resort to alcohol or drug use as a means of coping with, and temporarily escaping, the adverse emotions often associated with the sexually abusive experience, it is interesting to consider why, in the current study, victims of CSA were not at increased risk of developing these disorders, as recorded on the VPCR. As previously discussed, although the VPCR may disproportionately over-represent the more severe forms of mental illness within the general community, the less serious psychiatric conditions, including alcohol and drug related disorders, may be under-represented. That is, individuals with alcohol or drug related disorders might be more likely to be receiving treatment in contexts other than the public mental health system, such as in specialised alcohol or drug related services, in which clients are not registered on the VPCR. Furthermore, because of the diagnostic comorbidity that is

often associated with alcohol or drug related disorders, these disorders are often second order effects of other mental illnesses, such as depression or schizophrenia. Accordingly, their frequency in the current study is likely to be under-represented, given the nature of the diagnostic hierarchy that was implemented, with alcohol and drug related disorders being at the lowest end of the hierarchy.

In addition, a comparison of the mean age of the CSA cohort (27.1 years) with the mean age of those in the cohort diagnosed with an alcohol or drug related disorder (39.9 years) suggests that at the time of data matching, the majority of the CSA cohort had not reached the peak risk period of developing an alcohol or drug related disorder. In combination, these methodological limitations may have combined to underestimate the frequency of alcohol or drug related disorders in the CSA cohort, and should therefore be addressed in future research investigating the association between these variables.

Given that the current study was inconsistent with the large body of research that has supported an association between exposure to CSA and alcohol or drug related disorders in early adulthood, future research should be directed towards further examining this relationship. In particular, the nature of the association between CSA and subsequent disorders of alcohol or drug dependence is worthy of further investigation. It has been suggested that the nature of the association between CSA and alcohol abuse is unclear, because it may be that exposure to CSA increases the risk of forming a relationship with an alcoholic partner, which in turn, increases the risk of

alcohol abuse (Fleming et al., 1997). In addition, it has been demonstrated that although CSA may not be solely sufficient to cause alcohol dependency, it nevertheless has the potential to increase the risk of alcohol abuse when combined with the perception of an uncaring and overly controlling mother (Fleming et al., 1998). Future research should address whether these factors influence the likelihood of drug dependence in survivors of CSA, given that both alcohol and drug use may be a means of coping with the negative emotions often associated with having been sexually abused.

#### **6.4.4 Limitations of current study**

The current study into the association between CSA and adult mental illness was unique for a variety of reasons. Rather than rely on retrospective reports, the study prospectively examined a large number of CSA cases reported to the OFM by the Victorian police and CSV. This prospective design allowed an examination of the temporal relationship between CSA and adult mental illness, where the findings of previous retrospective research have been confounded by errors of recall bias (Fergusson et al., 2000; Finkelhor, 1994; Horwitz et al., 2001). Furthermore, given that the sexual abuse of males may be more likely to be recognised by official agencies, the use of both police and CSV records is more likely to be representative of both male and female CSA than the records of agencies dealing only with abuse within the family (Calam et al., 1988; Cermak & Molidor, 1996; Levesque, 1994; Reinhart, 1987). In combination, the present methodology enabled an examination of the association

between a history of CSA and mental illness in early adulthood, and of gender differences in the long-term mental health outcomes of CSA, where existing research has predominantly focused on female victims of CSA. Despite these methodological strengths, the present study was subject to several systematic biases, which will now be discussed.

Perhaps one of the main limitations of the present study was the representativeness of the CSA cohort. Given that the most severe cases of CSA are reported to public agencies (Finkelhor, 1983), the extent to which the findings are generalisable to unreported or unascertained cases of CSA may be questioned. For example, the medical reports of individual cases in the cohort indicated that the majority of the sample had 'definitely' or 'most likely' experienced penetrative abuse (92.6%), rather than non-penetrative abuse (7.4%)<sup>24</sup>. It is therefore true that the current findings can only be generalised to penetrative abuse, which leaves unanswered the question of whether less severely intrusive forms of childhood sexual victimisation, which may not be officially documented or ascertained, may also lead to subsequent mental illness. Future research should prospectively investigate this possibility further, focusing in particular on whether gender differences exist in both the types of abuse and mental health outcomes likely to be manifested following a sexually abusive childhood.

The generalisability of information extracted from the VPCR is also worthy of particular mention. Data on the VPCR pertains to diagnoses in the Victorian public mental health system only. This characteristic of the database leads to a

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<sup>24</sup> Data on type of abuse were available for 651 of 1612 cases in the age-restricted cohort

disproportionate over-representation of the more severe psychiatric illnesses, such as the schizophrenic and major affective disorders, as almost everyone with a schizophrenic disorder in the State will be recorded on the register and a very high proportion of those with major affective disorders will similarly be registered at some point in the public mental health service (Krupinski et al., 1982). In contrast, depressive disorders, anxiety disorders, organic disorders, disorders of childhood, personality disorders, and substance abuse disorders, are likely to be under-represented in the VPCR as not all individuals in the State with these disorders will be registered in the public mental health system.

It is also likely that the diagnostic hierarchy that was implemented to specify a single diagnosis in cases where multiple diagnoses were recorded further exacerbated this over-representation of severe psychopathology. Not only might diagnoses lower in the hierarchy have been lost to those more serious diagnoses at the higher end, but also the implementation of a single diagnosis for all cases failed to recognise the possibility of diagnostic comorbidity.

In addition, individuals in the general population with psychological difficulties who are not registered, have not received treatment, or are receiving treatment in other contexts such as in the private mental health system or in States other than Victoria, are under-represented by the VPCR. Furthermore, females on the VPCR who were in the cohort may have married and, therefore, might not be identified on the VPCR by their maiden name. This limitation may have led to an underestimate of identified females

and subsequently an overestimate of male contacts with public mental health services, relative to those of females. In a study focused on gender differences in the long-term outcomes of CSA, data on the marital status of women registered on the VPCR would have been ideal to address this methodological shortfall.

Although the computer-matching algorithm that was implemented enabled CSA cases to be identified prospectively with greater certainty than the manual linkage of cases to existing databases or the retrospective acknowledgement of CSA in current psychiatric clients, the matching procedure may have also contributed to the underestimation of mental illness in the CSA cohort. The base rate of contacts with public mental health services in the estimated resident Victorian population were derived directly from the VPCR, and as such, they did not require any process for linking individuals to the register. The levels of mental illness in the CSA cohort, on the other hand, were derived by the computerised data matching procedure, which may be unrepresentative and subject to fallibility. There are a number of reasons why the current data linkage procedure may have underestimated the prevalence of mental illness in the CSA cohort. For example, the names or dates of birth on the VPCR may have been entered incorrectly, or the names provided upon contact with public mental health services may be different to the names recorded on the OFM CSA database. In addition, non-specific technical reasons may also have influenced the accuracy and representativeness of information derived from the VPCR. It is therefore reasonable to conclude that the data linkage procedure between the CSA cohort and the VPCR may have produced figures that were less than the comparative figures derived by determining the number of

individuals recorded on the VPCR and comparing this frequency to the estimated Victorian population over the follow-up period of the study. Consequently, an underestimation of mental illness in the CSA cohort relative to the Victorian population was likely in the present investigation.

In addition to factors pertaining to the specific characteristics of the CSA sample, the VPCR, and the data linkage procedure, several methodological issues may have further influenced the findings of the present study. First, although the definition of mental illness according to general categories of psychopathology such as 'personality disorders' was necessary given the low frequencies of some diagnoses, this methodology may have obscured further differences from emerging. For example, males and females may be more likely to develop antisocial and borderline personality disorders, respectively, which would provide valuable information as to how the long-term consequences of CSA may vary as a function of gender.

Second, potentially confounding pre-abuse and abuse-specific factors, were not controlled in the present investigation due to limited descriptive information for the CSA cohort individuals who were identified on the VPCR, and consequently, limited statistical power to enable meaningful statistical analyses to be conducted. Hence, a variety of contextual variables, including comorbid types of abuse, may have inflated the levels of mental illness that were obtained in the present investigation.

Third, it is likely that individuals in the comparative Victorian population had also experienced CSA, given that the OFM does not deal with all cases of CSA in Victoria. If this possibility were true, however, the likelihood of detecting a significant difference between the CSA cohort and the comparative population would be decreased. Consequently, the relative risks of mental illness that were obtained in the present study may have been underestimated.

Finally, the relatively young age of the victim cohort may indicate that the subjects had not reached the maximum risk period for each of the diagnoses, which may have masked any further differences from emerging. This age factor, coupled with the short follow-up period of nine years, led to limited years at risk of contact with public mental health services, which would have again, underestimated the prevalence of mental illness in the CSA sample. This issue may have been further compounded by the fact that although the nine-year follow-up period in the current study was equal for both the age-restricted CSA cohort and the age-comparable Victorian population, the number of years at risk of mental health problems was not. Individuals who were born before the 1<sup>st</sup> of July 1991 were included into the CSA cohort, regardless of how many years they had been at risk of mental illness prior to the commencement of the follow-up period. Consequently, the number of years at risk of mental illness following CSA, and prior to the commencement of the follow-up period, varied between individuals in the CSA cohort.



In combination, these methodological limitations should be considered in future research into the adverse mental health consequences of CSA. Although the present investigation was informative in supporting a temporal association between sexual abuse in childhood and mental illness in early adulthood, the extent to which the findings are generalisable may be questioned. Future research would benefit from employing large samples of adult survivors of CSA, who experienced both penetrative and non-penetrative abuse, to examine whether the prevalence of mental illness in these individuals rises with increased years at risk of psychopathology, despite comparable follow-up periods. This research objective would also assist in elucidating whether it is the exploitative nature that is characteristic of all forms of CSA, rather than the severity of the abuse, which is pathogenic in individuals exposed to sexual exploitation in childhood.

#### **6.5            Summary and evaluation of current models concerning the effects of CSA**

This chapter described Study 2, which implemented a prospective-cohort design to examine the long-term outcomes of CSA on adult mental illness. No study into CSA has prospectively examined such a large sample of males and females who were examined for CSA between 6 and 37 years ago, and whose later treatment by public mental health services was known and recorded on the VPCR.

By linking the CSA cohort to the VPCR, the frequency with which individuals who were allegedly sexually abused appear on the register in the various diagnostic categories could be determined. This information was utilised to identify the disorders that are over-represented in CSA victims, relative to the frequencies obtained for the comparative age-restricted Victorian estimated resident population.

The findings of the present study accord with the majority of previous studies, which are primarily retrospective in design, in supporting an association between a history of CSA and a pervasive range of adult mental health outcomes (Andrews et al., 2002a; Fergusson & Mullen, 1999). The present study therefore challenges the conceptualisation of the long-term impact of CSA as a specific post-sexual abuse syndrome in which victims of CSA primarily experience dissociative symptoms that are characteristic of PTSD (Lindberg & Distad, 1985; McLeer, et al., 1988; Rowan, Foy, Rodriguez, & Ryan, 1994; Wolfe et al., 1989).

The present study also demonstrated that the long-term mental health outcomes of CSA are likely to be similar for males and females. Although the prevalences of conduct disorders and childhood mental disorders were significantly greater in cohort males, compared to cohort females, sexually abused females were also significantly more likely than their non-sexually abused counterparts to be diagnosed with these disorders. Accordingly, based on the findings of the current study, males and females are likely to experience similar mental health consequences following CSA, and any gender differences in the prevalence of these disorders are more likely to reflect differences in

the degrees to which these disorders are manifested or diagnosed in males and females, than be indicative of gender-specific outcomes.

Consistent with models that have attempted to explain the progression from CSA to adult mental health outcomes, the long-term effects of CSA demonstrated in this thesis may have been influenced by several negative emotions associated with the sexually abusive experience, including a sense of betrayal, low self-esteem, a perception of powerlessness, guilt, and denial (Cole & Putnam, 1992; Finkelhor, 1987; Mullen & Fleming, 1998). A combination of these negative emotions may have led to ineffective coping skills, impaired judgement in interpersonal relationships, difficulties in personality integration and shortfalls in the formation of a coherent sense of identity or self (Cole & Putnam, 1992; Finkelhor, 1987; Mullen & Fleming, 1998). The observation that not all children in the CSA cohort were identified as exhibiting psychiatric problems in early adulthood suggests that CSA, although potentially damaging, is open to amelioration and limitation by a variety of both positive and negative pre- and post-abuse experiences (Mullen et al., 1993; Mullen & Fleming, 1998). Accordingly, it may be that CSA contributes to a variety of developmental disruptions that lay the foundation for interpersonal and social problems in adult life, and that many of the mental health problems associated with CSA are second-order effects of these developmental disruptions (Mullen & Fleming, 1998).

Given that current research is at an early stage in understanding the mechanisms by which CSA exerts its effect, future research should be aimed at further identifying the

developmental, family, and social correlates of CSA that constitute risk factors for such abuse (Fergusson & Mullen, 1999; Mullen et al., 1993; Romans et al., 1995). Such research would not only have the benefit of further challenging specific post-sexual abuse theories, which are often independent of the social circumstances and family background in which CSA occurs (Fergusson & Mullen, 1999), but may also further elucidate whether gender plays an important role in shaping adverse mental health consequences following CSA. In addition, this research might further elucidate whether CSA itself is causal, or rather, a marker for other childhood disadvantages that may interact to increase the likelihood of developing mental health problems in adulthood.

## **Chapter 7: Suicide and fatal overdose in CSA sample**

### **7.1 Overview**

This chapter describes Study 3, which used data of the combined CSA cohort implemented in Study 2 to investigate the long-term outcomes of suicide and death resulting from fatal drug and alcohol overdose. The results in this chapter pertain to:

- (a) The prevalence of, and gender differences in, suicide and fatal overdose in the CSA cohort;
- (b) A comparison of suicide and fatal overdose rates obtained in the CSA cohort to those in the general Victorian population; and
- (c) Relative risks of the CSA cohort having suicided or died from a drug or alcohol overdose at the time of data matching.

### **7.2 Method**

Data matching with the VCID was performed both manually and via a batch searching method for the 1655 cases that were examined for sexual abuse at the OFM during the years 1967 to 1975 and 1989 to 1995. Gender and age breakdown were previously presented in Section 6.2.

For the purpose of this study, suicide and fatal overdose (drug or alcohol) refers to deaths recorded as such on the VCID by the State Coroner following an autopsy during the nine-year follow-up period of 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000.

The Victorian estimated resident population figures for the period 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000 were used for comparative analyses with the CSA cohort (Section 4.6). This population was restricted by age to constitute a valid comparison group with the CSA cohort. All cases born prior to 8<sup>th</sup> March 1950 (oldest person in the CSA cohort) and after 1<sup>st</sup> July 1991 (youngest person in the cohort) were excluded from the ABS population statistics for the nine-year follow-up period. These age restrictions were applied to ensure valid age comparisons between individuals in the CSA cohort with persons in the comparative resident Victorian population.

### **7.3 Results**

#### **7.3.1 Prevalence of suicide and fatal overdose in the CSA sample**

Seven cases (six females and one male) in the unrestricted CSA sample (0.4%) were identified on the VCID as having died from suicide or overdose, where an autopsy was required. The mean age at death for these cases was 30.0 years (SD 10.2). All seven cases were registered on the VPCR, with their psychiatric registration following their medical examination for CSA. Four females were diagnosed with an anxiety disorder or

an acute stress reaction, one female was diagnosed with an organic disorder, and the remaining female was diagnosed with a major affective disorder. The identified male had a recorded diagnosis of schizophrenia.

Table 7.1 presents frequencies of manner of death by gender. Four females who had experienced CSA and were medically examined at the OFM between 1967 and 1975 and 1989 and 1995 had suicided by the time of data matching and a further two females had fatally overdosed from drugs or alcohol. One male was identified as having died from a drug overdose.

Table 7.1

Frequencies of manner of death by gender

Manner of death	Males	Females	Total
Suicide	0	4	4
Fatal overdose	1	2	3
Suicide/fatal overdose	1	6	7

### 7.3.2 Prevalence of suicide and fatal overdose in the age- restricted cohort

To directly compare the OFM sexual abuse data with the VCID, a constant time frame by which to compare the populations of interest was specified. A nine-year follow-up period, spanning 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000, was determined. Criteria for cohort inclusion were as follows:

1. Born before 1<sup>st</sup> July 1991, and;
2. Identified on the VCID as having died from suicide or drug and alcohol overdose between 1<sup>st</sup> July 1991 and 30<sup>th</sup> June 2000 (Table 7.2).

Table 7.2

Frequencies of cases born before 1<sup>st</sup> July 1991 who were recorded on the VCID as having died from suicide or fatal overdose between the period 1/7/91 to 30/6/00.

		Born before 1 <sup>st</sup> July 1991		Total
		No	Yes	
<b>Identified on VCID as having died during period 1/7/1991 to 30/6/2000</b>	No	43	1606	1649
	Yes	0	6	6
<b>Total</b>		43	1612	1655

As can be seen from Table 7.2, of the 1655 cases who constituted the total CSA cohort and were medically examined at the OFM, 1612 cases were born prior to 1<sup>st</sup> July 1991, with six of these cases identified on the VCID as having died from suicide or overdose



during the specified nine-year time frame. All six cases (5 female and 1 male) were registered psychiatric clients, with their VPCR registration following their medical examination for CSA. The 1612 cases that met the age-restriction criterion constituted the cohort that was compared to the Victorian estimated resident population for the same follow-up period.

Frequencies and percentages of all deaths as a function of gender are presented in Table 7.3, which reveals that 0.2% of the CSA sample had suicided by the time of data matching and a further 0.2% had overdosed. Chi square goodness of fit analyses did not reveal significant gender differences between the observed and predicted frequencies for suicide ( $\chi^2_{(1)} = 0.87$ ,  $p = .35$ ), fatal overdose ( $\chi^2_{(1)} = 0.51$ ,  $p = .48$ ) or the combined category of death resulting from suicide/overdose ( $\chi^2_{(1)} = 0.06$ ,  $p = .81$ ).<sup>25</sup>

Table 7.3

Prevalence of VCID recorded suicide and fatal overdose by gender in the age-restricted CSA sample between 1/7/1991 and 30/6/2000

	Male n=285	%	Female n=1327	%	Total n=1612	%
<b>Suicide</b>	0	0.0	3	0.2	3	0.2
<b>Fatal overdose</b>	1	0.4	2	0.2	3	0.2
<b>Suicide/fatal overdose</b>	1	0.4	5	0.4	6	0.4

<sup>25</sup> These results should be approached with caution given the low numbers identified on the Coroner's records. The mean age of the CSA cohort at the time of data matching was 26.7 (SD 13.4) (range 8.6 – 51.7 years), while the mean age at death was 30.0 years (SD 10.2). It may be that the majority of the sample had not yet passed through the highest risk years for suicide/overdose. This study should be conducted in approximately ten years to determine whether an older sample with more years 'at risk' of suicide/overdose leads to more cases of suicide/overdose.

### 7.3.3 Prevalence of suicide and fatal overdose in the total Victorian estimated resident population

Frequencies and percentages of suicide and fatal overdose, as recorded on the VCID, for the age-restricted Victorian estimated resident population for the period 1/7/1991 to 30/6/2000 are presented in Table 7.4. As can be seen, 0.3% of the Victorian population, with the same age distribution as that of the CSA cohort, had died from either a suicide or an overdose between 1/7/1991 and 30/6/2000. Examining the manner of death categories separately, 0.1% of the Victorian population had suicided and a further 0.2% had died from an overdose.

Table 7.4

Prevalence of suicide and fatal overdose as recorded on the VCID in the age-restricted Victorian estimated resident population for the period 1/7/1991 to 30/6/2000.

Outcome	F n=1572773	%	M n=1566972	%	Total n=3139745	%
Suicide	1171	0.1	1051	0.1	2222	0.1
Fatal overdose	4088	0.3	2137	0.1	6225	0.2
Suicide/fatal overdose	5259	0.3	3188	0.2	8447	0.3

### 7.3.4 A comparison of suicide and fatal overdose between the CSA cohort and the estimated resident Victorian population

A comparison of the prevalence of suicide and fatal overdose for the age-restricted cohort and age-restricted estimated resident Victorian population for the period 1/7/1991 to 30/6/2000 is presented in Table 7.5.

Table 7.5

A comparison of the prevalence of VCID recorded suicide and fatal overdose between the age-restricted CSA cohort and the age-restricted estimated Victorian resident population for the period 1/7/1991 to 30/6/2000.

Outcome	Females		Males		Total	
	CSA	Victoria	CSA	Victoria	CSA	Victoria
<b>Suicide</b>	<b>0.2*</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>
<b>Fatal overdose</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>
<b>Suicide/fatal overdose</b>	<b>0.4*</b>	<b>0.3</b>	<b>0.4</b>	<b>0.2</b>	<b>0.4</b>	<b>0.3</b>

\*  $p < 0.05$

NB: Significance indicates a difference between the CSA cohort and the age-restricted estimated resident Victorian population (1/7/1991 – 30/6/2000).

Chi square ( $\chi^2$ ) goodness of fit analyses revealed that suicide was more common in the female CSA sample than in the age-restricted general population ( $\chi^2_{(1)} = 4.10$ ,  $p = .04$ ), as was the combined category of suicide and fatal overdose ( $\chi^2_{(1)} = 5.21$ ,  $p = .02$ ) for females. No other significant differences were demonstrated.

### 7.3.5 Relative risks for suicide and fatal overdose for the age-restricted CSA cohort

Relative risks and 95% confidence intervals for suicide and death from overdose during the period 1/7/1991 to 30/6/2000 for the age-restricted cohort are presented in Table 7.6. An examination of these relative risks reveals that female CSA victims had a 2.7

increase in risk in the combined category of suicide and fatal overdose relative to individuals in the age-restricted estimated resident Victorian population who were not examined for CSA at the OFM but were recorded on the VCID as having suicided or died from an overdose. No other significant increases in relative risks were demonstrated.

Table 7.6

Relative risks of suicide and fatal overdose by gender in the age-restricted CSA cohort between 1/7/1991 and 30/6/2000

OUTCOME	TOTAL SAMPLE (n = 1612)			MALES (n = 285)			FEMALES (n = 1327)		
	n	RR	95%CI	n	RR	95%CI	n	RR	95%CI
Suicide	3	1.1	0.4, 3.5	0	—	—	3	3.1	1.0, 9.5
Fatal overdose	3	1.8	0.6, 5.7	1	2.6	0.4, 18.4	2	2.3	0.6, 9.1
Suicide/fatal overdose	6	1.4	0.6, 3.1	1	0.9	0.1, 6.3	5	2.7*	1.1, 6.5

\*  $p < 0.05$

**NB:** Significance represents difference between the likelihood of those in the OFM sample with a history of CSA being identified on the VCID as having died from suicide or overdose, compared to individuals in the age-restricted estimated resident Victorian population not examined at the OFM for CSA.

#### 7.4 Discussion

The current study investigated the relationship between a history of CSA and death resulting from suicide or overdose as recorded on the VCID. With the exception of females who were almost three times at increased relative risk of having died from suicide or overdose than females in the comparative Victorian population, no other significant differences emerged. Males in the CSA cohort were at equal relative risk of being recorded on the VCID with cause of death being suicide or overdose as their non-CSA cohort males in the Victorian population. Similarly, when the combined category of suicide and fatal overdose was separated into its respective outcomes, males and females in the CSA cohort were at equal relative risk as their counterparts in the general Victorian population to have died from either suicide or overdose. No gender differences in the combined category of suicide and overdose were demonstrated. However, these findings should be approached with caution, because only six cases in the age-restricted CSA cohort were identified on the VCID: three females and no males had suicided, and two females and one male had died from an overdose. Hence, inadequate statistical power may have obscured the relationship between CSA and these fatal outcomes.

These findings of no relationship between CSA and death resulting from suicide and overdose, except for females, were unexpected. Although only one study, to the author's knowledge, has been conducted into the relationship between CSA and completed suicide (Plunkett et al., 2001), research suggests that exposure to CSA

increases a victim's vulnerability to suicidal ideation and attempts in later life (Andrews et al., 2002a; Beautris et al., 1994; Bensley et al., 1999; Briere & Runtz, 1986; Briere et al., 1997; Dinwiddie et al., 2000; Fergusson et al., 1996b; Mullen et al., 1993; Nelson et al., 2002; Read et al., 2001; Silverman et al., 1996; Yellowlees & Kaushik, 1994). In addition, alcohol and drug abuse, which may occur to provide relief from the negative emotion often resulting from sexual abuse in childhood, has also consistently been associated with a history of CSA (Andrews et al., 2002a; Briere et al., 1997; Burnam et al., 1988; Dinwiddie et al., 2000; Fergusson et al., 1996b; Fergusson & Mullen, 1999; Fleming et al., 1997; Kendler et al., 2000; Nelson et al., 2002; Silverman et al., 1996; Widom & White, 1997; Yellowlees & Kaushik, 1994; Zierler et al., 1991).

The three deaths resulting from overdoses that were recorded on the VCID were deemed by the Coroner as accidental deaths resulting from the toxic effects of drugs or alcohol. However, it is difficult to determine if these overdoses were administered with the intention of suicide. Given that Chapter 6 examined the association between CSA and alcohol or drug related disorders in early adulthood, and that no studies, to the researcher's knowledge, have examined the relationship between CSA and death resulting from drug or alcohol overdose, the present discussion will consider overdose as a form of high-risk behaviour resulting in self-imposed death or 'suicide'.

#### 7.4.1 Does CSA increase the risk of completed suicide?

The findings of the present investigation do not accord with those of Plunkett et al. (2001), who explored the relationship between CSA and completed suicide. Conducting a national death search, and using the person-years method, which considers different follow-up periods for each subject, Plunkett et al. demonstrated a suicide rate of 10.7 to 13.0 times that of the 1995 Australian national suicide rate. This methodology contrasts with the approach utilised in the current research, in which only the VCID was explored. Conceivably, some individuals who were in the CSA cohort had moved interstate, thereby removing the likelihood of being identified on the VCID in the case of suicide or overdose in states other than Victoria. Similarly, females in the CSA cohort who are registered on the VCID by their married surname will not be identified.

In addition, although the nine-year follow-up period in the current study was equal for victims in the age-restricted CSA cohort and in the age-comparable Victorian population, the number of years at risk of suicide or overdose was not. For example, according to the age-restriction criterion, individuals born before 1<sup>st</sup> July 1991 were included in the CSA cohort, regardless of how many years they had been at risk of suicide or overdose prior to the commencement of the follow-up period. Had the person-years method employed by Plunkett et al. (2001) been implemented in the current study, the proportion of suicide and overdose relative to the number of years at risk may have been greater than the proportion of these outcomes relative to the number of subjects in the CSA cohort. Consequently, the likelihood of securing significant



findings in the current study may have increased, enabling a comparability of findings with those of Plunkett et al.

The current findings of no relationship between suicide and death resulting from overdose, when considered separately for males and females in the CSA cohort, are not necessarily inconsistent with the large body of research that supports an association between CSA and suicidal behaviour, including suicidal ideation and attempts (Andrews et al., 2002a; Beautris et al., 1994; Bensley et al., 1999; Briere & Runtz, 1986; Briere et al., 1997; Dinwiddie et al., 2000; Fergusson et al., 1996b; Mullen et al., 1993; Nelson et al., 2002; Read et al., 2001; Silverman et al., 1996; Yellowlees & Kaushik, 1994). Although the present investigation did not trace and subsequently examine the prevalence of suicidal ideation and attempts in the CSA victim cohort, it is reasonable to assume that the prevalence of these outcomes would have been greater than that of completed suicide, which is the extreme end of suicidality. CSA may also undermine a sense of control, and thus responsibility, and hence, may reduce the likelihood that ideation will evolve to action.

Indeed, this possibility was illustrated in the study of Plunkett et al. (2001), in which 43.0% of CSA victims reported suicidal ideation since being sexually abused, 32.0% had attempted suicide, and 3.3% had died from suicide. Although this finding is important in demonstrating that the increasingly destructive behaviours of suicidal attempts and completed suicide occur increasingly less than suicidal ideation, direct comparisons cannot be conducted between the current study and previous research in

the absence of specifically examining the prevalence of suicidal thoughts and behaviour in the CSA cohort. Future research should, therefore, address the mechanisms by which the potential pathways from suicidal ideation to completed suicide are established, because this information would shed light on the risk factors of completed suicide in individuals experiencing suicidal ideation.

#### **7.4.2 Risk of suicide: A combination of negative life experiences?**

Many studies into the relationship between CSA and subsequent suicidal behaviour have controlled potentially confounding factors, including social and family background variables, psychiatric history, and types and severity of abuse (Andrews et al., 2002a; Beautris et al., 1984; Briere et al., 1997; Dinwiddie et al., 2000; Read et al., 2002). These studies have demonstrated that, following statistical adjustment for these factors, the association between CSA and suicidal behaviour and attempts remains significant. These findings are important, as they highlight that CSA can induce suicidal behaviour even when many other risk factors have been controlled.

Although a life-course trajectory, in which exposure to a variety of social, family, personality and mental health factors interact to produce an increased risk of developing suicidal behaviour (Andrews et al., 2002a; Fergusson et al., 2000; Molnar et al., 2001) was not specifically examined in the present study, as data pertaining to such life events were not available in the OFM records, a brief analysis of whether cases that were

identified on the VCID were also registered on the VPCR yielded interesting findings. All of the individuals that had died from suicide or overdose during the nine-year follow-up period were registered on the VPCR and had contact with Victorian public mental health services during the same period ( $p < .001$ ); three females were diagnosed with an anxiety disorder or an acute stress reaction, one female was diagnosed with an organic disorder, the remaining female was diagnosed with a major affective disorder, and the one male was diagnosed with a schizophrenic disorder.

These findings highlight the importance of controlling psychopathology when examining the relationship between CSA and suicidal behaviour. Given that all cases identified on the VCID during the nine-year follow-up period were not matched with the VPCR for the same period, meaningful analyses about the role of psychopathology in the long-term outcome of suicide or fatal overdose in adult survivors of CSA could not be conducted. Future research should address this issue, because the combination of CSA and adult mental illness, along with a host of other negative life experiences, may prove to be risk factors in the subsequent development of suicidal behaviour.

#### **7.4.3 An appraisal of the present investigation into the association between CSA and death resulting from suicide and overdose**

The current study was different from the existing research into the association between CSA and suicidal behaviour for several reasons. Given that completed suicide can be studied only prospectively, the utilisation of the existing OFM data enabled the examination of completed suicide and overdose in the largest CSA victim cohort studied systematically. Furthermore, the CSA cohort was believed to be more representative of both male and female CSA because it included a greater proportion of male CSA victims than have been studied to date. This breadth enabled the only examination to date of gender differences into completed suicide in individuals with a history of CSA. In addition to comparing the genders, the present methodology contrasted the prevalence of suicide and fatal overdose in the CSA cohort over the nine-year follow-up period to the prevalence of these outcomes in the estimated resident Victorian population for the same period and age distribution. Although only a small number of CSA cases were identified on the VCID, this methodology enabled a valid comparison between the two populations of interest. Finally, the examination of the VCID enabled a comprehensive investigation into the association between CSA and completed suicide and fatal drug or alcohol overdose. Given that the State Coroner has a statutory responsibility to investigate all cases of sudden death in Victoria (Ruschena et al., 1998), it follows that the VCID provided representative and comprehensive information for individuals in the CSA cohort who had suicided or fatally overdosed in Victoria at the time of data matching.

Despite these methodological strengths, the current study was subject to several limitations, some of which have been described throughout this section. Perhaps one of the main limitations of the study was the relatively young age of the CSA cohort, which may have masked any significant differences from emerging. The mean age of the cohort at the time of data matching was 27.1 years, whereas the mean age of those in the CSA cohort who were identified on the VCID was 30.0 years. Perhaps the CSA cohort had not reached the peak risk period of suicide and overdose, thereby resulting in a small number of identified VCID cases and a consequent underestimation of the association between CSA and these long-term outcomes.

In addition, given that both the OFM database for CSA and the VCID rely on the manual recording of information, errors in data entry might have been committed, which could have prevented some matches between the two databases being made. To some extent, this problem was addressed by conducting VCID searches using three fields of: (a) exact matching on date of birth and surname; (b) matching on first four characters of surname and date of birth; and (c) matching on exact surname and year of birth, and also by consulting the respective OFM and VCID file in the one ambiguous case. Nevertheless, some data entry errors may not have been identified through the three different searches that were conducted. This omission would have had increased the number of false-negatives, and consequently, underestimated the relationship that links CSA with suicide and overdose.

Future research should address the methodological issues raised in this section. To obtain an adequate representation of the association between CSA and all suicides and overdoses that occur in Australia, a national death search should be conducted, rather than an examination of the individual State Coroner's records, which fail to identify individuals who suicided or overdosed in a state other than that in which the CSA occurred. In addition, where victim cohorts are relatively young and the years at risk of suicide differ substantially between cases, the person-years method may be an appropriate methodological framework from which to examine the association between a history of CSA and suicide or fatal overdose (Plunkett et al., 2001). Conversely, the examination of a cohort that has reached the maximum risk age of suicide and overdose at the time of data matching would most likely increase the obtained prevalence of suicide and overdose in the victim cohort, because of an increased number of years at risk of these adverse long-term outcomes. These methodologies may augment the number of identified deaths resulting from suicide and overdose, which may not only enable a more comprehensive examination of gender differences than was afforded in the present study, but may also enable a life-course trajectory to be assumed, in which the influence of a range of potentially confounding factors on suicide and overdose could ideally be controlled. If an increased understanding into the association between a history of CSA and the detrimental outcomes of suicide and overdose is a priority, then such research strategies are warranted and should be granted due recognition.

## 7.5 Summary

This chapter described Study 3, which investigated the impact of CSA on outcomes of completed suicide and fatal overdose. To the author's knowledge, the study was the second to examine the relationship between a history of CSA and completed suicide (Plunkett et al., 2001), and the first to investigate the relationship between a history of CSA and death resulting from drug or alcohol overdose.

The study objective was achieved by prospectively linking the CSA cohort to the existing VCID, which details all unnatural and sudden deaths in Victoria that require an autopsy to determine cause of death. With the exception of females who were almost three times at increased risk of having died from suicide or overdose relative to females in the comparative Victorian population, no other significant differences were demonstrated. Furthermore, males and females did not differ in the likelihood of having died from suicide or fatal overdose, which suggests that in a sample of CSA victims with a mean age of almost 27 years, suicide and fatal overdose is not a gender-specific outcome. However, as discussed in the chapter, several methodological limitations may have masked any potential significant differences from emerging and should be considered when interpreting the present findings.

Consequently, in the absence of addressing these methodological limitations, it would be relatively premature to accept the proposition that CSA does not cause increased risk of death resulting from suicide and drug or alcohol overdose, and further, that gender

differences do not exist in these long-term outcomes. This precaution is particularly important given the consistent findings that a history of CSA significantly increases the risk of suicidal ideation and attempts in later life (Andrews et al., 2002a; Beautrais et al., 1994; Bensley et al., 1999; Briere & Runtz, 1986; Dinwiddie et al., 2000; Fergusson et al., 1996b; Mullen et al., 1993; Nelson et al., 2002; Read et al., 200; Silverman et al., 1996; Yellowlees & Kaushik, 1994).

Future research is needed that addresses the mechanisms by which the potential pathways from suicidal ideation to completed suicide are established, as such information would shed light on the risk factors of completed suicide in individuals experiencing suicidal ideation.



## **Chapter 8            Reconceptualisation and conclusion**

This chapter integrates the findings of the three studies presented in Chapters 5 to 7, and discusses the conceptual implications of these findings. The chapter concludes with suggestions for future research.

### **8.1            Overview of main findings**

Study 1 investigated gender differences in the background and nature of sexual abuse for 982 alleged victims of CSA who were medically examined at the OFM between the years 1989 and 1995. The analysis of official OFM records enabled an examination of CSA characteristics in the largest cohort of alleged CSA victims to have been investigated systematically, which included an increased proportion of male victims than have been studied to date. The study clearly demonstrated that the background and nature of CSA differs for male and female victims. Specifically, males were more likely than females to:

- (a)    have been subjected to non-penetrative abuse;
- (b)    have been subjected to concurrent physical abuse;
- (c)    have been abused by an unrelated offender, outside the family home.
- (d)    be living without a biological father;

- (e) have had concerns of CSA raised indirectly, such as following the sexual assault of a sibling or after contact with a known sex offender;
- (f) have disclosed their sexual abuse to professional sources;
- (g) be living with one adult at the time of the abuse;
- (h) be pre-pubertal at the time of abuse; and
- (i) have had previous Intellectual Disability Services involvement.

In contrast, females were more likely than males to:

- (a) have been subjected to penetrative abuse;
- (b) have been abused within the family home, by a related offender.
- (c) be living with a stepfather or family member other than a biological or stepparent;
- (d) have had previous concerns of sexual abuse;
- (e) have disclosed their sexual abuse to a friend, peer, or other unrelated person;
- (f) be living with two adults at the time of the abuse; and
- (g) be peri- or post-pubertal when abused.

Study 2 implemented a prospective cohort design to examine the long-term outcomes of CSA on adult mental illness over a nine-year timeframe spanning 1<sup>st</sup> July 1991 to 30<sup>th</sup> June 2000. This research objective was achieved by linking the cohort of 982 alleged CSA victims established in Study 1, and a further 673 older cases, to the largest psychiatric database in the world, the VPCR. These prevalences of VPCR recorded

diagnoses were compared to those recorded for the comparative age-restricted Victorian estimated resident population for the same nine-year follow-up period to identify the psychiatric disorders that are over-represented in CSA victims relative to the frequencies of these disorders in the general Victorian population.

The long-term sequelae of CSA were found to be largely similar for males and females. All mental illnesses were significantly more prevalent in the CSA cohort than in the general population. With the exception of conduct disorders and childhood mental disorders, significant gender differences in the prevalence of mental illnesses were not observed. Although both males and females were at significantly increased risk, relative to their counterparts in the general Victorian population, of developing conduct disorders and childhood mental disorders following CSA, males in the cohort were more likely than cohort females to be diagnosed with these disorders. This finding suggests that although males and females are equally as likely to be diagnosed with the mental illnesses examined in this thesis, gender differences in psychiatric symptomatology may be influenced by differences in the degrees to which males and females react to traumatic incidents, and the degrees to which these disorders are reported in males and females, rather than be indicative of gender-specific outcomes.

Study 3 investigated the impact of CSA on outcomes of completed suicide and death resulting from drug and alcohol overdose. This objective was achieved by linking the cohort of 1655 CSA victims implemented in Study 2 to the existing VCID, which details all unnatural and sudden deaths in Victoria that required an autopsy to determine cause of

death. Like in Study 2, the prevalences of these outcomes were compared to those of the comparative age-restricted Victorian estimated resident population for the same nine-year follow-up period to determine whether CSA victims were more likely than individuals in the general Victorian population to have died from suicide or fatal overdose.

Despite the low frequencies of suicide and fatal overdose that were observed, it was found that death resulting from suicide or fatal overdose was equally likely in males and females in the cohort. However, CSA cohort females were almost three times more likely than females in the comparative Victorian population to be recorded on the VICID as having died from suicide/overdose over the nine-year follow-up period. Males in the cohort were not at increased risk, relative to males in the Victorian population, of completed suicide or fatal overdose. These findings should be approached with some caution, however, given the relatively young age of the victim cohort who may not have reached the peak risk age of suicide or fatal overdose. This possibility may explain the low frequencies of suicides and fatal overdoses that were observed.

## **8.2 Implications of the findings**

The present study represents the first prospective investigation into gender differences in CSA characteristics, and long-term outcomes of mental illness, suicide and fatal overdose. The present study provides confirmation of a number of central findings in retrospective research into the long-term impact of CSA on mental health. This

confirmation is of importance because the largest question surrounding the literature on adult sequelae of CSA is its dependence on adult retrospective reports of having been victims of sexual abuse (Femina et al., 1990; Fergusson et al., 2001; Holmes, 1990; Horwitz et al., 2001; Loftus et al., 1998; Melchert & Parker, 1997; Pope & Hudson, 1995; Widom & White, 1997). Therefore, the present prospective research is an important complement to the existing retrospective CSA literature.

Furthermore, the current findings are informative because research into how the nature and long-term impact of CSA differs for males and females is currently somewhat limited (Fontanella et al., 2000; Paolucci et al., 2002; Spataro et al., 2001). Although most research into CSA has focused on the sexually abused female, the present study implemented the largest cohort of allegedly sexually abused males and females to have been investigated systematically. Furthermore, unlike previous research, the subsequent treatment by Victorian public mental health services and outcomes of suicide and fatal overdose were monitored in these individuals. Therefore, the prospective findings of the present study may assist clinicians in identifying and treating victims of CSA before they are identified many years later in either the psychiatric or Coronial systems.

Of particular importance, given the disproportionate empirical focus on female, relative to male, CSA (Black & DeBlassie, 1993; Faller, 1989; Peake, 1989; Vander Mey, 1988; Young et al., 1994) is the expected finding that males, like females, are indeed at risk of CSA. Although the proportion of female CSA victims was greater than that of males, a substantial number of males were also sexually abused. It is, therefore, abundantly clear

that routine enquiry into the possibility of CSA in all children is warranted, to not only increase society's awareness of the possibility of sexual abuse in males, but also to encourage males to disclose and subsequently seek professional assistance for their sexually exploitative experiences.

In addition to demonstrating that CSA is reality for both genders (Spataro et al., 2001), the present study suggests that different risk factors may be operating for male and female CSA. The current findings imply that males who are pre-pubertal, living in single-parent families, without a male role model, and who have had previous contact with Intellectual Disability Services may be particularly vulnerable to the sexual advances of unrelated perpetrators outside the immediate family environment, thereby increasing the likelihood of extra-familial CSA (Budin & Johnson, 1989; Monaco & Gaier, 1988; Pierce & Pierce, 1985; Vander Mey, 1988). In contrast, females who are undergoing or have completed sexual development, who have had previous concerns of sexual abuse, and who are residing with a stepfather or family member other than a biological or stepparent, may be particularly vulnerable to CSA by related offenders, thereby increasing the risk of intra-familial CSA (Brown et al., 1988; Dhaliwal et al., 1996; Faller, 1989; Finkelhor et al., 1990). The present findings also indicate that disadvantaged family environments, as measured by marital disruption, previous professional agency involvement, and low SES may increase the risk of CSA, regardless of gender (Fergusson et al., 1996a; Fergusson & Mullen, 1999; Mullen et al., 1993; Mullen et al., 1994).

These findings have the potential to generate a risk assessment tool that may serve to identify children and adolescents at particular risk of CSA. Given that the present investigation was one of a limited number of studies to systematically examine gender differences in a large number of background and CSA-specific characteristics (Fontanella et al., 2000; Paolucci et al., 2001), increased research efforts are required to further enable an elaboration and reconceptualisation of current models of how the sexually abusive experience differs between males and females.

All mental illnesses that were examined in the current thesis were significantly more likely in both male and female CSA victims, than in their counterparts in the general Victorian population. This observation suggests that a wide range of adult psychological sequelae is associated with a history of CSA, regardless of gender. The finding that CSA cohort males were significantly more likely than CSA cohort females to be diagnosed with conduct disorders and childhood mental disorders suggests that although all of the mental illnesses associated with sexual trauma, relative to those expected in the general population, were equally likely in both genders, males and females may express this trauma in different ways and degrees, with higher levels of behavioural problems in sexually abused males as compared to females.

In demonstrating that a pervasive range of mental health outcomes was significantly associated with an OFM documented history of CSA, the present study challenges the conceptualisation of the long-term impact of CSA as a specific post-sexual abuse syndrome, in which victims of CSA primarily experience dissociative symptoms

characteristic of PTSD (Lindberg & Distad, 1985; McLeer, et al., 1988; Rowan, Foy, Rodriguez, & Ryan, 1994; Silverman et al., 1996; Wolfe et al., 1989). In addition, the observation that not all of the children in the CSA cohort were identified as exhibiting mental health problems in later life suggests that although potentially damaging, CSA is open to amelioration through a variety of pre- and post-abuse experiences (Mullen & Fleming, 1998).

It has been suggested that many of the mental health problems associated with a history of CSA are second-order effects of the developmental disruptions that CSA engenders (Cole & Putnam, 1992; Finkelhor, 1987; Mullen & Fleming, 1998), including a sense of betrayal, low self-esteem, as well as a perception of powerlessness, guilt, and denial. Although the current investigation did not specifically examine the social-developmental model proposed by Mullen and Fleming (1998), it appears that this model may more adequately explain the progression from CSA to the wide range of mental health outcomes that were demonstrated, than do specific post-sexual abuse theories. Accordingly, further prospective investigations into the developmental, familial, and social correlates that constitute risk factors for CSA are warranted, to further clarify whether CSA itself is causal, or rather, a marker for a host of other childhood disadvantages that interact to increase the risk of developing mental health problems in adulthood (Mullen et al., 1993; Mullen & Fleming, 1998).



The implications that can be derived from the present investigation into the association of a history of CSA with suicide and fatal overdose are somewhat limited, given the low frequencies of VCID recorded suicides and overdoses, and consequently, the non-significant findings that emerged. Notwithstanding, at the time of data matching, the majority of children in the CSA cohort had not reached the peak risk period for suicide or death resulting from drug or alcohol overdose; thus, the conclusion that CSA is not associated with these adverse outcomes would seem somewhat premature (Plunkett et al., 2001).

The finding that CSA cohort females were almost three times more likely than females in the comparative Victorian population to have died from suicide or fatal overdose provides evidence for the association between CSA and these outcomes. However, the question of whether gender differences exist in the outcome of suicide and fatal overdose following a history of sexual abuse remains. Moreover, the prevalence of completed suicide and fatal overdose in the current CSA cohort was less than the rates of suicidal ideation and attempts that have been observed in the literature. Although individuals exposed to CSA may be at increased risk of suicide or fatal overdose in adulthood (Plunkett et al., 2001), further research is required that systematically examines this proposition. This research objective is particularly important given that only one other study, in addition to the present, has investigated this plausible association (Plunkett et al., 2001).

### 8.3 Future research priorities

Despite the theoretical advances made by the current prospective investigation, there is still much to be learned in the area of gender differences in the nature and impact of CSA. In addition to further research that addresses the methodological considerations outlined throughout this thesis, several other research approaches are warranted.

Future research should examine prospectively the theoretical model of gender-based risk factors for CSA outlined in this thesis. Although the aim of the present study was not to test a theoretical model of CSA per se, much information pertaining to how the sexually abusive experience differs between males and females was generated. In particular, the possibilities that pre-pubertal males who are living in single-parent families, without a male role model, and sexually developed females who are living with a stepfather or family member other than a biological or stepparent, are at increased risk of CSA, should be investigated further.

The potential causes of CSA, as well as the protective mechanisms that may ameliorate the effects of this abuse, should also be granted future research attention. This pertinent information may enable intervention to protect children from the possibility of CSA or from the adverse consequences with which it is commonly associated. Such intervention may not only involve minimising the risk factors associated with CSA, but also maximising the number of protective factors and sources of support available to children at risk (Mulien & Fleming, 1998; Spaccarelli, 1994).

Although the current study briefly examined gender differences in several measures of familial SES, future research should examine, in more detail, the broader societal determinants of CSA, including the role of familial, social, and socio-economic disadvantages (Finkelhor et al., 1990; Kuyken, 1995; Mullen et al., 1993; Mullen et al., 2000; Mullen et al., 1994; Romans et al., 1995). With such knowledge, effective education and prevention programs may be developed, which may not only curb the prevalence of CSA that may emerge from a matrix of childhood disadvantages (Fergusson & Mullen, 1999; Mullen et al., 1993; Mullen & Fleming, 1998), but may also enable the potentially adverse long-term consequences of CSA to be addressed.

A prospective examination of the association between CSA and criminal offending would be beneficial in terms of further elucidating the impact of CSA on subsequent behaviour and coping mechanisms. Although various researchers have examined this association for childhood abuse and neglect in general (Maxfield & Widom, 1996; Weiler & Widom, 1996; Widom, 1996; Widom & Ames, 1994; Widom & White, 1997), the available empirical evidence is currently insufficient to justify acceptance of a specific link between CSA and its criminal consequences (Maxfield & Widom, 1996; Widom & Ames, 1994). Hence, further research, in which a sample with more male CSA victims than have been studied to date is warranted, as knowledge of a link between CSA and subsequent criminal offending may enable the identification and treatment of potential offenders, which may in turn, reduce the costs of both juvenile delinquency and adult criminality to the community.

Finally, an important area of investigation in which increased research efforts are justified is the association between CSA and schizophrenic disorders. The current study was the first to examine this association prospectively using both the largest CSA victim sample investigated and the VPCR, in which almost every individual in Victoria with a schizophrenic disorder will be recorded (Krupinski et al., 1982). Although no significant relationship was demonstrated between a history of CSA and schizophrenic disorders in later life, the possibility that CSA may lead to the development of schizophrenic disorders in adulthood should not be discounted, especially because of the conflicting findings that have emerged previously (Briere et al., 1997; Burnam et al., 1992; Carmen et al., 1984; Read et al., 2002; Read & Argyle, 1999; Sansonett-Hayden et al., 1987). Increased research efforts should, therefore, be directed towards further examining this possibility. Not only would this research priority assist in further elucidating inconsistent findings into the association between CSA and schizophrenic disorders, but it would also challenge traditional biological explanations of these disorders, which minimise the potential influence of psychosocial factors (Briere et al., 1997).

#### **8.4 Final summary**

The three studies in this thesis have advanced knowledge into gender differences in CSA characteristics and long-term outcomes of mental illness, suicide, and fatal overdose. By implementing a prospective cohort design, it was demonstrated that both

males and females are often subjected to sexual abuse in childhood and that disparate risk factors may be operating for each gender. In addition, mental health outcomes and death resulting from suicide or fatal overdose, following CSA are largely similar for males and females, relative to their counterparts in the Victorian population. The finding that males in the cohort, relative to females, were more likely to be diagnosed with childhood mental disorders and conduct disorders suggests that although the long-term mental health outcomes of CSA are similar between genders when compared to the rates of mental illness expected in the general Victorian population, males and females may express their CSA related trauma in disparate ways, and to different degrees.

The present investigation demonstrated that although the nature of CSA may differ between male and female victims, the long-term impact of CSA on mental health, suicide, and fatal overdose might be largely similar. However, the question of whether these non-significant gender differences were influenced by the relatively young age of the CSA victim cohort needs to be raised. It is, therefore, imperative that further research into gender differences in the nature and long-term impact of CSA is conducted, taking into consideration the methodological issues outlined in this thesis. It is only with such an enhanced understanding that mental health professionals will be able to develop specific gender-based treatment programs to fulfil the specific psychological needs of males and females who are sexually victimised as children.

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# Department of Forensic Medicine Child Sexual Assault Examination

**CONFIDENTIAL****CHILD**

SURNAME	ETHNIC BACKGROUND	
GIVEN NAMES	GENDER	
DATE OF BIRTH	AGE IN YEARS	
ADDRESS	POSTCODE	

**EXAMINATION**

DATE	TIME
DOCTOR	D.F.M STATISTICS CODE
PLACE	
PERSONS PRESENT	COUNCELLOR/ADVOCATE
PHOTOGRAPHY Y / N	SPECIMENS Y / N : HANDED TO ON / / AT HOURS

**POLICE INVOLVEMENT**

NAME	RANK REG. No
STATION / UNIT	INVOLVED Y / N

**C.S.V. INVOLVEMENT**

NAME	INVOLVED Y / N
ADDRESS	

**D.F.M CODINGS**

UNIT RECORD NUMBER	RESEARCH DATABASE ENTRY No: Date:	STATISTICS ENTRY Code: Date:	REPORT DICTATED: REPORT TYPED: REPORT SENT: SENT TO:
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Department of Forensic Medicine  
DNA RECORD PAGE 2

SURNAME

## CHILDS LEGAL GUARDIAN

SURNAME	GIVEN NAMES	PRESENT AT EXAM Y / N	
RELATIONSHIP TO CHILD		1) BIOL MOTHER 2) BIOL FATHER 3) STEP PARENT 4) OTHER FAMILY 5) C.S.V. 6) OTHER	
PROTECTION APPLICATION CURRENTLY IN FORCE		1) NO 2) YES	
CONSENT GIVEN FOR      1) EXAMINATION   Y / N      2) MEDICAL REPORT   Y / N      3) SPECIMENS   Y / N			

## CHILDS FAMILY

ADULTS RESIDING AT CHILDS HOME AT TIME OF INCIDENT- LIST ALL	1) BIOLOGICAL MOTHER 2) BIOLOGICAL FATHER 3) STEP/DEFACTO MOTHER 4) STEP/DEFACTO FATHER 5) OTHER ADULT FAMILY 6) OTHER ADULT - NON FAMILY	
CHILDREN RESIDING AT HOME AT THE TIME OF THE INCIDENT	Specify Total No of children	
	Specify No of Full biological siblings	
	Childs birth position in family ( 1st = eldest )	
EMPLOYMENT STATUS OF FAMILY'S PRIMARY INCOME EARNER	1) EMPLOYED 2) UNEMPLOYED	
IF EMPLOYED - LIST PRIMARY OCCUPATION		
IF UNEMPLOYED - LIST TYPE OF SOCIAL SECURITY BENEFIT RECEIVED		

## CHILD'S MEDICAL HISTORY

MEDICAL HISTORY

MEDICAL HISTORY
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## DETAILS OF ABUSE (cont)

CONCERNS OF SEXUAL ABUSE RAISED PRIMARILY BY - ( list one only )	1) DISCLOSURE BY CHILD 2) PHYSICAL INDICATORS 3) BEHAVIOURAL CHANGES 4) CONTACT WITH SEX OFFENDER 5) SIBLING SEXUALLY ASSAULTED 6) OTHER	
IF CHILD DISCLOSED - TO WHOM DID IT OCCUR	1) NO DISCLOSURE 2) PARENT 3) SIBLING 4) OTHER FAMILY MEMBER 5) PEER 6) NEIGHBOUR / FAMILY FRIEND 7) PROFESSIONAL 8) OTHER	
TIME PERIOD BETWEEN LAST INCIDENT AND REPORTING (in days)	1) UNKNOWN 2) LESS THAN 48 HOURS 3) 2 - 14 DAYS 4) 2 WEEKS - 3 MONTHS 5) GREATER THAN 3 MONTHS	
DATE OF LAST INCIDENT ( if known ) _____ / _____ / _____		
WHERE WAS/WERE INCIDENT/S ALLEGED TO HAVE OCCURED	1) UNKNOWN 2) CHILDS HOME 3) OFFENDERS HOME 4) OTHER BUILDING 5) OTHER	
TIME PERIOD OVER WHICH INCIDENTS WERE ALLEGED TO HAVE OCCURRED	1) UNKNOWN 2) ONE INCIDENT ONLY 3) LESS THAN ONE WEEK 4) 1 WEEK TO 3 MONTHS 5) 3 MONTHS TO 1 YEAR 6) GREATER THAN 1 YEAR	
SEX OF THE ALLEGED OFFENDER	1) UNKNOWN 2) FEMALE 3) MALE	
RELATIONSHIP ALLEGED OFFENDER TO CHILD	1) OFFENDER UNKNOWN 2) NO RELATION 3) BIOLOGICAL PARENT 4) BIOLOGICAL GRANDPARENT 5) UNCLE / AUNT 6) STEP / DEFACTO PARENT 7) OTHER FAMILY	

## TYPE OF CHILD / OFFENDER CONTACT

HAVE SPECIFIC ALLEGATIONS OF CONTACT BETWEEN CHILD AND OFFENDER BEEN MADE

- 1) NO  
2) YES

IF YES - COMPLETE TABLE BELOW USING THE FOLLOWING CODES eg Offenders hand touching childs anus is U / C

CHILD	OFFENDER	TYPES OF CONTACT
A) VULVA / VAGINA	U) FINGERS / HANDS	1)
B) PENIS	V) PENIS	2)
C) ANUS	W) VULVA / VAGINA	3)
D) MOUTH	X) MOUTH	4)
E) FINGERS / HANDS	Y) ANUS	5)
F) OTHER	Z) OTHER	6)

 <p style="font-size: small;">Department of Forensic Medicine FBI LABORATORY</p>	<p style="font-size: x-small; margin: 0;">SURNAME</p> <div style="border: 1px solid black; height: 30px; width: 100%;"></div>
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## GENERAL PHYSICAL EXAMINATION

<p style="font-size: x-small; margin: 0;">GENERAL PHYSICAL EXAMINATION</p>		
<p style="font-size: x-small; margin: 0;">HEIGHT - (use percentile chart)</p> <div style="border-bottom: 1px solid black; width: 80%; margin: 10px auto;"></div> <p style="text-align: right; font-size: x-small; margin: 0;">CM</p>	<p style="font-size: x-small; margin: 0;">1) &lt;3rd %ile    4) 90-96 %ile 2) 4-10 %ile    5) &gt;97th %ile  3) 11-89 %ile</p>	
<p style="font-size: x-small; margin: 0;">WEIGHT - (use percentile chart)</p> <div style="border-bottom: 1px solid black; width: 80%; margin: 10px auto;"></div> <p style="text-align: right; font-size: x-small; margin: 0;">KG</p>	<p style="font-size: x-small; margin: 0;">1) &lt;3rd %ile 2) 4-10 %ile 3) 11-89 %ile 4) 90-96 %ile 5) &gt;97th %ile</p>	
<p style="font-size: x-small; margin: 0;">SIGNS OF NON ACCIDENTAL INJURY DETECTED</p>	<p style="font-size: x-small; margin: 0;">1) NO 2) YES</p>	

## GENITAL AND ANAL EXAMINATION

<p style="font-size: x-small; margin: 0;">RECORD ALL GENITAL AND ANAL EXAMINATION FINDINGS</p>
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## FEMALE GENITAL EXAMINATION - CODING

STAGE OF PUBERTY	RECORD TANNER STAGE ( 1 TO 5 )	
INJURIES TO LABIA	1) NONE 2) BRUISING 3) ABRASION 4) BRUISING PLUS ABRASION 5) OTHER	
INJURIES TO INTROITUS	1) NONE 2) BRUISING 3) ABRASION 4) BRUISING PLUS ABRASION 5) OTHER	
INJURIES TO PERINEUM	1) NONE 2) BRUISING 3) ABRASION 4) BRUISING PLUS ABRASION 5) OTHER	
SIGNS OF GENITAL INFECTION	1) NONE 2) REDNESS 3) DISCHARGE 4) REDNESS AND DISCHARGE 5) GENITAL WARTS 6) THREADWORM	
ANATOMICAL APPEARANCE OF HYMEN	1) ANNULAR 2) CRESCENTIC 3) LAX OR FOLDED 4) OESTROGENISED 5) OTHER	
CLAPS (outgrowth of tissue) IN HYMEN	1) NONE 2) 1 OR 2 NONTRAUMATIC 3) > 2 NONTRAUMATIC 4) ASSOCIATED WITH INJURY	
	POSITION ON HYMEN (use clockface notation)	
NOTCHES (deficit of tissue) IN HYMEN	1) NONE 2) 1 OR 2 NONTRAUMATIC 3) > 2 NONTRAUMATIC 4) ASSOCIATED WITH INJURY	
	POSITION ON HYMEN (use clockface notation)	
FRESH INJURIES TO HYMEN - (list all injuries observed)	1) NONE 2) BRUISING 3) ABRASION 4) LACERATION 5) OTHER	
HEEDING PRESENT	1) NO 2) YES	
HEALED INJURIES TO HYMEN - (list all injuries observed)	1) NONE 2) THICKENING 3) SCARRING 4) ADHESIONS	
POSITION OF INJURIES ON HYMEN - (use clockface notation)  - (if no injuries present leave blank)	BRUISING PRESENT AT _____	
	LACERATION PRESENT AT _____	
	ABRASION PRESENT AT _____	
	THICKENING PRESENT AT _____	
	SCARRING PRESENT AT _____	
	ADHESIONS PRESENT AT _____	

## MALE GENITAL EXAMINATION - CODING

STAGE OF PUBERTY	RECORD TANNER STAGE 1 TO 5	
INJURIES TO PENIS	1) NONE 2) BRUISING 3) ABRASION 4) BRUISING PLUS ABRASION 5) OTHER	
INJURIES TO SCROTUM	1) NONE 2) BRUISING 3) ABRASION 4) BRUISING PLUS ABRASION 5) OTHER	
INJURIES TO PERINEUM	1) NONE 2) BRUISING 3) ABRASION 4) BRUISING PLUS ABRASION 5) OTHER	
SIGNS OF GENITAL INFECTION	1) NONE 2) REDNESS 3) DISCHARGE 4) REDNESS AND DISCHARGE 5) GENITAL WARTS	

## ANAL EXAMINATION - CODING

FRESH INJURIES TO ANUS	1) NONE 2) BRUISING 3) ABRASION 4) LACERATION 5) OTHER	
BLEEDING FROM ANUS OR RECTUM	1) NO 2) YES	
HEALED INJURIES TO ANUS	1) NONE 2) SCARRING 3) ABNORMAL RUGAL PATTERN 4) FISSURE 5) OTHER	
POSITION OF ABNORMALITIES ON ANUS - ( use clockface notation )	BRUISING PRESENT AT _____	
	ABRASION PRESENT AT _____	
	LACERATION PRESENT AT _____	
	SCARRING PRESENT AT _____	
	FISSURE PRESENT AT _____	
ANAL DILATATION	1) NONE 2) YES (ANAL CANAL ONLY VISIBLE) 3) YES (RECTUM VISIBLE)	
TIME FOR ANAL DILATATION TO OCCUR	1) NONE OCCURED 2) IMMEDIATE 3) WITHIN 30 SECONDS 4) 30 TO 60 SECONDS 5) GREATER THAN 60 SECONDS	
SIGNS OF PERIANAL INFECTION	1) NONE 2) REDNESS 3) DISCHARGE 4) REDNESS AND DISCHARGE 5) GENITAL WARTS 6) THREADWORM 7) OTHER	