THE PREVALENCE AND CORRELATES OF CHILDHOOD SEXUAL ABUSE IN A NATIONAL SAMPLE OF CANADIAN WOMEN

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A thesis submitted to the

School of Graduate Studies

in partial fulfillment of the requirements for the degree of

Doctor of Psychology

Department of Psychology

Memorial University of Newfoundland

October 2019

St. John's

Newfoundland and Labrador

Abstract

This study examined the prevalence and correlates of childhood sexual abuse (CSA) among a large nationally representative sample of Canadian women (age 20-64). Among the 7,862 women age 20 through 64 who participated in the Canadian Community Health Survey of Mental Health (CCHS-MH; Statistics Canada, 2013), 1027 (13.01%) reported a history of CSA prior to age 16. Data associated with 2,054 participants were extracted from the Canadian Community Health Survey of Mental Health (CCHS-MH; Statistics Canada, 2013) and further analyzed. Women who reported a history of CSA were significantly more likely to meet diagnostic criteria (lifetime and 12-month) for all psychiatric disorders examined in the present analysis including major depressive disorder, general anxiety disorder, substance and alcohol use disorders, and bipolar disorder compared to an age-matched sample of women without a CSA history. Lifetime and 12-month suicidal ideation were also significantly higher among those women with a CSA history, along with prevalence of a prior PTSD diagnosis. Significantly poorer outcomes were observed for those women with a CSA history across all socio-demographic (marital status, level of education, personal income) and quality of life (community belonging, self-rated mental health, life satisfaction) variables included in the present analysis. Findings were discussed within the context of existing research on the prevalence and correlates of CSA internationally and within Canada.

Acknowledgements

I would first like to thank my research supervisor Dr. Ken Fowler. Your guidance throughout my academic journey has been immensely appreciated. Your consistent support and understanding through challenging times have not gone unnoticed. Additionally, I would be remiss to discount the support of my committee members, Dr. Brent Snook and Dr. Jackie Hesson. Thank-you both for your careful consideration of my work; your feedback throughout this process has been very valuable and much appreciated.

I would also like to thank the countless friends and family members who have offered love and support throughout my academic journey; I would truly not have made it without you. Many thanks to those in my PsyD cohort as well. It has been a pleasure learning along side of you and sharing in the joys and challenges of this final leg of graduate school together.

Finally, I would like to thank the survivors of childhood sexual abuse who participated in this study. I hope that through this project and related research, the deeply personal information you offered may be used to improve outcomes for all women and girls who have survived the unthinkable.

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Foreword

Childhood sexual abuse (CSA) is a deleterious and common form of trauma occurring at alarming rates worldwide. Although males undoubtedly experience CSA, this form of trauma appears significantly more common among females (for example, Barth, Bermetz, Heim, Trelle & Tonia, 2013). Indeed, it is estimated that nearly one out of five women worldwide will experience some form of sexual violence prior to age 16 (Pereda, Guilera, Forns, & Gómez-Benito, 2009). Prevalence rates of CSA within North America are similarly unsettling, with previous research reporting that between 13.5% (Molnar, Buka, & Kessler, 2001) and 27% (Finkelhor, Hotaling, Lewis, & Smith , 1990) of women endorse a CSA history. Sadly, a plethora of research exist which highlights associations between a CSA history and negative mental and physical health outcomes (for example, Chen et al., 2010; Maniglio, 2009).

The current study aims to address commonly cited gaps in the literature and explore the prevalence and correlates of CSA among women within the understudied Canadian population. Specifically, the prevalence of various psychiatric disorders and suicidal ideation among women who self-report a CSA history will be compared with that observed in an age matched randomly selected sample of women without a CSA history. Both groups will also be compared across socio-demographic and quality of life variables. Findings have the potential to inform clinical practice and be used to advocate for initiatives that will ultimately help to reduce the occurrence of CSA. The following literature review will discuss CSA broadly, experiences of women, and the known prevalence and correlates of CSA, prior to providing an overview of the current study and related hypotheses.

Chapter 1: Literature Review

1.1 Childhood Abuse

Defining childhood. Childhood is defined by the United Nations as a broad developmental period which spans from birth to age 18 (United Nations, 1989). However, the legal definition of childhood varies within each Canadian province. For example, in Newfoundland and Labrador, a child is any individual under the age of 16; consistent with the provincial age of consent. Although adolescence is recognized by both the United Nations (1989) and the World Health Organization (2017) as a distinct developmental period (10-19 years), the term 'childhood' is used regularly within the abuse/maltreatment literature to refer to both children and adolescents up to the age of 18 years (World Health Organization, 2017).

Adverse childhood experiences. Experiences that have the potential to create detrimental long-term effects when occurring in childhood are known in the literature as adverse childhood experiences (ACEs). Examples of ACEs that have received substantial attention within the past two decades include various forms of household dysfunction (e.g. witnessing violence within the home, parental separation or divorce, living with household members struggling with substance/alcohol abuse, suicidality or mental health issues, and parental imprisonment) as well as various forms of maltreatment (e.g., physical, sexual, emotional abuse, and neglect) (Felitti et al., 1998). Other examples of ACEs include parental death, family separation, bullying, corporal punishment, living in a war/conflict zone, and family economic adversity (Green et al., 2010; Maras, 2019).

Adverse childhood experiences and lasting bio-psycho-social difficulties. Although child's rights activists, researchers, and clinicians have been aware of the deleterious effects of ACEs for decades (Maras, 2019), research into the long-term sequelae of difficult childhood

experiences has abounded in the past two decades following a landmark study conducted by Felitti and colleagues (1998). This large-scale study, which included 10,000 adults, was the first of its kind to find associations between ACE's and negative health outcomes in adulthood. Dr. Anthony Felitti, the chief physician of the Kaiser Permanente Department of Preventative Medicine began exploring the association between childhood sexual abuse and negative health outcomes following a series of patient interviews in the mid 1980's while attempting to better understand the low success rates in a California-based obesity clinic (Stevens, 2012). Felitti and colleagues spent the following decades studying the associations between the development of numerous common chronic illnesses and various forms of childhood abuse, neglect, and household dysfunction. The researchers had nearly 10,000 adults complete a questionnaire regarding ACE's as part of a standard medical evaluation (Felitti et al., 1998). Seven types of ACE's including physical, sexual, and mental abuse, as well as exposure to household members with a history of incarceration, mental illness, substance abuse, or suicidality were studied. The results revealed that ACE's are more prevalent than previously thought (with over half of respondents reporting at least one childhood exposure, and nearly one-quarter reporting two or more), and that significant positive correlations exist between a history of ACE's and the development of numerous social problems (e.g., higher rate of divorce, greater absenteeism from work), mental illness, and physical illness, including chronic diseases (e.g., heart disease, lung diseases, diabetes, etc). A cumulative effect was also evident, with the risk of negative health outcomes in adulthood increasing as exposure to various forms of ACE's increased. Subsequent research has continued to support the associations between negative health outcomes in adulthood and a variety of ACE's including witnessing intimate partner violence (Dube, Anda, Felitti, Edwards & Williamson, 2002), and exposure to natural disasters (Salloum, Carter, Burch,

Garfinkel, & Overstreet, 2011). Exposure to ACE's as a result of direct trauma (as opposed to witnessed trauma) is associated with greater instance of problem behaviors and psychopathology among youth and young adults, including affective problems, Attention Deficit Hyperactive Disorder, Conduct Disorder, Oppositional Defiance Disorder and dissociation (Price, Higa-McMillan, Kim, & Frueh, 2013). A history of ACE's is also associated with a greater risk of premature mortality, with those individuals endorsing six or more ACE's living on average 20 fewer years than those without a history of ACE's (Brown, Anda, Tiemeier, Felitti, Edwards, Croft, & Giles, 2009). Indeed, the *absence* of childhood adversities has proven to be a protective factor, with adults without a history of childhood sexual abuse for example being 70% less likely to experience complex psychopathology in adulthood (Putnam, Harris & Putnam, 2013).

Numerous studies on ACEs indicate however that maltreatment (various forms of abuse and neglect) tends to result in more deleterious outcomes compared to other forms of difficult childhood experiences due to its interpersonal nature (Price et al., 2013), and as such warrants further exploration.

Types of childhood maltreatment. In 1999 the World Health Organization released the *Report of the consultation of child abuse prevention,* in which childhood maltreatment was described as any form of ill-treatment resulting in actual or potential harm to a child's survival, health, dignity, or development, within the context of a relationship of trust, power, or responsibility (World Health Organization, 1999). The same report recognized four distinct types of childhood maltreatment, including physical, emotional/psychological, and sexual abuse, as well as neglect (World Health Organization, 1999). Childhood maltreatment can also be further described as either active (physical, sexual, emotional abuse) or passive (neglect), depending on whether the act was one of commission or omission (Allen, 2001).

Childhood maltreatment and lasting bio-psycho-social difficulties. Undoubtedly, trauma experienced during adulthood can be detrimental and is often followed by adverse psychosocial outcomes (Briere & Scott, 2015). As such, the impact of traumatic events endured by adults should by no means be discounted. However, a large body of research suggests that the likelihood of long-term difficulties is markedly increased among those who experience trauma during childhood (Briere & Rickards, 2007; Gal, Levav, & Gross, 2011; Gilbert, Widom, Browne, Fergusson, Webb & Janson, 2009). For example, a meta-analysis conducted by Gilbert and colleagues (2009) synthesized the results of numerous longitudinal studies on childhood maltreatment and mental health outcomes. The results revealed an association between a history of childhood maltreatment and the later development of depression, Post-Traumatic Stress Disorder (PTSD), and suicidality.

Briere and Scott (2015) propose several explanations for the development of adverse mental health outcomes in those who are survivors of childhood maltreatment. First, childhood maltreatment (by virtue of occurring during childhood) takes place during the most vulnerable time in human development. Second, childhood maltreatment also involves relational maltreatment (perpetrated by another human being) as opposed to impersonal trauma (e.g., a car accident, natural disaster, etc.). Relational maltreatment can be interpersonal (perpetrated by an individual, but not one the child is close with) or attachment based (perpetrated by an individual with whom the child had an attachment) and is often associated with worse outcomes than non-relational trauma (Allen, 2001). Finally, compared to trauma endured during adulthood, childhood maltreatment often involves multiple victimization experiences as it tends to occur repeatedly over an extended period of time (Briere & Scott, 2015).

A vicious circle appears as previous research suggests that childhood trauma is a risk factor for later victimization in adulthood (Amstadter, Elwood, Begle, Gudmundsdottir, Smith, Resnick, & Kilpatrick, 2011; Coid, 2001; Kessler & Biescheke, 1999; Liem and Boudewyn, 1999; Perreault, 2015; World Health Organization, 2007), and that a history of childhood trauma tends to exacerbate or compound responses to subsequent traumatic experiences (Breslau, Peterson, & Shultz, 2008; Cloitre, Scarvalone, & Difede, 1997; Fortier, DiLillo, Messman-Moore, Peugh, DeNardi, Gaffey, 2009; Salloum, Carter, Burch, Garfinkel, & Overstreet, 2011). As such, in addition to the adverse mental and physical health outcomes observed among survivors of adult trauma, those who have experienced childhood maltreatment may also experience difficulties forming and maintaining relationships, identity disturbances, and emotion regulation difficulties (Alexander, 1992; Briere & Scott, 2015;Briere & Rickards, 2007; Fowler, Allen, Oldham, & Frueh, 2013).

Within the context of childhood maltreatment, previous research suggests that childhood sexual abuse (CSA) appears to represent a unique victimization experience distinguishable from other forms of childhood maltreatment (Briere & Scott, 2015; Fergusson, Boden, & Horwood, 2008; Lewis, McElroy, Harlaar, & Runyan, 2016). The feelings of shame, stigma, self-blame and powerlessness, along with the inherently exploitative nature of CSA and resulting boundary violations may serve to explain why CSA has been shown to yield worse long-term psychological, emotional, social and physical health outcomes for adult survivors when compared to other forms of childhood maltreatment (Noll, 2008).

1.2 Childhood Sexual Abuse

Defining CSA. Despite CSA being the subject of extensive study over the past several decades, there has been at times a lack of consensus in defining CSA (Anguelova, 2018), with

methodological differences often responsible for researchers' difficulty in putting forth a unanimous definition (Briere, 1992;Browning & Laumann, 1997; Cook, Gidycz, Koss, & Murphy, 2011; Pereda et al., 2009). Within the CSA literature, consensus is sometimes lacking in terms of what (at minimum) shall constitute abuse, the age differentials necessary when victim and perpetrator are close in age, and defining the upper age limit which constitutes 'childhood' (DiLillo, 2001).

Although all forms of CSA are undoubtedly abhorrent, a consistent definition of CSA has also likely been difficult to achieve within the literature as CSA often varies greatly in terms of severity and type of sexual abuse being perpetrated (Anguelova, 2018). It is imperative to distinguish amongst various forms of CSA, as more severe and invasive acts (e.g. intercourse) are associated with poorer outcomes for adult survivors (Bulik, Prescott, & Kendler, 2001; Callahan, Price & Hilsenroth, 2003; Dube, Anda, Whitfield, Brown, Felitti, Dong & Giles, 2005), and are generally considered qualitatively and quantitatively different experiences of victimization compared to less intrusive forms of CSA (DiLillo, 2001).

With the contention regarding the definition of CSA in mind, a recently released set of clinical guidelines which address working with survivors of CSA by the World Health Organization (2017) offer a definition of CSA that appears to adequately and concisely describe this broad form of childhood maltreatment, describing CSA as the following:

"…The involvement of a child or adolescent in sexual activity that he or she does not fully comprehend and is unable to give informed consent to, or for which the child or adolescent is not developmentally prepared and cannot give consent, or that violates the laws or social taboos of society..'.

Types of CSA. CSA can be differentiated by type and severity. The World Health Organization (2017) distinguishes among three types of CSA including (i) non-contact (e.g., exposing child to pornography, indecent exposure, verbal sexual harassment), (ii) contact sexual abuse involving intercourse, and (iii) contact sexual abuse excluding intercourse (e.g., inappropriate touching/fondling, kissing). CSA has also been conceptualized in terms of severity, and may be described as very severe (e.g., involving vaginal or anal intercourse, penetration, and oral sex), severe (e.g., unclothed touching), or less severe (sexual kissing, clothed touching) (Anguelova, 2018). More severe forms of sexual victimization, such as experiencing physical injury or the perpetrator's use of a weapon, are associated with greater frequency and severity of later psychopathology (Dworkin, Menon, Bystrynski & Allen, 2017). Furthermore, CSA may be perpetrated by both adults and other children, who as a result of their developmental stage are in a position of power or trust in relation to the victim (World Health Organization, 2006). CSA is more commonly facilitated with manipulation as opposed to physical force, and it may occur on a single occasion or across repeated episodes (World Health Organization, 2017).

CSA and lasting bio-psycho-social difficulties. Previous research also suggests that irrespective of survivor variables, having experienced sexually based trauma is associated with worse outcomes for survivors (Briere & Scott, 2015; Fergusson et al., 2008; Lewis, McElroy, Harlaar, & Runyan, 2016; Noll, 2008). A large body of research examining the association between CSA and later psychopathology has accumulated over the past several decades. Numerous meta-analysis have revealed associations between experiencing sexual victimization and the development of psychopathology (Chen, Murad, Paras, Colbenson, Sattler, Goranson, Elamin, Seime, Shinozaki, Prokop, Zirakzadeh, 2010; Dworkin et al., 2017) as well as negative physical health outcomes in adult survivors (Maniglio, 2009).

A meta-analysis conducted by Dworkin and colleagues (2017) which examined nearly 45 years of literature pertaining to sexual victimization (occurring both in childhood and adulthood) revealed that overall those who have experienced sexual victimization report significantly worse psychopathology than those who did not have such experiences, with an average effect size of 0.61 (Hedge's *g*). The researchers synthesized the results of 195 studies and found that having experienced sexually-based trauma was significantly positively related to the development of all forms of psychopathology examined, including depression (Hedge's $g = 0.60$), trauma related conditions (e.g., PTSD) (Hedge's $g = 0.71$), anxiety (Hedge's $g = 0.53$), disordered eating (Hedge's $g = 0.39$), suicidality (Hedge's $g = 0.74$), bipolar conditions (Hedge's $g = 0.66$), obsessive-compulsive disorder (Hedge's $g = 0.71$), and substance abuse/dependence (Hedge's $g = 0.37$) (Dworkin et al., 2017).

Similarly, Chen and colleagues (2010) conducted a meta analysis in which the results of 37 studies (spanning nearly three decades) were assessed to determine whether associations exist between a lifetime diagnosis of psychiatric disorders and CSA. The researchers found evidence to indicate a statistically significant positive association between lifetime diagnosis of various anxiety disorders (OR, 3.09; 95% Cl, 2.43-3.94), eating disorders (OR, 2.72; 95% CI, 2.043.63), post-traumatic stress disorder (OR, 2.34; 95% CI, 1.59-3.43), and sleep disorders (OR, 16.17; 95% CI, 2.06-126.76). A significant positive association was also found between CSA and risk of depression (OR, 2.66; 95% CI, 2.14-3.30) and suicide attempts (OR, 4.14; 95% CI, 2.98-5.76). These positive associations remained regardless of participant's sex or the age at which CSA occurred.

A qualitative systematic review conducted by Maniglio (2009) revealed similar results in regards to surviving CSA and heightened psychopathology in adulthood. Maniglio (2009)

examined 14 reviews (encompassing 587 distinct studies) published during the previous two decades, and consistently found significant associations between a CSA history and a range of mental and physical health outcomes in adulthood. Specifically, it was found that individuals who experienced CSA were significantly more likely to experience low self-esteem, depression, suicidal ideation and attempts, self-injurious behavior, anxiety, and dissociative disorders. Moreover, a significant association was also found between CSA and PTSD, eating disorders, psychotic symptomology (e.g., paranoid ideation), and sexual dysfunction. The authors conclude that experiencing CSA should be considered a general risk factor for the development of later psychopathology.

In addition to negative mental health outcomes, there is also substantial evidence to suggest a positive association between the development of physical health issues and CSA history. Felitti and colleagues (1998) found a significant association between ACE's (including CSA) and negative physical health outcomes in adulthood, with the risk of developing various physical illnesses increasing with the number of ACE's experienced. For example, it was found that those experiencing four of more ACE's (including CSA) were more likely to experience chronic diseases such as heart disease (OR, 2.20; 95% CI, 1.30-3.70), lung diseases (OR, 3.90; 95% CI, 2.60-5.80), diabetes, (OR, 1.60; 95% CI, 1.00-2.50), as well as severe obesity (OR, 1.60; 95% CI, 1.20-2.10).

A systematic review and meta-analysis conducted by Paras and colleagues (2009) revealed significant associations between CSA history and the development of various somatoform disorders. The meta-analysis, which examined 23 longitudinal studies spanning nearly three decades, revealed significantly higher rates of lifetime gastrointestinal disorders (OR, 2.20; 95% CI, 1.36-4.31), non-specific chronic pain, (OR, 2.20; 95% CI, 1.54-3.15), psychogenic seizures

(OR, 2.96; 95% CI, 1.12-4.69) and chronic pelvic pain (OR, 2.73; 95% CI, 1.73-4.30) among individuals with a history of CSA. In those studies in which severity of CSA was considered, a history of penetrative abuse (e.g., rape) was also associated with a lifetime diagnosis of fibromyalgia (OR, 3.35; 95% CI, 1.51-7.46).

Survivors of CSA may also experience social impairment resulting from difficulties with attachment (Alexander, 1992; Herman, 1992; DiLillo, 2001), lower relationship satisfaction, and difficulties with intimacy and sexual satisfaction/functioning (Stephenson, Hughan, & Meston, 2012). A significant association between a history of CSA and engaging in high-risk sexual practices has also been found. A meta-analysis conducted by Ariolla, Louden, Doldren and Fortenberry (2009) revealed associations between experiencing CSA and later involvement in the sex trade (r = 0.12), having multiple sexual partners (r = 0.13), and engaging in unprotected intercourse (r = 0.05).

Sadly, negative repercussions associated with CSA often emerge long before adulthood. A large body of research suggests that experiencing sexual abuse during childhood interferes with the child's typical developmental trajectory (Cicchetti & Toth, 2005, Freeman & Morris, 2001, Hulme, 2004), as they often experience difficulties with attachment and development of emotion regulation, along with disrupted peer relationships, diminished self-worth, and feelings of self-blame regarding the abuse (Briere & Scott, 2015; Langevin, Hébert, Cossette, 2015; Shipman, Zeman, Penza, Champion, 2000). Short-term correlates of CSA in children also include behavior problems (Hébert, Langevin & Oussaïd, 2018; Lewis, McElroy, Harlaar & Runyan, 2016; Maniglio, 2005;) as well as sexualized behaviors (Ensink et al., 2018). However, it is important to note that not all individuals who experience CSA will suffer lifelong psychological harm. This notion was first proposed by Rind and colleagues (1998), who

conducted a meta-analysis of 59 studies examining CSA prevalence and various psychological outcomes among college samples (Rind, Tromovitch, & Bauserman, 1998). The results revealed small effect sizes (r= 0.04 to 0.13) of CSA across 18 psychological sequela included in the analysis. The researchers subsequently concluded that CSA results in only mild maladjustment for most adult survivors, and that any long-lasting repercussions are likely a result of a negative/chaotic family environment as opposed to the CSA itself (Rind et al., 1998). Although the study was met with swift criticism for its methodology and conclusions (see Oellerich, 2000; Spiegel, 2000), the work by Rind and colleagues (1998) serves as a reminder of the strength and capacity for resiliency among many CSA survivors.

1.3 Current Estimates of CSA Prevalence

Global prevalence of CSA. CSA is a common and nefarious form of trauma occurring worldwide. A quarter century ago, Finkelhor (1994) conducted a study exploring international prevalence of CSA, prior to which it was presumed by some that CSA was less common outside of North America. The author reviewed 21 epidemiological studies from as many countries, and found rates of CSA ranging from 7% to 36% among females, and 3% to 29% among males worldwide. Since the publication of this influential study, awareness of CSA as a world-wide issue has increased and the abundance of subsequent research interest has allowed for several meta-analyses regarding global prevalence rates of CSA.

For example, a meta-analysis by Pereda, Guilera, Forns, and Gomez-Benito (2009) amalgamated the results of 65 studies from 22 countries. The authors found a global CSA prevalence rate of 7.9% among males and 19.7% among females (Pereda et al., 2009). Similarly, a meta-analysis conducted by Stoltenborgh, Van Ijzendoorn, Euser and Bakermans-Kranenburg (2011) synthesized the results of 217 publications, with samples originating from all six

continents. Results of the analysis revealed an overall global CSA prevalence rate of 11.8%. Gender was found to be a significant moderator, with a greater overall prevalence of CSA in female samples (18.0%) compared to male samples (7.6%) (Stoltenborgh et al., 2011). The meta-analyses both found the lowest rates of CSA in Asian countries for both genders, and the highest prevalence rates in Australia for females and Africa for males. Most recently, a systematic review and meta-analysis conducted by Barth and colleagues (2013) synthesized the results of more recent studies (Barth et al., 2013). A total of 55 publications from 2002 through 2009 representing 24 countries were included in the analysis, which calculated prevalence rates of CSA based on the nature of the abuse (e.g., non-contact abuse (inappropriate sexual solicitation, indecent exposure), contact abuse (touching/fondling, kissing), forced intercourse (oral, vaginal, anal, attempted) and mixed sexual abuse). The results revealed prevalence rates ranging from 9% (forced intercourse) to 31% (non-contact abuse) for females, and 3% (forced intercourse) to 17% (non-contact abuse) for males (Barth et al., 2013).

North American prevalence of CSA. Heightened interest in sexual victimization from both a societal and research perspective was first observed in North America in the early 1970's. This increased attention resulted from sexual victimization being conceptualized as an important feminist issue (see Butler, 1978; Herman & Hirschman 1977; Rush 1980) as well as the beginnings of interest in sexual assault and abuse as potentially traumatic life experiences with long-term ramifications (Dworkin et al., 2017). Following the introduction of PTSD into the newly published Diagnostic and Statistical Manual of Mental Disorders-Third Edition (DSM-III) (American Psychiatric Association [APA], 1980), researchers became increasingly interested in determining the prevalence of CSA in North America. Until that point, CSA was believed to be a rare occurrence, as so few cases were often reported (Finkelhor, 1994). The first national study

of CSA history in the United States was conducted by Finkelhor and colleagues (1990) in the mid 1980's. The researchers surveyed 1,145 men and 1,481 women from across the US regarding their experiences of CSA and overall opinion on the issue. Much to the surprise of researchers, the results indicated that 27% of women and 16% of men had experienced some form of sexual abuse during childhood (including intercourse, molestation, oral sex or sodomy, and other sex-related acts).

In the following decades, national surveys of US populations have yielded varying results. Molnar and colleagues (2001) were the first to explore both prevalence rates of CSA as well as psychopathology in a nationally representative sample of adults in the US. The researchers utilized data collected in the early 1990's through the National Comorbidity Survey, finding overall prevalence rates of 13.5% for females and 2.5% for males. These seemingly lower prevalence rates are likely a result of a more narrow definition of sexual abuse (molestation, rape) which did not include non-contact forms of CSA (Molnar et al., 2001).

Canadian prevalence of CSA. Research examining the prevalence of CSA in Canada has been minimal, and unlike global and North American research, has involved relatively few self-report studies. Findings on the occurrence of CSA in Canada have been largely reliant on data obtained through reports to law enforcement and child-welfare organizations, which generally examine incidence (i.e., how many times an event has occurred within a given time period, usually one year) as opposed to prevalence. For example, CSA rates in Canada have been explored via the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS). The CIS has been carried out by the Public Health Agency of Canada three times over the past two decades (1998, 2003, 2008) and examines the incidence of reported child maltreatment and the characteristics of the children and families investigated by Canadian child welfare sites from all

13 provinces and territories. The 2008 iteration of the CIS revealed that on average, 3% of child welfare investigations in Canada involve allegations of sexual abuse; or 2,600 investigations annually at a rate of 43/100,000 children. Sexual offences committed against children (those under 18) that are reported to police are also collected and used by Juristat; Statistics Canada's Center for Justice Statistics. For example, a Juristat report completed using data from 2012 revealed that approximately 14,000 children/youth were victims of police-reported sexual offences; a rate of 205 victims for every 100,000 Canadians under 18 (Cotter & Beaupré, 2014).

However, the aforementioned reports only include incidences of abuse reported to either police or child welfare agencies. This is problematic as sexual offences in general are known to be underreported to police (Finkelhor et al., 2001; Taylor & Gassner, 2010), with those committed against children believed to be further underreported due to factors likely to reduce reporting, including having to rely on an adult to bring the incident to the attention of police (Kuoppamaki et al., 2011; United Nations, 2006) and feelings of self-blame, shame and perceived negative consequences of abuse disclosure (Lemaigre, Taylor & Gittoes, 2017). As a result, prevalence rates that rely on police statistics are generally considered to be poor indicators of actual rates of CSA.

Self-report data regarding CSA history (and childhood maltreatment generally) were collected for the first time as part of the most recent iteration (2014) of the General Social Survey (GSS); a nationally representative survey administered every five years which asks respondents to self-report victimization (Perreault, 2015). Over 33,000 Canadians participated in the most recent GSS, with approximately 1% of males and 5% of females indicating a history of CSA. The results revealed that most incidences of maltreatment overall (93%) were not reported to police, with even the most severe/chronic reports of CSA (i.e., more than 10 experiences of

CSA) only reported to the police approximately ¼ of the time (Perreault, 2015). Currently, few other nationally representative studies of CSA prevalence in Canada exist within published literature. For example, there have been several notable studies examining CSA prevalence within a single Canadian province or geographic area. For example, MacMillan and colleagues (1997) examined the prevalence of CSA among adults residing in the province of Ontario. Nearly 10,000 adults completed a self-administered questionnaire as part of the Ontario Health Supplement; a general population survey conducted by the government of Ontario, designed to ascertain information regarding the epidemiology of mental health disorders among provincial residents. A history of sexual abuse was reported by 12.8% of females, and 4.3% of males (MacMillan et al., 1997). More recently, MacMillan and colleagues (2013) examined prevalence rates of CSA using data from The Ontario Child Health Study; a province-wide survey involving children aged four to 16 years. The results revealed a CSA prevalence rate of 22.1% for females and 8.3% for males (MacMillan et al., 2013). Similar results were found by Hébert, Tourigny, Cyr, McDuff and Joly (2009) in a provincial sample of adults from Quebec. The authors found that of the 804 adult participants, 22.1% of women and 9.7% of men reported a history of CSA. The authors also inquired about previous disclosure of abuse, and found that only 22.1% of adults with a CSA history disclosed within a month of the first abusive incident. The majority of those who did disclose (57.5%) did so more than five years following the abusive event(s). The authors found that of those who had never previously disclosed their CSA history (1/5) (or those who delayed disclosure for more than five years following the abuse) reported greater levels of psychological distress (Hébert et al., 2009).

There are also a small number of notable Canadian studies which have explore CSA prevalence among nationally representative samples. For example, Afifi and colleagues (2014)

examined prevalence of three types of childhood abuse (CSA, physical abuse, witnessing intimate partner violence) among a nationally representative Canadian sample (CCHS-MH) revealing an overall abuse prevalence rate of 32%. Similarly, Shields, Tonmyr and Hovdestad (2016) explored CSA using data from both the CCHS-MH and 2004/2005 Canadian Gender, Alcohol, and Culture: An International Study (GENACIS). The authors concluded that CSA appears to be decreasing over the past several decades, but caution that ongoing monitoring is needed. Finally, Tonmyr and Shields (2017) focused on CSA and substance abuse among adults, again relying on data from GENACIS. Of the 14, 063 respondents, 14% of women and 5% of men reported a history of CSA.

Methodological issues in determining prevalence with self-report research.

Prevalence rates determined using self-report data are considered more accurate than those reliant on reports to law enforcement and child-welfare organizations (Finkelhor et al., 2001; Goldman & Padayachi, 2000; Taylor & Gassner, 2010). The considerable variability among prevalence rates for CSA (globally, within North American and Canada) within self-report studies is believed to be in part a result of methodological issues. Not unlike many other areas of social research, concerns regarding methodological issues and the potential effects on estimates of prevalence have plagued CSA research for decades. Haugaard and Emery (1989) were among the first to express concern regarding methodological issues within the field of CSA research. Since then, researchers have continued to reflect on methodological issues affecting prevalence rate reporting. Most commonly cited methodological issues over the past several decades have included variable definitions of CSA, sampling issues (e.g., university, community, or clinical samples), data collection methods (e.g., self-administered questionnaire, face-to-face interview, or telephone interview), type and number of questions posed, and response rates (Briere, 1992;

Browning & Laumann, 1997; Cook et al.,2011; Gibson & Morgan, 2013; Goldman & Padayachi, 2000; Pereda et al.,2009). All those who have expressed concerns regarding methodological issues within CSA research agree on one point; these issues have likely resulted in highly conservative prevalence rates that underestimate the true prevalence of CSA.

1.4 Experiences of Women as Survivors

CSA among women versus men. Despite the many challenges in determining accurate prevalence rates of CSA, previous research has been consistent in finding higher prevalence rates of CSA among females (for example, Barth et al., 2013; Briere & Scott, 2015; Cotter & Beaupré, 2014; Dworkin et al., 2017; Fergusson, McLeod & Horwood, 2013; Finkelhor, 1994; Finkelhor et al., 1990; Hébert et al., 2009; MacMillan et al., 2013; Pereda et al., 2009; Perreault, 2015; Stoltenborgh et al., 2011; Molnar et al., 2001). Higher rates of childhood physical abuse however are consistently reported among males (Amstadter et al., 2011; Briere & Elliott, 2003; MacMillan, Fleming, Streiner, Lin, Boyle, Jamieson & Beardslee, 2001; Perreault, 2015).

The difference in prevalence rates is believed to result from both a higher rate of CSA among those who identify as female, as well as the reluctance of males to disclose CSA due to social norms and constructs of masculinity (Dhaliwal, Gauzas, Antonowicz, & Ross, 1996). Weiss (2010) speculates that the patriarchal society in which we live-where males are socialized to be tough, brave, courageous, and stoic- serves to discourage disclosure among male CSA victims. As such, it is likely that the prevalence of CSA among males is higher than data available at the present time suggest.

For both male and female survivors of CSA, the perpetrator is likely to be a male whom the victim perceives as an authority figure (Finkelhor et al., 1990). For males, the perpetrator is generally a non-family member, and more likely to be unknown to the child (Finkelhor et al.,

1990), whereas female survivors of CSA are more often abused by a caregiver (Briere & Scott, 2015; Finkelhor et al., 1990; Perreault, 2015). This distinction amongst common experiences of male versus female CSA is noteworthy, as harm inflicted upon a child by an individual in a caregiver role is likely to interfere with the process of attachment; the highly adaptive formation of a stable, permanent biologically based bond with a caregiver (see Bowlby 1977, 1982, 1988). When an individual is abused by an attachment figure, harm is being inflicted on them by the very individual intended to protect them from harm and act as a secure base for exploration of the world. As a result, they will experience a disruption in the normal processes of attachment, and unsurprisingly, outcomes tend to be worse for those who survive CSA perpetrated by an attachment figure (Alexander, 1992; Briere & Scott, 2015; Bulik et al., 2001; Liem et al., 1999). Early sexual boundary violations in which sexual acts (paired with coercion/violence) are experienced within a caregiver relationship, are believed to result in greater emotional trauma and later interpersonal difficulties (Noll, Trickett & Putnam, 2003). Moreover, a greater degree of self-blame may be observed in adult survivors of CSA in which non-physical coercion was used to accomplish the abuse (Noll, 2008), which is most common when the perpetrator is an attachment figure (Noll, Trickett, & Putnam, 2000).

Gender plays a substantial role in an individual's experience of CSA and resulting psycho-social outcomes, with males and females reporting qualitatively and quantitatively different (but equally deleterious) experiences of CSA (Barth et al., 2013; Dhaliwal et al., 1996). As such, the remainder of the current study focuses on the unique experiences of female survivors of CSA, beginning with a review of mental illnesses occurring among women with a CSA history.

1.5 Post-Traumatic Stress Disorder

Diagnostic and Statistical Manual of Mental Disorders (DSM-5) diagnostic criteria for post-traumatic stress disorder. In order to receive a diagnosis of PTSD, an individual must meet eight criteria (APA, 2013). First, there must be evidence of exposure to a traumatic event(s), such as real or threatened death, sexual violence, or serious injury (Criteria A). CSA which involves developmentally inappropriate sexual experiences satisfies criteria A, regardless of whether serious injury or physical violence was involved (APA, 2013). Intrusive symptoms (flashbacks, intrusive memories, nightmares) are characteristic of PTSD (Criteria B), and generally results in avoidance of stimuli associated with the trauma (e.g., internal reminders such as thoughts/feelings or external reminders such as people, places, situations, Criteria C). Negative changes in cognitions and mood associated with the traumatic event are also evident in those with PTSD (Criteria D), as well as alterations in arousal and reactivity associated with the traumatic events (Criteria E). To be diagnosed with PTSD these symptoms must be present for at least one month (Criteria F), cause clinically significant distress and impairment in social/occupational functioning (Criteria G), and must not be the result of another medical condition or the effects of a substance (Criteria H). Once an individual has met criteria for a diagnosis of PTSD, the DSM-5 also stipulates that clinicians specify whether the individual is also experiencing persistent/reoccurring dissociative symptoms, including feelings of detachment from one's own body and mental processes (depersonalization) or unreality of surroundings (derealization).

CSA and post-traumatic stress disorder in adulthood. A myriad of research conducted over the past four decades indicates that experiencing sexually-based trauma is a risk factor for the development of PTSD (Brewin, Andrews & Valentine, 2000; Briere & Scott, 2015; Chen et al., 2010; Green et al., 2010), particularly when trauma occurs at a young age (Ozer, Best,

Lipsey, & Weiss, 2003). A salient association between CSA and PTSD is not surprising, given that exposure to some form of trauma is a necessary precondition of a PTSD diagnosis (Dworkin et al., 2017). Interestingly however, women appear to be at greater risk of developing PTSD following childhood trauma compared to men, even after controlling for trauma exposure (e.g., greater exposure, larger variety of trauma) (Breslau, Davis, Andreski, Peterson & Schultz, 1997). Moreover, research also suggests that prior trauma increases the risk of developing PTSD following a subsequent (adulthood) trauma (Bresleau, Peterson & Schultz, 2008).

In a qualitative review of literature pertaining to prolonged and repeated trauma, Herman (1992) observed that women who experience sexually based trauma such as CSA are more likely to report having experienced dissociation while the abuse was occurring, particularly if they experienced repeated/ongoing abuse. Peri-traumatic dissociation can be described as an adaptive process in which an individual 'detaches' themselves from their own conscious experience by both blocking out extraneous information and functioning from the perspective of a spectator; both of which serve to ensure survival and to lessen the immediate emotional ramifications of the trauma (Gottfried, 2005; Herman, 1992). Herman (1992) further describes dissociation as a way for the survivor to escape an 'unbearable reality' while the abuse is ongoing, and a means of distancing themselves from the memories thereafter. It is not surprising then that dissociation is a widely-utilized coping strategy for children experiencing sexual abuse. Given their stage of development and decreased sense of agency, children may be more inclined than adults to use dissociation as a self-protective measure to cope with sexual trauma as it is occurring (Gottfried, 2005). Although dissociation serves an adaptive function while a trauma is ongoing, it establishes a means of processing experiences and coping with stressors which results in later adult dysfunction (Gottfried, 2005; Herman, 1992). For example, a meta-analysis by Ozer and

colleagues (2003) revealed that having experienced dissociation during the trauma (r = 0.35) is among the greatest predictors of later PTSD development (Ozer et al., 2003).Specifically, the researchers found greater symptom severity and higher rates of concurrent disorders among those who had developed PTSD and also reported dissociation during or immediately following the traumatic event(s) (Ozer et al., 2003). Dissociative symptoms (e.g., depersonalization and derealization) occurring long after the trauma has been endured are often described by sufferers as highly distressing, and have been shown to be more common among those with a CSA history (Carrion & Steiner, 2000; Sar, Akyuz, & Dogan, 2007).

Dissociative symptoms experienced by adult survivors of CSA can be conceptualized as falling within the larger category of avoidance responses; means of coping with distress in the absence of sufficient affect regulation skills (Briere & Jordan, 2009). Along with dissociation, avoidance behaviors may involve substance use, or tension reduction behaviors; external activities employed to reduce negative internal states, such as self-injury, disordered eating, indiscriminate sexual behavior, or aggression (Briere & Jordan, 2009). Indeed, higher reports of dissociative symptoms among female survivors of CSA are also associated with increased risk of developing a substance use disorder (Gottfried, 2005).

1.6 Substance Use, Abuse, and Dependence

DSM-5 diagnostic criteria for substance use disorder. Separate information for each of ten classes of substances (including alcohol) is provided in the DSM-5 (APA, 2013). However, the diagnosis of substance use disorder is made using the same eleven criteria regardless of the substance in question (with the exception of caffeine). A substance use disorder (SUD) involves a pathological pattern of use resulting in clinically significant impairment or distress within a 12-month period (Criteria A). Specifically, two of the following eleven criteria must be present in

order to receive a diagnosis of SUD. The individual may exhibit impairments in control over usage of the substance in question (Criteria 1-4). They may take the substance in larger quantities or for a longer period than intended (Criteria 1), and may be unsuccessful in reducing or discontinuing use of the substance despite multiple attempts (Criteria 2). A substantial amount of the individuals' time may be spent obtaining, using, or recovering from the effects of the given substance (Criteria 3), and the individual may also experience cravings; an intense desire or urge for the substance (Criteria 4). Furthermore, social impairments (Criteria 5-7) may also be present as a result of substance use. Major role obligations (e.g., work, school, or home) may be unmet (Criteria 5), and important social, occupational, or recreational activities may be abandoned (Criteria 7). Despite persistent/reoccurring interpersonal problems, the individual continues to use the substance in question (Criteria 6). The individual may also engage in risky use of the substance (Criteria 8-9), including using the substance when it is physically hazardous to do so (Criteria 8), and continuing use despite the awareness that physical/psychological problems are caused or worsened by use of the substance (Criteria 9). Pharmacological measures (Criteria 10-11) are also considered. The individual may report tolerance; requiring a marked increase in dosage of the substance to experience the desired effect, or a marked reduction in effect when the usual dose is used (Criteria 10). Finally, symptoms of withdrawal may be present (Criteria 11), and generally include adverse physiological and psychological reactions to a decline in blood/tissue concentration of a substance following prolonged heavy usage.

CSA and substance use, abuse, and dependence in adulthood. Substance use is among the avoidance behaviors associated with childhood trauma (Briere & Jordan, 2009). Unsurprisingly then, SUD's are relatively common among those who have experienced interpersonal trauma, with female CSA survivors more likely to meet criteria for alcohol and other SUD's compared to

women without a CSA history (Fergusson et al., 2013; Maniglio, 2009; Messman-Moore & Long, 2002).

It is postulated that individuals seek out psychoactive substances as a means of managing their trauma-related symptoms. Briere and Jordan (2009) describe substance use among those with a childhood trauma history as an anesthesia against painful childhood memories. Moreover, difficulties in regulating affect often experienced by those with a childhood trauma history may also prompt substance use as a means of regulating one's emotional experience (Grilo, Martino, Walker, Becker, Edell & McGlashan, 1997). It is also possible that the painful childhood memories that individuals are seeking to diffuse with substance use are the result of negative experiences of CSA disclosure. Bulik and colleagues (2001) examined CSA and the development of psychopathology and substance use among a sample of adult female twins. The researchers found that having experienced a negative response by someone to whom a CSA survivor disclosed the abuse was a significant predictor of SUD in adulthood (Bulik et al., 2001).

1.7 General Anxiety Disorder

DSM-5 diagnostic criteria for general anxiety disorder. A diagnosis of general anxiety disorder (GAD) requires the individual to meet four criteria (APA, 2013). First, the individual must experience excessive anxiety and worry most days, for a minimum of six months, about a number of activities and events (Criteria A). Routine life circumstances, including job responsibilities, health, finances, or minor issues, are generally the crux of worries for adults with GAD (American Psychiatric Association, 2013). Additionally, the individual has difficulty controlling the worry (Criteria B), and experiences at least three of the following symptoms most days for the past six months: restlessness, easily fatigued, difficulty concentrating, irritability, muscle tension, and sleep disturbances (Criteria C). Marked impairment in functioning (e.g.

occupational, social, etc.) results from the worry, anxiety, or physiological symptoms (Criteria D). However, a GAD diagnosis is only warranted if the symptoms are not a result of the effects of a substance or another medical condition (Criteria E), and if the disturbance cannot be better explained by another mental disorder (Criteria F).

CSA and anxiety. Vulnerability and perceived danger are inherent to all forms of trauma, with post traumatic outcomes often involving symptoms of anxiety as a result (Briere & Scott, 2015). Anxiety related to a traumatic event may involve generalized anxiety, the development of trauma-specific phobias, or the experience of panic attacks (Briere & Scott, 2015). Previous research suggests a higher incidence of anxiety disorders among those who have survived CSA (Chen et al., 2010; Fergusson et al., 2013; Macmillan et al., 2001; Mulnar et al, 2001). Although symptoms of panic are not among the criteria for PTSD, they are a common anxiety-related symptom experienced by those with a trauma history, and have been shown to be among the unique predictors of severe disability stemming from PTSD (Cougle, Feldner, Keough, Hawkins & Fitch, 2010). Anxiety-based symptoms such as panic attacks appear to be common among trauma survivors, regardless of whether the attack is readily attributable to a trauma-related trigger (Briere & Scott, 2015). Phobic anxiety is also not uncommon among trauma survivors. A phobic response underlies avoidance of people, places and situations reminiscent of the trauma inherent to PTSD (Briere & Scott, 2015). In fact, comorbidity among post-traumatic stress and various phobias (e.g., social, specific) has been found in previous studies (Carleton, Peluso, Collimore & Asmundson, 2011; Collimore, Carleton, Hoffman & Asmundson, 2010), with research by Cougle and colleagues (2010) revealing significantly greater rates of social anxiety and panic disorders among female survivors of CSA (Cougle, Timpano, Sachs-Ericsson, Keough & Riccardi, 2010).

GAD is believed to be both a risk factor in the development of PTSD following a traumatic event, as well as a syndrome that may develop following a trauma (Briere & Scott, 2015; Cougle et al., 2010). In a longitudinal birth-cohort study examining CSA and a range of adult outcomes, Fergusson and colleagues (2013) found that of the participants who reported a history of CSA, approximately one half to one third of them met criteria for GAD in adulthood. The prevalence of GAD increased with the severity of abuse, from those reporting non-contact CSA (46.4% GAD), contact CSA (51.0% GAD), and penetrative CSA (74.2% GAD) (Fergusson et al., 2013). Additionally, having experienced a negative response by someone to whom a CSA survivor disclosed the abuse was found to be a significant predictor of GAD in adulthood (Bulik et al., 2001). Although an individual exhibiting symptoms of GAD cannot be assumed to have a trauma history, there is evidence to suggest that individuals who have experienced a traumatic event may experience an increase in non-specific anxiety symptoms after the fact (Cougle et al., 2010; Safren, Gershuny, Marzol, Otto & Pollack, 2002). It has been proposed that a predisposition towards GAD and anxiety disorders overall in those with a trauma history may be attributable to increased autonomic reactivity in this population (Safren et al., 2002). Interestingly, individuals with a history of CSA who meet criteria for an anxiety disorder are significantly more likely to experience comorbid Major Depressive Disorder compared to those without a CSA history (Safren et al., 2002).

1.8 Major Depressive Disorder

DSM-5 diagnostic criteria for major depressive disorder. The DSM-5 includes five criteria overall that must be considered when assessing for Major Depressive Disorder (MDD) (APA, 2013). First, an individual must have experienced at least five of nine symptoms consistently during a single two-week period, which represents a change in normal functioning;

with one symptom being a loss of interest or pleasure, or depressed mood (Criteria A). The individual may experience depressed mood (1), a loss of interest in otherwise pleasurable activities (2), decrease in appetite and significant weight loss or gain (3), insomnia of hypersomnia (4), psychomotor agitation or retardation (5), fatigue or loss of energy (6), feelings of worthlessness or excessive/inappropriate guilt (7), difficulty concentrating, or indecisiveness (8), recurrent thoughts of death, suicidal ideation, or suicide attempt (9). These symptoms must result in clinically significant impairment (e.g., social, occupational functioning) or distress (Criteria B) and must not be owing to physiological effects of a substance or another medical condition (Criteria C) or be better explained by another mental illness (Criteria D). Finally, MDD can only be diagnosed in the absence of a history of manic/hypomanic episode(s) (Criteria E).

CSA and major depressive disorder. Previous research suggests that exposure to any major trauma is also associated with a risk of developing MDD (Breslau et al., 1992). The results of numerous meta-analysis and longitudinal studies have found a significant association between CSA and symptoms of depression in female survivors (Bulik et al., 2001; Chen et al., 2010; Dworkin et al., 2017; Fergusson et al., 2013; Molnar et al, 2001). For example, in a longitudinal population-based study of 206 sets of adult female twins who endorsed a CSA history, Bulik and colleagues (2001) found that over half of all participants (215 of 412) met criteria for MDD.

Indeed, many trauma survivors often present with a primary concern of depressed mood, and may not initially report a trauma history (Briere & Scott, 2015). There is also some overlap between clinical features of PTSD and depression (e.g., insomnia, difficulty with concentration, loss of pleasure in previously enjoyed activities, psychomotor agitation), with individuals often reporting feelings of isolation, loss, and abandonment when depressive symptoms arise in those with a trauma history (Briere & Scott, 2015).

Women with a history of CSA also appear to be at heightened risk of depression during the prenatal and postpartum period. Numerous studies have found that women with a history of CSA experience significantly higher rates of depression while pregnant and during the postpartum period compared to those mothers without a CSA history (Ansara, Cohen, Gallop, Kung & Schei, 2005; Buist & Janson, 2001; Robertson-Blackmore et al., 2013), and even compared to those women with a history of other forms of trauma (Lev-Wiesel & Daphna-Tekoah, 2010). For example, in a longitudinal study of 374 women, Robertson-Blackmore and colleagues (2013) found that 12% of participants endorsed a history of CSA. The presence of psychopathology, including MDD was assessed twice during the prenatal period (18 and 32 weeks), and twice during the post-natal period (six to eight weeks and six months). Those women who reported a CSA history were found to be at significantly greater risk of both anti-natal (OR, 2.47; 95% CI, 1.27-4.78) and post-partum (OR, 1.10; 95% CI, 0.44-2.79) depression (Robertson-Blackmore, 2013). Similar results were also found among adolescent mothers (Gilson & Lancaster, 2008).

CSA and suicidality. Previous research also suggests increased suicidality among women with a history of childhood adversity, including CSA (Chen et al., 2010; Fergusson et al., 2013; Krysinska & Lester, 2010; Nrugham, Holen, & Sund, 2010; Joiner, Sachs-Ericsson, Wingate, Brown, Anestis & Selby, 2007). The highest risk of suicide has been found among women with a history of sexual victimization, as opposed to other forms of trauma (Dworkin et al., 2017). Krysinska and Lester (2010) conducted a meta-analysis examining the results of 50 studies on suicidality among those with a trauma history and a PTSD diagnosis. The results revealed a marked increase in prior suicide attempts (effect size of 0.17 (*Phi*)) and past and current suicidal ideation (effect size of 0.17 (*Phi*)) among those women with a trauma history who also met

criteria for a PTSD diagnosis. It seems that as severity of CSA increases, so too does the risk for suicide attempts in adulthood (Joiner et al., 2007).

Although suicidality is a prominent feature of depression (and various other forms of psychopathology), it has been suggested that a history of sexual victimization is more strongly associated with suicidal ideation (OR, 2.20; 95% CI, 2.0-2.4), previous suicide attempts (OR, 2.60; 95% CI, 2.2-3.1) and in particular unplanned previous attempts (OR, 1.50; 95% CI, 1.1-2.0) than other forms of trauma, independent of comorbid disorders (Stein et al., 2010). In a global study of trauma exposure and subsequent suicidality (e.g., attempts, ideation, planning), Stein and colleagues (2010) found that a history of sexual trauma was the strongest predictor of persistent suicidality (ideation and attempts) compared to other forms of trauma. It has been postulated that the high degree of shame and stigma associated with having experienced sexual abuse may contribute to the heightened potential for suicidality amongst female CSA survivors (Dworkin et al., 2017).

1.9 Bipolar Disorder

DSM-5 diagnostic criteria for bipolar disorder I and II. The DSM-5 states that two stipulations must be met in order to receive the diagnosis of bipolar disorder type I (BPD I) (APA, 2013). First, the individual must meet criteria for a manic episode (Criteria A-D). A manic episode involves a period of abnormally and persistently elevated, expansive, or irritated mood and goal-directed behavior, lasting at least one week (or any duration if hospitalization is required) (Criteria A). During this period, three (or more) of the following are present, and represent a marked change from usual behavior: grandiosity or inflated self-esteem (1), decreased need for sleep (2), more talkative than usual (3), flight of ideas (4), distractibility (5), increased goal-directed activity, or psycho-motor agitation (6), and engaging in high-risk

activities (7) (Criteria B). The mood disturbance results in marked functional (e.g., social, occupational, etc.) impairment, or requires hospitalization. Additionally, the occurrence of both manic and major depressive episodes must not be better explained by other schizophrenia spectrum or psychotic disorders, and is not attributable to physiological effects of a substance of another medical condition (Criteria D). The manic episode may have been proceeded or may be followed by a major depressive episode(s) or hypomanic episode(s), but the occurrence of a major depressive episode is not *required* for diagnosis of BPD I

Bipolar disorder type II (BPD II) is similar to type I, but a depressive episode *is* required for diagnosis, along with a hypo-manic episode (APA, 2013). Similar to a manic episode, criteria for a hypo-manic episode are met when at least four symptoms under Criteria B are present. A hypo-manic episode is associated with an uncharacteristic change in functioning (Criteria C), which along with the disturbance in mood is noticeable to others (Criteria D). However, the episode does not necessitate hospitalization, nor does it result in marked changes in social or occupational functioning (Criteria E). Finally, the hypo-manic episode is not owing to the physiological effects of a substance (Criteria F).

CSA and bipolar disorder (BPD). Compared to others forms of psychopathology, fewer studies have explored the relationship between CSA and BPD. Indeed, in a recent systematic review and meta-analysis of studies examining the relationship between psychopathology and CSA, BPD was omitted from the analysis owing to an absence of previous longitudinal studies examining this association (Chen et al., 2010).

Although BPD is believed to be largely genetically based, there is some research that suggests childhood trauma may play a larger role in the development of BPD than previously thought (Etain et al., 2008; Etain et al., 2013). Indeed, some researchers are also exploring the

possibility that BPD may arise in some individuals who have a genetic predisposition towards developing the disorder that is activated by the stress of childhood sexual abuse. For example, a recent study by Etain and colleagues (2013) explored the presence of a CSA history among 587 adults diagnosed with BPD (type I and II). Females with a CSA history reported significantly earlier age of onset, were more likely to have had at least one previous suicide attempt, and experienced rapid-cycling to a greater degree compared to female BPD patients without a CSA history (Etain et al., 2013). Similarly, previous research by Meade and colleagues (2009) has suggested that mood outcomes for those with BPD depression are markedly worse for women who are CSA survivors, as opposed to those women without a CSA history (Meade et al., 2009). Although the mechanism underlying the association between CSA and the development of BPD remains unclear, it appears that a CSA history is at the very least associated with a more severe symptomatology among adult survivors with BPD (Etain et al., 2013; Meade et al., 2009).

1.10 CSA and Socio-Demographic Correlates

CSA and adult marital status. A history of CSA is associated with a range of interpersonal dysfunction for adult survivors. Specifically, women with a CSA history are more likely to experience disrupted development of sexuality, sexual dysfunction in adulthood, interpersonal problems in intimate partner relationships, more unplanned pregnancies, and difficulties with parental functioning (De Jong, Alink, Bijleveld, Finkenauer & Hendriks, 2015; DiLillo, 2001; Fergusson et al., 2013; Noll et al., 2003; Stephenson et al., 2012). All of these factors may help to explain the increased risk of relationship break-down resulting in heightened separation and divorce rates among women with a CSA history (De Jong et al., 2015). A systematic review of 132 studies on CSA and the fulfillment of adult roles revealed that for those women with a CSA history who do remain in relationships, it appears that the quality of

relationships is impacted, with increasingly severe forms of abuse (e.g., involving penetration) associated with further deteriorations in adult relationship quality (De Jong et al., 2015).

CSA and level of education. There is also evidence to indicate that educational attainment is stifled in female survivors of CSA (De Jong et al., 2015; Fergusson et al., 2013; Horan & Widom, 2015). For example, Fergusson and colleagues (2013) found that female CSA survivors were more likely to have left secondary school without qualifications, compared to those women without a CSA history. A systematic review completed by De Jong and colleagues (2015) revealed an overall trend towards decreased educational attainment among female CSA survivors, with women less likely to complete post-secondary education if they had experienced CSA. Similarly, in a study by Hardner and colleagues (2018), female CSA survivors evidenced significantly less educational attainment, which correlated with younger onset of abuse and greater presence of ongoing psychopathology (Hardner, Wolf, & Rinfrette, 2018). Understanding the association between CSA history and education is crucial in being able to better support women who are survivors of CSA in attaining educational goals, as educational success has been associated with improved health and well-being outcomes among female CSA survivors (Dube & Rishi, 2017), likely a result of the higher self-esteem and earning potential that accompanies a post-secondary education (Hardner et al., 2018).

CSA and personal income. Numerous studies have reported lower personal income among adult female survivors of CSA (Fergusson et al., 2013; Gottfried, 2005; Hyman, 2000; Roberts, O'Connor, Dunn & Golding, 2004). For example, the results of a longitudinal cohort design study conducted by Fergusson and colleagues (2013) found that women with a history of CSA reported a significantly lower gross personal income and were more likely to be recipients of governmental income supplements (e.g., welfare) than women without a CSA history. In a

study examining the economic consequences of CSA among a sample of gay women, Hyman (2000) found a marked decrease in personal income among women who were survivors of CSA, compared to those women without a CSA history. Roberts and colleagues (2004) found a history of CSA among women to be associated with a marked decreased in their household income as adults. However, the degree to which lower personal and household income among female survivors of CSA is mediated by educational attainment is not clear.

1.11CSA and Quality of Life

CSA and Quality of life. Women who have survived CSA often live with long lasting ramifications that affect their daily lives. Examining self-perceived quality of life among female CSA survivors may serve as a useful measure of health and well-being that extends beyond the diagnosis of specific illnesses. A relatively new construct, quality of life has been explored as part of medical and psychological research since the 1990's (Centers for Disease Control and Prevention, 2014). Although quality of life is frequently used as an outcome measure to gauge an individual's overall functioning (Barofsky, 2012), there is no single, discrete definition for this particular construct (Fletcher, 2018). Barofsky (2012) proposed that quality of life encompasses one's physical functioning, psychosocial adjustment, happiness, well-being, and life-satisfaction, along with the value that the individual places upon these components.

A modest number of studies have explored the relationship between CSA and adulthood quality of life, revealing lower quality of life among survivors of CSA (Fergusson et al., 2013; Fletcher, 2018; Gospodarevskaya, 2013; Weber, Jud, & Landolt, 2016). For example, a systematic review of 19 articles by Weber and colleagues (2016) explored health-related quality of life among individuals with a history of childhood trauma, including CSA. The researchers found consistent negative correlations among CSA and subsequent quality of life, and concluded

that robust evidence exists to suggest an inverse relationship between CSA and quality of life in adulthood (Weber et al., 2016). Similarly, Gospodarevskaya (2013) conducted a secondary data analysis of a nationally representative sample of Australians and examined quality of life among those with and without a history of CSA. A significant loss of quality of life was observed among those with a history of CSA, with further decreases in quality of life associated with co-morbid depression (Gospodarevskaya, 2013). The relationship between CSA and quality of life may be mediated by the higher rates of psychopathology found among those women with a CSA history, as previous research has documented reduced mental-health related quality of life among those with a CSA history. (Afifi, Enns, Cox, De Graaf & Ten Have, 2007).

CSA and life satisfaction. Quality of life can be considered synonymous with life satisfaction and well-being (Anderson, Jané-Llopis & Cooper, 2011). Fergusson and colleagues (2013) found a marked decreased in life satisfaction among women with a CSA history, along with decreased self-esteem, compared to women without a CSA history. A study by Sigurdardottir (2016) and colleagues reported significant improvement in overall well-being (e.g., improved occupational and social functioning) of Norwegian women with a CSA history following participation in an intensive trauma-focused treatment program (Sigurdardottir, Halldorsdottir, Bender & Agnarsdottir, 2016).

CSA and sense of belonging to the community. Community belonging is defined by the quality of relationships with others, connectedness to and participation in one's community, and sense of agency (Karren, 2006). Trauma has the potential to impede an individual's ability to forge interpersonal connections and connect to community members for support; further delaying healing (Herman, 1992; Schultz, Cattaneo, Sabina, Brunner, Jackson & Serrata, 2016). Surprisingly, no previous studies appear to have examined community belonging specifically

among adult survivors of CSA. Cheung and colleagues (2017) examined perceived community belonging among adolescents with a history of childhood maltreatment (including CSA). The researchers found that those adolescents with a history of childhood maltreatment reported a decreased sense of community belonging compared to those without a maltreatment history, but the difference did not reach statistical significance.

Social support is also associated with our perception of community belongingness (Karren, 2006). Indeed, positive correlations between perceived social support and improved outcomes for CSA survivors have been well documented (Brewin et al., 2000; Ozer et al., 2003; Hyman, Gold & Cott, 2003).

Self-perceived mental health. A large body of research exists on the relationship between CSA history and later development of mental illness (e.g., Chen et al 2010; Dworkin et al., 2017; Maniglio, 2009). However, positive mental health includes the presence of well-being, in addition to the absence of mental illness (WHO, 2005). As such, it may be important to explore the overall mental health of female CSA survivors, in addition to the prevalence of specific, diagnosable mental illnesses. Nevertheless, no previous studies to date have explored adult female CSA survivors' perceptions of their own mental health. Cheung and colleagues (2017) explored perceived mental health among adolescent survivors of child maltreatment generally, but did not find a significant difference between the self-perceived mental health of those who reported a childhood maltreatment history compared to those who denied having experienced childhood maltreatment. However, only 5.5% of those in the maltreatment group had experienced CSA.

1.12 The Present Study

Significance of the present study. Relatively little is known regarding the prevalence and comorbidities of CSA among Canadian women. The present study seeks to address gaps in the literature, commonly cited methodological issues, and explore CSA prevalence and correlates among the understudied Canadian population. Relying upon a large matched-control sample, the current study provides one of few nationally representative estimates of CSA prevalence among Canadian women that does not rely on reports to child welfare agencies or law enforcement. In addition, a variety of variables (including mental illnesses, demographic, and quality of life variables) will be explored as potential correlates of childhood sexual abuse. Indeed, the current study is unique in its wholistic nature; examining a range of indicators representing mental health and well-being. The current project utilizes data obtained from a national Canadian population health survey, and will provide much-needed insight regarding the actual magnitude of CSA among Canadian women, as well as a greater understanding of potential long-term ramifications of CSA among a Canadian population. The findings from this research may be used by policy makers, particularly those concerned with the prevention and early detection of CSA, and overall awareness of CSA as a public health issue. Moreover, mental health professionals working with female CSA survivors may also benefit from these findings for the purpose of assessment, treatment planning and overall best practice.

Hypotheses. The current study aims to estimate the prevalence of self-reported CSA history among Canadian women (age 20-64). Additionally, the present study aims to compare the prevalence of various psychiatric disorders and suicidal ideation among women who self-report a CSA history with that observed in an age matched randomly selected sample of women without a CSA history. Both groups will also be compared across socio-demographic and quality of life variables. It is expected that the CSA group will evidence greater prevalence of

psychopathology, as well as poorer outcomes across socio-demographic variables. Moreover, measures of quality of life are also expected to be poorer among those women with a CSA history.

Chapter 2: Methods

2.1 Participants

As previously mentioned, data were obtained via the Statistics Canada Canadian Community Health Survey of Mental Health (CCHS-MH; Statistics Canada, 2013**)**; a survey which sampled individuals living in private dwellings throughout 115 health regions covering all ten provinces.

Respondents for the survey were selected in three stages. First, geographical areas were selected, followed by households within each geographical area. Finally, one respondent from each household was selected randomly. The overall national response rate was 68.9%, with the CCHS-MH providing cross-sectional data from 25,113 Canadians aged 15 to 80 residing in private residences from the 10 provinces. The sample did not include individuals living in the three territories, those living on Aboriginal reserves or settlements, full-time members of the Canadian forces, or institutional residents. However, Statistics Canada estimates that the total number of these individuals represents less than 3% of the target population, so as a result the remaining sample is still considered to be nationally representative (CCHS-MH; Statistics Canada, 2013).

For the current study, age was recorded categorically in the database in five-year increments from age 20 through age 64. Inclusion was based on age, self-identified gender, and response to the variables of interest. Those in the 15-19 age category were not included in the analyses as the question regarding CSA was not posed to them. Additionally, as the present study is focused on the experiences of women, any individual who self-identified as male was excluded from the analysis. Furthermore, as the present study is focused on the experiences of adult women, data from senior women (those beyond age 64) were excluded from the analysis,

as those age 65 and older are typically considered to be ‘seniors’ (Statistics Canada, 2007). The exclusion of seniors (those over 65) to focus on the unique experiences of the general adult population is common among studies using CCHS-MH data (see Hesson & Fowler, 2018; Fowler, Wareham, & Barnes, 2013). Furthermore, data from individuals who did not provide a response when asked whether they had experienced sexual abuse as a child were also excluded from the analysis. Finally, an age-matched sample of randomly selected adult women who did not report a CSA history was created as the control group. The study’s final sample size was 2,054 female participants age 20 through 64.

2.2 Data Collection Method

Data collection occurred from January 2012 to December 2012. During the sampling period, 25,113 valid interviews were conducted. Detailed information regarding sampling techniques and data collection is available from Statistics Canada (2013) but are summarized below.

The CCHS-MH used the same area frame as used in the Labor Force Survey (LFS); a complex two-stage stratified design in which clusters make up each stratum. First, clusters are selected using a sampling method with a probability proportional to size. Next, for each cluster dwelling lists are prepared, and a systematic sample of households is selected from these lists. Afterwards, a single member was randomly selected from each household with the assistance of selection probabilities based on household composition and age.

Prior to the commencement of data collection, introductory letters and brochures were sent to the 43,030 selected households explaining the purpose of the study. The importance of survey participation, along with examples outlining how the CCHS-MH data would be utilized

were provided. Participants were made aware that their contributions would be meaningful and important, but completion of the survey was entirely voluntary.

Minimizing non-responding.

Interviewers were instructed to make initial personal contact with randomly selected survey respondent from each dwelling. Every reasonable effort was made to obtain interviews. Respondents were contacted by phone initially to arrange an appointment time for the in-person interview. However, respondents were also offered the opportunity to complete the interview by phone if they were available immediately. Proxy interviews were not permitted for the CCHS-MH.

In order to further minimize the incidence of non-responding, a letter underscoring the importance of the household's participation in the survey was sent to those respondents who initially refused to complete the survey. This was followed by a second contact with a Statistics Canada representative (either in person or by phone) to further stress the importance of participation in the survey.

Use of the Computer Assisted Personal Interview (CAPI) software by trained interviewers. Data were collected directly from survey respondents by trained individuals from Statistics Canada's collections planning and management division. The majority of interviews (87%) for the CCHS-MH were conducted in person, with the remaining completed via telephone. All interviews were completed using the CAPI software program. This computer-assisted interviewing system allows for custom interviews for each respondent based on their individual characteristics and survey results, ensuring the interviewers do not ask questions that do not apply to the respondent.

Weighting. Each respondent was assigned a survey weight value that corresponds to the number of people in the entire population that the respondent is intended to represent. Weighting is done so that estimates derived from a set of data can be representative of the entire population and not just the sample itself.

2.3 Instrument Description

The CCHS-MH was designed by Statistics Canada in consultation with representatives from various governmental agencies, the Mental Health Commission of Canada, and academic experts in mental health. Topics covered in the survey include health, health care services, lifestyle and social conditions, mental health and well-being, and prevention and detection of disease. The survey is composed of 30 modules. The decision to include an in-depth module assessing for symptoms of a given diagnostic psychiatric disorder was guided by recommendations from the CCHS-MH expert committee. Modules to be incorporated into the CCHS-MH were selected based upon numerous factors, including currently available estimates of prevalence, relevance to current programs/policy, perceived impact on health care costs, and comparability with previous CCHS-MH cycles (CCHS-MH; Statistics Canada, 2013).

2.4 Measures

Prevalence of childhood sexual abuse. The CCHS-MH interview includes a section on Childhood Experiences of Violence Questionnaire – Short Form dealing with physical and sexual abuse before the age of 16 (Walsh, MacMillan, Trocmé, Jamieson, & Boyle, 2008). Respondents are reminded at the onset that all information they provide will remain confidential. For the purposes of the current study, prevalence of CSA history was determined based on one specific item within the Childhood Experiences of Violence Questionnaire which asks “How many times did an adult force you, or attempt to force you into any unwanted sexual activity, by

threatening you, holding you down or hurting you in some way?". Respondents indicated their response on a five-point scale, ranging from "Never" to "More Than 10 Times". For the present study, respondents deemed to have experienced CSA if they indicated any response other than 'Never'.

Screening section. To reduce response burden, survey modules exploring symptoms of distinct mental illnesses (with the exception of the substance use disorder modules) are preceded with screener questions for each disorder. Screener questions were based upon those used in the World Mental Health version of the Composite International Diagnostic Interview (WMH-CIDI) (CCHS-MH; Derived Variable Specifications, Statistics Canada 2014). Further information on the WMH-CIDI is provided below. To avoid the occurrence of false negatives and the possibility of participants purposely answering 'no' to avoid completing a given module, all screener questions were grouped together in a separate module (Screening Section) near the beginning of the survey. The Screening Section module requires an average of approximately 19 minutes to complete (WHO WMH CIDI, 2018). Participants who responded 'no' to screener questions were not asked questions associated with that disorder and were considered as failing to meet criteria for the given disorder. Respondents who answered 'yes' were flagged for follow-up questioning within disorder-specific modules which include more in-depth questioning regarding specific symptoms of a given psychiatric illness. With respect to the substance use disorder modules, all respondents are asked a minimum set of questions on their use of alcohol and drugs.

Assessment of psychiatric disorders; lifetime and 12-month prevalence. The questions used for the CCHS-MH modules on substance and alcohol use, depression, and general anxiety disorder are based on the World Mental Health version of the Composite International Diagnostic Interview (WMH-CIDI). The WMH-CIDI is a comprehensive and fully standardized

instrument for the assessment of mental disorders and conditions according to definitions and criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and the International Classification of Diseases and Related Health Problems (ICD-10) (Kessler & Ustun, 2004). The WMH-CIDI was created by the World Health Organization (WHO) in 1998 to be used by trained lay-interviewers for epidemiological, clinical and research purposes. The WMH-CIDI was created as an expansion of its predecessor, the WHO-CIDI (Kessler & Ustun, 2004), which was developed in 1990 (WHO WMH-CIDI, 2018). The WMH-CIDI is similar to the WHO-CIDI, which contains symptom related questions, probes for psycho-social impairments, evaluates symptom severity, and measures other relevant episode-related questions (Wittchen, 1994). Previous research, including a review of multiple reliability studies by Wittchen (1994) suggests that the WHO-CIDI is a reliable and valid measure (WHO-CIDI, 1990; Wittchen, 1994; Kessler, Andrews, Mroczek, Ustun, Wittchen, 1998), as it its expanded and updated version, the WMH-CIDI (Haro, Bouchez, Brugha, Girolamo, Guyer, Jin, Lepine, Mazzi, Reneses, Vilagut, Sampson, Kessler, 2006; Kessler & Usten, 2004), upon which the CCHS-MH modules for MDD, GAD, BPD (I and II), SUD and AUD are based.

Within any given module, respondents who declined to offer a response for a given question were coded as 'RF', and were not included in the analysis, as were those who responded that they were unsure or did not know 'DK'. The assessment of each variable is briefly summarized with examples below. For a complete list of questions posed to respondents within each CCHS-MH module (including screener questions) see Statistics Canada (2013).

Post-traumatic stress disorder. The PTSD variable was assessed within the Chronic Conditions (CCC) module of the survey. The CCC module requires an average of approximately 15 minutes to administer in its entirety (WHO WMH CIDI, 2018). Respondents were instructed

prior to the start of the module that they would be asked about the presence of various health conditions that had already been diagnosed by a health professional that are expected to last (or have already lasted) 6 months. Respondents were asked 'Do you have Post-Traumatic Stress Disorder', and interviewers coded responses as either 'Yes'or 'No'. A positive response ('Yes') was coded having a PTSD diagnosis. Although a separate diagnostic module to assess symptoms of PTSD is included in the WMH-CIDI (WHO WMH CIDI, 2018) this module was not included in the 2012 cycle of the CCHS-MH. As such, the presence of a PTSD diagnosis was based on the respondents answer to this single item.

Substance use, abuse and dependence. The substance use, abuse and dependence (SUD) variable was assessed by measuring symptoms of Substance Use Disorder as outlined in the World Mental Health version of the Composite International Diagnostic Interview (WMH-CIDI). As part of the SUD module, respondents were asked about their use of a variety of both illicit and prescribed substances being used non-medicinally. Prior to administration of the SUD module, respondents were reminded that the information they provide will remain confidential. Administration of the SUD module was not preceded by screener questions. As such, all respondents were asked a minimum number of questions pertaining to substance use. For each substance, the interviewer provided examples of the substance in question, then asked 'Have you ever used or tried [substance in question] non-medicinally?'. Responses were coded as either 'Yes, just once', 'Yes, more than once', or 'No'. Only those who indicated that they had used a given substance more than once were asked further questions regarding their use of the given substance. Respondents were asked about their use of sedatives (e.g., valium, rohypnol, diazepam) stimulants (e.g., methamphetamine, Adderall, Ritalin) analgesics (e.g., codeine, morphine, Percodan) marijuana or hashish, cocaine (e.g., in an form including powder, crack,

free base, coca leaves, paste), ‘club drugs’ (ecstasy, ketamine, MDMA), hallucinogens (e.g., LSD, mescaline, PCP, angel dust, mushrooms, peyote), heroin or opium, inhalants or solvents (e.g., nitrous oxide, paint, gasoline, glue), and any other substances not covered by these categories. Lifetime use and 12-month frequency were evaluated, and criteria for a substance use disorder diagnosis as outlined in the DSM-IV were systematically covered.

Questions assessing substance dependence (both lifetime and 12-month) were also administered for each substance. For example, respondents were asked ‘Was your use ever so regular that you felt that you could not stop using [substance in question]?’, with responses being coded as ‘Yes’ or ‘No’. Respondents were also asked to indicate for each substance whether their use within the past 12 months has interfered with their life and activities, including home management activities, ability to attend school or work a job, ability to form and maintain relationships, and social relations. The SUD module requires an average of approximately seven minutes to administer (WHO WMH CIDI, 2018).

Alcohol use, abuse and dependence. The alcohol use, abuse and dependence (AUD) variable was assessed by measuring symptoms of alcohol use disorder as outlined in the World Mental Health Composite International Diagnostic Interview (WHO-CIDI). The term ‘drink’ used throughout the module to indicate one standard serving of alcohol was clarified with examples provided at the onset of the SUD module. Respondents were asked about their use of alcohol, followed by questions related to alcohol abuse and dependence as appropriate. The module included questions which covered cognitive, behavioral, and physiological symptoms associated with alcohol use disorder. Questions pertaining to alcohol use explored lifetime and 12-month rate of use, consumption of alcohol during the past week, episodes of binge drinking (more than five standard drinks in one sitting) during the past 12 months, and reasons for

stopping or reducing overall consumption if relevant. Questions pertaining to alcohol dependence explored problematic patterns of alcohol use within the past 12-month and across the respondent's lifetime. Questions pertaining to tolerance and withdrawal were also included in the AUD module. Some questions required a 'Yes' or 'No' response from respondents, whereas other measuring frequency of use offered a range of response options. For example, respondents who were asked 'during the past 12 months, how often did you drink alcoholic beverages?' were offered seven response options ranging from 'Less than once a month' to 'Everyday'. In line with the SUD module, respondents who completed the AUD module were also asked to report the extent to which the symptoms they reported have interfered with their ability to engage in a range of activities (e.g., responsibilities at home, school/work attendance, maintenance of relationships, social engagement). Respondents were asked to rate on a scale from 0 (No Interference) to 10 (Very Severe Interference) the degree to which their symptoms have interfered with each of the aforementioned activities. Administration of the AUD module was not preceded by screener questions. As such, all respondents were asked a minimum number of questions pertaining to alcohol use.

General anxiety disorder. The GAD variable was assessed by measuring symptoms of GAD as outlined in the World Mental Health Composite International Diagnostic Interview (WMH-CIDI). The GAD module was introduced only to those respondents who answered 'Yes' to screener questions designed to identify the existence of possible GAD (see Statistics Canada (2013) for a full list of screener questions). Respondents were shown a list of common areas that are often a source of worry for those with GAD (e.g., finances, relationships, own health, etc.) and asked to identify which (if any) of these are a source of worry for them. This module included questions designed to assess the presence of symptoms (both physiological and

cognitive) associated with GAD, including the frequency and duration of these symptoms. Lifetime and 12-month prevalence of symptoms associated with GAD were evaluated. Respondents were also asked to report the extent to which the symptoms they reported have interfered with their ability to engage in a range of activities (e.g., responsibilities at home, school/work attendance, maintenance of relationships, social engagement). Respondents were asked to rate on a scale from 0 (No Interference) to 10 (Very Severe Interference) the degree to which their symptoms have interfered with each of the aforementioned activities. The GAD module requires an average of approximately six minutes to administer (WHO WMH CIDI, 2018).

Major Depressive Disorder. The MDD variable was assessed by measuring symptoms of a major depressive episode as outlined in the World Mental Health Composite International Diagnostic Interview (WMH-CIDI). The MDD module was introduced only to those respondents who answered 'Yes' to one of three screener questions designed to identify the symptoms consistent with a major depressive episode (See Statistics Canada (2013) for a full list of screener questions). This module included questions designed to assess the presence of symptoms associated with a major depressive episode, including the frequency, duration, and severity of these symptoms. Questions assessed the physiological symptoms associated with depression (e.g., changes in appetite, weight, and sleeping patterns), as well as cognitive symptoms (e.g., difficulty concentrating, indecisiveness), emotional/mood related symptoms (e.g., feelings of sadness, hopelessness, worthlessness) and behavioral symptoms (e.g., isolations one's self, ceasing to engage in previously enjoyed activities). Certain questions within the module required a forced choice; respondents were required to answer 'Yes' or 'No'. Questions assessing severity required respondents to use a rating scale including 'Mild', 'Moderate',

'Severe', and 'Very Severe'. Additionally, questions which explored the impact depressive symptoms reported by the respondent have had on various aspects of their life (e.g.. relationships, occupational functioning) required the respondent to rate the interference as 'Often', 'Sometimes', 'Rarely', or 'Never'. The MDD module takes an average of approximately eight minutes to administer (WHO WMH CIDI, 2018).

Suicidal ideation. The (SUI) variable was assessed by means of a sub-block of questions within the MDD module. However, questions regarding suicidal thoughts were posed to all respondents regardless of whether the MDD module was administered. Respondents were asked questions related to the presence of 12-month and lifetime suicidal ideation. All questions pertaining to suicidal ideation required a forced-choice; respondents were required to answer 'Yes', 'No'. The suicidal ideation sub-block of questions takes, on average, sixty seconds to administer (WHO WMH CIDI, 2018).

Bipolar disorder. BPD was assessed by measuring symptoms of BPD I and BPD II as outlined in the World Mental Health Composite International Diagnostic Interview (WMH-CIDI). As is recommended by Statistics Canada (CCHS-MH, 2013), a derived omnibus variable which combines data from the evaluation of BPD I and BPD II was used to evaluate lifetime and 12-month prevalence of symptoms associated with BPD (both types). Symptoms of BPD were assessed within the depression (described above) and mania modules of the CCHS-MH. The mania (MIA) module was introduced only to those respondents who answered 'Yes' to one of two screener questions designed to identify the symptoms consistent with a manic episode, including increased energy/feelings of excitement and irritability. (See Statistics Canada (2013) for a full list of screener questions). This module included questions designed to assess the presence of symptoms associated with a manic or hypo-manic episode, including the frequency,

duration, and severity of these symptoms. Questions assessed for mood disturbances (e.g., elevated, expansive, or irritable mood) and increased energy/activity associated with mania, as well as changes in self-esteem (e.g., inflated, grandiosity), changes in sleep (e.g., decreased need), pressured speech, flight of ideas and distractibility. Behavioral symptoms consistent with mania (e.g., increased goal-directed activity, involvement in high-risk activities) were also assessed. Certain questions within the module required a forced choice; respondents were required to answer 'Yes' or 'No'. Questions assessing duration of episode required respondents to use a rating scale including 'Hours', 'Days', 'Weeks', 'Months', or 'Years'. Additionally, respondents who endorsed symptoms of mania/hypomania were also asked to rate the extent to which the symptoms interfered with their functioning as either 'Not at all', 'A little', 'Some', 'Allot', 'Extremely'. The MIA module takes an average of approximately six minutes to administer (WHO WMH CIDI, 2018).

Socio-demographic Variables

Socio-demographic variables incorporated into the analysis were categorical in nature and included age, marital status, level of education, and personal income.

Age. Age was measured by asking the respondent for their birthday. The interviewer then confirmed the respondent age and sought clarification from the respondent if an error in age calculation had been made. Age was recorded categorically in the database in five-year increments; 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 54, 55 to 59, 60 to 64 (CCHS-MH; Statistics Canada, 2013).

Marital status. Marital status was measured by soliciting from respondents' information regarding their marital status. Respondents were asked to select a response which best reflected

their current marital status from the following options: ‘Married’, ‘Common-Law’, ‘Widowed’, ‘Divorced or Separated’, or ‘Single’ (CCHS-MH; Statistics Canada, 2013).

Level of education. Level of education was assessed by asking respondents about the highest level of formal education they have attained. Respondents were asked to select a response which best reflected their current level of education from the following options: ‘Less Than Secondary School Graduation’, ‘Secondary School Graduation’, ‘Some Post-Secondary’, ‘Post-Secondary Graduation’ (CCHS-MH; Statistics Canada, 2013).

Personal income. Personal income was measured by asking respondents information regarding their personal income. Respondents were reminded that their responses will remain confidential, and were then asked to estimate their total personal income from all sources from the following categories: ‘Less than 10,000’, ’$10,000-$19,999’, ’$20,000-$29,000’, ‘$30,000-$39,999’, ‘$40,000-$49,999’, ‘$50,000 or more’ (CCHS-MH; Statistics Canada, 2013).

Quality of life variables. Quality of life variables incorporated into the analysis were categorical in nature, and included Life Satisfaction, Sense of Belonging to the Community, and Self-Perceived Mental Health.

Life satisfaction. Life satisfaction was assessed within the General Health module of the survey. Respondents were asked to rate their current level of life satisfaction on a scale of zero (Very Dissatisfied) to 10 (Very Satisfied) (CCHS-MH; Statistics Canada, 2013).

Sense of belonging to the community. Sense of belonging was assessed within the General Health module of the survey. Respondents were asked to rate their sense of belonging to their local community as either ‘Very Strong’, ‘Somewhat Strong’, Somewhat Weak’ or ‘Very Weak’ (CCHS-MH; Statistics Canada, 2013).

Self-perceived mental health. This variable was assessed within the Screening Section of the survey. Respondents were asked to rate their overall mental health as 'Excellent', 'Very Good', 'Good', 'Fair' or 'Poor' (CCHS-MH; Statistics Canada, 2013).

2.5 Data Analyses

SPSS (Statistical Package for the Social Sciences) software was used to perform data analyses. Computer based algorithms were used to calculate lifetime prevalence for each disorder based on respondents answers to questions within each disorder module. For each disorder 12-month prevalence included meeting the criteria for a lifetime diagnosis of the disorder and experiencing an episode of the disorder within the past 12-months (with a marked impairment in occupational and social functioning). As previously explained, only lifetime prevalence was derived for PTSD due to the nature in which this variable was assessed in the 2012 cycle of the CCHS-MH.

To test the hypotheses, a series of chi-square tests were performed to assess whether the prevalence of various psychiatric illnesses (PTSD, BPD, AUD, SUD, GAD, MDD), suicidal ideation, socio-demographic variables (education, personal income, marital status) and quality of life indicators (life satisfaction, sense of belonging, self-perceived mental health) were significantly dependent on whether women reported experiencing CSA. Specifically, all analyses compared the adult Canadian sample of women reporting CSA with an age-matched group of randomly selected women from the overall sample who did not report experiencing CSA.

Chapter 3: Results

The 2013 CCHS-MH data file was used for the present study. As mentioned, an age-matched group of 1027 women randomly selected from the overall sample of those aged 20 through 64 was used as a control group. A summary of descriptive statistics pertaining to age-matching across the CSA history and control groups is shown in Table 1.

3.1 Prevalence of CSA in Overall Sample

Of the 7,862 women age 20 through 64 who completed the CCHS-MH 2012, 1027 (13.01%) reported a history of CSA. In other words, more than 10% of adult women between the aged 20 to 64 who completed the CCH-MH 2012 reported being forced by an adult into unwanted sexual activity prior to age 16.

3.2 Assessment of Psychiatric Disorders; Lifetime and 12-month Prevalence

A summary of chi-square test results including frequencies, chi-square values, effect sizes, and p-values for both groups (CSA positive group, and control group) are shown in Tables 2 and 3. Effect sizes were measured by Cramer's *V*; a versatile statistic which represents the correlation between two variables that may be used for both 2x2 and larger contingency tables (Howell, 2010). The magnitude of effect size may be interpreted as either small, medium, or large depending on the degrees of freedom (see Cohen, 1988).

Post-traumatic stress disorder (PTSD). To determine whether a significant relationship exists between a CSA history having been previously diagnosed (by a medical professional) with PTSD, a chi-square test of independence was conducted. The results indicate that women who experienced CSA were significantly more likely to have been previously diagnosed with PTSD than those women who did not experience CSA (χ^2 (1) = 74.86, $p < .001$). The effect size was small (0.19).

Substance use, abuse and dependence (SUD). To determine whether a significant relationship exists between CSA history and the prevalence of substance use and dependence (including cannabis), a chi-square test of independence was conducted. The results indicate that women who experienced CSA were significantly more likely to experience substance abuse or dependence within the past 12 months (χ^2 (1) = 14.25, $p < .001$), and within their lifetime (χ^2 (1) = 89.38, $p < .001$) compared to women who did not experience childhood sexual abuse. Effect sizes were small for both 12-month (.08) and lifetime (0.21) prevalence.

Alcohol use, abuse and dependence (AUD). To determine whether a significant relationship exists between CSA history and the prevalence of alcohol abuse and dependence, a chi-square test of independence was conducted. The results indicate that women who experienced CSA were significantly more likely to experience alcohol abuse or dependence within the past 12 months (χ^2 (1) = 11.43, $p < .001$), and within their lifetime χ^2 (1) = 78.04, $p < .001$) compared to women who did not experience CSA. Effect sizes were small for both 12-month (0.08) and lifetime (0.20) prevalence.

General anxiety disorder (GAD). To determine whether a significant relationship exists between CSA history and the prevalence of GAD, a chi-square test of independence was conducted. The results indicate that women who experienced CSA were significantly more likely to meet criteria for GAD within the past 12 months (χ^2 (1) = 48.73, $p < .001$), and within their lifetime (χ^2 (1) = 89.19, $p < .001$) compared to women who did not experience CSA. Effect sizes were small for both 12-month (0.16) and lifetime (0.21) prevalence.

Major Depressive Disorder (MDD). To determine whether a significant relationship exists between CSA history and experiencing a major depressive episode, a chi-square test of independence was conducted. The results indicate that women who experienced CSA were

significantly more likely to meet criteria for a major depressive episode within the past 12 months (χ^2 (1) = 83.40, p < .001), and within their lifetime (χ^2 (1) = 136.93, p <.001) compared to women who did not experience CSA. Effect sizes were small for both 12-month (0.20) and lifetime (0.26) prevalence.

Suicidal ideation (SUI). To determine whether a significant relationship exists between CSA history and suicidal ideation, a chi-square test of independence was conducted. The results indicate that women who experienced CSA were significantly more likely to endorse suicidal thoughts both within the path 12 months (χ^2 (1) = 56.78, p < .001), and within their lifetime (χ^2 (1) = 229.46, p< .001) compared to women who did not experience CSA. Effect sizes were small for 12-month (0.17) and medium for lifetime (0.34) prevalence.

Bipolar disorder (BPD). To determine whether a significant relationship exists between CSA history and meeting criteria for BPD (type one or type two) a chi-square test of independence was conducted. The results indicate that women who experienced CSA were significantly more likely to meet criteria for BPD both within the past 12 months (χ^2 (1) = 24.58, p < .001), and within their lifetime (χ^2 (1) = 40.57, p < .001), compared to women who did not experience CSA. Effect size was small for both 12-month (0.11) and lifetime (0.14) prevalence.

3.3 Assessment of Socio-Demographic Variables

To determine whether a significant relationship exists between CSA history and outcomes measures by various socio-demographic variables (marital status, level of education, personal income), chi-square tests of independence were conducted. Table 4 contains a summary of chi-square test results including frequencies, chi-square values, effect sizes, and p-values for both groups (CSA positive group, and control group).

Marital Status. The results indicate a significant relationship between sexual abuse history and marital status (χ^2 (4) = 45.10, $p < .001$). Specifically, women with a CSA history were more likely to be divorced/separated, and less likely to be married, than those with no sexual abuse history. The effect size was medium (0.15).

Level of education. This variable was measured at the ordinal level. The results indicate a significant relationship between CSA history and level of education (χ^2 (3) = 44.78, $p < .001$). Specifically, sexual abuse history was associated with lower levels of educational attainment. The effect size was small (0.15).

Personal income. This variable was measured at the ordinal level. The results indicate a significant relationship between CSA history and current personal income (χ^2 (5) = 52.55, p < .001). Sexual abuse history was associated with lower levels of personal income. The effect size was medium (0.17).

3.4 Assessment of Quality of Life Variables

To determine whether a significant relationship exists between CSA history and various quality of life variables (life satisfaction, sense of belonging, self-rated mental health), a series of chi-square tests of independence were conducted. All three quality of life variables were measured at the ordinal level. See Table 5 for a summary of chi-square test results including frequencies, chi-square values, effect sizes, and p-values for both groups (CSA positive group, and control group).

Life satisfaction. The results indicate a significant relationship between CSA history and life satisfaction (χ^2 (10) = 107.14, $p < .001$). Specifically, higher levels of life satisfaction were reported by those without a sexual abuse history. The effect size was large (0.23).

Sense of belonging to the community. The results indicate a significant relationship between CSA history and sense of belonging to the community among respondents (χ^2 (3) = 29.43, $p < .001$). Specifically, a stronger sense of belonging to the community was reported by those without a sexual abuse history, whereas a weaker sense of belonging was more prevalent among those reporting a sexual abuse history. The effect size was small (0.12).

Self-perceived mental health. The results indicate a significant relationship between CSA history and self-perceived mental health (χ^2 (4) = 169.97, $p < .001$). Specifically, a history of CSA was associated with lower self-rated mental health, whereas higher mental health ratings were observed in those women without a sexual abuse history. Those who reported a history of CSA were more likely to rate their mental health as 'Poor', 'Fair', or 'Good', whereas ratings of 'Very Good' or 'Excellent' were more likely among those women without a sexual abuse history. The effect size was large (0.29).

Chapter 4: Discussion

4.1 Summary of Findings

The current study revealed a number of findings which add to existing research on potential negative life outcomes among adult women who have experienced CSA. A primary objective was to establish a nationally-representative prevalence rate of CSA among women living in Canada, as research on the occurrence of CSA among Canadian women to-date has been sparse. Existing estimates of CSA prevalence have largely relied on reports to law enforcement and child-welfare organizations (see Cotter & Beaupré, 2014) and as such likely grossly underestimate the actual prevalence of CSA history among women in Canada.

Accordingly, among the 7,862 women age 20 through 64 who participated in the CCHS-MH, 1027 (13.01%) reported having been forced (or attempted to be forced) by an adult into unwanted sexual activity prior to age 16. This prevalence rate is in-line with existing estimates of CSA prevalence among women living in Canada. For example, a previous nationally representative study exploring CSA in Canada found a prevalence rate among women of 14% (Tonmyr & Shields, 2017). Previous studies exploring CSA history among women in Ontario have found prevalence rates ranging from 12.8% (MacMillan et al., 1997) to 22.1% (MacMillan et al., 2013), and 22.1% in Quebec (Hébert et al., 2009).

Sadly, true prevalence of CSA history among women in Canada is likely higher than the prevalence rate of 13.01% derived in the current study, which gauged CSA history based on whether women admitted to having been forced (or attempted to be forced) by an adult into unwanted sexual activity prior to age 16. It is not uncommon for sexual abuse of children to be accomplished via coercion or manipulation as opposed to physical force (World Health Organization, 2017). As such, participants who experienced CSA in which they did not perceive

themselves to have been *forced* per-se to engage in sexual acts with an adult may have answered 'No' to this question and as a result would have been excluded from calculation of the prevalence rate. Indeed, those CSA survivors whose experiences do not fit with typical societal schemas of CSA may have also been inclined not to endorse this item. It is also possible that factors which greatly limit the number of CSA cases reported to police, including feelings of shame and self-blame (Lemaigre et al., 2017) caused some participants who had survived CSA to deny their experiences when questioned during the interview. Moreover, the current study does not account for those participants who experienced non-contact forms of CSA. As such, the prevalence rate derived in the current study (as is believed to be the case in most CSA research) is perhaps more representative of more severe forms of CSA, and would likely have been higher if other forms of CSA (e.g., non-contact) were included in the analysis.

As a result of the above factors, it is possible that some CSA survivors were inadvertently included in the no-CSA group, potentially diluting the strength of associations observed between CSA history and psychiatric outcomes, socio-demogra*phi*c variables, and quality of life variables. Given that the results of the current study supported all proposed hypotheses, it is likely that the effect sizes derived in the current analysis represent a conservative estimate of the true magnitude of the relationship between CSA and psychiatric, socio-demographic, and quality of life outcomes in adulthood.

In terms of mental health and problematic behaviours, it was found that women with a CSA history were significantly more likely than the matched control respondents who did not report a CSA history to meet diagnostic criteria for all of the psychiatric disorders examined in the present analysis including PTSD , SUD , GAD, MDD , BPD and AUD . Significant associations were observed for each disorder in which 12-month and lifetime prevalence were

analyzed. Moreover, CSA survivors were significantly more likely to report a prior PTSD diagnosis and endorsed significantly greater 12-month and lifetime suicidal ideation compared to those who did not endorse a CSA history. Third, evidence was found to indicate poorer outcomes across all socio-demographic variables included in the present analysis. Specifically, women who experienced CSA were significantly more likely to report relationship break-downs (i.e., divorce and separation) compared to those women without a CSA history. CSA survivors also reported significantly lower levels of formal education, and earned significantly less personal income compared to those women without a CSA history. Finally, all quality of life variables included in the analysis were found to be significantly correlated with CSA history. Specifically, CSA survivors reported a weaker sense of belonging to their community, worse mental health and lower life satisfaction overall compared to those who did not endorse a CSA history. A more in-depth interpretations of these findings is offered below.

Post-traumatic Stress disorder

PTSD is a disorder involving a number of characteristic symptoms which develop following exposure to one (or more) traumatic events (APA, 2013). Consistent with the first hypothesis, women with a CSA history were significantly more likely to report having been diagnosed with PTSD compared to those without a CSA history. Of the 129 women within the sample who endorsed having been previously diagnosed by a health professional with PTSD, nearly all of them (112) also endorsed a CSA history; supporting the association between sexual victimization and post traumatic outcomes found in previous studies (Dworkin et al., 2017).

The presence of a significant association between PTSD and CSA history is not surprising however, given that exposure to a traumatic stressor is a necessary requirement to receive a PTSD diagnosis (APA, 2013). It has also been established that experiencing

interpersonal violence perpetrated by a caregiver, as is frequently the case among female CSA survivors (Briere & Scott, 2015; Finkelhor et al., 1990; Perreault, 2015), is a risk factor for the development of PTSD (APA, 2013). Moreover, by virtue of comparing women who are known to have experienced a trauma (CSA) to those women whose trauma history (outside of CSA) is unknown, the CSA group would be inevitably expected to exhibit greater prevalence of PTSD compared to the no-CSA group. However, only several decades ago the notion that women who are survivors of CSA may develop a discernable, distinct disorder as a result of these experiences was a novel one. Prior to the (initially controversial) introduction of PTSD into the DSM-III (APA, 1980), the symptoms we now associate with this disorder were considered to result largely from an inherent personal weakness as opposed to being the result of a traumatic event (Friedman, 2018). Since then, an abundance of research over the past several decades has found undeniable evidence to indicate that women who experience sexually based trauma during childhood are at heightened risk of developing PTSD (Brewin et al., 2000; Briere & Scott, 2015; Chen et al., 2010; Dworkin et al., 2017; Green et al., 2010), especially when trauma occurs at a young age (Ozer et al., 2003). It seems that individuals most at risk of developing PTSD following a traumatic event include those with a lack of social support and family stability both before and after the trauma has occurred (APA, 2013; Lind et al., 2018).

In the current study, a PTSD diagnosis was significantly dependent on whether CSA was reported during adulthood, with a small (0.19) effect size. However, the strength of the observed finding is likely a conservative estimate of the association between CSA and subsequent development of PTSD due to the nature of this variable. Specifically, participants were coded as having PTSD if they endorsed a single item which asked if they had previously received a PTSD diagnosis from a health professional. As such, it is possible that women with a CSA history who

have experienced symptoms of PTSD (and may have met diagnostic criteria) did not affirm this question as they had not received a formal PTSD diagnosis from a health professional; either because they had not sought treatment, or their symptoms were sub-threshold. Future iterations of the CCHS-MH should include a separate diagnostic module to assess for symptoms of PTSD (as was done with all other psychiatric disorders), so that prevalence of PTSD may be properly assessed. Moreover, the inclusion of a distinct diagnostic module for PTSD would allow for more in-depth analysis of specific symptoms of PTSD known to be more prominent among CSA survivors, and considered particularly distressing, including dissociation (Carrion & Steiner, 2000; Gottfried, 2005; Herman, 1992; Sar et al., 2007).

Substance and Alcohol Use, Abuse, and Dependence

The use of illicit and prescription substances (being used non-medicinally) and alcohol were examined within the SUD and AUD modules of the CCHS-MH (Statistics Canada, 2013), respectively. As anticipated, women with a CSA history were significantly more likely to meet diagnostic criteria for a SUD compared to those without a CSA history. Small effect sizes were observed for both lifetime (0.21) and 12-month (0.08) prevalence. A similar association was found amongst female CSA survivors and AUD, with those women with a CSA history significantly more likely to meet diagnostic criteria for an alcohol use disorder compared to those women without a CSA history. Similar to SUD, effect sizes for AUD were small for both lifetime (0.20) and 12-month prevalence (0.08).

Although the contribution of genetic and social factors to the etiology of substance and alcohol use disorders is well established (APA, 2013), a large body of research also supports the notion of CSA history as an additional risk factor contributing to the development of a substance or alcohol use disorder (Fergusson et al., 2013; Grilo et al., 1997; Maniglio, 2009; Messman-

Moore & Long, 2002)**.** There are several possible reasons for this association, the most salient being the use of alcohol and drugs by female CSA survivors as a means of controlling negative affect resulting from the trauma. Indeed, a history of CSA has been associated with difficulty in tolerating and managing negative internal states (e.g., feelings of sadness, anger, guilt, shame) among survivors who may rely upon various maladaptive coping mechanisms to regulate their emotions and better tolerate the resulting distress (Briere & Rickards, 2007; Grilo et al., 1997). Management of trauma-related negative affect is often accomplished by engaging in various forms of internal avoidance, including using psychoactive substances (Briere & Jordan, 2009), which may account for the finding in the current study of greater SUD and AUD among those women with a CSA history. Indeed, avoidance is among the predominant symptoms of PTSD, reflecting the high co-morbidity of PTSD with other conditions including alcohol and SUD's (Friedman, Resick, Bryant & Brewin, 2011).

General Anxiety Disorder

Symptoms of anxiety have long been associated with post-traumatic outcomes, and until the most recent iteration of the DSM (APA, 2013), PTSD was classified as an anxiety disorder. This conceptualization is understandable as post-traumatic outcomes often involve symptoms of general anxiety (Bulik et al., 2001; Fergusson et al., 2013) panic (Briere & Scott, 2015; Cougle et al., 2010), various phobias (Carleton et al., 2011; Collimore et al., 2010) and non-specific anxiety (Cougle et al., 2010; Safren et al., 2002). Heightened startle responses and hypervigilance are also common among those with a trauma history (Friedman, 2018), and previous research has found greater prevalence of anxiety disorders in general among women with a CSA history (Chen et al., 2010; Fergusson et al., 2013; Macmillan et al., 2001; Mulnar et al, 2001).

In the current study, female survivors of CSA were significantly more likely to meet criteria for GAD compared to the non-CSA matched control respondents. Small effect sizes were observed for both 12-month (0.16) and lifetime (0.21) prevalence. These finding are in-line with previous research by Fergusson and colleagues (2013), which revealed a significantly higher prevalence of GAD among women with a CSA history that increased with the severity of abuse. The association between CSA and GAD found in the current study may be representative of the shared characteristics of GAD and PTSD. Although a PTSD diagnosis requires the presence of an identifiable traumatic stressor (APA, 2013), both disorders involve avoidance behaviors, irritability, and affective dysregulation. GAD is also considered a risk factor in the development of PTSD (Briere & Scott, 2015; Cougle et al., 2010).

Numerous previous studies have proposed that the association between GAD and CSA history may result from increased autonomic reactivity in this population (Safren et al., 2002; Schore, 2003). When children are exposed to CSA and other forms of chronic adversity, the developing neurobiology is often adversely affected, owing to sustained activation of the body's stress response system; the hypothalamic pituitary adrenal (HPA) axis (Schore, 2003). As a result, CSA survivors may be more vulnerable to the development of GAD and other anxiety disorders, along with emotion regulation issues generally (Safren et al., 2002; Schore, 2003). Interestingly, individuals with a history of CSA who meet criteria for an anxiety disorder are significantly more likely to experience a comorbid MDD compared to those without a CSA history (Safren et al., 2002).

Major Depressive Disorder

While MDD is among the most common psychiatric illnesses diagnosed among women (APA,2013), studies suggest that rates are even higher among female survivors of CSA ((Bulik

et al., 2001; Chen et al., 2010; Dworkin et al., 2017; Fergusson et al., 2013; Molnar et al, 2001). Consistent with such findings, female survivors of CSA were significantly more likely to meet criteria for MDD compared with matched control participants in the current study. Small effect sizes were observed for both 12-month (0.20) and lifetime (0.26) prevalence.

The development of MDD is believed to have a strong biological component; depression appears to be highly heritable, and most common among those predisposed to more negative affect (APA, 2013). However, environmental risk factors -such as the presence of stressful life events- are also known to precipitate depressive episodes. Indeed, a history of childhood adversity (including CSA) is also considered a risk factor for the development of MDD (APA, 2013). As such, it is possible that sexual victimization may activate the expression of a genetic liability towards developing MDD (Dworkin et al., 2017).

The traumagenic dynamics model may be used to better illustrate the association between CSA history and development of mood disorders in adulthood. The model put forth by Finkelhor and Browne (1985) postulates that disempowerment, stigmatization, betrayal and traumatic sexualization are common to most forms of CSA, and together may adversely affect development and adjustment of survivors. As a result of CSA, children often develop negative schemas regarding themselves, the world, and others, with the experience of betrayal leading to feelings of mistrust and anger (Finkelhor & Browne, 1985). Repeated boundary violations may result in feelings of chronic powerlessness, and self-worth is often impacted as a result (Finkelhor & Browne, 1985). Indeed, in a recent empirical test of the traumagenic dynamics model, it was found that all four dynamics (disempowerment, stigmatization, betrayal, traumatic sexualization) are significantly associated with mood disorders and low self-esteem among CSA survivors (Cantón-Cortés, Cortés & Cantón, 2012). Specifically, feelings of powerlessness were

found to be most predictive of depressive symptomatology among adult CSA survivors (Cantón-Cortés et al., 2012).

Feelings of disempowerment may also help to explain the heightened risk of depression among CSA survivors during the period before and after childbirth. Indeed, women with a CSA history who choose to have children have been shown to be at increased risk of depression during the perinatal period compared to those without a CSA history (Ansara et al., 2005; Buist & Janson, 2001; Robertson-Blackmore et al., 2013) as well as those who have experienced other forms of trauma (Lev-Wiesel & Daphna-Tekoah, 2010). The implementation of pre-natal screening for CSA history has been suggested as an important tool to determine which women may be at increased risk of depression during the peri-natal period (Robertson-Blackmore et al.,2013).

Suicidal Ideation

There is evidence to suggest that women who have experienced CSA are at greater risk of suicidal ideation and attempts (Chen et al., 2010; Dworkin et al., 2017; Fergusson et al., 2013; Krysinska & Lester, 2010; Nrugham et al., 2010; Joiner et al., 2007). Suicidality has also been shown to increase with severity of abuse (Joiner et al., 2007), and among those survivors who also meet criteria for a PTSD diagnosis (Krysinska & Lester, 2010). In the current study, female CSA survivors exhibited significantly greater suicidal ideation than those women who did not endorse a CSA history. The effect size observed for lifetime prevalence (0.34) was the large, and represented the largest among all associations examined in the present study. Effect size was small for 12-month prevalence (0.17).

Although the presence of suicidal thoughts is listed among the diagnostic criteria for MDD, a smaller effect size was evidenced for depression (lifetime) compared to suicidal ideation

(lifetime). As such, it seems that CSA survivors in the current analysis are at heightened risk for suicidal ideation beyond what could be accounted for by the relationship between CSA history and depression. A similar trend was observed by Stein and colleagues (2010), who found that CSA was the greatest predictor of persistent suicidal thoughts than other forms of trauma; a relationship that remained even when controlling for co-morbid disorders. Indeed, it is possible that the uniquely violating nature of CSA and accompanying feelings of self-blame, shame and powerlessness may contribute to the increased risk of suicidal ideation observed among survivors.

Bipolar Disorder

Compared to other forms of psychopathology, relatively few studies have examined the relationship between CSA and the development of BPD (Chen et al., 2010). It is widely accepted that a family history of BPD is among the strongest risk factors for its development (APA, 2013), and as such much of the research on BPD in recent decades has focused on genetic and biological determinants (Etain et al., 2008). However, there is some research to suggest evidence for a multifactorial origin, with both genetic and environmental factors contributing to the development of BPD (Smoller & Finn, 2003). Indeed, preliminary research appears to suggest an association between CSA history and BPD, with female CSA survivors at significantly greater risk of developing BPD compared to those women without a CSA history (Dworkin et al., 2017; Etain et al., 2008; Etain et al., 2013). It also appears that in addition to being a predisposing factor, CSA history is associated with more severe clinical course and symptomatology among women living with BPD , including worse mood outcomes (Meade et al., 2009), heightened suicidality and rapid cycling, and earlier age of onset (Etain et al., 2013). In the current study, female CSA survivors were significantly more likely to meet criteria for BPD (type I or II) both

within the past 12-months and within their lifetime than those women who did not endorse a CSA history. The effect size was small for lifetime (0.14) and 12-month (0.11) prevalence.

It has been proposed that stress associated with CSA may trigger gene expression among CSA survivors who were otherwise genetically susceptible to the development of BPD (Dworkin et al., 2017; Etain et al., 2008). Indeed, early changes in brain structures observed among those with BPD (Murray et al., 2004) may be associated in some cases with early life events including CSA. Despite the highly heritable nature of BPD, evidence of an association between CSA history and increased risk and severity of clinical course warrants further research to better understand the relationship among these variables.

Socio-Demographic Variables

Marital status. Given the intimate nature of CSA, romantic relationships may present unique challenges for survivors. Indeed, previous research has found that women with a CSA history are often subject to a range of issues related to intimate partner relationships, including higher rates of unplanned pregnancies, difficulties with parenting, increased interpersonal discord, disruptions in normal development of sexuality and sexual dysfunction (De Jong et al., 2015; DiLillo, 2001; Fergusson et al., 2013; Noll et al., 2003; Stephenson et al., 2012). CSA survivors have also been shown to exhibit higher rates of separation and divorce, and report increased deterioration in romantic relationship quality among those who do remain in relationships, compared to those women without a CSA history (De Jong et al., 2015; Stephenson et al., 2012). Moreover, it seems that abuse severity moderates the association between CSA history and romantic relationship quality, with CSA survivors reporting significantly lower relationship satisfaction with increasingly severe CSA history (Dube et al., 2005).

In the current study, a significant association between CSA history and marital status was found, with survivors being more likely to report separation or divorce compared to those women without a CSA history. A medium effect size (0.15) was observed. However, women were equally as likely to report being widowed, single, or in a common-law relationship regardless of CSA history. The significant increase of relationship breakdown noted among female CSA survivors may be due to the association between CSA and increased risk of adverse mental health outcomes. Indeed, previous research has found an association between psychopathology in women and increased instances of marital disruptions (Butterworth & Rodgers, 2008; Kessler, Walters, & Forthofer, 1998). Further analysis is required to determine whether the presence of psychopathology among CSA survivors may account for the association between CSA history and marital breakdown observed in the current study.

The current findings may also be representative of the damage resulting from sexual abuse itself, which is associated with adverse outcomes among adult survivors including sexual dysfunction (Stephenson et al., 2012) and difficulties forming lasting positive relationships with others (Briere & Rickards, 2007). It is also possible that the current findings reflect attachment difficulties not uncommon among women who experience CSA. Indeed, worse outcomes are often observed among CSA survivors whose abuse was perpetrated by a caregiver (Alexander, 1992; Briere & Scott, 2015; Bulik et al., 2001; Liem et al., 1999), as is the case for most female CSA survivors (Briere & Scott, 2015; Finkelhor et al., 1990; Perreault, 2015), likely due to a disruption in the process of attachment. As a result, these attachment difficulties may persist into adulthood, resulting in challenges maintaining healthy romantic relationships, and ultimately leading to greater relationship break-down (separation and divorce) among female CSA survivors.

Level of education. Previous research suggests an association between CSA history and decreased educational attainment among female survivors (De Jong et al., 2015; Fergusson et al., 2013; Hardner et al., 2018; Horan & Widom, 2015; Hyman, 2000). Indeed, educational outcomes appear increasingly poor for those who experience CSA earlier in childhood (Hardner et al., 2018). In the current study, a significant association between CSA history and educational attainment was found, with survivors being more likely to report lower educational attainment overall compared to those women without a CSA history. A small effect size (0.15) was observed. Specifically, women with a CSA history were more likely to endorse their level of education as being 'less than secondary-school', and they were also less likely to graduate post-secondary school compared to those women without a CSA history. Similar outcomes were seen for women endorsing 'secondary school graduation' and 'some post secondary' as their highest level of education.

There are several possible explanations for these findings. First, it is possible that lower educational attainment exists among CSA survivors due to avoidance behaviors. Women who have experienced CSA may be triggered by classroom cues (e.g., perceived confinement, diming of lights, topics associated with abuse), and this may interfere with attendance and completion of coursework, impacting educational goals as a result (Hardner et al., 2018). Moreover, increased prevalence of depression among female CSA survivors may account in part for the differences among women in regards to post-secondary outcomes, as depression is associated with a lower GPA and heightened drop-out rates among post-secondary students (Eisenberg, Golberstein, & Hunt, 2009). Finally, it is also possible that a trauma history exacerbates stressors related to education (e.g., meeting deadlines, etc.), making educational achievement that much more challenging for CSA survivors (Hardner et al., 2018). Overall, gaining a greater understanding of

the relationship between CSA history and educational attainment is important as educational success is associated with improved health and well-being outcomes for CSA survivors (Dube & Rishi, 2017). By learning more about possible obstacles to educational attainment faced by CSA survivors, improved services and supports can be put in place to better assist girls and women with a history of CSA to reach their educational goals.

Personal income. Female CSA survivors have been found to earn less income than those women without a CSA history (Fergusson et al., 2013; Gottfried, 2005; Hyman, 2000; Roberts et al., 2004). Moreover, female survivors of CSA are significantly more likely to be recipients of governmental income supplements (Fergusson et al., 2013). In the current study, CSA survivors earned significantly less personal income than those women without a CSA history. The effect size was medium (0.17). Specifically, the majority of CSA survivors earned a personal income of $10,000 to $29,000, whereas women who did not endorse a CSA history were more likely to earn $30,000 to upwards of $50,000.

There are several possible interpretations for this finding. First, it is possible that an increase in psychopathology among CSA survivors, along with decreased educational attainment may contribute to the discrepancy noted in personal income. In a study of economic consequences of CSA for homosexual women, Hyman (2000) found that although female CSA survivors earned significantly less personal income, mental health and level of education were significant predictors of women's earnings. However, Hyman (2000) also found that more severe forms of CSA (e.g., intrafamilial with coercion, or extrafamilial by a stranger) were associated with lower earnings irrespective of mental health status or level of education. It is possible that the presence of psychopathology or decreased educational attainment may have impacted CSA survivors' earnings potential, resulting in lower personal income.

Second, it is also possible that the experience of CSA more directly influences the personal income of survivors. CSA is associated with low self-esteem and self-worth among survivors (Fergusson et al., 2013; Langevin et al., 2015; Maniglio, 2009), which may impact women's confidence in pursuing opportunities to increase their personal income, including requesting a pay raise or applying for a higher salary position.

Quality of Life Variables

Life satisfaction. Little research has been conducted on life satisfaction among female CSA survivors. Fergusson and colleagues (2013) are among few researchers to examine this association, finding significantly lower life satisfaction among women with a CSA history. Several additional studies have examined quality of life among CSA survivors, which is considered tantamount to life satisfaction (Anderson et al., 2011). Indeed, quality of life has been found to be significantly lower among those women with a CSA history (Fergusson et al., 2013; Fletcher, 2018; Gospodarevskaya, 2013; Weber et al., 2016). Similarly, in the current study CSA survivors reported significantly lower life satisfaction than those women without a CSA history. A large effect size (0.23) was observed.

It has been proposed that the discrepancy between the quality of life reported by women with and without a CSA history may be attributable in part to the increase in psychopathology found among CSA survivors, as mental-health related quality of life is lower among women with a CSA history (Afifi et al., 2007). It is also possible that pervasive feelings of shame and self-blame observed among many CSA survivors (Lemaigre et al., 2017) impact life satisfaction. Moreover, interpersonal difficulties found among some women with a CSA history may also contribute to lower life satisfaction.

Sense of belonging to the community. There has been some evidence to suggest that survivors of childhood maltreatment feel a lesser sense of belonging to their communities compared to those without an abuse history (Cheung et al., 2017). However, no research to date appears to have examined the relationship between CSA history and sense of community belonging among female survivors specifically. The current study addressed this gap in the literature. The results revealed a significantly weaker sense of community among CSA survivors, compared to those without a CSA history. A small effect size (0.12) was observed.

Community belonging is determined in part by social support, which has been found to be associated with improved outcomes for CSA survivors (Brewin et al., 2000; Ozer et al., 2003; Hyman et al., 2003). As such, it is possible that those women who endorsed lower levels of community belongingness also perceived themselves as receiving minimal social support. It is also possible that difficulties forming and maintaining relationships seen among women with a CSA history (Briere & Rickards, 2007; Dube et al., 2015) may interfere with survivors' ability to feel connected to their community. As previous researchers have suggested, further study of the impact of sexual victimization on women and girls must focus beyond individual factors and examine the influence of community level variables (Schultz et al., 2016), including community belongingness.

Self-perceived mental health. Although a plethora of research has evidenced an association between increased psychopathology among those women with a CSA history, no studies to date have examined CSA survivors' self-perceptions of their mental health. In addressing this gap in the literature, the current study found that CSA survivors rated their mental health as significantly poorer than those women without a CSA history. A large effect size (0.29) was observed.

One interpretation of this finding is that as a result of mental illness being more common among women with a CSA history (e.g., Chen et al., 2010; Fergusson et al., 2013; Maniglio , 2009), these women in turn perceive their mental health as worse than those without a CSA history. However, the notion of mental health also involves overall well-being, in addition to the presence or absence of mental illness per se (WHO, 2005). As such, this finding may indicate poorer mental health overall in CSA survivors. Given that the current study is the first to date to examine self-perceived mental health among female CSA survivors, further research is needed to better understand the relationship between these variables, including whether factors such as social support may moderate the relationship between CSA history and perceptions of one's own mental health, or whether this relationship may be mediated by heightened psychopathology among this population.

Methodological Considerations: Strengths and Limitations

The present study has several important strengths. First, the current study is among the first to establish a nationally representative prevalence rate for CSA among adult women in Canada. Although prevalence rates for CSA within other western nations (e.g., the United States, Australia, etc.) have been reported throughout the past several decades, CSA research in Canada to-date has largely been limited to studies of prevalence within a single province or has relied upon police statistics. Only a small number of previous studies exist within published literature which have reported Canadian CSA prevalence based on a nationally representative sample. Second, the current study is also among the first to examine various correlates of CSA among a nationally representative Canadian sample. Although the majority of the correlates examined in the present study have been tested in the past, these analyses simply had not yet been completed with a nationally representative sample of Canadian women. Moreover, some variables included

in the analysis (e.g., self-rated mental health, community belonging) had not yet been explored among women with a CSA history. Third, the present study addresses some of the methodological issues frequently raised by those who study CSA. For example, the current study relied upon a clear and unambiguous definition of CSA to differentiate among those women who were survivors of CSA and those who were not. Moreover, the current study relied on data collected as part of the CCHS-MH; which resulted in a large, nationally representative and thus generalizable sample.

Despite several strengths, this study does have some limitations, the most salient being that it is correlational nature. Although significant relationships between CSA and psychopathology, socio-demographic variables, and quality of life variables emerged, causality cannot be established. Indeed, it cannot be claimed that CSA caused any of the outcomes studied. The correlational nature of the present study allows only for associations among variables to be drawn. Moreover, directionality of the associations among CSA and some variables examined in the present study is open to interpretation.

A second limitation of the present study involves issues inherent to self-reporting. Indeed, response bias, respondent honesty, understanding of the items, and social desirability may have affected responses provided by participants. Given the sensitive nature of CSA, it is possible that some participants may have denied CSA or simply omitted this item and as such were improperly excluded from the CSA history group.

Another limitation of the current study involved the item used to distinguish among women with and without a CSA history for the purposes of the analyses. The item used in the current study required that women had engaged in unwanted sexual activity with an adult (or an attempt had been made to engage them in such abuse), where either physical force or threats

were used to facilitate the abuse. Although the item is clear and unambiguous, this definition of CSA is somewhat limited. Indeed, it is possible that some women who experienced forms of CSA that fell outside of this definition (e.g., non-contact forms of abuse, abuse involving subtle coercion as opposed to physical force or threats, abuse perpetrated by an older child or adolescent) may have not endorsed this item, and were improperly included in the no-CSA matched group. As a result, the results of the present study likely represent a conservative estimate of CSA prevalence among Canadian women, and possibly an under-estimation of the strength of relationships among CSA history and the variables examined.

A fourth limitation of the current study involves criteria for one item included in the analysis; PTSD. For this variable, a single item was used to assess whether the respondent was living with the disorder. The item involved participants stating whether they had received a diagnosis of the PTSD by a health professional. Although significant associations were observed between PTSD and CSA, it is possible that women who would have otherwise met criteria for PTSD but have yet to receive a formal diagnosis by a health professional were coded as not having the disorder. Future iterations of the CCHS-MH should include a separate diagnostic module to assess symptoms of each disorder (including PTSD) in the analysis. Such a module for PTSD was included in the most recent version of the WMH-CIDI (WHO WMH CIDI, 2018), and could be modified as appropriate for use in future iterations of the CCHS-MH.

An additional limitation of the current study is that an older version of the DSM (DSM-IV), the manual used to diagnose and classify mental disorders, was used in the creation of the modules examining psychopathology. Unfortunately, data for the present study were collected as part of the CCHS-MH in 2012, and the DSM-5 was subsequently released the following year. Granted the DSM-5 is the most current standard of practice, changes in diagnostic criteria (see

APA, 2013. *Highlights of changes from DSM-IV-TR to DSM 5*) for the disorders examined in the current study are not believed to have markedly affected the validity of the present study.

The exclusion of those living in the three territories, those living on Aboriginal reserves or settlements, full-time members of the Canadian forces, and institutional residents represents an additional limitation of the present study. However, Statistics Canada estimates that the total number of these individuals represents less than 3% of the target population, and as such the remaining sample is none the less considered to be nationally representative (CCHS-MH; Statistics Canada, 2013).

Finally, although all analyses conducted in the present study yielded significant results, effect sizes varied in magnitude. Therefore, other variables in addition to CSA accounted for much of the differences observed between those women with and without a CSA history. In regard to psychopathology, genetic and environmental factors are widely regarded as contributing towards the development of most mental illnesses (APA, 2013), including those examined in the present study. Indeed, CSA history is likely one of many variables that contributed to the outcomes observed in the present study.

Implications for Clinical Practice

The results of the current study warrant further attention as they have implications for clinical practice. Establishing a current and nationally representative prevalence rate for CSA among women in Canada helps to highlight the all too common nature of CSA, and the need for increased preventative interventions, early detection, screening, and evidence-based treatment for both survivors of CSA and those who perpetrate sexual abuse of children. Moreover, in exploring associations between CSA and psychopathology, along with socio-demographic and

quality of life variables, attention is being given to the potential for lifelong ramifications of CSA and the importance of acknowledging the impact of CSA among female survivors.

Increased awareness of CSA prevalence in Canada can be used by policy makers to encourage initiatives which support early detection of CSA. This may include initiatives that train those working with children (e.g., teachers, day care workers, etc.) in detecting behavioral and physical indicators that suggest that a child may be experiencing sexual abuse. Moreover, those working closely with children should also receive training in managing abuse disclosure, as previous research suggests worse outcomes in adulthood for those CSA survivors who report a negative experience (e.g., disbelief, invalidation) during their initial disclosure of abuse (Bulik et al., 2001; Hébert et al., 2009; Lemaigre et al., 2017).

Additionally, results of the current study may also be used to highlight the importance of preventative sexual education interventions for children. School-based preventative interventions have been widely implemented in the western world since the 1990's. They have been shown to increase children's self-protective skills (e.g., boundaries, bodily autonomy) and general knowledge of CSA, but the extent to which these interventions have decreased the prevalence of CSA is unknown (Walsh, Zwi, Woolfenden, & Shlonsky, 2018). School-based preventative interventions may be better served to focus on dismantling widely accepted harmful misogynistic tropes that contribute to a society in which CSA may continue. Indeed, the promotion of gender equality in school-based interventions has also been proposed by the World Health Organization (WHO, 2009) as an important means of targeting violence against girls and women in general. This could include approaching sexual education from a feminist perspective which discourages victim blaming and encourages children to operate outside of traditional gender roles in which

aggression, dominance and power is encouraged in males, and submissiveness and servitude are rewarded among females.

The current research may also be used to advocate for the importance of early intervention for those children who do fall victim to CSA. School-based interventions should also focus on encouraging children who have experienced CSA to disclose to a trusted adult. Indeed, the importance of initial abuse disclosure should not be discounted (Gayle, 2012), as worse outcomes have been reported among adult CSA survivors who either delayed disclosure for five or more years post-abuse, or avoided disclosing entirely (Hébert et al., 2009).

For those health professionals working with adults, the results of the present study also highlight the importance of screening for trauma history among women by primary care physicians and mental health professionals. However, there remains some uncertainty regarding whether routine, widespread screening for childhood trauma in a primary care setting is warranted (Finkelhor, 2018). At minimum, the presence of a trauma history should be established during any initial intake interview with a mental health professional (e.g., psychologist, psychiatrist, etc.) as part of best practice, but allowing the survivor to maintain control over which (if any) details are shared, and whether or not to seek treatment. Indeed, the current research can be used to encourage the importance of evidence-based treatment for female CSA survivors, and engaging with survivors from a trauma-informed perspective (see Anguelova, 2018; Parcespe et al., 2015).

Finally, findings from the present study highlight the need to address CSA and prevent its occurrence. Supporting, expanding and improving treatment programming for convicted sexual offenders is one means of potentially reducing CSA. Canadian researchers are among the leaders in the field of treatment programming for sexual offenders, with a newly developed strengths-

based treatment program being offered in several federal correctional institutions in Ontario showing promising results in reducing recidivism and effecting change in treatment targets (see Marshall, Marshall, Serran, & O'Brian, 2011).

Directions for Future Research

Cantón-Cortés and colleagues (2012) describe two distinct generations of research on CSA to date. The first phase of research can be described as largely exploratory; examining CSA prevalence and both short and long-term correlates of CSA. The second generation of CSA research has shifted focus towards examining variables that moderate the relationship between CSA and various psycho-social outcomes (Cantón-Cortés et al., 2012). The present study is in line with the first-generation of CSA research, which had been minimal in Canada to date. Indeed, the present study represents an initial glimpse into CSA among women in Canada, but there remain many possible avenues for further research on this population.

Examining resilience among female CSA survivors is one area that warrants further attention. Indeed, although the focus of the present study was largely on associations between CSA and otherwise undesirable outcomes, many women in the CSA group did not endorse psychopathology. Recent research on resilience among CSA survivors has identified several variables that appear to moderate the relationship between CSA and adverse outcomes in adulthood, including parenting style employed by the survivor's parents (Lind et al., 2018), factors related to reporting and disclosure of the abuse (Bulik et al., 2001), and feelings of hope, self-forgiveness, and sense of agency (Kaye-Tzadok & Davidson-Arad, 2017). As such, it would be interesting to explore the impact of potential risk and protective factors among Canadian CSA survivors. Indeed, such analyses could easily be conducted with data used in the current study, or a future iteration of the CCHS-MH. Moreover, further statistical analysis of the associations

found in the present study is also warranted. This could include an exploration of potential mediator or moderator variables that may add to our understanding of the current study. For example, determining whether the presence of psychopathology mediates the relationship between CSA history and any of the socio-demographic or quality of life variables examined in the current study.

Conclusion

Childhood sexual victimization and associated outcomes have been extensively studied over the past four decades, but research on CSA in Canada has been relatively sparse compared to that generated within other western nations. The aim of the current study was to first determine the prevalence of CSA among a nationally representative sample of Canadian women. Furthermore, associations between CSA history and various variables in adulthood were examined, including psychopathology, demographic, and quality of life variables. Results revealed that 13.1% of women surveyed endorsed a CSA history. CSA was also found to be significantly positively related to all psychiatric disorders examined in the present analysis, as well as suicidal ideation. Indeed, MDD, PTSD, GAD, BPD, SUD, AUD and suicidal ideation were all more common among those women with a CSA history. Moreover, CSA was associated with adverse socio-demographic and quality of life outcomes. CSA survivors were significantly more likely to be divorced or separated and report lower educational attainment and less personal income. They also reported lower life satisfaction, sense of community belongingness, and self-perceived mental health. Taken together, the current study adds to the plethora of existing research which supports an association between CSA and the potential for both short- and long-term deleterious outcomes. Better understanding is required of factors that may explain these relationships or influence the degree to which CSA is associated with various outcomes. Greater

understanding of the interaction among these variables will hopefully result in better outcomes for survivors.

References

Afifi, T., Enns, M., Cox, B., De Graaf, R., & Ten Have, M. (2007). Child abuse and health related quality of life in adulthood. *Journal of Nervous and Mental Disease*, 195(10), 797-804. https://doi-org.qe2a-proxy.mun.ca/10.1097/NMD.0b013e3181567fdd

Afifi, T. O., MacMillan, H. L., Boyle, M., Taillieu, T., Cheung, K., & Sareen, J. (2014). Child abuse and mental disorders in Canada. CMAJ: Canadian Medical Association Journal, 186(9), 675. https://doi-org.qe2a-proxy.mun.ca/10.1503/cmaj.131792

Alexander, P. C. (1992). Application of attachment theory to the study of sexual abuse. *Journal of Consulting and Clinical Psychology*, *60*(2), 185-195. https://doi-org.qe2a-proxy.mun.ca/10.1037/0022-006X.60.2.185

Allen, J.G., 2001. *Traumatic Relationships and Serious Mental Disorders*. Wiley, Chichester, UK. Retrieved from http://search.ebscohost.com.qe2a-proxy.mun.ca/login.aspx?direct=true&AuthType=ip,url,uid&db=psyh&AN=2001-01556-000&site=ehost-live&scope=site

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

American Psychiatric Association (2013). Highlights of changes from DSM-IV-TR to DSM 5. Retrieved from https://doi.org/10.1176/appi.books.9780890425596.changes

Anderson, P., Jané-Llopis, E., & Cooper, C. (2011). The imperative of well-being. Stress and Health: *Journal of the International Society for The Investigation of Stress*, 27(5), 353-355. doi:10.1002/smi.1433

Anguelova, L. (2018). *Working with adult survivors of childhood sexual abuse*. New York, New York ; London, England : Routledge

Ansara, D., Cohen, M. M., Gallop, R., Kung, R., & Schei, B. (2005). Predictors of women's physical health problems after childbirth. *Journal of Psychosomatic Obstetrics & Gynecology, 26*(2), 115–125. https://doi-org.qe2a-proxy.mun.ca /10.1080/ 01443610400023064

Arriola, K. R. J., Louden, T., Doldren, M. A., & Fortenberry, R. M. (2005). A meta-analysis of the relationship of child sexual abuse to HIV risk behavior among women. *Child Abuse & Neglect, 29*(6), 725–746. https://doi-org.qe2a- proxy.mun.ca/10.1016/ j.chiabu.2004.10.014

Barth, J., Bermetz, L., Heim, E., Trelle, S., & Tonia, T. (2013). The current prevalence of child sexual abuse worldwide: A systematic review and meta-analysis. *International Journal of Public Health*, *58*(3), 469–483. https://doi-org.qe2a-proxy.mun.ca /10.1007/s00038-012-0426-1

Bowlby, J. (1977). The making and breaking of affectional bonds. *British Journal of Psychiatry, 130*, 201–210.

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment.* New York: Basic Books.

Bowlby, J. (1988). Developmental psychiatry comes of age. *American Journal of Orthopsychiatry*, *145*, 1–10.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, *68*(5), 748–766. https://doi.org/10.1037/0022-006X.68.5.748

Breslau, N., Davis, G. C., Andreski, M. A., Peterson, E. L., & Schultz, L. R. (1997). Sex differences in posttraumatic stress disorder. *Archives of General Psychiatry*, 54, 1044-1048.

Breslau, N., & Davis, G. C. (1992). Posttraumatic stress disorder in an urban population of young adults: Risk factors for chronicity. *The American Journal of Psychiatry, 149*(5), 671–675. https://doi-org.qe2a-proxy.mun.ca/10.1176/ajp.149.5.671

Breslau, N., Peterson, E., & Schultz, L. (2008). A second look at prior trauma and the posttraumatic stress disorder effects of subsequent trauma: A prospective epidemiological study. *Archives of General Psychiatry, 65*(4), 431-7.

Briere, J. (1992). Methodological issues in the study of sexual abuse effects. *Journal of Consulting and Clinical Psychology*, 60(2), 196-203. doi:10.1037/0022-006X.60.2.196

Briere, J., & Elliott, D. M. (2003). Prevalence and psychological sequelae of self-reported childhood physical and sexual abuse in a general population sample of men and women. *Child Abuse & Neglect*, *27*(10), 1205–1222. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2003.09.008

Briere, J., & Jordan, C. E. (2009). Childhood maltreatment, intervening variables, and adult psychological difficulties in women: An overview. *Trauma, Violence, & Abuse*, *10*(4), 375–388. https://doi-org.qe2a-proxy.mun.ca/10.1177/1524838009339757

Briere, J., & Rickards, S. (2007). Self-awareness, affect regulation, and relatedness: Differential sequels of child-hood versus adult victimization experiences. *Journal of Nervous and Mental Disease*, 195, 497-503

Brown, D.W., Anda, R.F., Tiemeier, H., Felitti, V.J., Edwards, V.J., Croft, J.B., & Giles, W.H. (2009). Adverse childhood experiences and the risk of premature mortality. *American Journal of Preventive Medicine*, 37(5), 389–396.

Buist, A., & Janson, H. (2001). Childhood sexual abuse, parenting and postpartum depression--a 3-year follow-up study. *Child Abuse & Neglect*, 25(7), 909-21.

Bulik, C. M., Prescott, C. A., & Kendler, K. S. (2001). Features of childhood sexual abuse and the development of psychiatric and substance use disorders. *The British Journal of Psychiatry*, *179*(5), 444–449. https://doi-org.qe2a-proxy.mun.ca/10.1192/bjp.179.5.444

Butler, S. (1978). *Conspiracy of silence: the trauma of incest.* San Francisco, CA: New Glider.

Butterworth, P., & Rodgers, B. (2008). Mental health problems and marital disruption: Is it the combination of husbands and wives' mental health problems that predicts later divorce? *Social Psychiatry and Psychiatric Epidemiology: The International Journal for Research in Social and Genetic Epidemiology and Mental Health Services*, *43*(9), 758–763. https://doi-org.qe2a-proxy.mun.ca/10.1007/s00127-008-0366-5

Cantón-Cortés, D., Cortés, M. R., & Cantón, J. (2012). The role of traumagenic dynamics on the psychological adjustment of survivors of child sexual abuse. *European Journal of Developmental Psychology*, *9*(6), 665–680. https://doi-org.qe2a-proxy.mun.ca /10.1080/17405629.2012.660789

Carleton, R. N., Peluso, D. L., Collimore, K. C., & Asmundson, G. J. G. (2011). Social anxiety and posttraumatic stress symptoms: The impact of distressing social events. *Journal of Anxiety Disorders*, *25*(1), 49–57.

Carrion, V. G., & Steiner, H. (2000). Trauma and dissociation in delinquent adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*(3), 353–359. https://doi-org.qe2a-proxy.mun.ca/10.1097/00004583-200003000-00018

Chen, L.P., M. Murad, H., Paras, M.L., Colbenson, K.M., Sattler, A.L., Goranson, E.N., Elamin, M.B., Seime, R.J., Shinozaki, G., Prokop, L.J., Zirakzadeh, A. (2010). Sexual Abuse and Lifetime Diagnosis of Psychiatric Disorders: Systematic Review and Meta-

analysis. *Mayo Clinic Proceedings*,85(7), 618-629. https://doi.org /10. 4065/ mcp.2009.0583.

Cheung, K., Taillieu, T., Turner, S., Fortier, J., Sareen, J., MacMillan, H. L., Afifi, T. O. (2017). Relationship and community factors related to better mental health following child maltreatment among adolescents. *Child Abuse & Neglect, 70*, 377–387. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2017.06.026

Cicchetti, D., & Toth, S. L. (1995). A developmental psychopathology perspective on child abuse and neglect. *Journal of the American Academy of Child & Adolescent Psychiatry*, *34*(5), 541–565. https://doi-org.qe2a-proxy.mun.ca/10.1097/00004583-199505000-00008

Cloitre, M., Scarvalone, P., & Difede, J. (1997). Posttraumatic stress disorder, self- and interpersonal dysfunction among sexually retraumatized women. *Journal Of Traumatic Stress*, *10*(3), 437-452. doi:10.1023/A:1024893305226

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd ed.).* Hillsdale, NJ: Lawrence Erlbaum.

Coid, J., Petruckevitch, A., Feder, G., Chung, W.S, Richardson, J., Moorey, S. (2001). Relation between childhood sexual and physical abuse and risk of revictimisation in women: a cross-sectional survey.*The Lancet*, 358 (9280), 450-454. https://doi.org/10.1016/S0140-6736(01)05622-7.

Collimore, C., Carleton, N., Hoffman, S., & Asmundson, G. (2010). Posttraumatic stress and social anxiety: The interaction of traumatic events and interpersonal fears. *Depression and Anxiety, 27*, 1017–1026. doi: 10.1002/da.20728.

Cook, S. L., Gidycz, C. A., Koss, M. P., & Murphy, M. (2011). Emerging Issues in the Measurement of Rape Victimization. *Violence Against Women*, *17*(2), 201–218. https://doi.org/10.1177/1077801210397741

Cotter, A., & Beaupré, P. (2014). Police-reported sexual offences against children and youth in Canada, 2012. *Juristat: Canadian Centre for Justice Statistics*, 1-29.

Cougle, J. R., Timpano, K. R., Sachs-Ericsson, N., Keough, M. E., & Riccardi, C. J. (2010). Examining the unique relationships between anxiety disorders and childhood physical and sexual abuse in the National Comorbidity Survey-Replication. *Psychiatry Research*, *177*(1–2), 150–155. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.psychres.2009.03.008

Cougle, J. R., Feldner, M. T., Keough, M. E., Hawkins, K. A., & Fitch, K. E. (2010). Comorbid panic attacks among individuals with posttraumatic stress disorder: Associations with traumatic event exposure history, symptoms, and impairment. *Journal of Anxiety Disorders*, *24*(2), 183–188. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.janxdis.2009.10.006

De Jong, R., Alink, L., Bijleveld, C., Finkenauer, C., Hendriks, J. (2015). Transition to adulthood of child sexual abuse victims. *Aggression and Violent Behavior,* 24. 175-187. https://doi.org/10.1016/j.avb.2015.04.012.

Dhaliwal, G. K., Gauzas, L., Antonowicz, D. H., & Ross, R. R. (1996). Adult male survivors of childhood sexual abuse: Prevalence, sexual abuse characteristics, and long-term effects. *Clinical Psychology Review,* 16, 619-639. doi:10.1016/S0272-7358(96)00018-9

DiLillo, D. (2001). Interpersonal functioning among women reporting a history of childhood sexual abuse: Empirical findings and methodological issues. *Clinical Psychology Review, 21*(4), 553-576. doi:10.1016/S0272-7358(99)00072-0

Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J., & Williamson, D. F. (2002). Exposure to abuse, neglect and household dysfunction among adults who witnessed intimate partner violence as children: Implications for health and social services. *Violence and Victims, 17*(1), 3–18. https://doi.org/10.1891/vivi.17.1.3.33635

Dube, S. R., & Rishi, S. (2017). Utilizing the salutogenic paradigm to investigate well-being among adult survivors of childhood sexual abuse and other adversities. *Child Abuse & Neglect*, 66, 130–141.

Dworkin, E. R., Menon, S. V., Bystrynski, J., & Allen, N. E. (2017). Sexual assault victimization and psychopathology: A review and meta-analysis. *Clinical Psychology Review, 56*, 65–81. https://doi.org/10.1016/j.cpr.2017.06.002

Eisenberg, D., Golberstein, E., & Hunt, J. B. (2009). Mental health and academic success in college. *The BE Journal of Economic Analysis & Policy*, 9(1)

Ensink, K., Godbout, N., Bigras, N., Lampron, J., Sabourin, S., & Normandin, L. (2018). Persistent and transitory sexualized behavior problems in children. *Child Psychiatry and Human Development, 49*(4), 621–631. https://doi-org.qe2a-proxy.mun.ca/10.1007/s10578-017-0778-0

Etain, B., Henry, C., Bellivier, F., Mathieu, F., & Leboyer, M. (2008). Beyond genetics: Childhood affective trauma in bipolar disorder. *Bipolar Disorders, 10*(8), 867–876. https://doi-org.qe2a-proxy.mun.ca/10.1111/j.1399-5618.2008.00635.x

Etain, B., Aas, M., Andreassen, O. A., Lorentzen, S., Dieset, I., Gard, S., & Henry, C. (2013). Childhood trauma is associated with sever clinical characteristics of bipolar disorders. *The Journal of Clinical Psychiatry*, *74*(10), 991–998. https://doi-org.qe2a-proxy.mun.ca/10.4088/JCP.13m08353

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., … Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*(4), 245–258. https://doi.org/ 10.1016/S0749-3797(98)00017-8

Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2008). Exposure to childhood sexual and physical abuse and adjustment in early adulthood. *Child Abuse & Neglect*, *32*(6), 607–619. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2006.12.018

Fergusson, D. M., McLeod, G. F. H., & Horwood, L. J. (2013). Childhood sexual abuse and adult developmental outcomes: Findings from a 30-year longitudinal study in New Zealand. *Child Abuse & Neglect*, *37*(9), 664–674. https://doi.org/ 10.1016/ j.chiabu.2013.03.013

Finkelhor, D., & Browne, A. (1985). *The traumatic impact of child sexual abuse: A conceptualization*. American Journal of Orthopsychiatry, 55, 530–541.

Finkelhor, D., Hotaling, G., Lewis, I. A., & Smith, C. (1990). Sexual abuse in a national survey of adult men and women: Prevalence, characteristics, and risk factors. *Child Abuse & Neglect*, *14*(1), 19–28. https://doi-org.qe2a-proxy.mun.ca/10.1016/0145-2134(90)90077-7

Finkelhor, D. (1994). The international epidemiology of child sexual abuse. *Child Abuse & Neglect*, 18, 409-417. doi:10.1016/ 0145-2134(94)90026-4.

Finkelhor, D. (2018). Screening for adverse childhood experiences (ACEs): Cautions and suggestions. *Child Abuse & Neglect.* 85. 174-179. https://doi.org/ 10.1016/j.chiabu.2017.07.016

Fletcher, M. (2018). Quality of life in adult survivors of childhood sexual abuse. *Dissertation Abstracts International: Section B: The Sciences and Engineering*. ProQuest Information & Learning.

Fortier, M. A., DiLillo, D., Messman-Moore, T. L., Peugh, J., DeNardi, K. A., & Gaffey, K. J. (2009). Severity of child sexual abuse and revictimization: The mediating role of coping and trauma symptoms. *Psychology Of Women Quarterly*, *33*(3), 308-320. doi:10.1111/j.1471-6402.2009.01503.x

Fowler, J.C., Allen, J.G., Oldham, J.M., & Frueh B.C. (2013). Exposure to interpersonal trauma, attachment insecurity, and depression severity. *Journal of Affective Disorders, 149*(1-3), 313-318.

Fowler, K., Wareham, F. S., & Barnes, C. (2013). Social context and depression severity and duration in Canadian men and women: Exploring the influence of social support and sense of community belongingness. *Journal of Applied Social Psychology*, *43*(Suppl 1), E85–E96. https://doi-org.qe2a-proxy.mun.ca/10.1111/jasp.12050

Freeman, K. A., & Morris, T. L. (2001). A review of conceptual models explaining the effects of child sexual abuse. *Aggression and Violent Behavior*, *6*(4), 357–373. https://doi-org.qe2a-proxy.mun.ca/10.1016/S1359-1789(99)00008-7

Friedman, M.J. (2018). PTSD History and Overview. Retrieved from https://www.ptsd.va.gov/professional/treat/essentials/history_ptsd.asp

Friedman, M. J., Resick, P. A., Bryant, R. A., & Brewin, C. R. (2011). *Considering PTSD for DSM-5. Depression and Anxiety*, 28, 750-769. doi: 10.1002/da.20767

Gayle, T.-A. K. (2012). "I'm telling on you": A natural history of disclosure of childhood sexual abuse. *Dissertation Abstracts International: Section B: The Sciences and Engineering*.

Gibson, K., & Morgan, M. (2013). Narrative research on child sexual abuse: Addressing perennial problems in quantitative research. *Qualitative Research in Psychology*, *10*(3), 298–317. https://doi-org.qe2a-proxy.mun.ca/10.1080/14780887.2011.606597

Gilbert R, Widom CS, Browne K, Fergusson D, Webb E, Janson S. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet*, 373,68-81.

Gilson, K. J., & Lancaster, S. (2008). Childhood sexual abuse in pregnant and parenting adolescents. *Child Abuse & Neglect*, *32*(9), 869–877. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2007.11.005

Goldman, J. D. G., & Padayachi, U. K. (2000). Some methodological problems in estimating incidence and prevalence in child sexual abuse research. *Journal of Sex Research*, *37*(4), 305–314. https://doi-org.qe2a-proxy.mun.ca/10.1080/00224490009552052

Gospodarevskaya, E. (2013). Post-traumatic stress disorder and quality of life in sexually abused Australian children. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders*, 22(3), 277–296. https://doi-org.qe2a-proxy.mun.ca/10.1080/10538712.2013.743953

Gottfried, D. C. (2005). Adult sequelae of childhood sexual abuse: Dissociation, attachment style and substance use. *Dissertation Abstracts International: Section B: The Sciences and Engineering*.

Green, J. G., McLaughlin, K. A., Berglund, P. A., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2010). Childhood adversities and adult psychiatric disorders in the National Comorbidity Survey Replication I: Associations with first onset of DSM-IV disorders. *Archives of General Psychiatry*, *67*(2), 113–123. https://doi-org.qe2a-proxy.mun.ca/10.1001/archgenpsychiatry.2009.186

Grilo, C. M., Martino, S., Walker, M. L., Becker, D. F., Edell, W. S., & McGlashan, T. H. (1997). Controlled study of psychiatric comorbidity in psychiatrically hospitalized young adults with substance use disorders. *American Journal of Psychiatry*, 154, 1305–1307.

Hardner, K., Wolf, M. R., & Rinfrette, E. S. (2018). Examining the relationship between higher educational attainment, trauma symptoms, and internalizing behaviors in child sexual abuse survivors. *Child Abuse & Neglect*, doi:10.1016/j.chiabu.2017.10.007

Haugaard, J. J., & Emery, R. E. (1989). Methodological issues in child sexual abuse research. *Child Abuse & Neglect*, *13*(1), 89–100. https://doi-org.qe2a-proxy.mun.ca/10.1016/0145-2134(89)90032-X

Hébert, M., Tourigny, M., Cyr, M., McDuff, P., & Joly, J. (2009). Prevalence of childhood sexual abuse and timing of disclosure in a representative sample of adults from Quebec. *The Canadian Journal of Psychiatry*, 54(9), 631–636.

Hébert, M., Langevin, R., & Oussaïd, E. (2018). Cumulative childhood trauma, emotion regulation, dissociation, and behavior problems in school-aged sexual abuse

victims. *Journal of Affective Disorders*, *225*, 306–312. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.jad.2017.08.044

Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress, 5*(3), 377-391. doi:10.1002/jts.2490050305

Herman, J. & Hirschman, L. (1977). Father-daughter incest. *Journal of Women in Culture and Society*, 2, 735–56.

Hesson, J., & Fowler, K. (2018). Prevalence and correlates of self-reported ADD/ADHD in a large national sample of Canadian adults. *Journal of Attention Disorders*, *22*(2), 191–200. https://doi-org.qe2a-proxy.mun.ca/10.1177/1087054715573992

Horan, J.M., Widom, C.S., 2015. Cumulative childhood risk and adult functioning in abused and neglected children grown up. *Developmental Psychopathology*, 27, 927–941. http://dx. doi.org/10.1017/S095457941400090X.

Hulme, P. A. (2004). Theoretical Perspectives on the Health Problems of Adults Who Experienced Childhood Sexual Abuse. *Issues in Mental Health Nursing*, *25*(4), 339–361. https://doi-org.qe2a-proxy.mun.ca/10.1080/01612840490432899

Hyman, S. M., Gold, S. N., & Cott, M. A. (2003). Forms of social support that moderate PTSD in childhood sexual abuse survivors. *Journal of Family Violence*, *18*(5), 295–300. https://doi-org.qe2a-proxy.mun.ca/10.1023/A:1025117311660

Hyman, B. (2000). The economic consequences of child sexual abuse for adult lesbian women. *Journal of Marriage and the Family*, 62(1), 199–211. http://dx.doi.org/10.1111/j.1741-3737.2000.00199.x.

Joiner, T.E., Sachs-Ericsson, N.J., Wingate, L.R., Brown, J.S., Anestis, M.D., Selby, E.A. (2007). Childhood physical and sexual abuse and lifetime number of suicide attempts: A

persistent and theoretically important relationship. *Behaviour Research and Therapy,* 45(3), 539-547. https://doi.org/10.1016/j.brat.2006.04.007.

Karren, K. (2006). *Mind/body health: The effects of attitudes, emotions, and relationships* (3rd ed.). San Francisco; Montreal: Pearson/Benjamin Cummings.

Kaye-Tzadok, A., & Davidson-Arad, B. (2017). The contribution of cognitive strategies to the resilience of women survivors of childhood sexual abuse and non-abused women. *Violence Against Women, 23*(8), 993–1015. https://doi-org.qe2a-proxy.mun.ca/10.1177/1077801216652506

Kessler, R.C., Walters, E.E., Forthofer, M.S. (1998) The social consequences of psychiatric disorders, III: probability of marital stability. *American Journal of Psychiatry* 155,1092–1096

Kessler, S., & Biescheke, K.J. (1999). A retrospective analysis of shame, dissociation, and adult victimization in survivors of childhood sexual abuse. *Journal of Therapy Psychology*, 46(3), 335-341

Khrapatina, I., & Berman, P. (2017). The impact of adverse childhood experiences on health in college students. *Journal of Child & Adolescent Trauma, 10*(3), 275–287. https://doi-org.qe2a-proxy.mun.ca/10.1007/s40653-016-0093-0

Krysinska, K., & Lester, D. (2010). Post-traumatic stress disorder and suicide risk: A systematic review. *Archives of Suicide Research*, *14*(1), 1–23. https://doi-org.qe2a-proxy.mun.ca/10.1080/13811110903478997

Langevin, R., Hébert, M., & Cossette, L. (2015). Emotion regulation as a mediator of the relation between sexual abuse and behavior problems in preschoolers. *Child Abuse & Neglect*, *46*, 16–26. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2015.02.001

Lemaigre, C., Taylor, E. P., & Gittoes, C. (2017). Barriers and facilitators to disclosing sexual abuse in childhood and adolescence: A systematic review. *Child Abuse & Neglect, 70*, 39–52. https://doi.org/10.1016/j.chiabu.2017.05.009

Liem, J.H., Boudewyn, A.C. (1999). Contextualizing the effects of childhood sexual abuse on adult self- and social functioning: an attachment theory perspective. *Child Abuse & Neglect,* 23(11), https://doi.org/10.1016/S0145-2134(99)00081-2.

Lind, M. J., Brown, R. C., Sheerin, C. M., York, T. P., Myers, J. M., Kendler, K. S., & Amstadter, A. B. (2018). Does parenting influence the enduring impact of severe childhood sexual abuse on psychiatric resilience in adulthood? *Child Psychiatry and Human Development*, *49*(1), 33–41. https://doi-org.qe2a-proxy.mun.ca/10.1007/s10578-017-0727-y

Lev-Wiesel, R., & Daphna-Tekoah, S. (2010). The role of peripartum dissociation as a predictor of posttraumatic stress symptoms following childbirth in Israeli Jewish women. *Journal of Trauma & Dissociation*, 11(3), 266–283. https://doi-org.qe2a-proxy.mun.ca/10.1080/15299731003780887

Lewis, T., McElroy, E., Harlaar, N., Runyan, D., 2016. Does the impact of child sexual abuse differ from maltreated but non-sexually abused children? A prospective examination of the impact of child sexual abuse on internalizing and externalizing behavior problems. *Child Abuse. And Neglect.* 51, 31–40. http://dx.doi.org/10.1016/j. chiabu.2015.11.016

MacMillan, H. L., Fleming, J. E., Trocmé, N., Boyle, M. H., Wong, M., Racine, Y. A., Offord, D. R. (1997). Prevalence of child physical and sexual abuse in the community: Results from the Ontario Health Supplement. *JAMA: Journal of the American Medical*

Association, 278(2), 131–135. https://doi-org.qe2a-proxy.mun.ca/10.1001/jama.1997.03550020063039

MacMillan, H. L., Fleming, J. E., Streiner, D. L., Lin, E., Boyle, M. H., Jamieson, E., Beardslee, W. R. (2001). Childhood abuse and lifetime psychopathology in a community sample. *The American Journal of Psychiatry*, *158*(11), 1878–1883. https://doi-org.qe2a-proxy.mun.ca/10.1176/appi.ajp.158.11.1878

MacMillan, H. L., Tanaka, M., Duku, E., Vaillancourt, T., & Boyle, M. H. (2013). Child physical and sexual abuse in a community sample of young adults: Results from the Ontario Child Health Study. *Child Abuse & Neglect*, *37*(1), 14–21. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2012.06.005

Maniglio, R. (2009). The impact of child sexual abuse on health: A systematic review of reviews, *Clinical Psychology Review*,29 (7), 647-657. https://doi.org/10.1016/j.cpr.2009.08.003

Maniglio, R. (2015). Significance, nature, and direction of the association between child sexual abuse and conduct disorder: *A systematic review. Trauma, Violence, & Abuse*, 16(3), 241–257. https://doi-org.qe2a-proxy.mun.ca/10.1177/1524838014526068

Maras, D. (2019). Adverse childhood experiences: Traumas that set the framework for life. *Clinical Corner Time2Track Blog Post.*

Meade, C.S., McDonald, L.J., Graff, F.S., Fitzmaurice, G.M., Griffin, M.L., & Weiss, R.D., (2009). A prospective study examining the effects of gender and sexual/physical abuse on mood outcomes in patients with co-occurring bipolar I and substance use disorders. *Bipolar Disorder,* 11, 425–433.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health, 91*(5), 753–760. https://doi.org/10.2105/AJPH.91.5.753

Murray, R.M., Sham, P., Van, O. J., Zanelli, J., Cannon, M., & McDonald, C. A (2004). Developmental model for similarities and dissimilarities between schizophrenia and bipolar disorder. *Schizophrenia Research,* 71,405–416.

Noll, J. G., Trickett, P. K., & Putnam, F. W. (2000). Social network constellation and sexuality of sexually abused and comparison girls in childhood and adolescence. *Child Maltreatment: Journal of the American Professional Society on the Abuse of Children,* 5(4), 323–337.

Noll, J. G., Trickett, P. K., & Putnam, F. W. (2003). A prospective investigation of the impact of childhood sexual abuse on the development of sexuality. *Journal of Consulting & Clinical Psychology,* 71(3), 575–586

Noll, J. G. (2008). Sexual abuse of children – Unique in its effects on development? *Child Abuse & Neglect,* 32(6), 603–605. http://dx.doi.org/10.1016/j.chiabu.2007.09.008

Nrugham, L., Holen, A., & Sund, A. M. (2010). Associations between attempted suicide, violent life events, depressive symptoms, and resilience in adolescents and young adults. *Journal of Nervous and Mental Disease*, *198*(5), 389. https://doi-org.qe2a-proxy.mun.ca/10.1097/NMD.0b013e3181da48b3

Oellerich, T. D. (2000). Rind, Tromovitch, and Bauserman: Politically incorrect—scientifically correct. *Sexuality & Culture: An Interdisciplinary Quarterly, 4*(2), 67–81. https://doi-org.qe2a-proxy.mun.ca/10.1007/s12119-000-1027-3

Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin*, *129*(1), 52–73. https://doi.org/10.1037/0033-2909.129.1.52

Paras, M. L., Murad, M. H., Chen, L. P., Goranson, E. N., Sattler, A. L., Colbenson, K. M., Zirakzadeh, A. (2009). Sexual abuse and lifetime diagnosis of somatic disorders: A systematic review and meta-analysis. *JAMA: Journal of the American Medical Association*, *302*(5), 550–561. https://doi-org.qe2aproxy.mun.ca/10.1001/jama.2009.1091

Pereda, N., Guilera, G., Forns, M., & Gomez-Benito, J. (2009). The prevalence of child sexual abuse in community and student samples: A meta-analysis. *Clinical Psychology Review*, 29, 328-338. doi:10.1016/j.cpr.2009.02.007

Perreault, S. (2015). Criminal victimization in Canada, 2014. *Juristat Statistics Canada Catalogue*, 85-002-X.

Price, M., Higa-McMillan, C., Kim, S., & Frueh, B. C. (2013). Trauma experience in children and adolescents: An assessment of the effects of trauma type and role of interpersonal proximity. *Journal of Anxiety Disorders*, *27*(7), 652–660. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.janxdis.2013.07.009

Putnam, K. T., Harris, W. W., & Putnam, F. W. (2013). Synergistic childhood adversities and complex adult psychopathology. *Journal of Traumatic Stress*, *26*(4), 435–442. https://doi-org.qe2a-proxy.mun.ca/10.1002/jts.21833

Rind, B., Tromovitch, P., & Bauserman, R. (1998). A meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychological Bulletin*, *124*(1), 22–53. https://doi-org.qe2a-proxy.mun.ca/10.1037/0033-2909.124.1.22

Roberts, R., O'Connor, T., Dunn, J., & Golding, J. (2004). The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. *Child Abuse & Neglect,* 28(5), 525–545. http://dx.doi.org/10.1016/j.chiabu.2003.07.006.

Robertson-Blackmore, E., Putnam, F. W., Rubinow, D. R., Matthieu, M., Hunn, J. E., Putnam, K. T., & O'Connor, T. G. (2013). Antecedent trauma exposure and risk of depression in the perinatal period. *The Journal of Clinical Psychiatry,* 74(10), 942–948. https://doi-org.qe2a-proxy.mun.ca/10.4088/JCP.13m08364

Rush, R. (1980). *The best kept secret: sexual abuse of children.* Englewood Cliffs, NJ: Prentice Hall.

Sar, V., Akyüz, G., Öztürk, E., & Alioğlu, F. (2013). Dissociative depression among women in the community. *Journal of Trauma & Dissociation*, *14*(4), 423–438. https://doi-org.qe2a-proxy.mun.ca/10.1080/15299732.2012.753654

Safren, S. A., Gershuny, B. S., Marzol, P., Otto, M. W., & Pollack, M. H. (2002). History of childhood abuse in panic disorder, social phobia, and generalized anxiety disorder. *Journal of Nervous and Mental Disease*, *190*(7), 453–456. https://doi-org.qe2a-proxy.mun.ca/10.1097/00005053-200207000-00005

Salloum, A., Carter, P., Burch, B., Garfinkel, A., & Overstreet, S. (2011). Impact of exposure to community violence, Hurricane Katrina, and Hurricane Gustav on posttraumatic stress and depressive symptoms among school age children. *Anxiety, Stress, and Coping, 24*(1), 27-42.

Schore, A. N. (2003). *Affect dysregulation and disorders of the self*. New York: Norton

Schultz, K., Cattaneo, L. B., Sabina, C., Brunner, L., Jackson, S., & Serrata, J. V. (2016). Key roles of community connectedness in healing from trauma. *Psychology of Violence*, *6*(1), 42–48. https://doi-org.qe2a-proxy.mun.ca/10.1037/vio0000025

Shields, M., Tonmyr, L., & Hovdestad, W. (2016). Is child sexual abuse declining in Canada? Results from nationally representative retrospective surveys. Maladies Chroniques et Blessures Au Canada, 36(11), 252–260. Retrieved fromhttp://search.ebscohost.com.qe2a-proxy.mun.ca/login.aspx?direct=true&AuthType=ip,url,uid&db=a9h&AN=119996455&site=ehost-live&scope=site

Shipman, K., Zeman, J., Penza, S., & Champion, K. (2000). Emotion management skills in sexually maltreated and nonmaltreated girls: A developmental psychopathology perspective. *Development and Psychopathology*, *12*(1), 47–62. https://doi-org.qe2a-proxy.mun.ca/10.1017/S0954579400001036

Sigurdardottir, S., Halldorsdottir, S., Bender, S. S., & Agnarsdottir, G. (2016). Personal resurrection: Female childhood sexual abuse survivors' experience of the Wellness Program. *Scandinavian Journal of Caring Sciences*, *30*(1), 175–186. https://doi-org.qe2a-proxy.mun.ca/10.1111/scs.12238

Smoller, J.W., Finn, C.T. (2003). Family, twin, and adoption studies of bipolar disorder. *American Journal of Medical Genetics: Seminars in Medical Genetics,* 123,48–58.

Spiegel, D. (2000). The price of abusing children and numbers. *Sexuality & Culture: An Interdisciplinary Quarterly*, *4*(2), 63–66. https://doi-org.qe2a-proxy.mun.ca /10.1007/s12119-000-1026-4

Statistics Canada (2013). Canadian Community Health Survey: Mental Health.

Retrieved from http://www23.statcan.gc.ca/imdb/p3Instr.pl?Function= assemble Instr&a=1&&lang=en&Item_Id=119788

Stein, D. J., Chiu, W. T., Hwang, I., Kessler, R. C., Sampson, N., Alonso, J., Nock, M. K. (2010). Cross-national analysis of the associations between traumatic events and suicidal behavior: Findings from the WHO World Mental Health Surveys. *PLoS ONE, 5*(5). https://doi-org.qe2a-proxy.mun.ca/10.1371/journal.pone.0010574

Stephenson, K. R., Hughan, C. P., & Meston, C. M. (2012). Childhood sexual abuse moderates the association between sexual functioning and sexual distress in women. *Child Abuse & Neglect, 36*(2), 180-189. doi:10.1016/j.chiabu.2011.09.015

Stevens (2012). The Adverse Childhood Experiences Study — the largest, most important public health study you never heard of — began in an obesity clinic. *Aces Too High News*, Retrieved from https://acestoohigh.com/2012/10/03/the-adverse-childhood-experiences-study-the-largest-most-important-public-health-study-you-never-heard-of-began-in-an-obesity-clinic/

Stoltenborgh, M., van Ijzendoorn, M.H., Euser, E.M., Bakermans-Kranenburg, M.J., 2011. A global perspective on child sexual abuse: meta-analysis of prevalence around the world. *Child Maltreatment.* 16, 79–101. http://dx.doi.org/10.1177/ 1077559511403920le

Tonmyr, L., & Shields, M. (2017). Childhood sexual abuse and substance abuse: A gender paradox? Child Abuse & Neglect, 63, 284–294. https://doi-org.qe2a-proxy.mun.ca/10.1016/j.chiabu.2016.11.004

United Nations (1989). Convention on the Rights of the Child, New York. Retrieved from http://www.ohchr.org/ Documents/ProfessionalInterest/crc.pdf

Walsh, K., Zwi, K., Woolfenden, S., & Shlonsky, A. (2018). School-based education programs for the prevention of child sexual abuse: A Cochrane systematic review and meta-analysis. *Research on Social Work Practice*, *28*(1), 33–55. https://doi-org.qe2a-proxy.mun.ca/10.1177/1049731515619705

Weber, S., Jud, A., & Landolt, M. A. (2016). Quality of life in maltreated children and adult survivors of child maltreatment: A systematic review. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation*, *25*(2), 237–255. https://doi-org.qe2a-proxy.mun.ca/10.1007/s11136-015-1085-5

Weiss, K. G. (2010). Male sexual victimization: Examining men's experiences of rape and sexual assault. *Men and Masculinities*, *12*(3), 275–298. https://doi-org.qe2a-proxy.mun.ca/10.1177/1097184X08322632

World Health Organization (1999). Report of the Consultation on Child Abuse Prevention, Geneva. http://apps.who.int/iris/bitstream/10665/65900/1/WHO_HSC_PVI_99.1.pdf

World Health Organization (2005). Promoting mental health: concepts, emerging evidence, practice. Retrieved from http://www.who.int/mental_health/evidence/ MH_Promotion_Book.pdf

World Health Organization (2006). Preventing child maltreatment: a guide to taking action and generating evidence. Retrieved from https://www.who.int/violence injury_prevention/publications/violence/child_maltreatment/en/

World Health Organization (2007). The relationship between childhood maltreatment and the risk of later becoming a victim or perpetrator of violence. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0008/98783/E90619.pdf

World Health Organization (2013). Responding to children and adolescents who have been sexually abused: WHO clinical guidelines. Retrieved from https://www.who.int/reproductivehealth/publications/violence/clinical-response-csa/en/

World Health Organization (2009). Promoting gender equality to prevent violence against women. Retrieved from https://www.who.int/violence_injury_prevention/violence/gender.pdf

World Health Organization World Mental Health Composite International Diagnostic Interview (2018). Retrieved from https://www.hcp.med.harvard.edu/wmhcidi/

Table 1. Age Distribution Frequencies for women with and without CSA Histories

Age (Years)	CSA History				Total	
	No		Yes			
	N	*%*	*N*	*%*	*N*	*%*
20 to 24	89	8.7	89	8.7	178	8.7
25 to 29	73	7.1	73	7.1	146	7.1
30 to 34	100	9.7	100	9.7	200	9.7
35 to 39	88	8.6	88	8.6	176	8.6
40 to 44	91	8.9	91	8.9	182	8.9
45 to 49	125	12.2	125	12.2	250	12.2
50 to 54	165	16.1	165	16.1	330	16.1
55 to 59	152	14.8	152	14.8	304	14.8
60 to 64	144	14.0	144	14.0	288	14.0
Total	1027	100	1027	100	2054	100

Table 2. Psychiatric Illnesses/Outcome Distribution Frequencies-Lifetime Prevalence

Psychiatric Illness/Outcome	CSA History						
	No		Yes				
	N	*%*	*N*	*%*	*Chi Square*	*p*	*V*
Post-Traumatic Stress Disorder	17	1.7	112	10.9*	74.857	.001	0.191
Substance Abuse and Dependence	60	5.9	201	20.0*	89.382	.001	0.210
General Anxiety Disorder	132	13.0	307	30.2*	89.193	.001	0.209
Major Depressive Disorder	150	14.7	383	37.5*	136.931	.001	0.259
Suicidal Ideation	134	13.1	443	43.2*	229.461	.001	0.335
Bipolar Disorder	28	2.7	96	9.5*	40.568	.001	0.141
Alcohol Abuse and Dependence	129	12.8	291	28.7*	78.024	.001	0.196

*Notable Percentages

Table 3. Psychiatric Illnesses/Outcome Distribution Frequencies- 12-Month Prevalence

Psychiatric Illness/Outcome	CSA History						
	No		Yes				
	N	*%*	*N*	*%*	*Chi Square*	*p*	*V*
Substance Abuse and Dependence	8	0.8	31	3.1	14.254	.001	0.084
General Anxiety Disorder	38	3.7	123	12.1*	48.729	.001	0.155
Major Depressive Disorder	60	5.9	197	19.3*	83.398	.001	0.202
Suicidal Ideation	32	3.1	122	11.9*	56.777	.001	0.166
Bipolar Disorder	17	1.7	59	5.8	24.584	.001	0.110
Alcohol Abuse and Dependence	17	1.7	43	4.2	11.426	.001	0.075

*Notable Percentages

Table 4. Socio Demographic Variables-Distribution Frequencies

Socio-Demographic Variable	CSA History						
	No		Yes				
	N	*%*	*N*	*%*	*Chi Square*	*p*	*V*
Marital Status					40.095	.001	0.149
Married	498	48.6	358	35.1*			
Common-Law	124	12.1	137	13.4			
Widowed	36	3.5	32	3.1			
Divorced or Separated	141	13.8	218	21.4*			
Single	225	22.0	274	26.9			
Level of Education					44.784	.001	0.148
Less Than Secondary School Graduation	83	8.1	173	16.9*			
Secondary School Graduation	169	16.5	166	16.2			
Some Post-Secondary	55	5.4	78	7.6			
Post-Secondary Graduation	717	70.0	607	59.3*			
Personal Income					52.549	.001	0.166
Less Than $10,000	82	8.2	86	8.9			
$10,000-$19,999	140	15.0	247	25.5*			
$20,000-$29,000	229	24.4	270	27.9			
$30,000-$39,000	145	15.5	113	11.9			
$40,000-$49,000	82	8.8	80	8.3			
$50,000 or more	255	27.3	172	17.3*			

*Notable Percentages

Table 5. Quality of Life Variables-Distribution Frequencies

Quality of Life Variable	CSA History						
	No		Yes				
	N	*%*	*N*	*%*	*Chi Square*	*p*	*V*
Life Satisfaction					89.391	.001	0.209
Very Dissatisfied	6	0.6	14	1.4			
. . .	2	0.2	9	0.9			
. . .	7	0.7	12	1.2			
. . .	9	0.9	32	3.1*			
. . .	6	0.6	36	3.5			
. . .	53	5.2	116	11.3*			
. . .	59	5.8	87	8.5			
. . .	161	15.7	188	18.4			
. . .	344	33.5	278	27.1			
. . .	215	21.0	137	13.4*			

Very Satisfied	164	16.0	115	11.2			
Sense of Belonging to Community					29.426	.001	0.120
Very Strong	154	15.0	137	13.5			
Somewhat Strong	498	48.6	409	40.2*			
Somewhat Weak	280	27.3	310	30.5			
Very Weak	93	9.1	161	15.8*			
Self-Perceived Mental Health					169.967	.001	0.288
Excellent	205	20.0	113	11.0*			
Very Good	443	43.2	284	27.7*			
Good	291	28.4	350	34.1*			
Fair	71	6.9	222	21.6*			
Poor	15	1.5	58	5.6*			

*Notable Percentages