

Original Paper

Retracted: Comparison Between Male and Female Survivors of Sexual Abuse and Assault in Relation to Age at Admission to Therapy, Age of Onset, and Age at Last Sexual Assault: Retrospective Observational Study

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Abstract

Background: Sexual abuse and sexual assault are complex phenomena that involve many factors (or correlates) and have many health and financial implications for individuals, families, and society. Every correlate needs to be studied in detail, individually and in relation to other correlates. Only with a thorough understanding of these correlates can more efficient and targeted prevention and intervention programs be designed.

Objective: The purpose of this study was to examine the differences between male and female survivors of sexual abuse and sexual assault regarding the correlates of the survivors' age of onset of assault, age at the last assault, and age at which they entered therapy.

Methods: Therapists at eight sexual assault centers in the province of Alberta, Canada, completed a questionnaire on each of their clients over a period of 7 years. A total of 3302 participants, of whom 2901 (87.86%) were female and 401 (12.1%) were male survivors of sexual abuse and assault, were included in this study. Mostly descriptive analyses were carried out on the 4 variables of concern in this study.

Results: Regarding the number of survivors who sought therapy, female survivors outnumbered male survivors by a ratio of 7:1, with different ratios for different age groups. As children age, their risk of being sexually assaulted for the first time decreases. Male children are more likely to be sexually abused at a younger age, whereas female children are more vulnerable to being assaulted at all ages, particularly in adolescence. The mean age of onset of sexual abuse was found to be 6.71 (SD 2.86) years, and the odds of experiencing the first sexual assault during childhood, as opposed to adolescence, were 4:1 for females and 9:1 for males. Male survivors were two times more likely than female survivors to experience their first sexual assault in childhood. The vast majority of survivors sought help many years after being sexually assaulted, and male survivors waited an average of 3 years longer from the last sexual assault before seeking therapy.

Conclusions: The majority of survivors of sexual abuse and sexual assault live with the consequences for many years before they seek help, and a large proportion of male survivors are not likely to seek help.

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KEYWORDS

sexual abuse; sexual assault; age of onset; sex; gender; age; therapy; abuse; assault; mental health; victim; childhood; children; gender disparity; violence

Introduction

Although numerous studies have been conducted on various correlates of child sexual abuse (CSA) and sexual assault, not every correlate receives equal attention. A quick survey of the literature shows that prevalence and incidence studies [1-3] and the psychological effects of sexual abuse and assault [4-8] receive the most considerable attention. The sex and age of survivors [9-11] receive more attention than the age of the survivors when the first act of sexual abuse or assault occurred (age of onset) and when the last act of sexual abuse or assault was experienced. Although the ages of survivors at first and last sexual abuse or assault are sometimes mentioned, they have not been the focus of studies [12-14].

A 2014 report by the World Health Organization on violence prevention noted that the lifetime prevalence rate of CSA is 18% for girls and 7.6% for boys, with Africa having the highest rates of 33% for girls and 14% for boys [15]. The US Department of Health and Human Services' reports of 1999, 2005, and 2017 indicated, based on substantiated investigations, that 11.3%, 9.3%, and 8.6% of children were sexually abused, respectively, and the 1999 data showed that females were 4 times more likely to be sexually abused than males [16-18]. The comprehensive Canada-wide statistics on Canadian incidence of child maltreatment reported that 8.4% of all cases substantiated by the Department of Child Welfare involved sexual abuse of children in 1998 [19]; this percentage was 3% in 2003 [20] and 2008 [21]. The Australian Commonwealth Department of Family and Community Services report of 2017 indicated, based on substantiated investigations, that 9% of children were sexually abused and that girls were more likely to be sexually abused than boys (11% vs 7%, respectively) [22]. In 2002, the World Health Organization noted in its report, based on several studies, that when a broader definition of CSA was used, the prevalence jumped to 19% for males and 45% for females [23].

Indeed, the literature contains numerous prevalence studies that vary widely and lack consistency. The variety of definitions of CSA, cultural factors, legal regulations, and methods used to collect data are the major contributors to this lack of consistency. Rates based on CSA cases reported by survivors, especially those reporting retrospectively, tend to be much higher than those of cases that are reported to authorities. Studies based on self-report questionnaires might be biased toward overestimation, while studies using interviews might be biased toward underestimation of the prevalence [2,24]. Hence, rates based on official reports of CSA are lower than rates based on self-reports by youth and adults because only a small proportion of CSA cases are reported to authorities [25-27] and because only those whose allegations were substantiated after disclosing to the authorities were included in the official report data. For example, estimates of CSA based on a review of 217 studies conducted between 1998 and 2008 found rates based on self-reports to be approximately 30 times higher than rates based

on official reports (law enforcement and child protection) (12.7% vs 0.4%, respectively) [28]. A survey of 122 adult survivors of sexual abuse found that only 32% reported the abuse when they were children, whereas 68% reported the abuse after adulthood [29]. Another study concluded that 30% of male and 16% of female survivors had never reported their abuse [30]. A review of several disclosure studies found that approximately 30% to 80% of survivors do not report their experiences of sexual abuse until adulthood [31]. Based on these studies and many others, it seems that there is a ratio of approximately 3 to 1 in favor of those who do not report sexual abuse. Even when children are in the care of the state, many do not report sexual abuse, as was observed by the Mullighan Commission of Inquiry on Children in State Care in Australia [32].

It may seem that estimates based on self-reports are more accurate and, therefore, a realistic reflection of the prevalence of child sexual abuse. However, when relying on self-reports, the probability of false positive and false negative reports increases, thereby undermining the accuracy of the results [33,34]. However, the risk of false negative reports is judged to be small enough not to undermine prevalence rates based on self-reports and therefore to present minimal risk to the accuracy of the results [34,35]. False positive reports are rare [34,36], and the fact that many survivors of CSA do not disclose their abuse to anyone is likely to render any false positive results negligible. In fact, estimates based on self-reports may be somewhat conservative. Based on these studies, the use of survivors' retrospective reports of sexual abuse in this study is appropriate and justified.

Regardless of the definition of CSA, cultural factors, legal regulations, or the method used to estimate prevalence and incident rates, it seems that the majority of studies found girls to be at least twice as likely to be sexually abused as boys, that girls are more likely to seek help than boys, and that the risk of being sexually abused increases with age into late adolescence. Furthermore, although girls are at 2 to 3 times greater risk of being sexually abused than boys, this ratio does not seem to change during adolescence [3,10,24,28,36].

A few studies have not supported the finding that the rates of CSA among girls are higher than among boys. For example, one study using South African students found that the prevalence of CSA for boys, at 60%, was approximately 7% higher than for girls, at 53.2% [37]. Another study using Portuguese parents found the prevalence of CSA for boys and girls to be approximately the same, at 2.7% [38]. The difference between boys and girls in reporting may be due to the reluctance of males to disclose experiences of CSA. This reluctance is reflected by the length of time male survivors take to reveal CSA. Males may take as long as 10 years to disclose, whereas females take much shorter periods [39]. Adolescents experience a higher number of sexually abusive incidents than children [9], and at least 10% of girls experience forced intercourse before the age

of 18 [3]. Based on 9 studies conducted between 1993 and 1999, the 2002 report by the World Health Organization on violence and death revealed that forced sexual intercourse before the age of 18 years was experienced by 7% to 47.6% of girls and 0.2% to 31.9% by boys [23].

Children may experience CSA when they are as young as a few months old, and the abuse may last well into their adulthood. A study found that the average age of onset of CSA was approximately 5 (SD 3.7) years and that it lasted for an average duration of approximately 7.3 (SD 4.9) years [12]. Another study found that in a sample of 246 individuals, sexual abuse generally started at the age of 6.3 (SD 3.5) years and lasted for 8.1 (SD 7.3) years [40].

In summary, it is reasonable to conclude the following: sexual abuse and sexual assault continue to be a problem worldwide; on average, approximately 10% of children experience sexual abuse; on average, female survivors outnumber male survivors by approximately 4 to 1; on average, sexual assault on children may start around the age of 2 and last for as long as 15 years; on average, the number of sexually abused children based on self-reports is much higher than the number based on official reports by at least 3 to 1; the risk of being sexually assaulted may stay the same or increase with age into late adolescence; and female survivors are more likely to seek help and to do so sooner than male survivors.

Therefore, it is important to consider the sex of survivors in relation to the age at which they seek therapy and the ages when the first and the last act of sexual assault occurred. Clearly, these four variables are related. How soon after the first act of sexual assault does a male or a female survivor seek therapy? Because sexually assaultive behaviors can last many years, is it also essential to consider how soon after the last act of sexual assault a male or a female survivor seeks therapy. How long do they live with their experience of sexual abuse or assault before they seek help? Moreover, studying the relationships among these correlates provides for the determination of vulnerability and risk. For example, which male or female age group is most vulnerable to sexual abuse or sexual assault? Furthermore, it is crucial to appreciate that data based on self-reports, unless strictly controlled, do not reflect the present. More often, people seek therapy for sexual abuse or assault that occurred many years earlier, so these self-report data provide a window to what was happening in the past. A better understanding of the correlates of sexual abuse and sexual assault and their relationships as they existed would allow for the construction of a better and more accurate picture of the past and its impact on resources in the present. A more precise description would help us anticipate the current and future needs and design better and more effective prevention and intervention programs.

Aside from national studies conducted by governmental social service and child protection agencies, almost all previous studies used small community-based samples. To date, no study has considered the relationships between the age of survivors at the time of seeking therapy, at the time of the first sexual assault, and at the time of the last sexual assault before entering treatment, using a large sample of male and female survivors.

This is the first of several studies that will examine several correlates of sexual abuse and sexual assault.

This study focuses on data based on a large sample of children and adults who sought therapy for their sexual abuse or assault; these include many variables, such as the sex of the survivors, their age at the time of admission to therapy, their age at the time of the first sexual assault, and their age at the time of the last sexual assault. This study examines the differences between male and female survivors of sexual abuse and sexual assault regarding these correlates. The more general term of sexual assault is defined as any physical contact between adults (aged 18 years and older) that was traumatic and sexual in nature (kissing; fondling; oral sex; and digital, vaginal, and anal penetration) where consent was not given. When the sexual assault is committed against a minor, it is termed sexual abuse. Sexual abuse is defined as any physical contact with a minor (child under 18 years of age) that was traumatic and sexual in nature (kissing; fondling; oral sex; and digital, vaginal, and anal penetration) and was perpetrated by a blood relative, caregiver, person in a position of responsibility or control, friend, acquaintance, or date. The term *sexual assault* is inclusive of sexual abuse. Depending on the age of the survivors, an act of sexual assault may be termed as an act of sexual abuse. The term *sexual assault* is used throughout the text to refer to the act of sexual assault against anyone of any age, with the understanding that such an act is defined as sexual abuse when it is perpetrated against a person under the age of 18 years.

Although the data set is dated, there is much to be learned by examining and reporting the patterns of the relationships between these correlates. First, this examination can provide a snapshot of the prevailing patterns of relationships between these correlates before and during the period of data collection. Second, it can provide a basis for comparisons with more recent data and help establish a meaningful trend. Third, it can emphasize the importance of studying these relationships so that we may be better able to design targeted and more efficient prevention and intervention programs. Fourth, it can be used to argue for continuous funding using empirically informed prevention and intervention proposals.

Methods

Procedure

Eight sexual assault centers in the province of Alberta, Canada, participated in collecting the data between 1994 and 2003. These centers serve small, large, rural, and urban areas with populations of between 14,000 and 900,000 people. All centers reported data on a total of 5314 people, of whom 4317 were sexually abused or assaulted and sought therapy for the sexual abuse or assault. The archival data used in this study are based on a questionnaire, which was administered and collected under the supervision of the author from the eight sexual assault centers. The data are based on the responses to the questionnaire provided by the survivors of sexual abuse and sexual assault who sought help from these centers.

Therapists who collected the data were instructed to complete the questionnaire as soon as the information was available and

only after clients were comfortable, were informed of the purpose of the data collection, and had signed the informed consent form. Therapists were also instructed to ensure that their clients understood that intervention was not contingent or related to the data collection and that clients could refuse to be included in the survey and could withdraw their consent at any time.

Often, clients who approached these sexual assault centers for help were in crisis and needed immediate assistance. In consideration of this fact, it was decided not to ask those clients to complete the questionnaire. Clients were informed of the questionnaire only when the therapists thought it was appropriate, within the first 3 to 6 sessions, and the clients' consent was sought. A copy of the questionnaire was completed by the clients' therapist based on the clients' responses, although in some cases, and when appropriate, the client completed the questionnaire.

The completed questionnaires were sent to the author on a monthly basis. The data were entered into a database over several years by several people under the supervision of the author. Except for the respective therapists of the clients, the data were collected anonymously, clients' anonymity and confidentiality were maintained at all times, and no identifying information was extracted from the clinical files and included in the questionnaire except for the information contained in the questionnaire. Clients were informed about and consented to the data collection and the potential use of this data for funding, research, and publication. All clients signed an informed consent form for treatment as well as an informed consent form for the data collection. In cases where children were involved, the guardian of the child signed the consent form.

Some clients did not agree to participate, and not every therapist, although they were encouraged, diligently completed the questionnaire for every client. Therefore, not all survivors who received therapy received the questionnaire. The number of people who completed the questionnaire relative to the number of people seen by the centers is unknown. However, there is no reason to believe that those who did not agree to participate or for whom data were not collected were different from those for whom data were collected. Given the size of the sample, it is

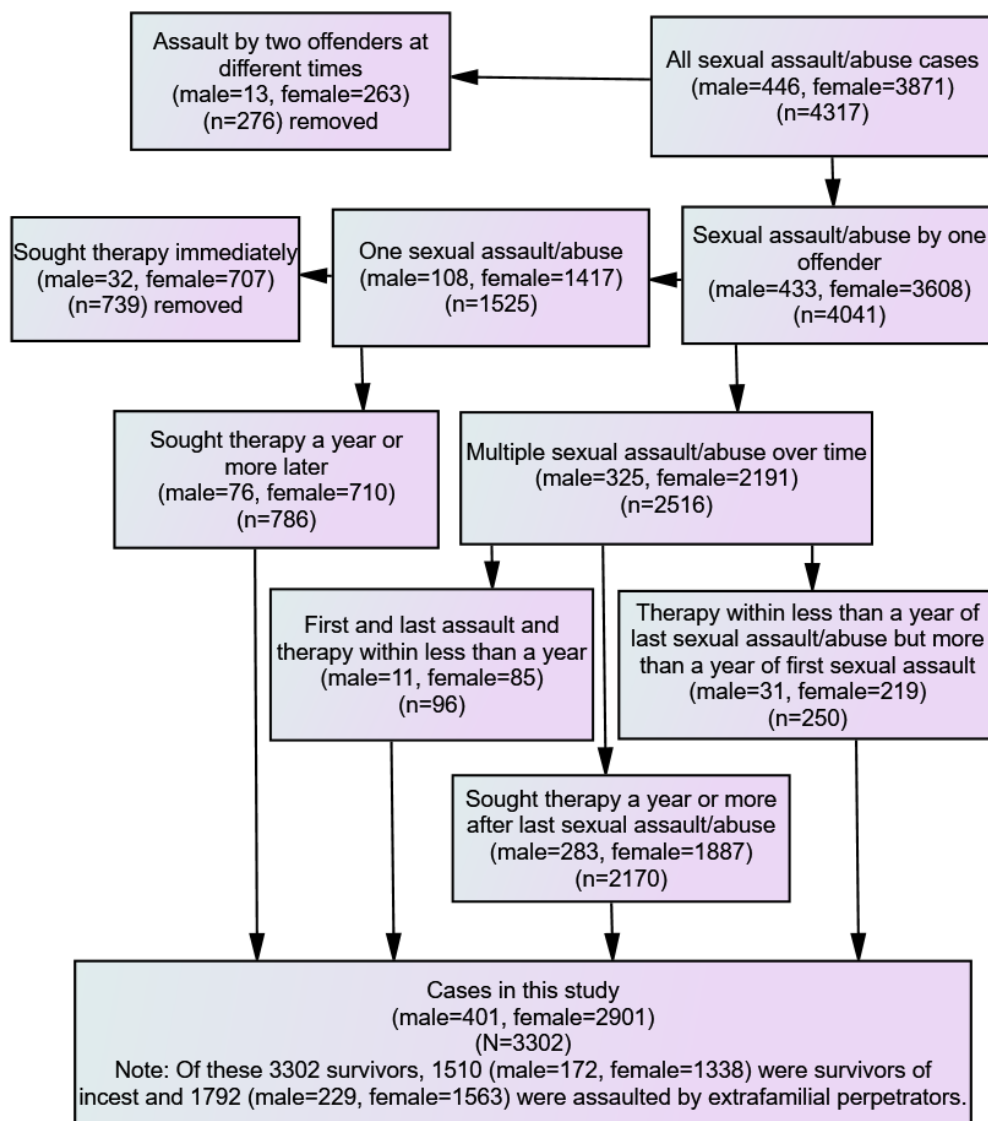
reasonable to conclude that the data accurately reflect those who sought therapy at that time in those geographical areas.

Questionnaire

The questionnaire was designed by the author and completed by the clients and their therapists who were working at these centers. The questionnaire included items that gathered information about the sex of the survivor, age at the time of admission to therapy, age at the time of the first sexual assault, age at the time of the last sexual assault, sex of the perpetrator, age of the perpetrator, survivor's relationship to the perpetrator, duration of the abuse, number of perpetrators, and type of threat used. The items in the questionnaire were developed collaboratively between the author and the therapists working at the sexual assault centers. Some questions were already part of the intake and information gathering processes at these centers.

Participants

As shown in [Figure 1](#), a total of 4317 survivors of sexual abuse or sexual assault completed the questionnaire. Survivors who were sexually abused or assaulted by two different perpetrators at two different times ($n=276$) were removed from the analysis. Survivors who were sexually assaulted once and sought therapy immediately or within days of the assault ($n=739$) were also removed from the analysis. The removal of these 2 groups of survivors ($n=1015$) left 3302 survivors to be the focus of this work. These survivors included those who were sexually assaulted once and sought therapy 1 year or more later ($n=786$) and those who experienced multiple incidents of sexual abuse or assault over an extended period of less than 1 month to more than 15 years ($n=2516$). The latter group, those with extended sexual abuse history, fell into 1 of 3 groups depending on the time they waited to seek help: those who experienced their first and last sexual assault and sought therapy within 1 year ($n=96$), those who sought therapy within less than 1 year of their last sexual assault but who experienced their first sexual assault more than 1 year ago ($n=250$), and those who sought therapy more than 1 year after the time of their last sexual assault ($n=2170$). Furthermore, of the 3302 survivors, 1338 (40.52%) females and 172 (5.2%) males were survivors of incest, whereas 1563 (47.33%) females and 229 (6.9%) males were survivors of extrafamilial perpetrators.

Figure 1. The process of selection of the study participants.

Analysis

The first part of the analysis in this study examined the sex differences of the survivors. The second part investigated the differences between males and females on the basis of the age at the time of admission to therapy, at the time of the first sexual assault, and at the time of the last sexual assault. The data were analyzed using a combination of descriptive statistics (means, standard deviations, percentages, histograms) and, where appropriate, univariate analysis using the *t* test and Cohen *d* effect size to determine any significant differences between the ages of survivors at different times. All analyses were conducted using SPSS, version 25 (IBM Corporation).

Results

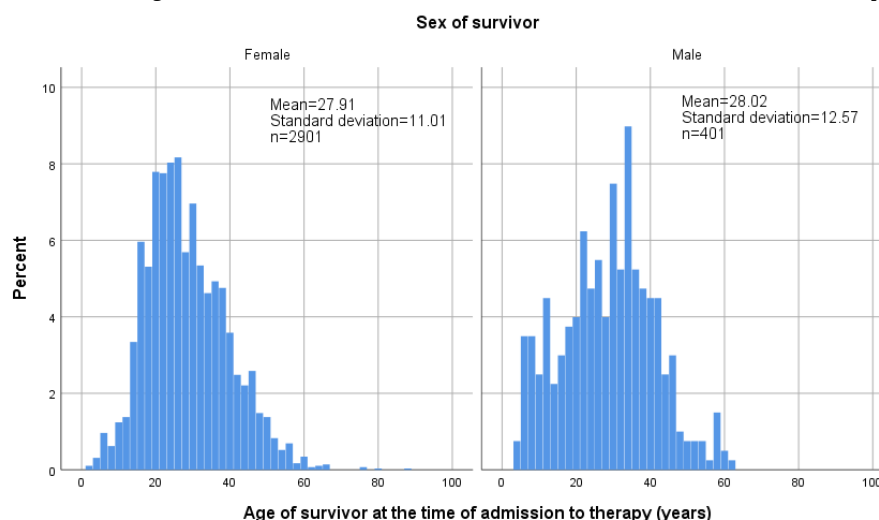
Sex of Survivors

The population of this study was 3302 survivors of sexual abuse or assault, of whom 2901 (87.86%) were female and 401

(12.1%) were male. On average, over the 8 years of data collection, for every 7 female survivors, 1 male survivor sought therapy.

Age of Survivors at the Time of Admission

The age of the survivors at the time of admission to therapy ranged from 2 to 88 years, with a mean age of 27.93 (SD 11.21) years. The median age at the time of admission was 26 years, and the mode was 23 years. The age of the male survivors at the time of admission to therapy ranged from 4 to 62 years, with a mean age of 28.02 (SD 12.57) years. The age of female survivors at the time of admission to therapy ranged from 2 to 88 years, with a mean age of 27.91 (SD 11.01) years. Frequency distributions of the age of male and female survivors at the time of admission to therapy are shown in [Figure 2](#).

Figure 2. Frequency distributions of the age of male and female sexual assault survivors at the time of admission to therapy.

To investigate these frequency distributions, the data were separated into several age groups for male and female survivors: young children (1-6 years old), children (7-12 years old), adolescents (13-17 years old), young adults (18-29 years old), and adults (30 years old and over), as shown in Table 1. Young male children accounted for 4.2% of all male clients (17/401), while young female children accounted for 1.37% of all female clients (40/2901). Male children aged 7-12 years accounted for 10.5% of all male clients (42/401), whereas female children of this age accounted for 3.24% of all female clients (94/2901). Male adolescents accounted for 6.7% of all male clients (27/401), whereas female adolescents accounted for 12.20% of female clients (354/2901).

Calculations of the odds ratios (ORs) at the time of admission to therapy for male and female survivors in different age groups showed that the odds of being an older child (age 7-12 years) were approximately 5% lower for females than males, OR 0.95

(95% CI 0.5-1.9); the proportion of older children aged 7-12 years to younger children aged 1-6 years for females and males is $(94/40) / (42/17) = 0.95$. However, when adolescents aged 13 to 17 years were compared with children aged 1 to 12 years, the odds of being an adolescent girl were approximately 6 times greater than those of being a boy between 1 and 12 years of age (OR 5.8, 95% CI 3.5-9.5); $(354/134) / (27/59) = 5.8 \approx 6$.

Further examination of Table 1 reveals a noticeable difference between young adult and adult male and female survivors. For the entire female sample, just under one-half (1226/2901, 42.26%) are aged between 18 and 29 years, and over one-third (1187/2901, 40.92%) are aged 30 years and older, whereas almost one-third (125/401, 31.2%) of the entire male sample were aged between 18 and 29 years and just under one-half (190/401, 47.4%) were aged 30 years and older at the time of admission to therapy.

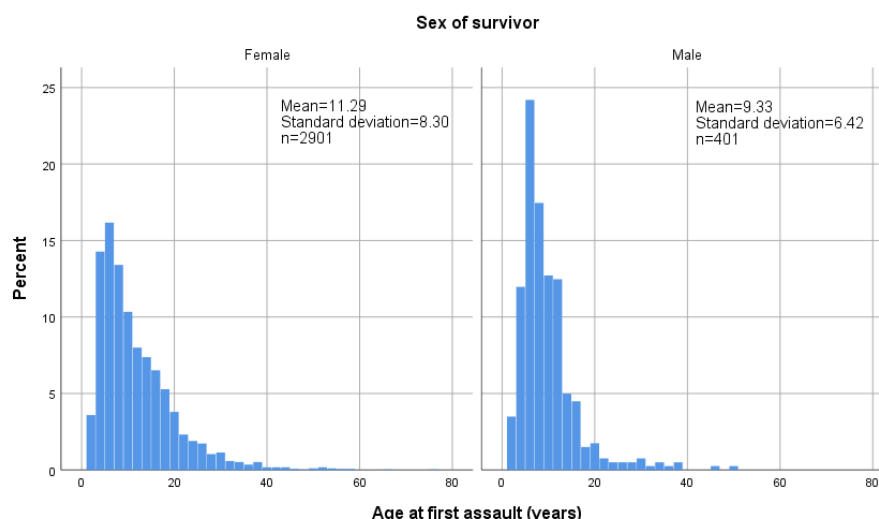
Table 1. Percentages of male and female sexual assault survivors by age group at the time of admission to therapy (N=3302).

Age at admission (years)	Value, n (%)	
	Male (n=401)	Female (n=2901)
1-6	17 (4.2)	40 (1.4)
7-12	42 (10.5)	94 (3.2)
13-17	27 (6.7)	354 (12.2)
18-29	125 (31.2)	1226 (42.3)
≥30	190 (47.4)	1187 (40.9)

Age at First Assault (Age of Onset)

The age of onset at which the first sexual assault occurred was reported to be between 2-6 years by 1146 (34.71%), 7-12 years by 1092 (33.07%), 13-17 years by 525 (15.90%), 18-29 years by 418 (12.66%), and 30 years and older by 121 (3.66%) of the 3302 survivors. The ages of onset ranged from 2 to 76 years, with a mean age of 11.05 (SD 8.12) years. The mode and the

median age of onset were 5 and 10 years, respectively. The inclusion of cases in which the age of onset was after childhood inflated the mean age of onset. By restricting the age of onset to 12 years and younger, the mean age of onset was found to be 6.71 (SD 2.86) years. Frequency distributions of the ages of male and female survivors at the time of the first sexual assault are shown in Figure 3.

Figure 3. Frequency distributions of the age of male and female sexual assault survivors at the time of the first sexual assault.

The age of onset was separated into several age groups for male and female survivors, as shown in Table 2. Among the 401 male survivors, 82.3% (n=330) reported that they had experienced their first sexually abusive act between the ages of 2 and 12 years (n=159, 39.7%, for 1-6 years and n=171, 42.6% for 7-12 years), whereas 1908 of the 2901 female survivors (65.77%) reported that they had experienced their first sexually abusive act between the ages of 2 and 12 years (n=987, 34.02%, for 1-6 years and n=921, 31.75%, for 7-12 years). During adolescence, between the ages of 13 and 17 years, 9.7% (39/401) of male survivors and 16.75% (486/2901) of female survivors reported being sexually assaulted for the first time. Of the entire sample, 8.0% (32/401) of male survivors and 17.48% (507/2901) of female survivors reported experiencing their first sexual assault after the age of 17 years. The odds of a female survivor

experiencing her first sexual assault during childhood as opposed to adolescence were approximately 4 to 1 ($1901 \div 486 = 3.91$), and the odds for a male experiencing his first sexual assault during childhood as opposed to adolescence were approximately 9 to 1 ($330 \div 39 = 8.46$). That is, for every female survivor in the sample who was first assaulted in adolescence, there were 4 female survivors who were first assaulted in childhood, and for every male survivor who was first assaulted in adolescence, there were 9 male survivors who were first assaulted in childhood. Taking the ratio of these two ratios showed that the odds that males would experience their first sexual assault in childhood were about twice those for females. Male survivors were 2 times more likely than female survivors to experience their first sexual assault in childhood.

Table 2. Percentages of male and female survivors by age of onset (N=3302).

Age at first assault (years)	Value, n (%)	
	Male (n=401)	Female (n=2901)
1-6	159 (39.7)	987 (34.0)
7-12	171 (42.6)	921 (31.7)
13-17	39 (9.7)	486 (16.8)
18-29	23 (5.7)	395 (13.6)
≥30	9 (2.2)	112 (3.9)

Age at First Assault in Relation to Age at Admission to Therapy

The age groups at the time of admission to therapy and the age groups at the time of the first sexual assault for male and female survivors were cross-tabulated, as shown in Table 3. The diagonal of this table represents the number of survivors who sought therapy (and therefore likely came to the attention of the system) during the same period when the first sexually assaultive act occurred. Examination of Table 3 shows that 36.7% of

female adolescents (130/354) versus 19% of male adolescents (5/27) at the time of admission were first assaulted between the ages of 13 and 17 years. The remaining 63.3% of female (224/354) and 81% of male (22/27) adolescents at the time of admission to therapy reported being first assaulted between the ages of 2 and 12 years. For the 30 years and older age group, 90.56% of women (1075/1187) and 95.3% of men (181/190) were seeking therapy for sexual assaults that first occurred between the ages of 2 and 29 years.

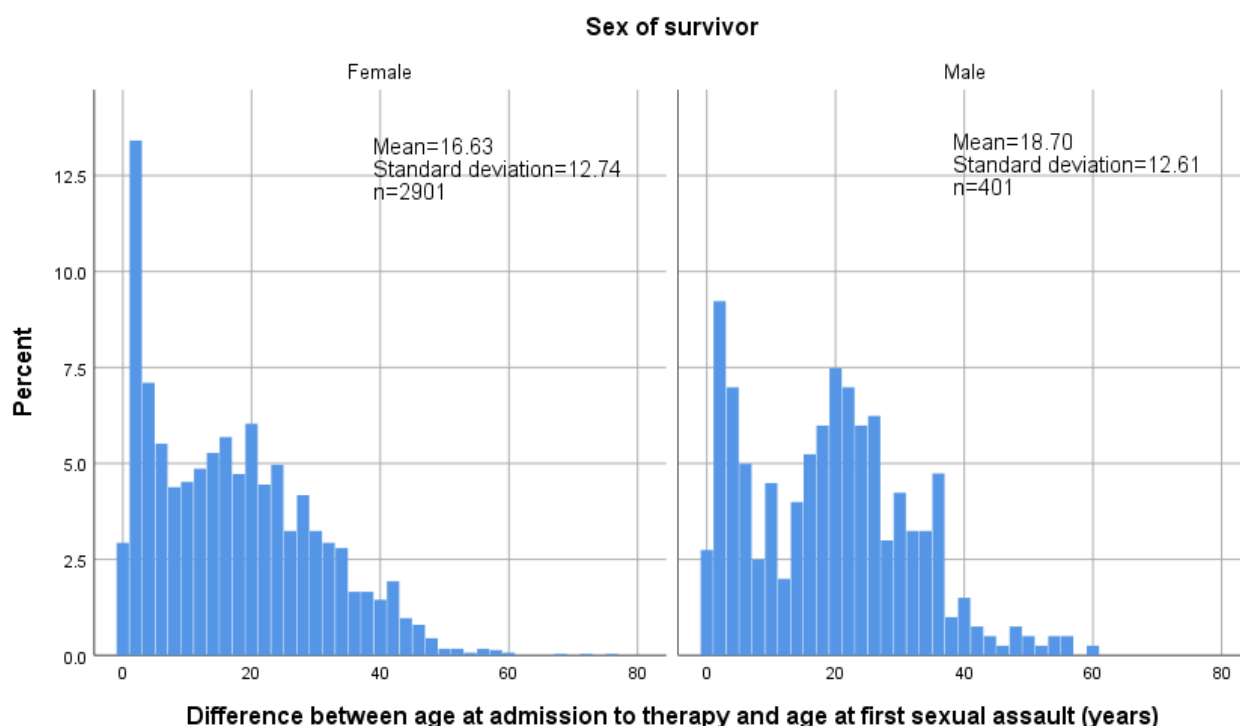
Table 3. Age at admission to therapy by age at first sexual assault for male and female survivors of sexual assault (N=3302).

Age at admission to therapy	Age at first sexual assault (years)											
	Child (1-6)		Child (7-12)		Adolescent (13-17)		Young adult (18-29)		Adult (≥30)		Total	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
1-6 years												
Count, n	40	17	0	0	0	0	0	0	0	0	40	17
Within age at admission group (%)	100	0	0	0	0	0	0	0	0	0	100	100
Within age groups at first assault (%)	4.05	10.69	0	0	0	0	0	0	0	0	1.38	4.24
Proportion of total (%)	1.38	4.24	0	0	0	0	0	0	0	0	1.38	4.24
7-12 years												
Count, n	41	25	53	17	0	0	0	0	0	0	94	42
Within age at admission group (%)	43.62	59.52	56.38	40.48	0.0	0.0	0.0	0.0	0.0	0.0	100	100
Within age groups at first assault (%)	4.15	15.72	5.75	9.94	0.0	0.0	0.0	0.0	0.0	0.0	3.24	10.47
Proportion of total (%)	1.41	6.23	1.83	4.24	0.0	0.0	0.0	0.0	0.0	0.0	3.24	10.47
13-17 years												
Count, n	78	11	146	11	130	5	0	0	0	0	354	27
Within age at admission group (%)	22.03	40.74	41.24	40.74	36.72	18.52	0	0	0	0	100	100
Within age groups at first assault (%)	7.90	6.92	15.85	6.43	26.75	12.82	0	0	0	0	12.20	6.73
Proportion of total (%)	2.69	2.74	5.03	2.74	4.48	1.25	0	0	0	0	12.20	6.73
18-29 years												
Count, n	367	53	361	49	235	14	263	9	0	0	1226	125
Within age admission group (%)	29.93	42.40	29.45	39.20	19.17	11.20	21.45	7.20	0	0	100	100
Within age groups at first assault (%)	37.18	33.33	39.20	28.65	48.35	35.90	66.58	39.13	0	0	42.26	31.17
Proportion of total (%)	12.65	13.22	12.44	12.22	8.10	3.49	9.07	2.24	0	0	42.26	31.17
≥30 years												
Count, n	461	53	361	94	121	20	132	14	112	9	1187	190
Within age admission group (%)	38.84	27.89	30.41	49.47	10.19	10.53	11.12	7.37	9.44	4.74	100	100
Within age groups at first assault (%)	46.71	33.33	39.20	54.97	24.90	51.28	33.42	60.87	100	100	40.92	47.38
Proportion of total (%)	15.89	13.22	12.44	23.44	4.17	4.99	4.55	3.49	3.86	2.24	40.92	47.38
Total												
Count, n	987	159	921	171	486	39	395	23	112	9	2901	401
Within age admission group (%)	34.02	39.65	31.75	42.64	16.75	9.73	13.62	5.74	3.86	2.24	100	100
Within age groups at first assault (%)	100	100	100	100	100	100	100	100	100	100	100	100
Proportion of total (%)	34.02	39.65	31.75	42.64	16.75	9.73	13.62	5.74	3.86	2.24	100	100

Another approach to analyzing the data was to examine histograms of the difference between the age at admission and the age of the first assault and plots of the difference between the age at admission and the age of the first assault against the age at admission for male and female survivors. The frequency distributions of the difference between the age at admission and the age at first sexual assault for males and females are shown

in Figure 4. It appears that only 8.5% (34/401) of male survivors sought therapy within the first 2 years of the first sexual assault, and 19.0% (76/401) within 5 years. The majority (325/401, 81.0%) waited for up to 60 years before they sought help, with 35.2% (141/401) waiting for 16 to 26 years before they sought help.

Figure 4. Frequency distribution of the difference between age at the time of admission and age at the time of first sexual assault for male and female survivors of sexual assault.



On the other hand, as shown in Figure 3, for females, approximately 15.83% (331/2901) of female survivors sought help within the first two years after the first sexual assault and about 32.52% (680/2901) within 5 years. The majority (1411/2901, 67.48%) waited for up to 76 years before they sought help, with 38.31% (801/2901) waiting for 16 to 26 years before they sought help. Clearly, more males waited a longer time than females to seek help after they were first sexually assaulted. The mean time difference between the time of admission to therapy and the time of the first sexual assault was 18.70 (SD 12.61) years for males and 16.63 (SD 12.74) years for females. The difference between these two means is statistically significant ($t_{3300}=3.06$, $P=.002$, two-tailed), and the effect size (Cohen $d=0.16$, 99% CI 0.03-0.30) suggests a small but real nontrivial effect.

Scatterplots of the difference between the age at admission to therapy and the age at first sexual assault against the age at admission to therapy and the age at first sexual assault for male and female survivors are shown in Figures 5 and 6, respectively. The horizontal line at zero in Figure 5 represents the zero difference, which shows the male and female survivors across all ages who sought therapy soon after their first sexual assault. Moving up along the vertical axis, the difference between the age at which therapy was sought and the age at which the first act of sexual assault occurred increases, which is reflective of those who sought therapy after some time had passed since they experienced the first act of sexual assault. Figure 5 shows very

similar patterns for males and females, a positive linear relationship between the age at which therapy was sought and the number of years that had passed since experiencing the first act of sexual assault (Pearson $r=0.75$, $P<.001$), and that the majority of victims waited a long time after they were first sexually assaulted to seek therapy, with 36.9% (148/401) of males and 47.98% (1392/2901) of females waiting for up to 15 years to seek therapy. This leaves a majority of 63.1% of males and 52.02% of females who waited for over 15 years before seeking help.

The horizontal line at zero in Figure 6 represents the zero difference, which shows the male and female survivors who sought help soon after their first sexual assault. Moving up along the vertical axis, the difference between the age at which therapy was sought and the age at which the first act of sexual assault occurred increases, which is reflective of those who sought therapy after some time had passed since they experienced the first act of sexual assault. Figure 6 shows very similar patterns for males and females: a large proportion of survivors who were first sexually assaulted during the first 20 years of life waited a long time before seeking therapy; the older the survivors at the time of the first sexual assault, the more likely they were to seek therapy sooner than later; large proportions of males and females who were first sexually assaulted before the age of 20 years waited for more than 15 years before seeking therapy; and females who were first sexually assaulted after the age of 20 years were far more likely to seek therapy within 10 years of the assault.

Figure 5. Scatterplot of the difference between the age at admission and the age at first sexual assault against the age at admission for males and female survivors of sexual assault.

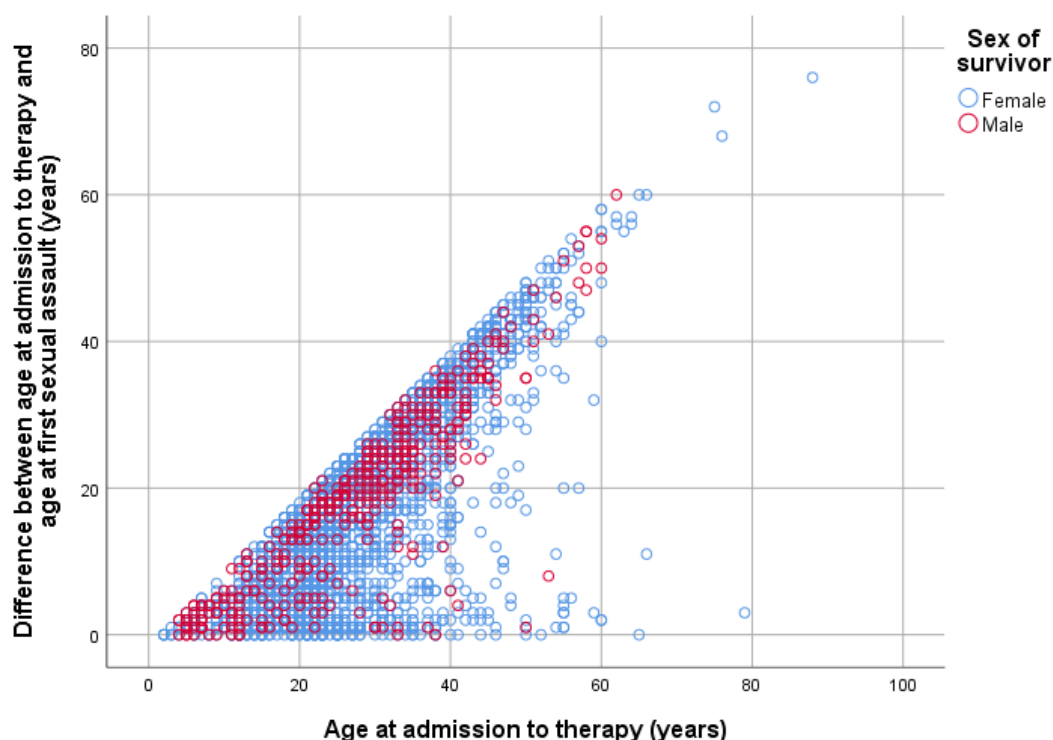
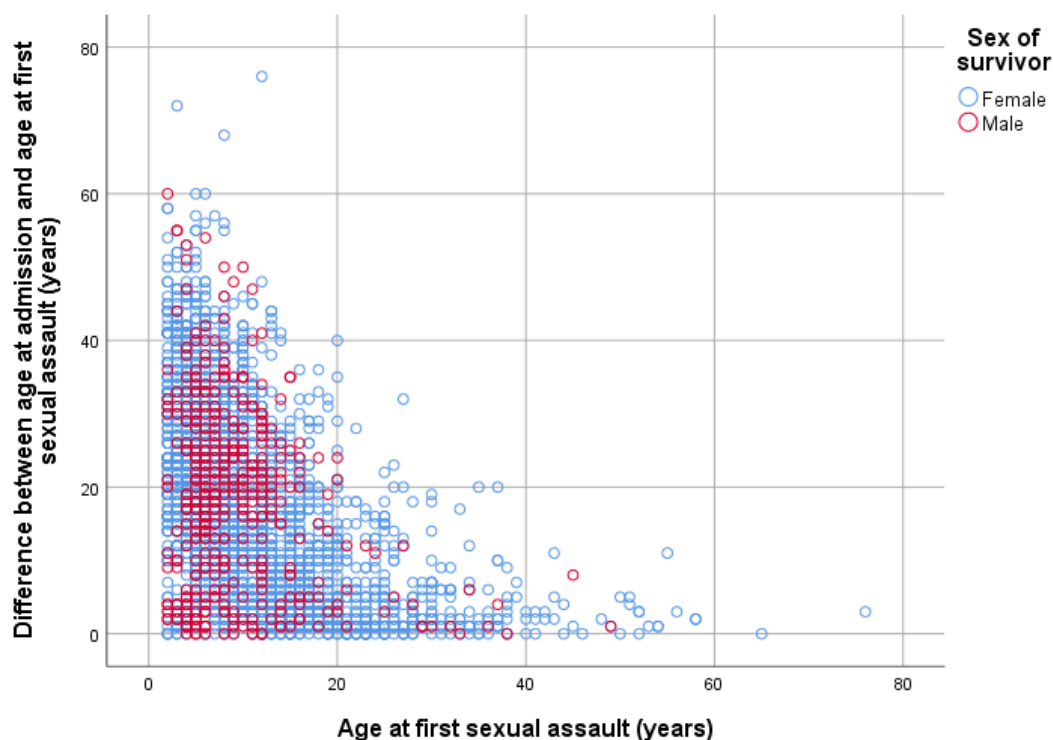


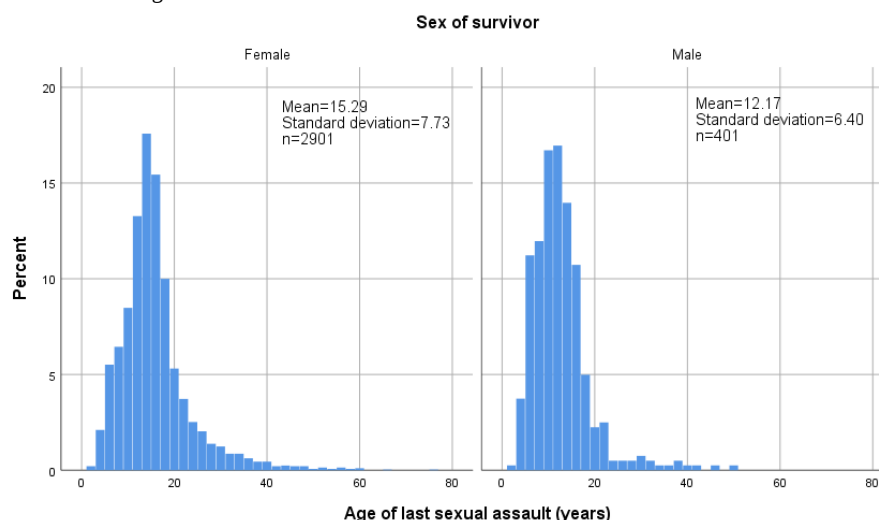
Figure 6. Scatterplot of the difference between the age at admission and the age at first sexual assault against the age at first sexual assault for male and female survivors of sexual assault.



Age at Last Assault

The age at which the 3302 survivors experienced their last sexual assault before seeking therapy was reported to be between 2 and 6 years by 288 (8.72%), 7 and 12 years by 1001 (30.31%), 13 and 17 years by 1235 (37.40%), 18 and 29 years by 606

(18.35%), and 30 years and older by 172 (5.21%). The ages at the last sexual assault ranged from 2 to 76 years, with a mean age of 14.91 (SD 7.65) years. The mode and the median age of the last sexual assault were 13 and 14 years, respectively. Frequency distributions of the age of male and female survivors at the time of the last sexual assault are shown in [Figure 7](#).

Figure 7. Frequency distributions of the age of male and female survivors of sexual assault at the time of last sexual assault.

The sample was separated into five groups based on the age of last sexual assault for male and female survivors, as shown in Table 4. Overall, 60.8% of all males (244/401) and 36.02% of all females (1045/2901) reported that their last sexual assault occurred between the ages of 2 and 12 years. Another 28.2% of all male survivors (113/401) and 38.68% (1122/2901) of all female survivors reported that their last sexual assault occurred between the ages of 13 and 17 years. Those who reported that their last sexual assault occurred after the age of 18 years comprised 11.0% of all male survivors (44/401) and 23.58%

(684/2901) of all female survivors. Males reporting their last sexual assault to have occurred between the ages of 2 and 12 years outnumbered females by approximately 2 to 1. In contrast, females reporting that their last sexual assault to have occurred after the age of 18 years outnumbered males by approximately 2 to 1. The 13 to 17 years at last sexual assault age group was the transitional group, wherein the proportion of females reporting sexual assaults started to increase relative to that of males.

Table 4. The number of male and female sexual assault survivors by age group at the time of the last sexual assault (N=3302).

Age at last sexual assault (years)	Value, n (%)	
	Male (n=401)	Female (n=2901)
1-6	61 (15.2)	227 (7.8)
7-12	183 (45.6)	818 (28.2)
13-17	113 (28.2)	1122 (38.7)
18-29	32 (8.0)	524 (18.1)
≥30	12 (3.0)	160 (5.5)

Table 5 shows the cross-tabulation of the age groups at the time of admission to therapy with the age groups at the time of last sexual assault for male and female survivors. The diagonal of this table represents the number of survivors who sought therapy (and therefore likely came to the attention of the system) during the same period when the last sexually abusive act occurred. Examination of Table 5 shows that for survivors between the ages of 7 and 12 years at the time of admission to therapy, three times as many girls (69/94, 73%) were seeking help for assaults that last occurred during the same period than for assaults that last occurred between the ages of 2 and 6 years (25/94, 27%). For boys aged 7 to 12 years at the time of therapy, 2.5 times as many (30/42, 71%) were seeking help for assaults that last occurred during the same period than for assaults that last occurred between the ages of 2 and 6 years (12/42, 29%). For

adolescents between the ages of 13 and 17 years at the time of therapy, 63.6% (225/354) of girls versus 30% (8/27) of boys were actually last assaulted during the same period. The remaining 36.4% (129/354) of girls and 70% (19/27) of boys reported their last assault to have occurred between the ages of 2 and 12 years. For young adults between the ages of 18 and 29 years at the time of therapy, 30.34% (372/1226) of women and 12.8% (16/125) of men were last assaulted during the same period. The remaining 69.66% (854/1226) of women and 87.2% (109/125) of men reported that they were last assaulted between the ages of 2 and 17 years. For those aged 30 years and older, 86.52% (1027/1187) of women and 93.7% (178/190) of men were seeking therapy for sexual abuse or assault that last occurred between the ages of 2 and 29 years.

Table 5. Age at admission to therapy by age at last sexual assault for male and female sexual assault survivors.

Age at admission	Age at last sexual assault (years)											
	1-6		7-12		13-17		18-29		≥30 years		Total	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
1-6 years												
Count, n	40	17	0	0	0	0	0	0	0	0	40	17
Within age at admission group (%)	100	100	0	0	0	0	0	0	0	0	100	100
Within recent assault groups (%)	17.62	27.87	0	0	0	0	0	0	0	0	1.38	4.24
Proportion of total (%)	1.38	4.24	0	0	0	0	0	0	0	0	1.38	4.24
7-12 years												
Count, n	25	12	69	30	0	0	0	0	0	0	94	42
Within age at admission group (%)	26.60	28.57	73.40	71.43	0	0	0	0	0	0	100	100
Within recent assault groups (%)	11.01	19.67	8.44	16.39	0	0	0	0	0	0	3.24	10.47
Proportion of total (%)	0.86	2.99	2.38	7.48	0	0	0	0	0	0	3.24	10.47
13-17 years												
Count, n	20	6	109	13	225	8	0	0	0	0	354	27
Within age at admission group (%)	5.65	22.22	30.79	48.15	63.56	29.63	0	0	0	0	100	100
Within recent assault groups (%)	8.81	9.84	13.33	7.10	20.05	7.08	0	0	0	0	12.20	6.73
Proportion of total (%)	0.69	1.50	3.76	3.24	7.76	2.00	0	0	0	0	12.20	6.73
18-29 years												
Count, n	67	14	348	64	439	31	372	16	0	0	1226	125
Within age at admission group (%)	5.46	11.2	28.38	51.2	35.81	24.8	30.34	12.80	0.0	0.0	100	100
Within recent assault groups (%)	29.52	22.95	42.54	34.97	39.13	27.43	64.81	50.00	0.0	0.0	42.26	31.17
Proportion of total (%)	2.31	3.49	12.00	15.96	15.13	7.73	12.82	3.99	0.0	0.0	42.26	31.17
≥30 years												
Count, n	75	12	292	76	458	74	202	16	160	12	1187	190
Within age at admission group (%)	6.32	6.32	24.60	40	38.58	38.95	17.02	8.42	13.48	6.32	100	100
Within recent assault groups (%)	33.04	19.67	35.70	41.53	40.82	65.49	35.19	50.00	100	100	40.92	47.38
Proportion of total (%)	2.59	2.99	10.07	18.95	15.79	18.45	6.96	3.99	5.52	2.99	40.92	47.38
Total												
Count, n	227	61	818	183	1122	113	574	32	160	12	2901	401
Within age at admission group (%)	7.82	15.21	28.18	45.64	38.68	28.18	19.79	7.98	5.52	2.99	100	100
Within recent assault groups (%)	100	100	100	100	100	100	100	100	100	100	100	100
Proportion of total (%)	7.82	15.21	28.18	45.64	38.68	28.18	19.79	7.98	5.52	2.99	100	100

Histograms of the difference between the age at admission to therapy and the age at which the last sexual assault occurred for male and female survivors are shown in Figure 8. For male survivors, approximately 10.5% (42/401) sought therapy within 1 year of their last sexual assault, and approximately 20.2% (81/401) sought help within 3 years of the last assault. The majority (79.8%) waited up to 53 years before they sought help, with 44.9% (180/401) waiting for 10 to 28 years before they sought help.

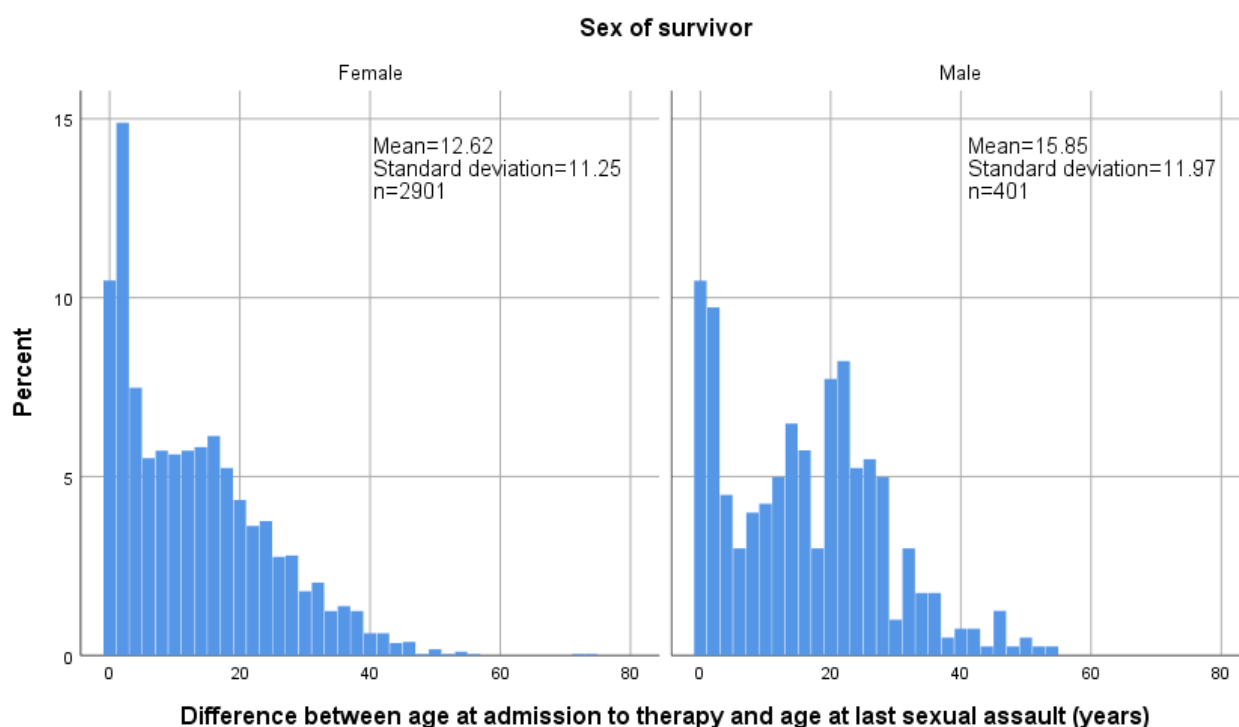
On the other hand, 10.48% of female survivors (304/2901) sought help within 1 year of their last sexual assault, and 25.37% (736/2901) sought help within 3 years of the last sexual assault.

The majority (74.63%) of females waited up to 73 years after their last sexual assault to seek therapy, with 40.19% (1291/2901) waiting for approximately 10 to 28 years before they sought help. Also, 44.50% of females waited between 6 and 18 years from the last sexual assault to seek therapy. The proportion of females who waited for a longer period than 18 years from the last assault decreased gradually as the waiting period increased.

The average time difference between the age at the time of admission to therapy and the age at the time of the last sexual assault was 15.85 (SD 11.97) years for males and 12.62 (SD 11.25) years for females. The difference between these two

means was statistically significant ($t_{3300}=5.34$, $P<.001$, 2-tailed), with an effect size (Cohen d) of 0.28 (99% CI 0.14-0.42), suggesting a moderate and real nontrivial effect.

Figure 8. Frequency distributions of the difference between the age at the time of admission to therapy and the age at the time of the last sexual assault for males and female survivors of sexual assault.



Scatterplots of the difference between the age at admission and the age at last sexual assault against the age at admission and the age at last sexual assault for male and female survivors are shown in Figures 9 and 10, respectively. The horizontal line at zero in Figure 9 represents the zero difference, which shows the males and females who sought therapy soon after their last sexual assault. Moving up along the vertical axis, the difference between the age at which therapy was sought and the age of last assault increases, which is reflective of those who sought therapy after some time had passed since their last sexual assault was experienced. Figure 9 shows very similar patterns for males and females: a positive linear relationship existed between the age at which therapy was sought and the number of years that had passed since experiencing the last act of sexual assault ($r=0.73$, $P<.001$); and one group of all ages sought therapy soon or waited up to 5 years after the last sexual assault, a second group aged 13 to 40 years sought therapy after waiting for up to 25 years from the time of their last sexual assault, and a third group aged 40 years and older at the time of therapy experienced their last sexual assault between the ages of 10 and 15 years.

The horizontal line at zero in Figure 10 represents the zero difference, which shows the male and female survivors who sought help soon after they were last sexually assaulted. As we move up along the vertical axis, the difference between the age at which therapy was sought and the age at which the last sexual

assault occurred increases, which is reflective of those who sought therapy after some time had passed since their last act of sexual assault was experienced. Figure 10 shows that males and females follow the same pattern; that aside from the few who sought therapy soon after being sexually assaulted, the vast majority who were last assaulted between the ages of 2 and 20 years waited decades, up to 50 years, to seek therapy; that those who were last assaulted after age 20 years were more likely to seek therapy within 10 years of the assault; and that the older the person was at the time of the last sexual assault, the more likely that person was to seek therapy sooner than later.

Focusing on the male survivors, Figure 10 shows that very few males sought help soon after their last sexual assault, with the vast majority of male survivors seeking help years after the last sexual assault. It appears that males who experienced their last sexual assault early in life were more likely to seek help sooner, but a large proportion of males who were last sexually assaulted at a young age waited for more than 20 years before seeking help.

Finally, it should be noted that two-thirds of the survivors in the sample were sexually abused and/or assaulted over a period of time. The mean time difference between the age at first assault and the age at last assault for males was 2.85 (SD 3.41) years, and that for females was 4.00 (SD 4.56) years.

Figure 9. Scatterplot of the difference between the age at admission to therapy and the age at last sexual assault against the age at admission to therapy for male and female survivors of sexual assault.

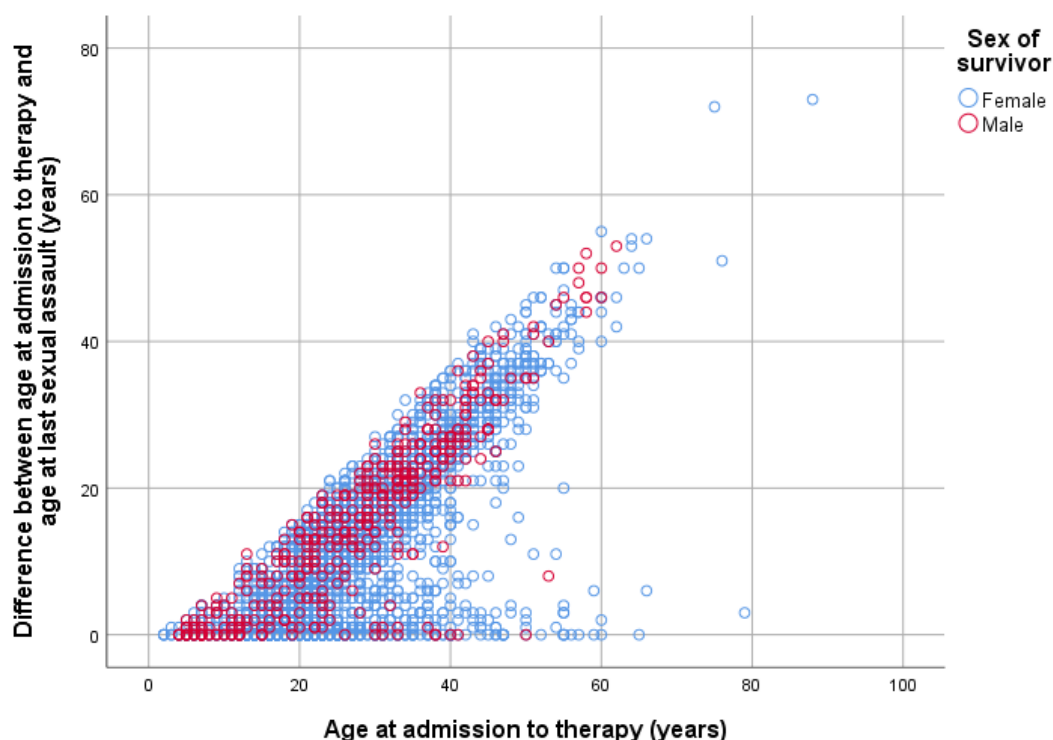
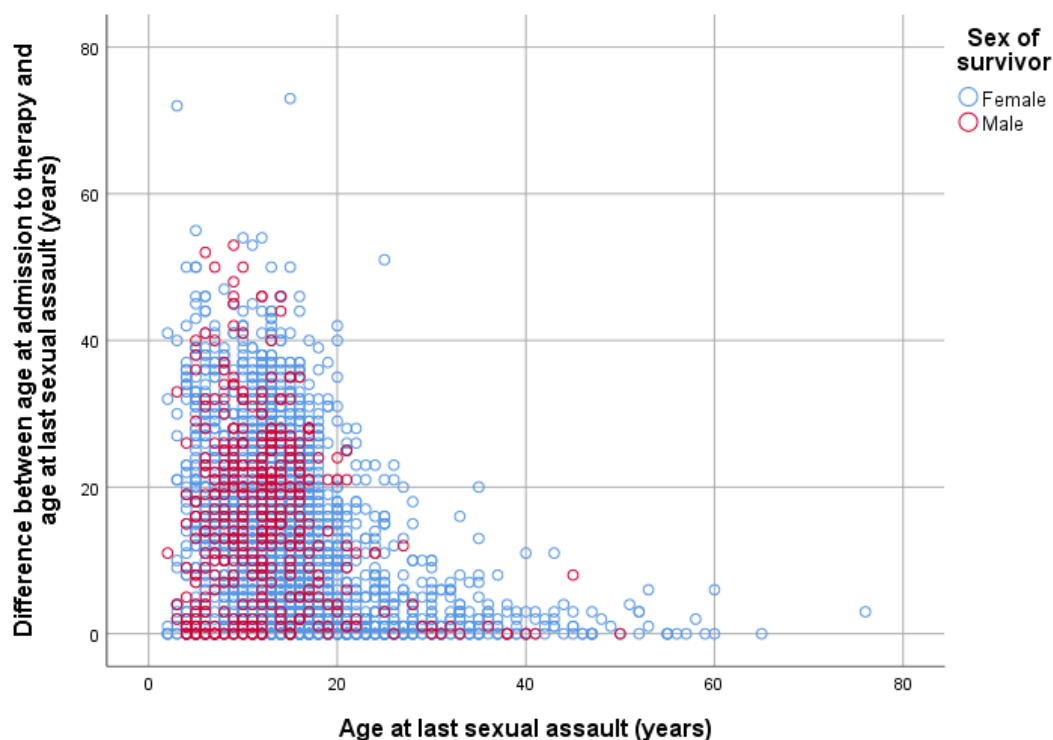


Figure 10. Scatterplot of the difference between the age at admission to therapy and the age at last sexual assault against the age at last sexual assault for male and female survivors of sexual assault.



Discussion

Principal Findings

The purpose of this study was to investigate the differences between male and female survivors of sexual abuse and sexual

assault regarding the age of onset of abuse, the age of last assault, and the age at which the survivors entered therapy. All 3302 participants sought therapy for the first time for their sexual abuse or assault by one offender, who offended against them over a period of time. Those who sought therapy immediately after one sexual assault and those who were

assaulted by two or more offenders at different times were removed from the analysis. The data were collected over a 7-year period from eight sexual assault centers in the province of Alberta, Canada. Sexual abuse was defined as a sexual act with a person under the age of 18 years, whereas sexual assault was defined as a sexual act between persons over the age of 18 years without consent.

The results show that 1 male survivor sought therapy for sexual abuse or assault for every 7 female survivors. This finding is consistent with the general perception that more female than male survivors seek help for their sexual abuse or assault. There is little doubt that females are more inclined to seek help for past and present sexual abuse or assault than males [41,42]. It should be noted that the focus of this study was on those females and males who sought help for their sexual abuse or assault; therefore, it should not be surprising if some results are inconsistent with those of several other studies. Most of those studies surveyed school, college, and university students [11,37,43]; people in the general population shortly or a long time after the discovery of sexual abuse [9,10,29,38,41]; or law enforcement and child services reports of sexual abuse or assault [16-21,25-28]. As such, the sample of this study is restricted to those who sought help, and therefore it cannot be generalized to the population of survivors of sexual abuse and assault. Therefore, the ratio of 7:1 is reflective of those female and male survivors who sought help and not those who reported incidents of sexual abuse and assault.

This large 7:1 ratio in favor of female survivors suggests that there are many male survivors of sexual abuse who are not seeking help. Even if conservative estimates are used, in which the risk of being sexually abused is the same for males and females, or females are at twice the risk of being sexually abused as males [10], the resulting large number of male survivors who are not seeking help and/or are not coming to the attention of the legal and support systems is alarming. It is reasonable to suggest that if males are unlikely to seek help, they are unlikely to report sexual abuse or assault. Indeed, females are more apt to report sexual abuse than males. A study found that 30% of males and 16% of females had never reported their abuse [30], and another argued that males' reluctance to disclose sexual abuse might explain the difference in reporting between males and females [39]. This raises a question: are females truly more vulnerable to be sexually abused, or is the ratio of female to male survivors the result of the male survivors' reluctance to report and/or seek help for the abuse? The collective findings of this study based on the different age groups who sought therapy suggest that both males and females are equally vulnerable to being sexually abused and that males are more vulnerable to being abused at younger ages, whereas females are vulnerable at all ages. Generally, these results are consistent with previous findings [3,23,24,36].

At approximately 28 years of age, the average age of male and female survivors at the time of admission to therapy does not differ. However, although there is a slight difference in the odds (5%) between male and female survivors aged 2 to 12 years at the time of therapy, when adolescents aged 13-17 years were compared with children aged 7-12 years at the time of entry to therapy, the odds of being an adolescent girl were 6 times greater

than those of being a boy between 2 and 12 years of age. These results should not be surprising, as children are likely to be brought to therapy by their caregivers, who are unlikely to treat young male and female survivors differently in terms of seeking medical or psychological help. On the other hand, adolescents are likely to be more in control of disclosure and seeking therapy; therefore, adolescent boys, considering their social upbringing and the societal norms surrounding boys, are less likely to seek therapy. This resistance to therapy seems to decrease after boys leave adolescence.

The age of onset of sexual abuse was reported to be between 2 and 6 years by one-third of the sample, with another one-third reporting the age of onset to be between 7 and 12 years. For 82.3% and 65.77% of male and female survivors, respectively, who reported ages of onset between 2 and 12 years, the average age of onset was 6.71 (SD 2.86) years. These results are consistent with the finding that CSA can begin when children are as young as a few months old and can last well into adulthood, with an average age of onset of approximately 5 (SD 3.7) years [12] and with the finding that the age of onset of sexual abuse for a sample of 246 children was 6.3 (SD 3.5) years [40].

The odds of experiencing the first sexual assault during childhood, as opposed to adolescence, are approximately 4 to 1 for females and 9 to 1 for males, and the odds that males will experience their first sexual assault in childhood are approximately twice those of females. Thus, male survivors are 2 times more likely than female survivors to experience their first sexual assault in childhood. These results are based on the reports made by those who sought therapy and are difficult to compare with the results of other studies in which investigations and disclosures are the basis of the results, such as the findings that substantiated cases of CSA consisted of 69% girls and 31% boys in 1998 [19] and 63% girls and 27% boys in 2003 [36]; the report that females show twice the risk of sexual abuse of males as children and during adolescence [10]; the finding that the CSA female to male ratio was about 2.5 [24]; and the conclusion that females have a 2 to 3 times greater risk of experiencing CSA than males and that 10% of females will experience forced intercourse before the age of 18 years [3].

At the time of admission to therapy, 66% of female and 82% of male adolescents reported being first assaulted between the ages of 2 and 12 years. Only 9% of male and 16% of female survivors sought therapy within the first 2 years of their first sexual assault; meanwhile, 19% of males and 33% of females sought help within 5 years, and 81% of males and 67% of females waited for up to 60 and 76 years, respectively, before they sought help, with 35% of males and 38% of females waiting for 16 to 26 years before they sought help. These results show that the majority of survivors waited for a long time before seeking help and that more males than females waited for longer periods to seek help after they were first sexually assaulted.

On average, the difference between the males' waiting time of 18.70 (SD 12.61) years from the time of the first assault to the time of seeking help and females' waiting time of 16.63 (12.74) years is statistically significant, with a small but real nontrivial effect size.

Positive linear relationships for male and female survivors were found between the age at which therapy was sought and the number of years that passed since the first act of sexual assault was experienced. The older the survivors were at the time of the first sexual assault, the more likely they were to seek therapy sooner. A large proportion of males and females who were first sexually assaulted before the age of 20 years waited for more than 15 years before seeking therapy, and women who were first sexually assaulted after the age of 20 years were far more likely to seek therapy within 10 years of the assault.

The conclusion that adolescents, compared to children, are more likely to have been abused at least 10 times (adolescents, 40%, vs children, 26%) [11] is understandably not supported. In this study, the focus was on those who had experienced sexual abuse involving physical contact, whereas in that study, sexual abuse was experienced at the verbal level [11]. It makes sense that adolescents may experience more verbal sexual abuse than children and, of course, that those who experience such abuse will rarely come to the attention of the system or seek help. On the other hand, when sexual abuse is defined in terms of physical contacts, the results of this study show the same trends as those reported in a study that found children were more likely to be abused than adolescents by a ratio of as much as 9 to 2 [9]. Another disturbing observation that may be made from these results is that far fewer children come to the attention of the system and seek help when they really need it. The vast majority of survivors wait until much later or until they are in their adult years to seek help for past abuse or assault, perhaps when they realize that their past experience is impacting their current life. These results are consistent with the finding that 30% to 80% of survivors do not report until adulthood [31]; the conclusion that 68% reported CSA after adulthood [29]; and the results that males may take up to 10 years to disclose CSA, compared with shorter periods for females [39].

Among the survivors, 1 in 10 males and 1 in 4 females reported their last sexual assault to have occurred after the age of 18 years. Males who were last sexually abused before the age of 12 years outnumbered females by a ratio of 2:1, and females who were last sexually assaulted after the age of 18 years outnumbered males by a ratio of 2:1. These ratios suggest that male children are more vulnerable to being sexually abused before the age of 12, and females are vulnerable to be sexually assaulted after the age of 18 years. Approximately 70% of women and 87% of men aged 18 to 29 years sought therapy for sexual assaults that occurred between the ages of 2 and 17 years. Similarly, 87% of women and 94% of men aged 30 years and older were seeking therapy for sexual assaults that last occurred between the ages of 2 and 29 years. These data suggest that, at least between 1994 and 2003, a large number of people lived in silence with their sexual abuse or assault for many years. It would be useful to know if this attitude of “living in silence” is still prevalent today, considering the amounts of exposure and education that have taken place over the past 15 years.

A statistically significant difference with a moderate real nontrivial effect size was found between male and female survivors for the average time difference between the age of the last sexual assault and the age of seeking therapy. Males waited for an average of approximately 3 years longer to seek

therapy than females. However, males and females appeared to follow a similar pattern in that the vast majority of those who were last assaulted between the ages of 2 and 20 years waited up to 50 years to seek therapy, those who were assaulted after age 20 years were more likely to seek therapy within 10 years of the assault, and the older the survivor was at the time of the last assault, the more likely they were to seek therapy sooner. As was indicated in [39], the reluctance of males to disclose experiences of CSA and sexual assault is reflected by the length of time males take to reveal such experiences. Thus, the difference between males and females in reporting may be due to males' reluctance to disclose CSA experiences.

Limitations

There are some limitations to this study. First, the relatively small size of the male sample compared to that of the female sample poses one limitation. Second, while those who seek therapy and report sexual abuse and sexual assault may be a better and more accurate source of information about the incidence of sexual abuse and assaults, the fact that they are seeking therapy is a limitation. The results of this study are limited to males and females who sought therapy, and the results cannot be generalized to all survivors of sexual abuse. At the time of admission to therapy, proportionately, many more males than females in this sample reported being first assaulted when they were children. The presence of a large percentage of male survivors who reported being first sexually abused during childhood may be reflective of the proportion of male survivors of sexual abuse in the population or reflective of the much higher number of sexually abused male children under the age of 12 years than has been reported.

Third, the sole reliance on the survivors' memories of past sexual abuse and assault imposes another limitation. It is well established that despite their best efforts, individuals' memories are constructed and diluted. Although no details that are most susceptible to memory distortion were used, the ages at which at the first assault and last assault occurred, particularly if historical, may not be accurate.

Fourth, the events the clients described occurred between 1994 and 2003 or before 1994. The time of the collection of the data imposes another limitation. It would be of great interest to compare these results with results based on more recent data. It is to be hoped that progress has been made over the past 25 years, but the question remains: has it?

Conclusions

Eight sexual assault centers saw a total of 4317 survivors in the province of Alberta, Canada. This study focused on a total of 3302 survivors of CSA and/or sexual assault, of whom 2901 (87.86%) were female and 401 (12.14%) were male. Overall, for every male survivor, 7 female survivors sought therapy for their sexual abuse or assault.

At the time of admission to therapy, the proportions of male survivors aged 2 to 6 and 7 to 12 years (4.2% and 10.5%, respectively) were 3 times greater than the same proportions of female survivors (1.38% and 3.24%, respectively). This pattern was reversed for those aged 13 to 17 years and 18 to 29 years, in which the proportions of male survivors (6.7% and 31.2%,

respectively) were one-half to two-thirds those of female survivors (12.20% and 42.26%, respectively). For survivors over 30 years of age, the proportion of males was 47.4%, and the proportion of females was 40.92%.

It appears that a minority of children are seeking help within a short period of being assaulted. Of those male and female survivors between 18 and 29 years of age at admission, 42.40% and 29.93% were first assaulted between the ages of 2 to 6 years, 39.20% and 29.45% were first assaulted between the ages of 7 and 12 years, and 11.20% and 19.17% were first assaulted between the ages of 13 and 17 years. This means that almost 80% of females and 93% of males aged 18 to 29 years sought therapy for sexual abuse and sexual assault that was first experienced when they were children between the ages of 2 and 12 years. It is clear that most adults seek therapy for sexual abuse or assault that occurred many years earlier during childhood.

At the time of the first sexual assault, 39.7% of male and 34.02% of female survivors were between 2 and 6 years old, 42.6% of male and 31.75% of female survivors were between 7 and 12 years old, 9.7% of male and 16.75% of female survivors were between 13 and 17 years old, and 8.0% of male and 17.48% of female survivors were over 18 years old. It seems that as children age, the risk of being assaulted for the first time decreases. That is, males and females are most vulnerable to experiencing their first sexual assault when they are children.

The presence of a large percentage of male survivors who reported being first abused as children is likely not to be reflective of the proportion of male survivors of sexual abuse in the population but rather to be reflective of those who seek therapy for sexual abuse.

Based on reports of the last sexual assault, 15.2% of males and 7.82% of females reported being sexually abused between the ages of 2 and 6 years. Boys between the ages of 7 and 12 years are at the highest risk of sexual abuse, at 45.6% (vs females, at 28.20%), whereas girls between the ages of 13 and 17 years are at the highest risk of sexual abuse at 38.68% (vs boys at 28.2%). Female adolescents as a group are more vulnerable to being sexually assaulted than their male counterparts and any other age group. Females continue to be assaulted more frequently in adulthood than males. Approximately 89% of the male survivors experienced their first sexual abuse before the age of 18 years and 11% experienced it after the age of 18 years, whereas 75% of females experienced their sexual abuse before the age of 18 years and 25% experienced it after the age of 18 years.

Prevention and intervention programs must be made available to all age groups. Intervention programs should start in preschool and continue to grade 12 on a regular and continuous basis, and they should be made part of sex education curricula.

Conflicts of Interest

None declared.

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Abbreviations

CSA: child sexual abuse

OR: odds ratio

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