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Father-daughter incest: Comparison of treated cases to untreated control subjects

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Abstract: Treatment of father daughter incest (FDI) survivors using the victim advocacy/child welfare approach to FDI that predominates today in the US has never been compared to results in untreated control subjects in any published report. In the present study, thirty-two survivors of FDI who received treatment based on the victim advocacy/child welfare approach to FDI were compared to 32 control subjects who did not receive treatment. No significant differences were found using analysis of variance on 21 scales and subscales. Statistical analysis of the data from all 64 of the FDI survivors showed that items reflecting a poor self-image and a history of maternal depression predicted more problematic scores on the depression scale. Those who scored higher on religiosity were less likely to be depressed. Redesigned therapy for FDI aimed, first and foremost, at healing the survivors and validated by prospective randomized trials is needed.

Subjects: Criminology and Criminal Justice; Psychological Science; Cognitive Psychology

Keywords: Father-daughter incest; treatment; depression

Unlike drug companies that must submit proof of efficacy before a drug can be approved for sale to United States of America (US) citizens (U.S. Food and Drug Administration, 2016) there is no

ABOUT THE AUTHOR

The ten authors are all collaborating researchers in an interdisciplinary, on-going, multi-institutional collaborative project involving six different West Virginia campuses (an area somewhat inland near the eastern coast of the USA, usually referred to as "the mid-Atlantic region") which resulted in collection of data from 2,896 female participants in the interval between 2002 and 2018.

PUBLIC INTEREST STATEMENT

Unlike drug companies that must submit proof of efficacy before a drug can be approved for sale to US citizens, no proof of efficacy is required before mental health providers can charge for providing therapy to clients. The standard treatment provided to victims of Father-Daughter Incest (FDI) in the USA (since the 1970's) has never been tested against any control group to find out whether it was effective until the present study. The present study tested the psychological outcome in 32 FDI victims against a control group of 32 FDI victims who had not been treated. There was no significant difference between the treated group and the controls. In a Canadian study, Bagley and LaChance (2000) showed the *Child Sexual Abuse Treatment Program* which provided family therapy for the entire family including the perpetrator-father achieved a significantly improved outcome for the FDI-victims when compared to controls who received standard treatment.

proof of efficacy required before mental health providers can offer and charge for providing therapy to clients. Unfortunately, the hastily-developed victim advocacy/child welfare treatment programs for father-daughter incest (FDI) were not evidence-based, and, furthermore, no prospective studies were initiated in a timely fashion to test the results of treating FDI using the victim advocacy/child welfare approach against outcomes in untreated control subjects or even against alternative methods of treatment. There was a delay of twenty years between passage in the US of the 1974 Child Abuse Prevention and Treatment Act and publication of the first study using a randomized prospective design to evaluate the effectiveness of therapy for any kind of child sexual abuse (CSA), (Hyde, Bentovim, & Monck, 1995). More recently, even the purported beneficial effect of religiosity in preventing depression has been subjected to scientific analysis (e.g., Paine & Sandage, 2017).

The basic idea behind such studies is that any treatment being evaluated must show a statistically significant improvement to be demonstrably better than no treatment at all. Different types of CSA therapy have now been compared to untreated “wait-listed” control subjects or each other in groups of clients who were survivors of CSA of mixed types using a randomized prospective design (e.g., Bohus et al., 2012; Cohen, Deblinger, Anthony, Mannarino, & Steer, 2004; Elkjaer, Kristensen, Mortensen, Poulsen, & Lau, 2014; Hyde et al., 1995; see Saywitz, Mannarino, Berliner, & Cohen, 2000 for review). But, adult outcomes in treated FDI survivors have never been compared to untreated control subjects to measure the effectiveness of therapy for FDI survivors who have experienced the *victim advocacy/child welfare approach* to FDI in the US. The present paper presents the results of the first such study.

Historically, in the US there have been basically two different approaches to addressing cases of father-daughter incest reported to state law enforcement agencies. Both approaches are similar in that they focus on first halting the sexual abuse of the survivor daughter by either removing the perpetrator-father or the survivor-daughter from the nuclear family to halt the abuse. The two programs differed in how they approach two issues that are tightly inter-related: how to deal with the fact that the father has broken the law regarding child sexual abuse (CSA) of his daughter and whether or not to promote early reunification of the nuclear family. The two programs also differed in whether or not the efficacy of the therapy provided was ever evaluated in comparison to untreated control subjects. The *victim advocacy/child welfare approach* is based on the model that FDI is a crime which must be punished. It does *not* promote early reunification of the nuclear family. As will be explained below, the victim advocacy/child welfare approach has superseded an early approach that attempted to reunite the family after treatment. To understand the present state of affairs regarding FDI in the US, it is necessary to understand the history of US law addressing FDI.

In 1974, the Child Abuse Prevention and Treatment Act became US law. This law for the first time made federal CSA grants to states conditional on that state’s reporting known or suspected cases of CSA. All 50 US states soon passed or updated laws mandating reporting of CSA and spelling out long prison sentences for CSA which differed among the 50 states (Adams-Tucker, 1984; Bolton & Bolton, 1990). FDI was included in the mandated reporting of CSA. Most of these laws were in place or revised by 1979 in West Virginia, the source of the data for the present study. For recent examples in West Virginia, a man’s sentence for sexually abusing a girl was up to 330 years (White, 2015a, November 19; White, 2015b, December 31), but a sentence for murder and drugs was only up to 30 years in a case not involving CSA (Pierson, 2018, September 21). The resulting *victim advocacy/child welfare approach* to FDI soon predominated in West Virginia and most of the rest of the US (Maddock & Larson, 1995) as a result of compliance with the mandatory reporting laws.

The victim advocacy/child welfare approach to FDI used in most of the US was developed to optimize the chance of convicting the FDI perpetrator-father of his crime. That approach dictates removal of either the father or the child from the home and prepares the child to testify against

the father. These latter two steps were incorporated into therapy, and then rationalized as good for the young FDI survivors (Adams-Tucker, 1984; Saunders & Meinig, 2000). The demand for therapy for adult survivors of FDI as well as for the young FDI survivors was increased by the high publicity focused on FDI. As a result, FDI therapy has been described in many books and peer-reviewed publications (e.g., Adams-Tucker, 1984; Courtois, 1988; Dolan, 1991; Giarretto, 1978; Meiselman, 1979; Renshaw, 1982; Sheinberg & Fraekel, 2001; Westerlund, 1992).

The *alternative* approach to treating FDI is exemplified by the *Child Sexual Abuse Treatment Program* (CSATP) headed by Giarretto (1978) which began in Santa Clara County, California in 1971. Although the CSATP has been supplanted by the victim advocacy/child welfare approach to FDI in most of the US, it was well studied (e.g., Kroth, 1979), and it has been shown to be superior to the victim advocacy/child welfare approach to FDI in a prospective study (e.g., Bagley & LaChance, 2000).

The CSATP was based on a family systems model and therapy included family therapy for the daughter, the mother, and the perpetrator, as well as the rest of family. The 1971 CSATP-family therapy approach to FDI as the product of a disordered family environment is consistent with the Lewis (2018) integrated theoretical approach to addictions (including those involving illegal sexual behaviors) that views the origin of addictions as a product of learning a dysfunctional way of behaving in response to a sub-optimal environment and the treatment of addictions as requiring modification of the environment to lessen the likelihood of relapses. A major distinction between the CSATP approach to addressing FDI and other contemporary approaches in the US was the CSATP's family systems focus on rehabilitating the perpetrator-father without incarceration, maintaining the marriage in the nuclear family, and reunification of the family. California law contains specific provisions that permit assignment of FDI cases to the CSATP (Giarretto, 1978; Mertens, 1985). The most critical element required before a CSATP for FDI can be established is a pre-trial diversion program which is able to evaluate cases and refer those that are appropriate to a treatment facility which provides the treatments to the FDI family unit (Bagley & LaChance, 2000; Giarretto, 1978; Kroth, 1979). For all practical purposes, attempts to provide family therapy without such judicial cooperation result in being able to only provide therapy to the survivor-daughter, the mother, and the non-survivor siblings (Sheinberg & Fraekel, 2001).

California's CSATP was studied by an independent investigator funded by a grant from the state of California, and the results were published in a 200 page book (Kroth, 1979). Treatment of FDI using the CSATP in California demonstrated statistically significant improvements in the nervous or psychosomatic symptoms of the daughter and parents, in the relationships of the daughter with friends and peers, and in the daughters' relationships with their fathers when baseline scores obtained at intake on the CSATP internal instrument were compared to similar scores measured after completion of treatment (Kroth, 1979). There was no recidivism by the perpetrator-fathers during the study interval (Kroth, 1979, pp. 132–133). There was no untreated control group in the Kroth study, a deficiency remedied in the present study and in that by Bagley and LaChance (2000), described further on.

A similar program for FDI perpetrator-soldiers at Fort Knox, Kentucky has been reported (Schuler, 1990). Also, both Justice and Justice (1979) and Trepper and Traicoff (1985) reported that their programs were successful in re-uniting families after FDI. Bagley and LaChance (2000) compared 27 families treated by a Canadian program modeled on California's CSATP to 30 control families who received the conventional services provided by the Canadian child protective services and the Canadian legal system. Based on standardized instruments administered to the FDI-survivor daughters at baseline and two years after the cases were identified, Bagley and LaChance (2000) found that those who received treatment modeled on California's CSATP had recovered levels of self-esteem obtained in normative samples. Their scores on the depression scale had improved, and they were engaging in fewer problematic behaviors than at baseline. In contrast, after two years, the untreated control subjects had retained their poor initial scores on the self-

esteem and depression scales, and they were more likely to have engaged in problematic behaviors such as running away from home than those who had received treatment modeled on California's CSATP. The control subjects were also more likely to have been re-victimized by the original perpetrator (Bagley & LaChance, 2000).

Australia had a highly successful New South Wales Pre-Trial Diversion of Offenders Program (Cedar Cottage) for intra-familial sex-offenders from 1989 until it was closed in 2014 because of a new government policy that child sex offenders must spend time in prison. (Goodman-Delahunty, 2014). Extensive data accumulated over the 25 years that the program was in operation showed that the Cedar Cottage program which substituted intensive treatment for imprisonment had a 7.5% rate for sexual re-offenses which was significantly lower than the 13.5% observed in untreated control subjects who had been imprisoned (Butler, Goodman-Delahunty, & Lulham, 2012).

There were 13,081 citations returned from an October 2018 Academic Search Premier search of the combined Academic Search Premier and Medline databases using the words "child sexual abuse" with the diverse origins of the studies identified by the search leaving no doubt that it is a world-wide problem (e.g., Beitchman, Zucker, Hood, DaCosta, Akman, & Cassavia, 1992; Brown, Cohen, Johnson, & Salzinger 1998; Collings, 1997; Spataro, Mullen, Burgess, Wells, & Moss, 2004). It is also beyond question that CSA is harmful to the survivors (Beitchman et al., 1992; Brown et al., 1998; Collings, 1997; Spataro, et al., 2004). Reviewing the entire CSA literature is far beyond the scope of the present paper, because the focus of the present paper is exclusively on FDI, so most of the other citations in this paper are from studies focused on FDI.

Ascertainment bias is a major problem in doing research on CSA and FDI. Not only do estimates of the incidence of the abuse vary with the method used for ascertainment (Collings, 1997; Spataro, et al., 2004), the estimates of the degree of harm also vary. Cases assembled from psychology or psychiatric patients (e.g., Meiselman, 1979) or prospective studies based on follow-up of cases reported to the authorities (e.g., Spataro, et al., 2004) will almost certainly include a greater proportion of severely harmed survivors than cases ascertained through recruitment of university students because of the selective factors in gaining entry to these venues (e.g., Beard et al., 2017; Collings, 1997). Participants asked to provide data through any means that do not provide them total anonymity should rightfully withhold information that could be used to harm them. Furthermore, because the act of accessing memories of abuse to respond to questionnaires can lead to harm to study participants who have been forced to participate in the study and not provided a chance to gracefully decline study participation, it is not ethical to recruit CSA study volunteers to studies that do not provide total anonymity, warnings of potential harm from study participation, graceful ways to avoid study participation, and opportunities for study participants to quit the study at any time that they find themselves becoming upset (Collings, 1997).

A preliminary study reported that FDI survivors were more likely than control subjects to endorse feeling estranged from one or both parents, psychologically injured, damaged, and shamed by others when they revealed their FDI experience (Stroebe et al., 2012). FDI survivors had been eroticized early in life by the incest experience, and it interfered with their sexuality as adults (Stroebe et al., 2012). FDI survivors experienced coitus earlier than the control subjects (Stroebe et al., 2012). After they reached 18 years of age, they had more sex partners, they were more likely to have casual sex outside of their primary relationship, and they were more likely to engage in sex for money than control subjects (Stroebe et al., 2012). FDI survivors also had worse scores on scales measuring sexual satisfaction, communication about sex, and depression than control subjects (Stroebe et al., 2012).

Other research has provided knowledge that was not available when the US treatment programs were hastily developed after passage of the US 1974 Child Abuse Prevention and Treatment Act. We now know that testifying in court can cause both short-term and long-term harm to survivors of FDI (Maddock & Larson, 1995, p. 127; Quas et al., 2005; Renshaw, 1982). Based on

developmental research, we now know that developing an interest in sex (Griffee et al., 2014a, 2014b) and development of adult sexual orientations (Beard et al., 2015; Stroebel et al., 2019) are both subject to critical period learning, like language-learning. Females who start masturbating while younger or who begin partner sex of any kind (with partners of any age) earlier have a life-long higher interest in sex than women who delay these behaviors until after 18 years of age (Griffee et al., 2014a, 2014b). These early sexual behaviors explain the higher interest in sex observed in under-age survivors of FDI and survivors of *Child Sexual Abuse by Adult Males* who were not the survivor's father (CSA-AM) (Griffee et al., 2014a, 2014b; Yates, 1978, 1982, 2000). On the other hand, when females have not started masturbating or any kind of partnered sex before the age of 18, the likelihood that they will have a life-long low interest in sex is increased (Griffee et al., 2014a, 2014b). Adult sexual orientations result from conditioning by early covert behaviors such as masturbation using images of males or females and early sexual behaviors with partners; and, as a result of critical period learning and sexual imprinting, human sexual orientations are essentially fixed by the time that an individual reaches the age of 18 (Beard et al., 2017, 2015; Stroebel et al., 2019).

We now know that removing the father or daughter from the home does not necessarily stop the FDI-survivors' from having other experiences with partner sex before she reaches 18 years of age (Stroebel et al., 2012). Stroebel et al. (2012) reported that the FDI-survivor daughter often found a series of under-age or adult partners (other than her father) before she reached 18 years of age. Additionally, risky behaviors with sex partners increase the chance that an FDI survivor will encounter a coercive partner-sex experience, commonly framed as re-victimization (Griffee et al., 2012). FDI survivors finding early female partners explains the coexisting same-sex and opposite-sex sexual orientations observed in some survivors of FDI (Beard et al., 2015; Stroebel et al., 2019). The high likelihood of continued partner sex (with partners other than the FDI perpetrator) before FDI survivors reach 18 years of age makes it important to provide FDI survivors with information about human sexuality, information about how to avoid risky sexual partners, and also information about effective methods of contraception (Griffee et al., 2012; Stroebel et al., 2012).

Some therapists treating FDI have believed the now-discredited 19th-century theory of Westermarck (e.g., Meiselman, 1979, p. 5) purporting an innate genetics-based resistance to incest, disgust at the thought of incest, or resistance because of close association in the nuclear family (see Silverman & Bevc, 2005 for review), a theory more useful for supporting the denial of the high risk of FDI in the absence of strong social controls than for understanding why it occurs. We now know that the Westermarck theory is at odds with evidence from studies showing attraction among individuals who grew up in the communal kibbutz education system (Shor & Simchai, 2009) and data showing that incestuous marriages became common place in countries that accepted brother-sister marriages (Roman Egypt in the first to third centuries AD) or promoted brother-sister and father-daughter marriages (Persia from the fifth century BC to the seventh century AD; Scheidel, 1996). See Lieber (2006) for a thorough review of the history of Westermarck's theory, its basis in evolutionary theory, and the extensive biological, sociological, and psychological evidence against its validity.

We now know that many behaviors that were thought to be harmful to children have been shown not to harm when they were studied prospectively in families that believed that the behaviors were normal (Okami & Olmstead, 2002; Okami, Olmstead, & Abramson, 1997; Okami, Olmstead, Abramson, & Pendleton, 1998). Specifically, Okami et al. (1997) found that 77% of mothers reported that their child had engaged in sex play before six years of age and even when masturbation-only was removed from the statistic, 47.6 had engaged in sex play of other sorts. Okami et al. (1997) also found no evidence of harm at the age of 18 in individuals who had previously engaged in sex play. These human statistics on early human sex play are strikingly similar to behaviors of Bonobo young at similar developmental stages (De Waal & Lanting, 1997). Comparisons between human and Bonobo behaviors are appropriate because Bonobos are human's nearest primate relative. The strikingly similar behaviors shared between the two species

include female willingness to have sex throughout the female's menstrual cycle, using face to face positions for heterosexual intercourse, male-male, female-female, and masturbation sexual behaviors (De Waal & Lanting, 1997).

Also, we now know that FDI resembles behaviors typical of the Bonobo because sexual behaviors between young Bonobos and adults are common place and because an adult male Bonobo would have no way of knowing which of the young Bonobos he had sired due to Bonobo's mating with multiple partners (De Waal & Lanting, 1997). Based on the similarity in sexual behaviors between humans and Bonobos, it appears that, in humans, social controls are the only forces preventing incest between a father and his daughter (Beard et al., 2017), a conclusion also consistent with Leiber's review (2006).

While it is clear that moral and legal arguments securely place the blame for FDI incest solely on the perpetrator father (Herman, 1981), in order to prevent FDI, understanding the epidemiological evidence regarding the biological, psychological, and sociological factors that increase the risk of FDI happening is essential. Based on extensive research reviewed by Baumeister, Cantanese, and Vohs (2001) and Yates (2000) we now know that due to differences in circulating testosterone levels and its effects on the brains of the two sexes during critical developmental periods, men have a significantly greater interest in sex than women. Because of a series of studies on risk factors for FDI (e.g., Beard et al., 2017; Paveza, 1988; Russell, 1986; Sariola & Uutela, 1996; Stroebel et al., 2013; Beard et al., 2017), we now know that a poor relationship between a girl's parents is one the most powerful predictors of FDI (as shown by higher risks of FDI in girls whose parents fought and who were not affectionate to one another where the child could observe the affection (Beard et al., 2017) or as shown by low marital satisfaction and violence of the father directed against the mother (Paveza, 1988). At intake in the Kroth (1979) study, none of the studied non-offending spouse mothers admitted that they were very much responsible for the FDI. However, after family therapy, at treatment termination, 50% of non-offending-spouse-mothers admitted that they were very much responsible, a statistically significant increase (Kroth, 1979, pp. 113–114 and Table 3–27).

Another risk factor for FDI is high levels of family-tolerated father-daughter nudity (Beard et al., 2017; Stroebel et al., 2013). Nudity within the nuclear family increases the possibility that children will be more open about their interest in sex and more willing to engage in sexual activities where the parents may observe the behaviors (Friedrich, Grambsch, Broughton, Kuiper, & Beilke, 1991). Some girls may behave in ways that apparently seem seductive to some fathers (Gebhard, Gagnon, Pomeroy, & Christenson, 1965; Yates, 1982), and father's methods of initiating the incest affair are often covert, tentative, and seductive (de Young, 1982; Gebhard et al., 1965).

Other risk factors were a new man in the home (Beard et al., 2017; Stroebel et al., 2013) also described as a stepfather (Sariola & Uutela, 1996) and reduced closeness (Paveza, 1988) or reduced affection between the mother and her daughter (Stroebel et al., 2013). Each of these empirically identified risk-factors for FDI either describes a factor that increases the likelihood that the father has reduced emotional support and access to sex from his wife, a factor that increases the chance of a father providing unsupervised intimate care to his daughter, a factor that increases the chance that early sexual interactions between the father and daughter will not be recognized, or a factor that reduces the inhibitory social controls within the family provided by the daughter's mother.

The trauma that FDI survivors suffer differs in comparison to survivors of other types of CSA principally because the FDI perpetrator was the survivor's biological father or father-figure. This difference should make effective treatment for FDI different from treatment of other types of CSA (Courtois, 1988; Giarretto, 1978; Meiselman, 1979; Renshaw, 1982; Sheinberg & Fraekel, 2001). Beard et al. (2017) used a unique experimental design that for the first time compared survivors of father-daughter incest (FDI) to control subjects who were survivors CSA-AM. The purpose of that

study-design was to detect effects that were due solely to the fact that the perpetrators were the survivors' fathers. Despite the fact that the CSA of the FDI survivors was less severe than that of the survivors of CSA-AM by multiple different measures, as adults, the survivors of FDI had significantly decreased (more problematic) scores on a sexual satisfaction scale and also on two of its subscales, and they preferred to have partner sex less frequently than the survivors of CSA-AM. As adults the FDI survivors had significantly higher scores on a scale measuring interest in sex with females, and they engaged in more risky sexual behaviors than the survivors of CSA-AM. The survivors of FDI recalled experiencing lower amounts of both paternal and maternal affection before reaching the age of 18, and they reported witnessing less affection between their parents before reaching the age of 18 than the survivors of CSA-AM.

Survivors of FDI were more likely to endorse having suffered psychological injury, more likely to endorse feeling like damaged goods, and more likely to endorse having a listener react with horror and disgust when they tried to open up with another person about their childhood sexual experience (Beard et al., 2017). Survivors of FDI were significantly more likely to report having been estranged from both parents when they were in high school and significantly more likely to have had therapy for CSA than survivors of CSA-AM (Beard et al., 2017). Beard et al. (2017) showed that reporting the FDI was significantly more likely to end the marriage of the survivor's parents than not reporting it. Beard et al. (2017) also found data consistent with their proposed new mechanism for generation to generation transmission of FDI through the female lineage: If the FDI-survivor (proband) models her behaviors with her own husband on her mother's behaviors with her husband, the proband FDI-survivor's father, this would set the proband-FDI-survivor's daughter up for FDI in the next generation (e.g., If the proband FDI-survivor fights with her husband and is unaffectionate to her husband like her mother did in her relationship with the proband-FDI-survivor's father, then the proband-FDI-survivor sets her daughter up for FDI, just as her mother had set her up). The study showed a significantly increased (more problematic) depression scale score in the survivors of FDI as adults. The problematic increased depression scale scores of FDI survivors in comparison to survivors of CSA-AM (Beard et al., 2017) result appears to have a theoretical explanation.

Part of the potential differential effect of FDI compared to CSA-AM on survivors theoretically devolves from function of the father as the external model of the internalized father-figure (Bowlby, 1969, 1988). A well-functioning internalized father-figure theoretically should serve life-long as a source of security (Bowlby, 1969, 1988). Moreover, fathers have been shown to influence women's choice of mates through sexual imprinting (Berezkei, Gyuris, & Weisfeld, 2004; Berezkei, Hegedus, & Hajnal, 2009; Griffee et al., 2017; Seki, Ihara, & Aoki, 2012; Vukovic, Boothroyd, Meins, & Burt, 2015). Likewise, the internalized mother figure is based on the relationship between the mother and the child (Bowlby, 1969, 1988). The more general application of Bowlby's attachment theories to the romantic relationships of sexual partners has been supported by a number of empirical studies. (e.g., Carlson, Sroufe, & Egeland, 2004; Henry & Holmes, 1998; Roisman, Collins, Sroufe, & Egeland, 2005; Roisman, Madsen, Henninghausen, Sroufe, & Collins, 2001; Rusby, 2010; Simpson & Rholes, 1998).

The potential loss of a parent leads, theoretically, to animosity in the child (Bowlby, 1988). An ambivalent reaction with distancing from the parent alternating with seeking closer proximity to the parent can result from observed parental rejection (Bowlby, 1988; Saunders & Meinig, 2000). Theoretically, depression is the result of actual loss of a parent, (Bowlby, 1988), providing an explanation for the FDI survivor feeling depressed. Depression is often observed even many years after the FDI occurred in individuals seeking psychological treatment (Meiselman, 1979) or in FDI survivors compared to non-FDI survivors (Stroebel et al., 2012).

The present study was designed to (for the first time) compare the adult outcomes of FDI survivors who had received treatment using the victim advocacy/child welfare approach to

untreated control subjects, to search for predictors of adverse psychological outcomes among FDI survivors, and to search for predictors of scores on a depression scale.

1.1. Part-one: comparison of treated cases to untreated control subjects

The first part of the present study was designed to compare the outcomes in adult survivors of FDI who had received CSA treatment to those who had never had CSA treatment. It tested the following hypothesis:

- (1) Effective therapy for FDI should produce statistically significant improvements in symptomatology in comparison to untreated control subjects.

The hypothesis that therapy provided to survivors of FDI was effective will be tested by measuring differences between the adult outcomes in survivors of FDI who had therapy for CSA in comparison to survivors of FDI who never had therapy for CSA after adjustment for the severity of the CSA using each of the variables that Beard et al. (2017) used to search for differences between survivors of FDI and survivors of CSA-AM.

1.2. Part-two: a search for predictors

The second part of the study was designed to search for predictors of the depression scale scores and the binary variables that had been shown to be unique effects of FDI in the study by Beard et al. (2017). It tested the following hypothesis:

2. Depression in FDI survivors is made worse by loss of nuclear family attachment figures, a family history of depression, and adverse psychological outcomes and improved by religiosity. It will be tested by testing predictors related to attachment, self-image, family history of depression, and religiosity using correlation and regression analysis with a depression scale as the dependent variable.

2. Method

2.1. Participants

The 64 female study participants had an average age of 31.0 ± 11.9 (mean \pm SD) years. Their median age was 26.5 years. The 64 participants' distribution of education was as follows: 68.8% had some college education but no degree, 21.9% had a bachelor's degree, and 9.4% had a master's degree. All participants were over the age of 18, and all participants gave informed consent using forms approved by the review board of the relevant institution. The anonymous (unsigned) consent forms contained the following information about risks of study participation. "Some individuals may become quite upset when recalling childhood sexual experiences. If you feel at any time before (or during) the study that this will happen to you or that participation is or will be too painful for you, please do not participate or stop participating in the study. Your participation in the study indicates that you have voluntarily accepted the risks in an attempt to help others. You may quit the study at any time with a click of the mouse on the 'Quit Study' button."

Just prior to study participation, all participants received a 15 minute talking PowerPoint orientation that reinforced the information about risks provided by the consent form as well as detailed information about how to use the survey computer program. They were informed that for each sexual behavior item they would be asked whether their mother or father or brother or sister had been involved as a partner, depending on the age-differential category and sex of the partner mentioned in the item. Furthermore participants again were assured that the computerized survey provided total anonymity and that there was a quit study button maintained on every computer screen that they could use to either quit the study permanently or to temporarily save their data so that they could stop and return at a later time to complete the study. The study participant's later re-access to stored data was controlled by a temporary 12-digit random number issued solely to the study participant.

Participants were recruited from a population consisting mostly of undergraduate and graduate college students from six mid-Atlantic college campuses using bulletin board postings and announcements in classes. We also used announcements in public meetings (e.g., churches, gay picnics, American Civil Liberties Union [ACLU], etc.) and snowball recruiting to diversify the data base with regard to age and life experience by inviting university staff and faculty as well as individuals from the same general population of the mid-Atlantic United States who had already completed their education. None of the participants were paid. Nevertheless, many students received credit from professors in psychology, criminal justice, and social work courses.

2.2. Measures

Computer-Assisted Self-Interview (CASI) program (S-SAPE1©S-SAPE, LLC.) items were reproduced by permission of S-SAPE, LLC, 2002, P.O. Box 11,081, Charleston, WV 25339. The verbatim items appear in quotation marks within the body of this paper and in tables. Permission to reuse the items must be obtained from the rights holder. Extensive validation of the measures used in the present study and the measures themselves, a detailed description of the recruitment of participants, the anonymity protections for the participants, the way in which informed consent was obtained from the participants, and the IRB approvals have been published (Beard et al., 2015, 2017; Griffee et al., 2014b). Data from many of the participants were included in Beard et al. (2015), Beard et al. (2017) and Griffee et al. (2014b), making the validation of the measures published by Beard et al. (2015), Beard et al. (2017) and Griffee et al. (2014b) applicable to the present study. In order to save the space required to republish that information, the reader is referred to Beard et al. (2015), Beard et al. (2017) and Griffee et al. (2014b). To find the full text of any item not provided in the present paper see Beard et al. (2017) and the Appendix. The way that the S-SAPE1 items were used in the data analysis is unique to the present paper and not previously published.

2.3. Selection of participants for the study

The present report is based on data from a larger on-going study entitled “Effects of Recalled Family Attitudes and Childhood Sexual Experiences on Adult Sexual Attitudes and Adjustment” which accepted volunteers for study participation between 2002 and 2018 at which time the study stopped accepting new participants. In the first step, we selected the 2,828 women who were not transsexual and had no problems that interfered with sexual function and no genital anomalies from the data of all 2,896 female potential participants in the database. The transsexual women were excluded because, at the time that the early sexual behaviors occurred, they were genetic and anatomical males. Any sexual behaviors with a father or father-figure would have constituted father-son incest, and any sexual behavior with an adult male who was not their father would have constituted CSA of a boy by an adult male. In the second step, we then use a total of four items to further select a population from the above subset of potential participants for the present study consisting only of FDI survivors. The items used for the final selection process consisted of sexual behavior sub-item (f) from items B183 and B216, P40, and S93 from the Appendix. Endorsing S93 and also selecting answer (2) or (3) from P40 was sufficient to be included in the study. Selecting sub-item (f) from item B183 or item B216 was also sufficient to be included in the study. Our purpose in requiring participants endorsing S93 to have also selected consistent answers for P40 was to protect the participant selection process from acquiescence response bias (“yea-saying”) to which S93 was vulnerable. P40 was included as a study screening item so it was even preceded by a pop-up warning to read it very carefully. Two further advantages of including P40 were that it was a multiple choice item and also that respondents who selected the first choice (the one most likely to be selected randomly or by acquiescence bias) would be eliminated from the potential pool of FDI cases identified by S93, tending to correct for acquiescence bias in responding to S93.

Using the above criteria we selected the 64 cases of FDI from the 2,828 female potential participants above for the statistical analyses that provided the results of the present study. Sixty-three had endorsed S93 and also selected answer (2) or (3) from P40. One additional participant had endorsed sub-item (f) from both item B183 and item B216 and answer (1) from P40 but had

not endorsed S93. These 64 survivors of FDI included 60 of the 74 cases whose data were compared to data from 355 survivors of CSA-AM in Beard et al. (2017, which was based on data collected between 2002 and 2014) plus four new FDI cases collected in the subsequent four years between 2014 and 2018. The responses provided by the 14 cases from Beard et al. (2017) excluded from the present study's more strictly selected group of participants contained internal evidence of lack of consistency in their responses to S93, S62 and P4, as would be expected from systematically endorsing items, random responding, or lack of careful reading. The even distribution between those treated for FDI versus those not treated for FDI among the 64 participants in the current study was entirely fortuitous.

3. Results

3.1. Part one

The participants for part one of our study were limited to the 64 survivors of FDI. Testing for differences in behaviors between the 32 FDI survivors treated for CSA and the 32 who had not received treatment before they reached 18 years of age based on their response to S22 produced only one somewhat marginal finding. There was no significant difference between FDI survivors treated for CSA and the untreated control subjects in (1) the maximum severity of behaviors with the father before 18 years of age based on the 30 FDI survivors who provided details or (2) in the maximum severity of the CSA perpetrated by all of the adult males (including their fathers), based on the 38 FDI survivors who provided details (Table 1). However, a third variable, the maximum severity of all the voluntary and coerced sexual behaviors that the treated FDI survivors had engaged in with males of all ages based on the 53 FDI survivors who provided details was, slightly, but marginally greater ($p = .049$) than those of the corresponding figure for the untreated group. The data for these three maximum severity variables are shown as variables 10–13 in Table 1. The distribution of responses used for calculation of the maximum severity for of behaviors with the father before 18 years of age is provided in Table 2. There were no significant differences between the treated and untreated groups for any of the 13 behaviors included in the calculation.

Testing hypothesis 1: Effective therapy for FDI should produce statistically significant improvements in FDI symptomatology in comparison to untreated control subjects using comparisons between treated and untreated FDI survivors.

The ANOVAs showed that there were no differences *at all* between the treated and the untreated FDI survivors in any of the 21 continuously distributed variables in Table 3. Failure of ANOVA to detect a difference in between the 32 FDI survivors treated for CSA and the 32 untreated control subjects for any of the 21 variables supported a conclusion that there was no demonstration of a beneficial effect of the CSA treatment. Out of an abundance of caution, we also used a covariance analysis (ANCOVA) to adjust for the effects of possible confounding variables. In preparation for the ANCOVA, we tested eight variables describing the participants' sexual behaviors of any kind with adult male partners and one variable that recorded the earliest age that the FDI survivor reported engaging in self-masturbation of any kind for differences between those who received treatment for FDI and the control subjects who had not received treatment (variables 1–9 in Table 1). None of the eight variables differentiated between behaviors with the study participant's father and similar behaviors with other adult males when there were two or more partners. The following data therefore apply to behaviors with all adult males rather than just those with the FDI survivor's fathers. Furthermore, because only a subset of FDI survivors provided details about sexual behaviors with adult male partners, the tested data applied only to the 19 (out of the 32 untreated FDI survivors) and the 19 (out of the 32 treated FDI survivors) who provided the necessary details. The precisely even 19–19 distribution of those providing detailed data was also entirely fortuitous.

The treated FDI survivors' sexual abuse by an adult male began at a significantly earlier age than the CSA of those who had not been treated (Table 1, variable 3). Those treated for CSA had sex

Table 1. Comparison of sexual behavior variables of FDI victims who received treatment for CSA to those who did not receive treatment

	Untreated		Treated		p
	n ₁ = 32°		n ₂ = 32°		
	M ± SD	Mdn	M ± SD	Mdn	
1. Number of adult male partners ¹	2.0 ± 1.7	1	3.2 ± 2.3	3	ns
2. Number of times with adult male partners ^{1†}	66 ± 146	18	285 ± 530	60	.006 [†]
3. Earliest age with an adult male partner ¹	9.4 ± 3.2	9	6.1 ± 3.8	5	.007
4. Latest age with an adult male partner ¹	12.3 ± 3.6	13	14.1 ± 3.0	15	ns
5. Number of male partners of all ages ²	6.0 ± 4.5	6	6.4 ± 5.9	5.5	ns
6. Number of times with male partners of all ages ²	111 ± 225	40	334 ± 5544	95	ns
7. Earliest age with a male partner of any age ^{2†}	8.3 ± 3.6	8	8.0 ± 5.1	6	ns [†]
8. Latest age with a male partner of any age ²	15.2 ± 3.1	17	15.7 ± 2.4	17	ns
9. Earliest age for self-masturbation of any kind ³	11.3 ± 3.7	12	10.6 ± 4.1	11	ns
10. Maximum severity of behaviors with father before 18 years of age in the 30 FDI victims who provided details ⁴	4.6 ± 1.4	4.5	5.0 ± 1.0	5	ns
11. Maximum severity of behaviors with all adult males before 18 years of age in the 38 FDI victims who provided details ^{5†}	4.4 ± 1.5	4	5.3 ± 0.9	6	ns [†]
12. Maximum severity of behaviors with all males of any age before 18 years of age in the 53 FDI victims who provided details ^{6†}	4.7 ± 1.6	6	5.6 ± 0.9	6	.049 [†]

[†]The p-value was computed using the (non-parametric) Mann-Whitney test because of heterogeneity of variance present in the untransformed data. The rest of the statistics shown were computed on the untransformed data. ° There were 32 of the 64 FDI cases were not treated for CSA and 32 cases were treated. Some participant's not providing the data explains the smaller n's noted in the legend below corresponding to the superscripts. ¹For sex (of any kind) with an adult male partner before the participant reached 18 years of age, n₁ = 19 and n₂ = 19. ²For sex (of any kind) with a male partner of any age before the participant reached 18 years of age, n₁ = 27 and n₂ = 26. ³For the earliest age that participants began self-masturbation, n₁ = 21 and n₂ = 27. ⁴For maximum severity of CSA by their father or father-figure, n₁ = 15 and n₂ = 15. ⁵For maximum severity of CSA by the adult male perpetrators, n₁ = 19 and n₂ = 19. ⁶For maximum severity of CSA by male partners of any age, n₁ = 27 and n₂ = 26.

with adult male partners significantly more times before they reached the age of 18 than those who had not had treatment (Table 1, variable 2). There were no significant differences in Table 1 between the treated and untreated participants for any of the remaining six variables measuring behaviors with adult male partners, or the earliest age for self-masturbation, or the maximum severity perpetrated by the father (variable 10, Table 1).

Table 2. Numbers and Percentages of the Victims in Each Group who Engaged in One or More of the Thirteen Behaviors used to Measure Severity of CSA perpetrated by the victim's father or father-figure

	Voluntary		Coerced		Wt.	Behavior	Untreated n = 32		Treated n = 32		p ³
	No.		No.				n ¹	% ²	n ¹	% ²	
1	B183A		B216		1	"any kind"	15	46.9	15	46.9	ns
2	B184B		B217		2	"touching your male partner's nipples"	0	0.0	1	3.1	ns [†]
3	B185C		B218		2	"male partner touch your breasts"	6	18.8	9	28.1	ns
4	B187E		B220		3	"male partner looking at your genitals"	11	24.4	9	28.1	ns
5	B188F		B221		3	"looking at your male partner's genitals"	8	25.0	10	31.3	ns
6	B192K		B225		3	"looking at or touching your male partner's anus"	0	0.0	0	0.0	ns
7	B198O		B228		3	"male partner looking at or touching your anus"	5	15.6	3	9.4	ns [†]
8	B189G		B222		4	"touching your male partner's genitals"	8	25.0	10	31.3	ns
9	B190H		B223		4	"touching your male partner's genitals with objects"	1	3.1	1	3.1	ns [†]
10	B193M		B226		4	"male partner touching your genitals"	13	40.6	15	46.9	ns
11	B194N		B227		4	"male partner touching your genitals with objects"	1	3.1	1	3.1	ns [†]
12	B191I		B224		5	"touching your male partner's genitals with your genitals"	8	25.0	9	28.1	ns
13	B195R		B229		6	"male partner inserting his penis into your vagina"	6	18.8	7	21.9	ns

No. is the internal behavior number within the S-SAPE-1 survey program. Wt. is the weight assigned to the behavior. The phrase appearing in the behavior column is the phrase substituted into item B183 and item 2 to construct the items that the participant saw. Because detailed information about the behaviors that each participant had engaged in was required, the n for each group was reduced to the number of participants who had provided details. We used the max function with the series of 13 measures of severity (severity weights times a 0/1 indicator variable telling whether or not the participant had engaged in the behavior) enclosed in parentheses and separated by commas without spaces, as required by the function. The indicator variable was set to one if the participant indicated that they had engaged in the behavior either voluntarily or under coercion. To evaluate the scale for FDI (behaviors known to have occurred with the participant's father, the data shown in the table above) we use the parent/child sub-variable (f) (a 0/1 dummy variable) as the multiplier (times the severity value) for the maximum calculation. To apply the scale to behaviors with adults only, we restricted it to the behaviors with adults by behavior number. To apply the scale to behaviors with all males of any age, we used variable coded 1 if the victim had engaged in a voluntary or coerced behavior with a male of any age (all four age-differential categories listed in the appendix) before she reached 18 years of age (a 0/1 dummy variable) as the multiplier. ²n for the severity weight out of a possible maximum of 32 victims of FDI, ³percent for the severity weight based on a possible maximum of 32. ³p-value calculated from X² or Fisher's exact test (for tables with expected values less than five) for comparison of the actual numbers of participants who engaged in the behavior between behaviors of the FDI-victims with their fathers. [†]p-value calculated from Fisher's exact test (for tables with expected values less than five) for comparison of actual numbers of participants who engaged in the behavior.

Table 3. Comparison of FDI victims without treatment to FDI victims with treatment based on 21 continuously distributed variables

The independent variable was S22, "I have undergone psychological treatment for my childhood sexual abuse." ³	ANOVA results ¹				ANCOVA results ²			
	No treatment n = 32		Treatment n = 32		Adjusted effect of treatment	p	R ²	Partial η ²
	M ± SD	Mdn	M ± SD	Mdn				
1 CES-D total ^a	19.9 ± 11.6	16.5	19.5 ± 12.3	16.5	0.10 ± 3.47	ns	.179	.000
2 Intimacy-1 ^a	43.8 ± 18.3	49.5	47.0 ± 16.7	52	2.48 ± 5.28	ns	.119	.004
3 Conflict ^a	2.4 ± 2.1	2	2.7 ± 2.4	2	0.41 ± 0.34	ns	.223	.003
†4 Intimacy-2 ^a	3.2 ± 2.0	4	3.8 ± 1.4	4	-0.16 ± 0.28	ns [†]	.113	.043
5 MALE-SOS ^b	6.7 ± 2.8	6	7.1 ± 2.9	7	-0.19 ± 0.78	ns	.252	.001
6 FEMALE-SOS ^b	1.9 ± 2.7	1	2.5 ± 3.0	3.0	1.25 ± 0.84	ns	.164	.039
7 HRSBS-(1-13) ^c	3.2 ± 2.2	2	4.2 ± 3.1	5	0.93 ± 0.82	ns	.138	.023
8 HSSS-(1-6) ^c	1.7 ± 1.5	1.5	2.5 ± 1.9	1.9	0.82 ± 0.53	ns	.096	.041
9 RSBSS-(7-13) ^c	1.5 ± 1.5	1	1.8 ± 1.9	1	0.12 ± 0.51	ns	.164	.001
10 SRI-29	70.3 ± 24.6	71	74.1 ± 26.9	71.5	6.28 ± 7.3	ns	.226	.014
11 SPPAS ^c	22.8 ± 18.7	26.5	27.4 ± 18.8	26.5	6.71 ± 5.04	ns	.302	.032
12 SNSAS ^c	21.1 ± 7.6	22.5	22.5 ± 7.4	25	1.21 ± 2.28	ns	.106	.005
13 SPCAS ^c	26.4 ± 5.7	28	24.2 ± 6.6	26	-1.65 ± 1.76	ns	.225	.016
Preferred frequency for partner sex ^b								
†14 At attained age (P11)	6.2 ± 5.4	8	11.1 ± 10.8	8	4.52 ± 2.46	ns [†]	.246	.059
†15 Between 18 and 40 years of age (P12)	7.0 ± 5.8	8	11.6 ± 10.6	8	3.88 ± 2.45	ns [†]	.256	.045
Frequency of self-masturbation ^c								
16 At attained age (P15)	3.7 ± 4.2	3	5.8 ± 6.8	3	3.67 ± 1.74	ns	.107	.076

(Continued)

Table 3. (Continued)

The independent variable was S22, "I have undergone psychological treatment for my childhood sexual abuse." ³	ANOVA results ¹				ANCOVA results ²			
	No treatment n = 32		Treatment n = 32		Adjusted effect of treatment	p	R ²	Partial η ²
	M ± SD	Mdn	M ± SD	Mdn				
17 Between 18 and 40 years of age (P16)	3.8 ± 4.1	3	6.1 ± 6.8	3	3.68 ± 1.74	.039	.105	.077
18 Age (in years)	29.5 ± 11.7	24.5	32.4 ± 12.0	30	-	-	-	-
19 Paternal affection for participant	2.0 ± 0.7	2	2.0 ± 0.9	2	-0.05 ± 0.23	ns	.227	.001
20 Maternal affection for participant	2.3 ± 0.7	2	2.5 ± 0.7	3	0.22 ± 0.22	ns	.110	.019
†21 Parental modeling of affection for one another	1.8 ± 0.8	2	1.6 ± 0.6	2	-0.12 ± 0.22	ns [†]	.148	.005

†The p-value was computed from the non-parametric Mann-Whitney test because of heterogeneous variance present in the untransformed data. ¹Analysis of variance results (ANOVA). ²Analysis of covariance (ANCOVA) results comparing the adjusted difference between the results for the victims of FDI treated for CSA to those of the untreated victims of FDI after adjustment for a total of eight other variables falling into two groups. The variables, age and education fall into the first group because there were no missing data for these two variables. The earliest age, latest age, number of times, and number of partners for all adult male partners, the maximum severity of the CSA by all adult male partners, and a 0/1 dummy variables coded 1 if data were available and coded 0 if no data were available make up the second group of variables. The second group of variables were all coded 0 if no data were available, making each of the first four variables a cross-product between the dummy variable and that variable. The dummy variable adjusted for the group-difference between those with data (n = 38) and those without data (n = 26). The adjusted effect of treatment (headed by β ± SE) is the estimated regression coefficient for the dummy variable for CSA treatment (coded "1" for those receiving treatment for CSA and "0" the untreated controls). A positive sign indicates that the treated group had a higher score while a negative sign indicates that the untreated group had a higher score. The p-value in the adjacent column is for the test of significance for the estimated regression coefficient in the column headed by β ± SE. The partial η² (partial eta squared) is the fraction of the total variance in the dependent variable explained by regression on the dummy variable for CSA treatment. ³The independent variable was S22, "I have undergone psychological treatment for my childhood sexual abuse" in both the ANOVA and the ANCOVA. ⁴The validation was published in O'Keefe et al., 2014.

^bThe validation was published in Beard et al. (2015). ^cThe validation was published in Griffee et al. (2014b). "—"Indicates that no covariance analysis was done for the variable identified by inclusion of "—" in the table.

These findings were consistent with the idea that participants whose FDI or CSA-AM began earlier or who had more extensive sexual experience with adult males before 18 years of age were more likely to have received treatment for FDI. When the earliest ages that sex began with male partners of *any* age were compared (Table 1, variable 7), there was no significant difference between the two groups, but the median earliest age in the untreated group dropped by 1.1 years from 9.4 (for *adult* male partners) to 8.3 years of age for partners of *all* ages in the *untreated* group. This latter finding was consistent with the idea that for some of the untreated survivors of FDI, sex of any kind with an adult male had been preceded by sex of any kind with a male partner under the age of 18, perhaps explaining why those FDI survivors had not elected to seek treatment.

We used ANCOVA analyses with a total of eight covariates to adjust for any possible confounding by the eight variables included as covariates. The covariates included eight variables falling into two groups. The two variables, age and education fall into the first group because there were no missing data for these two variables. The second group consisted of the remaining six covariates: earliest age, latest age, number of times, and number of partners for all adult male partners, the maximum severity of the CSA by all adult male partners, and a 0/1 dummy variables coded 1 if data were available and coded 0 if no data were available. The second group of variables were all coded 0 if no data were available, making each one a cross-product between the dummy variable and that variable. The dummy variable adjusted for the group-difference between those with data ($n = 38$) and those without data ($n = 26$).

Even after adjustment for all eight covariates, the covariance analyses again showed no significant differences for 19 of the 21 tested variables (Table 3). The only variables where the covariance analysis showed a significant adjusted difference between treated and untreated survivors of CSA were the two variables measuring the frequency of self-masturbation as an adult. As shown in Table 3 for variables 16 and 17, the adjusted effect of treatment was to increase the frequency of self-masturbation by about 3.7 times per month. That latter result was consistent with the idea that treatment for the CSA had slightly increased the likelihood of masturbating, perhaps by making survivors more comfortable with masturbating. The result for frequency of self-masturbation was of doubtful clinical significance and border line statistical significance ($p = .039$).

The results for the remaining 19 variables supported a conclusion of CSA treatment having no beneficial effect in regard to the remaining 19 variables tested. The partial eta squared (*partial* η^2 , a measure of *effect size*) shown in the right-most column of Table 3 showed that the effect size of treatment of FDI was small relative to the total variance in the dependent variable and also small relative to the fraction of the total variance in the dependent variable explained by all of the variables included in the covariance statistical model (R^2) shown in the adjacent column of Table 3. The latter finding also supported the idea that there was no evidence for any other beneficial effect of the CSA treatment among the remaining 19 variables tested and that the variation in those 19 variables was primarily affected by factors other than treatment for FDI.

We also compared the FDI survivors who *had* treatment for CSA to those who had *not* had treatment on a total of 18 *binary* outcome measures (Table 4). A significantly higher percentage of the 64 FDI survivors who had treatment for CSA endorsed the statement (S78) that “sexual addiction may explain some of my sexual behaviors” (Table 4, variable 15, S78). This finding may be the *result* of therapy rather than evidence of a difference in the early experiences of the FDI survivors because having had CSA therapy (S22) was significantly correlated with endorsing the statement (S78, $r = .278$, $p = .026$) but not with having “sought counseling or psychological treatment for marital problems” (S31, $r = .145$, $p = \text{ns}$) or with having sought treatment for sexual addiction (S97, $r = .201$, $p = \text{ns}$).

Table 4. Comparison of responses of FDI victims who received treatment for CSA to those who did not receive treatment based on eighteen binary items

Treatment for CSA (S22, independent variable)	Disagree	Agree	χ^2	p^3
	<i>n</i> = 32	<i>n</i> = 32		
Items presented as agree/disagree (dependent variables)	% ¹	% ¹		
1 Ever married	43.8	56.3	0.56	<i>ns</i>
2 Ever divorced	25.0	75.0	1.13	<i>ns</i>
3 Ever divorced restricted to ever married ⁴	57.1	72.2	.266	<i>ns</i>
4 I have suffered psychological injury (S34)	59.4	78.1	1.82	<i>ns</i>
5 I feel like damaged goods (S46)	71.9	65.6	0.07	<i>ns</i>
6 When I gave history the listener reacted with horror and disgust (S59)	18.8	15.6	0.00	<i>ns</i>
7 My childhood sexual adventures helped develop my adult sexuality (S83)	28.1	50.0	2.36	<i>ns</i>
8 CSA perpetrator reported to authorities ⁶ (S32)	12.5	40.6	5.13	.024
9 Felt better after perpetrator was reported to authorities (S98)	9.4	21.9	1.07	<i>ns</i>
10 Felt better after perpetrator was reported to authorities restricted to those cases reported to authorities ⁶ (S98)	75.0	53.8	0.03	<i>ns</i>
11 Father reported for sexually abusing me (S62)	15.6	37.5	2.88	<i>ns</i>
12 Mother reported for sexually abusing me ⁷ (S79)	0.0	0.0	-	<i>ns</i>
13 Estranged from both parents in high school (P65,1) 5714	46.9	50.0	0.00	<i>ns</i>
14 Good relationships with all members of my family of origin today (P48,1)	18.8	25.0	0.09	<i>ns</i>
15 Sexual addiction may explain some of my sexual behaviors ⁵ (S78)	15.6	40.6	3.79	.050 [†]
16 I have sought treatment for sexual addiction (S97)	0.0	3.1	0.00	<i>ns</i>
17 Treated for marital problems (S31)	9.4	28.1	2.56	<i>ns</i>
18 Treated for marital problems restricted to ever married ⁴ (S31)	21.4	50.0	1.66	<i>ns</i>

¹Percent endorsing statement. ²Continuity-corrected Chi-square statistic with 1 d.f. ³ p -value computed from continuity-corrected χ^2 unless otherwise noted. ⁴Total ever married was 14 for no therapy and 18 for therapy. ⁵ p -value was computed using Fisher's exact test because of one or more cell counts were less than 5. ⁶Total reported to authorities was 4 for no therapy and 13 for therapy for S32. We used S32 for these statistics because S32 was a random variable not used for selecting the participants included in the study. ⁷No statistics were computed because S79 was a constant.

Also, the perpetrator had been reported to the authorities in a significantly higher percentage of the FDI survivors who had treatment for CSA (Table 4, variable 8, S32). This latter result was consistent with the idea that reporting the FDI to the authorities would very likely have resulted in the survivor being treated for CSA because logistic regression showed that survivors of FDI were approximately 4.8 times more likely to have received treatment for CSA if one or more of their

perpetrators had been reported to the authorities (S32, $p = .015$). There were no significant differences among the remaining 15 binary variables (Table 4).

3.2. Part two

Depression was significantly more problematic in FDI survivors than in survivors of CSA-AM in the study of Beard et al. (2017), indicating that depression was caused by the fact that the perpetrator was the survivor's father. Because there was *no significant difference* in depression scale score between the treated and untreated FDI survivors in the present study, we used the data from all 64 study participants in the following analyses without differentiating those who had been treated from those who had not received treatment.

Testing hypothesis 2: Depression in FDI survivors is made worse by loss of nuclear family attachment figures, a family history of depression, and adverse psychological outcomes and improved by religiosity.

We used correlation analysis and regression analysis to test hypothesis two by searching for significant predictors of the Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977) to identify the factors that were influencing depression using predictors based on the tested hypothesis. We used correlation analysis to screen the potential predictors of participants' scores on the CESD depression scale (Table 5). We first tested a total of eight 0/1 dummy variables describing the feelings of closeness that the survivors had toward their parents at two different time intervals: in high school and, later, at the time of study participation based on items P65 and P66, respectively. The closeness variables were measures of attachment that the study participants would have been able to tap into without awareness of what they meant in psychological terms. Having felt distant from both parents in high school was the most powerful of the eight predictors ($r = .315$) so it was entered into Table 5. We also evaluated (as predictors) Religiosity (P52, variable #4, Table 5) modeled as an ordinal variable and another ten items that were presented as agree/disagree, coded 1 and 0, respectively. (The latter ten variables were item S22, and items S31, S32, S34, S46, S59, S62, S78, S79, S83, and S98 which are all presented in abbreviated form in Table 4 and also as full text in Beard et al., 2017 and the Appendix). Two of the latter ten items obtained family histories related to depression. One obtained a history of divorce in the nuclear family. One retested the history of treatment for CSA. The remainder of the latter ten items were related to parent-child incest or served as measures of psychological well-being.

As shown in Table 4, the two most powerful of these latter ten variables were "My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished" (S46, $r = .343$, Table 5) and "I have suffered serious psychological injury as a result of one or more of my childhood sexual experiences" (S34, $r = .340$, Table 5). All 13 tested potential predictors (variable numbers 2–14 in Table 5) are entered into Table 5 in order of observed decreasing predictive power for the CESD scale score. Treatment for CSA (S22) was the least powerful of the variables in the table and not statistically significant ($r = -.016$, Table 5). The lack of significant correlation of the CESD scale scores with (variable 11, Table 5) showed that the origin of the depression in FDI survivors could *not* be attributed to parental divorce before the participant reached 18 years of age.

As mentioned before and as shown by the ANOVA and ANCOVA results presented in Table 3, therapy for CSA (expected *a priori* to have helped with the aftermath of incest), surveyed with the item, "I have undergone psychological treatment for my childhood sexual abuse" (S22) failed to show a significant effect of treatment in comparison to the untreated control subjects (without therapy) by ANOVA or ANCOVA based on the CESD depression scale scores (Table 3). Furthermore, in an alternative statistical analysis, the effect of treatment was not significantly correlated with the CESD depression scale scores (Table 5). The fortuitous, even split between the treated and untreated categories (32 with therapy vs 32 without therapy) optimized the statistical power for detecting a difference between the two groups.

Table 5. Pearson correlations among 14 variables for the 64 victims of FDI

Variable	1	2	3	4	5	6	7
1 CES-D (Depression scale)	1	.343 ²	.340 ²	-.325 ²	.315 ¹	.270 ¹	-.237
2 "My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished" (S46)	.343 ²	1	.345 ²	.055	.316 ¹	.000	-.358 ²
3 "I have suffered serious psychological injury as a result of one or more of my childhood sexual experiences" (S34)	.340 ²	.345 ²	1	.161	.114	.078	-.220
4 " ... depth of my religious commitment ..." (reverse scored P52)	-.325 ²	.055	.161	1	-.104	-.085	-.175
5 Distant from both parents in high school (0/1 dummy variable) (P65,1)	.315 ¹	.316 ¹	.114	-.104	1	.090	-.392 ³
6 Mother's history of depression (P99,4)	.270 ¹	.000	.078	-.085	.090	1	.055
7 "I believe that my childhood sexual adventures have been psychologically important and helpful to me in developing my adult sexuality" (S83)	-.237	-.358 ²	-.220	-.175	-.392 ³	.055	1
8 Number of adult male partners before reaching 18 years of age ⁴	.197	.233	.053	.097	.084	.140	.015
9 "I have felt better since the person who sexually abused me was reported to the authorities" (S98)	-.160	.012	-.081	-.103	-.159	.149	.096
10 Number of times with adult male partners before reaching 18 ⁴ years of age	-.108	.032	.144	.228	-.024	-.106	.034
11 Parents divorced before the participant reached 18 years of age (H2,3)	-.059	.082	.082	.007	-.057	-.129	-.147
12 Father's history of depression (P100,4)	.054	-.077	-.077	-.116	-.026	.404 ³	-.055
13 A parent died before the participant reached 18 years of age (H5,6)	-.026	-.073	.121	-.250 ¹	-.174	-.104	.040
14 "I have undergone psychological treatment for my childhood sexual abuse" (S22)	-.016	-.067	.202	.148	.031	.072	.224

¹p < .05, ²p < .01, ³p < .001. ⁴The data from the participants who did not provide details about their behaviors with their father was coded zero, making the data the cross product between the 0/1 dummy variable used to code for whether or not participants had provided details about their sexual behaviors with their father and the number or partners or the number of times that participants had engaged in sexual behaviors with adult males.

In order to identify factors that might have been influencing the scores on the CESD depression scale, we used multiple linear regression to build Model #1 shown in Table 6. Model #1 was obtained by considering only predictors that were significantly correlated with the dependent variable consisting of the CESD scale scores (the variables numbered 2–6 in Table 5) and adding the most powerful predictor at each step that was still statistically significant after adjusting for the predictors already in the model. “My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished” was the most powerful predictor in Model #1, and Religiosity was the second most powerful predictor in Model #1. The third most powerful predictor “I have suffered serious psychological injury as a result of one or more of my childhood sexual experiences” (S34, Table 6) was also significantly correlated with the first most powerful predictor ($r = .345$, Table 5). The fourth most powerful predictor, mother’s history of depression, was not significantly correlated with any of the other predictors in the model. Because the significant correlation between the first and third predictors in Model 1 reduced the amount of the variance attributable to either one individually, the second predictor (religiosity) explained more of the variance in the depression scale score as measured by η^2 , a measure of effect size, than any other single predictor in the model (Table 6).

Predictors for survivors of FDI endorsing that their childhood sexual experiences left them “feeling like damaged goods ...” (S46) in 64 survivors of FDI. Because S46 appeared as the most powerful initial predictor of scores on the depression scale (Model #1 in Table 6), we tested seven potential predictors of endorsing S46 using multiple logistic regression analysis. These seven tested predictors were: (1) the participants’ ages at study participation, (2) their education level, (3) their religiosity, (4) whether or not they ever had treatment for CSA, (5) whether or not they had “counseling or psychological treatment for marital problems” (Table 4, S31) or had “sought counseling or psychological treatment for problems with poor sexual function involving” themselves or their partner (S61 as control subjects for treatment for CSA), (6) whether they had experienced others reacting with “horror and disgust” when they “tried to open up with another person about” their “childhood sexual experience” (Table 4, S59), and (7) being distant from both parents in high school, a 0/1 dummy variable (P65,1 variable 5 in Table 5).

As can be seen in Model #2 in Table 7, logistic regression analysis revealed that endorsing having been very distant and estranged from their parents in high school was the most powerful predictor for endorsing that their childhood sexual experiences left them “feeling like damaged goods.” The likelihood of endorsing the statement increased by approximately 4.3 times for FDI survivors who were very distant and estranged from their parents in high school. None of the other potential predictors remained statistically significant after the first predictor had been added to Model #2 in Table 7.

Predictors for survivors of FDI endorsing that their “childhood sexual adventures have been psychologically important and helpful in developing” their “adult sexuality” (S83) in 64 survivors of FDI. We tested the same set of seven predictors used for arriving at Model #2. FDI survivors who were very distant and estranged from their parents in high school were 0.109 times less likely to endorse the statement, and the likelihood that they would endorse the statement increased approximately 8.6 times if they had sought psychological treatment of marital problems (Model #3, Table 7).

4. Discussion

To our knowledge, ours is the first published US study to compare the adult outcomes of FDI survivors treated for CSA using a victim advocacy/child welfare approach to the adult outcomes of untreated control subjects who were also survivors of FDI. Differences between these two groups were designed to measure whether or not CSA treatment was providing any benefits and to identify the specific areas of psychology that were benefited. Ultimately, 32 of the 64 FDI survivors in our study had found their way into CSA treatment even though only 17 of the 64 cases had ever been reported to the authorities.

Table 6. Linear regression models for predicting scores on the CESD depression

Model #1: CESD in FDI victims on four predictor variables, AdjR² = .324, N = 64

	Variables used as predictors ¹	B	SE	p	η [†]	n1% ³
1	“My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished” (S46)	6.664	2.805	.021	.087	68.8
2	Religiosity—(reverse scored P52—higher numbers indicate higher religiosity)	-4.552	1.303	.001	.171	1 03.1 2 14.1 3 40.6 4 31.3 5 10.9
3	“I have suffered serious psychological injury as a result of one or more of my childhood sexual experiences” (S34)	7.418	2.850	.012	.103	68.8
4	Mother’s history of depression ⁶ (P99,4)	5.862	2.840	.043	.067	25.0
	Constant	26.690	4.851	<.001	.288	

— = not applicable because the independent variable is a scale. ¹Predictors are listed from top to bottom in order of decreasing predictive power as determined by the order of stepwise addition to the model. [†]η² = Effect size as measured by the partial eta (η) squared. ³n1% = Percent of participants who endorsed the item or who selected a choice.

In line with the assertion of Meiselman (1990, pp. 53–54) and Stroebel et al. (2012) that depression was a major consequence of FDI, survivors of FDI had significantly more problematic scores on the depression scale than survivors of CSA-AM (Beard et al., 2017). However, (unexpectedly) there was no evidence from our present study that therapy for CSA had ameliorated the depression experienced by the FDI survivors or their scores on 20 other measures tested by ANOVA. Even after correction for potentially confounding variables using covariance analysis, only preferred frequency of self-masturbation showed a significant difference attributable to therapy (a slightly higher preferred frequency of self-masturbation that was marginally significant at p = .039).

When we evaluated the data available in our database for predictors of the scores on the CESD using multiple regression analysis (Model #1, Table 6), we found four significant predictors. Two predictors were beliefs related to having been harmed by the FDI either by being “damaged goods” or being harmed “psychologically.” Both these harmful beliefs should be amenable to psychotherapy directed at improving the survivor’s self-image. Religiosity was the second most powerful predictor in Model #1, and the regression coefficient was negative, indicating that strongly held religious beliefs tended to have had a beneficial effect by reducing depression. This result confirmed the research of Paine and Sandage (2017), cited in the introduction. Finally, the mother’s history of depression was a significant predictor of problematic scores on the CESD. Interestingly, there was no such relationship to the father’s history of depression. A large national twin study in Sweden has not only shown higher heritability of depression in women than in men but also evidence of a sex-specific effect (Kendler, Gatz, Gardner, & Pedersen, 2006). As was already mentioned in the introduction, there is a theoretical relationship between loss to the FDI survivor daughter of an on-going relationship with her perpetrator-father as a consequence of society’s response to FDI and development of depression of the FDI survivor (Bowlby, 1969, 1988). It is, therefore, not surprising that there is a growing literature that documents the tendency for depression to develop in adolescents and adults with attachment dysfunction (e.g., Agerup, Lydersen, Wallander, & Sund 2015; Bifulco et al., 2006; Gullone, Ollendick, & King, 2006; Morriss,

Table 7. Logistic regression analyses

Predictor variables (in order of decreasing predictive power)	B	Std. error	p	OR ¹ e ^B	[OR 95% CI] ²	
					e ^{LCI}	e ^{UCI}
Model #2: Nagelkerke $r^2 = .138$, $N = 64$, $n1 = 44$, for predicting endorsing: "My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished" in FDI victims (S46)						
1	"I felt very distant and estranged from both parents" in high school (P65,1)	0.601	.015	4.333	1.334	14.669
	Constant	.350	ns			
Model #3: (Nagelkerke $r^2 = .330$, $N = 64$, $n1 = 25$, for predicting endorsing: "I believe that my childhood sexual adventures have been psychologically important and helpful to me in developing my adult sexuality" in FDI victims (S83))						
1	"I felt very distant and estranged from both parents" in high school (P65,1)	0.698	.001	0.109	0.028	.427
2	"I have sought counseling or psychological treatment for marital problems." S31	0.845	.011	8.553	1.629	44.710
	Constant	0.070	ns			

$n1$ = number of participants who endorsed the item. ¹Odds ratio (e^B). ²95% CI

van der Gucht, Lancaster, & Bentall, 2009; Smith et al., 2012), including those with histories of CSA (Bifulco et al., 2006; Smith et al., 2012).

At this point it is appropriate for the discussion to return to the fact (already alluded to in the introduction) that Bagley and LaChance (2000) have reported that underage survivors of FDI who received early treatment in Canada modeled on California's CSATP had recovered levels of self-esteem obtained in normative samples, their scores on the depression scale had improved, and the treated survivors were engaging in fewer problematic behaviors than at baseline. These results of Bagley and LaChance (2000) in Canada and those of Kroth (1979) in the US, showed that a treatment program that included the father in family therapy and that supported the possibility of reuniting the family after therapy showed statistically significant improvements in nervous and psychosomatic symptoms of the survivor-daughters. Based on attachment (Bowlby, 1969, 1988) and romantic attachment theory (e.g., Carlson et al., 2004; Henry & Holmes, 1998; Roisman et al., 2005, 2001; Rusby, 2010; Simpson & Rholes, 1998), it is also possible that early therapy to improve parent-child relationships within the nuclear family would improve the adult FDI survivor's relationships with her adult romantic partners. Reassuringly, the data from CSATP programs studied by Bagley and LaChance (2000) and Kroth (1979), and data from the CSATP-like Australian Cedar Cottage program (Butler et al., 2012) showed that therapy for the father-perpetrator was able to reduce the father-perpetrators' recidivism rate both with respect to their off-spring and also with respect to unrelated survivors.

Statistical analysis of the data from the present study showed that survivors of FDI who endorsed having been very distant and estranged from their parents in high school (evidence of attachment dysfunctions with the nuclear family) were more likely to endorse "My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished" (Model #2, Table 7), suggesting that the harmful belief stemmed from experiences within their nuclear family. Similarly, as shown by Model #3 in Table 7, counseling or psychological treatment for marital problems tended to help FDI survivors re-frame their ideation related to being damaged goods or psychologically harmed to endorsing the more positive belief (S83) that "my childhood sexual adventures have been psychologically important and helpful to me in developing my adult sexuality," a belief which was negatively correlated with endorsing S46 ("damaged goods," $r = -.358, p = .04$) and not significantly (but still numerically) negatively correlated with endorsing S34 ("psychological injury," $r = -.220, p = .080$). It seems very likely to the authors that other studies designed to more fully delineate the etiological connection between early FDI and adult depression will be able to offer additional new ways that therapy for FDI can be improved.

How is it that FDI survivors who were treated with the victim advocacy/child welfare approach did equally well (or equally poorly, depending on one's point of view) whether or not they received treatment for their child sexual abuse? Some survivors of FDI are known to be more resistant to trauma or more successful at overcoming it without therapy (Meiselman, 1990, p. 79; for reviews see Spaccarelli, 1994; Walsh, Fortier, & DiLillo, 2010). Nelson (1981) showed that many FDI survivors had experiences that were of a non-damaging nature, a finding Renshaw (1982) confirmed in her own study that did not select participants through advertising. Those survivors were able to integrate the experience into their lives despite the societal shaming related to incest behaviors.

King, Wardecker, and Edelstein (2015) showed that personal mastery (a sense of control over life's circumstances) buffered the effects of CSA in women. Other helpful coping mechanisms identified by empirical research on recovering from CSA include positively reframing the abuse, minimization (Himelein & McElrath, 1996) and integration (Walsh et al., 2010, p. 7). It is important for therapist to keep in mind that their goal should be to heal the survivor in ways that allow her to function in emotionally and sexually fulfilling ways with her husband or future husband to minimize the risk of FDI in the next generation (Beard et al., 2017).

As mentioned in the introduction, social controls seem to be the only forces preventing incest between a human father and his daughter. If this is so, the best approaches to prospective prevention are to reduce the known risk factors for FDI (Beard et al., 2017) and to increase the social controls within the nuclear family Herman (1981). Herman (1981, p. 203) has advocated sex education of children beginning early in grade school that includes education designed to prevent CSA. She has also advocated teaching parents how to provide sexual education to their own children and involving both the father and the mother in providing the CSA warnings to their own children in such a way that it is clear that the warnings also include the parents, themselves, as well as others within the nuclear family (Herman, 1981, pp. 204–205). Beard et al. (2017) carried ideas for preventing FDI even further by advocating that parents should evaluate their own marriages with regard to whether their relationships are adequately fulfilling emotionally and sexually. Then, if a couple finds that their marriage is dysfunctional, they should either improve it by getting help to repair the marriage or turn to divorce to eliminate the risk of FDI (Beard et al., 2017).

4.1. Limitations of the study

We will address three concerns: the nature of the sample and possible self-selection in obtaining therapy for CSA. The sample utilized in the present study can be considered to be a control-study sample, a cohort sample, and a regression sample. The sample was appropriate for the statistical analyses performed. However, the study was neither a randomized clinical trial nor a randomized double-blind clinical trial.

Second, because the relationships between the variables evaluated in the regression analyses and logistic regressions (Tables 6 and 7) are purely correlational in nature, the statistical analyses cannot prove cause and effect. Therefore, it was necessary to rely on other evidence and clinical judgement to interpret the results.

Third, because the study was not prospectively randomized, it is theoretically possible that the lack of effectiveness of therapy for CSA shown in the present study could have been due to those with more traumatic CSA having sought CSA treatment. It could have been due to those who sought treatment being older or younger or their being more or less educated, etc. Upon examination of such possibilities, only two of behavioral variables one through eleven were significantly different (Table 1). There were no significant differences between the treated and untreated groups based on 16 out of a total of 18 binary items (Table 4). The significant differences in the other two variables in Table 4 appeared to result from adverse effects of therapy (endorsing sexual addiction) or the fact that reporting the abuse to the authorities tended to increase the likelihood of receiving therapy (based on S32). There were no significant differences between the two groups in age at study participation, paternal or maternal affection, parental modeling of affection (Table 3) or education (data not shown). With the exception of the increase in the preferred self-masturbation frequency of the treated FDI survivors which was of doubtful clinical significance and border-line statistical significance (Table 3), the covariance analysis also supported the conclusion that there was no significant effect of treatment.

The findings of this study and that of Beard et al. (2017) were consistent with the idea that approaches to effectively reducing the harm resulting from FDI may need to be very different from programs aimed at preventing FDI. Improvement in therapy for FDI is one such harm-reduction approach. However, if some of the harm of FDI results from destruction of the relationship between the father and the daughter and loss of a healthy internalized representation of a father figure in survivors, it may take early family therapy treatments designed to mend the father-daughter relationship to achieve an optimum outcome for the survivor. Supportive of this line of reasoning are the results reported by Bagley and LaChance (2000) already summarized in the introduction and in the discussion above. The fact that statistically significant improvements were shown in both depression and self-esteem in the young FDI-survivors by two years after their entry into the CSATP (but not in the control subjects) and the fact that many of these families were reunited suggests that

the CSATP approach would also tend to mend the damage to the internalized father-figure and mother figure as well as tending to head-off life-long depression in the FDI survivors.

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Correction

This article has been republished with minor changes. These changes do not impact the academic content of the article.

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Appendix

Items from computer-assisted self-interview (CASI) program S-SAPE1©S-SAPE, LLC. Reproduced by permission of S-SAPE, LLC, 2002, P.O. Box 11081, Charleston, WV 25339.

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Sexual behavior screen

The screen displayed each *behavior* item (one at a time), detailing not only the behavior but also that it was voluntary or coerced. Each item specified the age of the respondent at the time, the age-differential category, and sex of the partner. The questions were presented in a multi-tiered hierarchically structured format.

Items for behaviors during sex with partners. Items (B183) and (B216) below represent second-tier screening questions that only allowed access to third-tier questions if they were answered affirmatively. Item numbers (B183) and (B216) are presented below as examples that described CSA by an adult male. When paired with each of four partner age differentials and both male and female sexes, they form a total of 16 items that describe sexual behaviors that occurred before participants in the study reached 18 years of age. With insertion of 18–99 for “Your age range:” and both male and female sexes, Item (B183) and Item (B216) each describe sexual behaviors of participants as adult males with other adults of both sexes.

Item B183. “Your age range: 1–17 years; Behavior: Sexual experimentation of any kind with a male age 18 or older and more than 4 years older than yourself. Give your best guess for numbers—don’t get hung up on being precise!”

Item B216. “Your age range: 1–17 years; Behavior: Coerced sexual situations of any kind with a male age 18 or older and more than 4 years older than yourself. Give your best guess for numbers—don’t get hung up on being precise!”

The four age-differential categories were presented in the following order: (a) The partner’s age was within 4 years of the respondent’s age, (b) The partner was more than 4 years older than the respondent but under the age of 18, (c) The partner was more than 4 years older than the respondent and over the age of 18 (as shown in items B183 and B216), and (d) The partner was more than 4 years younger than the respondent.

Sexual behavior sub-items. The following sub-item variables were the actual prompts used in the sexual behavior screen to obtain the data used in this research.

- (a) “Did you ever engage in this behavior in this age range? (No/Yes coded 0/1)
- (b) “Number of partners:”
- (c) “On about how many occasions did you engage in this behavior?”
- (d) and
- (e) “What were the earliest and latest ages in the ‘(applicable age range)’ age interval that you engaged in this behavior?”
- (f) “Was mother involved” or “Was father involved” These questions were only asked when the partner described in the item was more than four years older and over age 18 and of the female sex (for mother) or the male sex (for father), respectively. (No/Yes coded 0/1)
- (g) “Was sister involved?” (for female partners) or “Was brother involved?” (for male partners) was asked for all partner-age categories. (No/Yes coded 0/1)

Preference Items (presented as multiple choice)

P5 “The best way to describe my parents’ relationship while I was growing up is: (1) My parents’ relationship was not good: there was verbal fighting, anger, criticism, distance, and little or no love or affection. (2) My parents’ relationship was very mixed: there were periods of love and affection interspersed with verbal fighting, anger, criticism, or distance. (3) My parents’ relationship was reserved: I did not see fighting, criticism, or physical display of affection, but I believe that there was quiet love and respect underneath. (4) My parents’ relationship included a lot of physical fighting and/or brutality. (5) My parent’ relationship was very good with lots of love, support, and physical affection and few times when there was fighting, anger, criticism or distance.” To create the parental fighting variable (P5, 1 & 4), choices one and four were recoded to one, and all other responses were recoded to zero.

P40. “The best way to describe my family of origin’s experience with child sexual abuse at the hands of my parents is as follows: (1) There were never any parental behaviors which could

be described as child sexual abuse. (2) Whatever child sexual abuse that did occur was never brought to the attention of the authorities in any way. (3) Child sexual abuse of me or my siblings did occur, and it was brought to the attention of the authorities.”

P52 “The best way to describe the depth of my religious commitment is: (1) I am deeply religious. (2) I am religious but, I do not consider myself devout. (3) I am very laid-back about my religious beliefs. (4) While I wouldn’t call myself an atheist, I guess I could accept being called an agnostic. (5) I am an atheist.” The illustrated coding for Item C means that higher values code for lower religiosity. Accordingly, P52 was reverse scored (5 to 1) so that higher values coded for greater religiosity.

P65 “The best way to describe the feelings of closeness that I had toward my parents as a child of high school age is: (1) I felt very distant and estranged from both parents. (2) I felt close to my mother but distant from my father. (3) I felt close to my father but distant from my mother. (4) I felt close to both parents but somewhat closer to my mother. (5) I felt close to both parents but somewhat closer to my father.”

P66 “The best way to describe the feelings of closeness that I have toward my parents now (or up until their death(s)) is: (1) I feel very distant and estranged from both parents. (2) I feel close to my mother but distant from my father. (3) I feel close to my father but distant from my mother. (4) I feel close to both parents but somewhat closer to my mother. (5) I feel close to both parents but somewhat closer to my father.”

Items P65 and P66 were each recoded as follows: distant from both parents (1 to 1, else

0); close to both parents: (4 & 5 to 1, else 0), close to mother only (2 to 1 else 0); close to father only (3 to 1 else 0), creating a total of four 0/1 dummy variables for P65 and another four dummy variables for P66.

P77 “The best way to describe what happens when thoughts come into my mind about an adult with whom I had sex when I was a child is: (1) I feel close to him/her/they, and my memories make me feel good. (2) I feel close to him/her/they, and I still feel sexual arousal some times. (3) Sometimes the memories come back so vividly that it is like I am reliving the sexual experiences that I had as a child. (4) Sometimes I am overwhelmed by the memories, and I have a very unpleasant reaction of anxiety and/or anger and/or fear. (5) I was never sexual with any adults when I was a child.”

P99. “The best way to describe my mother’s symptoms of depression is: (1) My mother was often sad and/or crying, but she was never treated for depression or manic depressive disorder. (2) My mother was treated for depression. (3) My mother was treated for bipolar (manic/depressive) disorder. (4) I have no evidence that my mother had a tendency toward depression or bipolar disorder.

P100. Is the same as P99 except for replacement of the word, “mother”, with the word, “father”.

Statements (presented agree/disagree)

S22 “I have undergone psychological treatment for my childhood sexual abuse.”

S31 “I have sought counseling or psychological treatment for marital problems.”

S32 “One or more of the people who have sexually abused me have been reported to the authorities.”

S34 “I have suffered serious psychological injury as a result of one or more of my childhood sexual experiences.”

- S46 “My childhood sexual experiences left me feeling like damaged goods, that my value had been diminished.”
- S59 “When I tried to open up with another person about my childhood sexual experience, he/she reacted with horror and disgust.”
- S61 “I have sought counseling or psychological treatment for problems with poor sexual function involving myself or my partner.”
- S62 “My father or father figure has been reported to the authorities for sexually abusing me.”
- S78 “I believe that in some ways I have demonstrated symptoms of ‘sexual addiction’ or ‘sexual compulsions’ which may explain some of my sexual behaviors.”
- S79 “My mother or mother figure has been reported to the authorities for sexually abusing me.”
- S83 “I believe that my childhood sexual adventures have been psychologically important and helpful to me in developing my adult sexuality.”
- S93 “I was sexually abused by my father or father figure.”
- S98 “I have felt better since the person who sexually abused me was reported to the authorities. (Answer ‘disagree’ if there was no such report to authorities.)”
- S109 “I have engaged in sex for the specific purpose of obtaining money, drugs, or other goods in exchange for sex.”



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