SITUATIONAL CORRELATES OF DISCLOSURE OF CHILD SEXUAL ABUSE

A Thesis

by

ELIZABETH STIRLING WILEY

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

December 2003

Major Subject: Psychology

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Approved as to style and content by:

Robert W. Heffer (Co-Chair of Committee)	David H. Gleaves (Co-Chair of Committee)
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ABSTRACT

Situational Correlates of Disclosure of Child Sexual Abuse. (December 2003)

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Often, a sexually abused child's disclosure is the only evidence of the abuse. However, most victims do not disclose until adulthood, if ever. This study explores situational correlates of child sexual abuse disclosure. An archival data set comprised of 1120 cases of child sexual abuse was analyzed. Questions asked include whether or not any variable differentiates between the type of disclosure a child makes, the identity of the recipient of the disclosure, whether or not a child will recant, and if a child does recant, in what timeframe this occurs. Variables included victim characteristics (gender, ethnicity, age, family income) and abuse characteristics (relationship to the perpetrator, nature of the abuse, threat involved, frequency of abuse, and duration of abuse.) T-tests, chi-square analyses, and log linear modeling were used in the analysis of the data. Although statistical limitations were an issue, age and threat were found to be influential in the disclosure process.

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INTRODUCTION

Disclosure of Child Sexual Abuse

Prevalence rates of child sexual abuse vary widely from study to study. Much of this variation may be due to differences in definitions of child sexual abuse and in the methodology of research conducted (Wyatt & Peters, 1986a; Wyatt & Peters, 1986b). Aspects of the definition of child sexual abuse that may account for some of the variation in prevalence rates include whether or not noncontact sexual abuse (such as exposure to the genitals and requests to participate in sexual activity) is included, varying upper limits placed on the victim's age at the time of the abuse, and whether and how peer abuse is included. In a review of four representative studies (Finkelhor, 1979 as cited in Wyatt & Peters, 1986a; Finkelhor, 1984 as cited in Wyatt & Peters, 1986a; Russell, 1983 as cited in Wyatt & Peters, 1986a; Wyatt, 1985 as cited in Wyatt & Peters, 1986a) of child sexual abuse of females, the inclusion of noncontact sexual abuse, older upper age limits, and peer abuse in the definition of child sexual abuse increases the prevalence rates reported in research (Wyatt & Peters, 1986a). These studies found the prevalence of child sexual abuse among women to range from 15% to 62%, depending on the definition used. Differences in methodology may also explain variations in prevalence rates of child sexual abuse. Higher prevalence rates are also associated with face-to-face interviews and questions concerning specific abusive sexual behaviors as

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This thesis follows the style and format of the *American Psychologist.*

opposed to self-administered questionnaires with broad questions (Wyatt & Peters, 1986b).

Few studies have researched the prevalence of child sexual abuse among boys and men in a community sample. Finkelhor (1980) found that 9% of men in a college population reported having experienced childhood sexual abuse, and Gordon (1990) stated that 15% of adult men in a telephone survey reported child sexual abuse. Using samples including both male and female child victims, boys are estimated to comprise approximately 11 - 23% of the population of sexually abused children (Cupoli & Sewell, 1988; De Jong, Emmett, & Hervada, 1982; Ellerstein & Canavan, 1980; Fischer & McDonald, 1998; Pierce & Pierce, 1985; Reinhart, 1987; Sauzier, 1989; Showers, Farber, Joseph, Oshins, & Johnson, 1983).

Although the exact prevalence of child sexual abuse is not known, it is clear that disclosure of abuse is lacking. The preponderance of children do not disclose until adulthood, if ever (Arata, 1998; Finkelhor, 1980; Herman, 1981; Romero, Wyatt, Loeb, Carmona, & Solis, 1999; Russell, 1983; Sauzier, 1989). Kuehnle (1996) noted the importance of research on children's initiations of disclosure in detecting sexually abused children and that research on this topic is lacking. Often, a child's disclosure is the most reliable indicator of abuse (Macdonald, Lambie, & Simmonds, 1995) and may be the only evidence of the abuse (Rieser, 1991).

Disclosure has been recognized as being beneficial in stopping the abuse, preventing the perpetrator from victimizing other children, and reducing the physical and emotional harm to the child (Browne, 1991; Conte, Wolf & Smith, 1989; DiPietro,

Runyan, & Fredrickson, 1997; Sinclair & Gold, 1997). However for many children, any benefit of disclosing is far outweighed by the potential negative outcomes. Examples of costs of disclosure include fear of embarrassment, shame, or not being believed; fear of their family breaking up; and fear of the offender (Macdonald et al., 1995; Sauzier, 1989). Also, some younger victims may lack the verbal capacity or the understanding of the experience necessary to disclose (Macdonald et al., 1995).

Disclosure as a Single Event Versus Disclosure as a Process

Two types of disclosure are addressed in the literature: intentional and accidental. Intentional disclosure occurs when a child deliberately tells someone about the abuse. Accidental disclosure occurs when the abuse is discovered by chance rather than by the child consciously telling (Sgroi, Blick, & Porter, 1982). In most studies, however, only intentional disclosure is addressed (DiPietro et al., 1997; Ellerstein & Canavan, 1980; Gries, Goh, & Cavanaugh, 1996). Studies that do address intentionality present conflicting information. For example, some authors suggest that accidental disclosures comprise the majority of disclosures (Sgroi et al., 1982; Sorenson & Snow, 1991). However, 55% of the 156 sexually abused children in Sauzier's (1989) study disclosed intentionally.

Some researchers have postulated that disclosure is not just a single event, but rather involves a process. Summit (1983) and Sorenson and Snow (1991) have each proposed models of disclosure as a process. In Summit's Child Sexual Abuse Accommodation Syndrome (CSAAS), five categories are proposed: (1) secrecy (due to shame and to threats from the perpetrator), (2) helplessness, (3) entrapment and

accommodation (in which the child learns to accept the situation), (4) delayed, conflicted and unconvincing disclosure, and (5) retraction. Sorenson and Snow (1991) identified four progressive stages in the process of disclosure: (1) denial, (2) disclosure (which has both a tentative phase and an active phase, in which a detailed, first-person account of the abuse is given), (3) recantation, and (4) reaffirmation.

In both models, disclosure as a *process* is addressed. Barriers to immediate disclosure are discussed. When a disclosure is initially made, it is cautious and unconvincing. Disclosure is followed by recantation or retraction, and in Sorenson and Snow's (1991) model, a reaffirmation of the initial disclosure then occurs. Sorenson & Snow's (1991) research retrospectively analyzed data on both male and female victims of child sexual abuse while Summit (1983) states that CSAAS was shown to be valid in his clinical experience, and applies to the typical *female* victim of child sexual abuse.

Although these models describe disclosure as a process, most studies do not examine disclosure within that framework. Further, not all researchers agree that disclosure follows a fixed sequence of events. For example, in Bradley and Wood (1996), cases fit criteria for CSAAS infrequently, and only 52% of the sample met the criteria for Sorenson and Snow's model. Denial and recantation were infrequent.

Other researchers state that recantation is not an uncommon occurrence in child sexual abuse cases (Gonzalez, Waterman, Kelly, McCord, & Oliveri, 1993 as cited in Bradley & Wood, 1996; Rieser, 1991; Sorenson & Snow, 1991). Reported rates of recantation in studies have ranged from 3% to 27% with lower recantation rates reported in the setting of child protection or police interviews and higher rates reported in therapy

settings (Bradley & Wood, 1996; Gonzalez et al., 1993 as cited in Bradley & Wood, 1996; Jones & McGraw, 1987 as cited in Bradley & Wood, 1996; Sorenson & Snow, 1991). Some precipitants of recantation include a lack of family support (Marx, 1999; Rieser, 1991; Summit, 1983), direct pressure to recant (Marx, 1999; Sgroi et al., 1982; Sorenson & Snow, 1991), and wanting to escape the consequences of disclosure (Gonzalez et al., 1993 as cited in Bradley & Wood, 1996; Rieser, 1991). Risk of recantation is higher when the offender is an individual trusted by the child or child's family, such as a father or stepfather (Marx, 1999). Recantation has been found to be unrelated to victim age, type of abuse, or use of threat (Bradley & Wood, 1996).

To Whom Did the Child Disclose?

Relatively few studies address the identity of the recipient of the disclosure. In studies that do attend to this topic, there is general agreement that parents, usually the mother, are most likely to receive the child's disclosure (Berliner & Conte, 1995; Fontanella, Harrington, & Zuravin, 2000; Gordon, 1990; Lamb & Edgar-Smith, 1994; Sauzier, 1989; Sinclair & Gold, 1997). However, Gordon (1990) noted a difference in the identity of the recipient of the disclosure based on the identity of the perpetrator and the gender of the victim. Girls were more likely than boys to disclose to a family member, while males were more likely than females to have told a non-relative. However, boys were more likely than girls to have told their parents about abuse perpetrated by a relative.

Variables Related to Child Sexual Abuse

Victim characteristics that have been associated with disclosure of child sexual abuse include gender (DiPietro et al., 1997; Fontanella et al., 2000; Sauzier, 1989), ethnicity (DiPietro et al., 1997; Fontes, 1993; Sauzier, 1989;), and age (Campis, Hebden-Curtis, & Demaso, 1993; DiPietro et al., 1997; Farrell, 1988; Fontanella et al., 2000; Herman, 1981; Sauzier, 1989; Sorenson & Snow, 1991; Tyagi, 2001). Family income has consistently been identified as a risk factor for child sexual abuse (Finkelhor, 1980; Sauzier, 1989; Tzeng & Schwarzin, 1990). Although its relation to disclosure has not been addressed in the literature, it will be explored in this paper. Abuse characteristics that have been associated with disclosure include the relationship of the perpetrator to the victim (DiPietro et al., 1997; Hanson, Resnick, Saunders, Kilpatrick, and Best, 1999), nature of the abuse (DiPietro et al., 1997; Farrell, 1988; Russell, 1983), threat involved (Hanson et al., 1999), frequency of the abuse (Hanson et al., 1999), and duration of the abuse (Farrell, 1988; Tyagi, 2001). These variables will first be discussed in the context of the occurrence of child sexual abuse and then in the context of disclosure.

Victim Characteristics

Gender

Boys are proposed to be less vulnerable to child sexual abuse than are girls (Fischer & McDonald, 1998; Kercher & McShane, 1984). As mentioned earlier, approximately 15 – 62% of women and 9 – 15% of men were sexually abused as children (Finkelhor, 1980; Gordon, 1990; Wyatt & Peters, 1986a). Within the

victimized population, estimates of male victims range from 11 - 23% (Cupoli & Sewell, 1988; De Jong et al., 1982; Ellerstein & Canavan, 1980; Fischer & McDonald, 1998; Pierce & Pierce, 1985; Reinhart, 1987; Sauzier, 1989; Showers et al., 1983).

Ethnicity

Tzeng and Schwarzin (1990) report that African-American children are 1.55 times more vulnerable to sexual abuse than are Anglo children, while "other" ethnicities are more vulnerable to sexual abuse than both Anglo (4 times) and African-American children (2.57 times). In contrast, Siegel and colleagues (Siegel, Sorenson, Golding, Burnam, and Stein, 1987) reported that in the Los Angeles area non-Hispanic whites were twice as likely as Hispanics to have experienced sexual abuse in childhood.

Age

Preschool-age children are at a higher risk for sexual abuse than are older children. Reasons cited include preschoolers' need for supervision and help with tasks such as bathing and dressing (Burkhardt & Rotatori, 1995 as cited in Fontanella et al., 2000; Waterman, 1986 as cited in Fontanella et al., 2000) and their trust of authority figures (Bogat & McGrath, 1993 as cited in Fontanella et al., 2000; Wurtele & Miller-Perrin, 1992 as cited in Fontanella et al., 2000). In contrast to this position, Tzeng and Schwarzin (1990) state that children from 12-17 years of age are the most susceptible to abuse.

Family Income

Risk of child sexual abuse is greater in lower socioeconomic (SES) households (Finkelhor, 1980; Tzeng & Schwarzin, 1990). In Finkelhor (1980), girls from families

with an income under $10,000 were two-thirds more likely to be sexually abused than the average girl. A majority of sexual abuse cases come from lower-income households where the caretaker has a blue-collar job, is unemployed, or is receiving aid/public assistance (Sauzier, 1989; Tzeng & Schwarzin, 1990). However, in a study of multiethnic female college students, no relationship between victimization and family of origin's income level was found (Kenny & McEachern, 2000).

Interrelations of Victim Characteristics

Male victims tend to be younger than female victims (De Jong et al., 1982; De Jong, Hervada, & Emmett, 1983; Fischer & McDonald, 1998; Pierce & Pierce, 1984; Tzeng & Schwarzin, 1990). Tzeng and Schwarzin (1990) observed that significantly more males were abused from 3 - 11 years of age while significantly more females were abused from ages 12 – 17 years of age or older. Conversely, Gordon (1990) maintained that boys are older at the time of their first abuse. For victims under 12 years of age, Cupoli and Sewell (1988) stated that no difference in age was found between male and female victims.

No ethnic differences in the abuse of boys are apparent (Showers et al., 1983). However, African-American girls have a higher victimization rate than Anglo girls. African-American infants (under age 3) and young adults (over age 17) are more vulnerable to sexual victimization than are Anglo children in these age groups (Tzeng & Schwarzin, 1990). Latino girls are more prone to abuse at a younger age than are African-American girls (Sanders-Phillips, Moisan, Wadlington, Morgan, Raganath, & English, 1995 as cited in Moisan, Sanders-Phillips, & Moisan, 1997).

Low SES seems to be more of an influence in the sexual abuse of boys and African-American children than in the abuse of girls and Anglo children, respectively. In other words, sexually abused boys are more likely to come from low SES homes than sexually abused girls, and sexually abused African-American children are more likely to come from low SES homes than sexually abused Anglo children (Tzeng & Schwarzin, 1990).

Abuse Characteristics

Relationship of the Perpetrator to the Victim

Research has found that most victims are abused by males they know (Cupoli & Sewell, 1988; Finkelhor, 1980; Fontanella et al., 2000; Reinhart, 1987). Approximately 40 - 60% of victims experience intrafamilial abuse (Dubé & Hébert, 1988; Finkelhor, 1980; Mian, Wehrspann, Klajner-Diamond, Le Baron, & Winder, 1986; Sauzier, 1989) while stranger abuse is rare (Sauzier, 1989). However, Reinhart (1987) and Cupoli and Sewell (1988) reported that for both male and female victims, most often the perpetrator was known to the victim, but was not related to the victim.

Nature of the Abuse

The extent of physical contact is useful in determining the severity of the abuse (Chaffin, Wherry, Newlin, Crutchfield, & Dykman, 1997 as cited in Arata, 1998). The categories of sexual acts addressed in this study, ranging from least to most severe, include noncontact abuse (such as exhibitionism or a sexual request), fondling, and penetration (Arata, 1998; Chaffin et al., 1997 as cited in Arata, 1998; Russell, 1983;

Fischer & McDonald, 1998). Noncontact sexual abuse is less of a focus in the literature, although Finkelhor (1980) does discuss the assaultive nature of exhibitionism.

Involvement of Threat in the Abuse

The prevalence of the use of threats in sexually abusive relationships is not universally agreed upon. In one study of college students, 55% of the child sexual abuse victims reported experiencing some force, including verbal threats, within the abusive relationship (Finkelhor, 1980). In Green, Ramelli, & Mizumoto (2001), 42% of female victims and 47% of male victims, including children and adults who were clients of a sex abuse treatment center, reported being threatened. However, Gordon (1990) reported that in the overwhelming majority of cases, threat is not used.

Frequency of the Abuse

Multiple experiences of sexual abuse are not uncommon. In Farber, Showers, Johnson, Joseph, & Oshins' (1984) study of child victims, 43% were abused more than once. Siegel et al., (1987) reported that 46% of the participants experienced more than one assault during childhood. Lamb and Edgar-Smith (1994) found that over half of the women in their study were abused weekly in childhood. However, Gordon (1990) reports that most child victims experience only an isolated incident of abuse.

Duration of the Abuse

Most studies examine the duration of child sexual abuse in conjunction with other variables, such as the gender of the victim, the relationship of the perpetrator to the victim, and the disclosure of the abuse.

Interrelations of Abuse Characteristics

Intrafamilial victims suffer longer durations (from months to years) and more frequent episodes of abuse than victims of extrafamilial abuse, who typically experience a single or small number of events over a short period of time (Faller, 1989; Farber et al., 1984; Fischer & McDonald, 1998; Mian et al., 1986; Russell, 1983). The longer, more frequent abuse at the hands of a family member could be due to the perpetrator's access to the child (Gomez-Schwartz, Horowitz, & Cardarelli, 1990 as cited in Lamb & Edgar-Smith, 1994) and to the child's lower likelihood of reporting a relative (Russell, 1983).

The literature concerning the relation of the seriousness of the abuse to the perpetrator's relationship to the victim is unclear. Both extrafamilial *and* intrafamilial abuse have been associated with more serious sexual behaviors (Russell, 1983; Fischer & McDonald, 1998). However, some researchers have found no differences in the seriousness of intrafamilial versus extrafamilial abuse. (Gomez-Schwartz et al., 1990 as cited in Lamb & Edgar-Smith, 1994). Extrafamilial abuse may lead to more threats and more violence because the victims are often older and resist more than younger victims might (De Jong et al., 1983). Also, Moisan and colleagues (1997) posited that children who are abused by extended family members may experience more abuse and more severe acts of abuse than those victimized by immediate family members.

Interrelations of Victim and Abuse Characteristics

Perpetrators of child sexual abuse, for both boys and girls, are mostly men known to the child (Cupoli & Sewell, 1988; Finkelhor, 1980; Fontanella et al., 2000; Reinhart, 1987). Boys are more likely than girls to be sexually abused by non-family members,

including strangers (De Jong et al., 1983; Dubé & Hébert, 1988; Finkelhor, 1980; Green et al., 2001; Gordon, 1990; Showers et al., 1983; Siegel et al., 1987; Tzeng & Schwarzin, 1990), although some studies have found that both male and female victims are most often victimized by non-relatives known to the victim (Cupoli & Sewell, 1988; Reinhart, 1987). Extrafamilial abuse results in the majority of both male and female victims experiencing only one episode of abuse (Gordon, 1990). Most studies have found the identity of the perpetrator to be related to the gender of the victim. However, not all researchers agree (Farber et al., 1984; Fischer & McDonald, 1998; Fontanella et al., 2000).

Ethnicity may be related to the perpetrator's relationship to the victim. Latino children, both male and female, may be prone to abuse from extended family members, perhaps because Latinos may come in contact with extended family more often (Kenny & McEachern, 2000; Moisan et. al., 1997; Romero et al., 1999). Moisan and colleagues (1997) compared sexually abused African-American boys and Latino boys and found that although most were abused by nonfamily members, when intrafamilial abuse did occur African-American boys were more likely to be abused by an immediate family member while Latino boys were more likely to be abused by an extended family member. It was posited that children who are abused by extended family members may experience more abuse and more severe acts of abuse (Moisan et al., 1997).

Intrafamilial abuse tends to have a younger onset than extrafamilial abuse, and younger victims are assaulted over longer periods of time (De Jong et al., 1983; Farrell, 1988; Fischer & McDonald, 1998; Green et al., 2001; Mian et al., 1986; Russell, 1983).

Although the average age of abused boys is younger than for girls in both intrafamilial and extrafamilial abuse situations, younger boys are more likely to be abused by a family member while older boys are more likely to be abused by a stranger (Fischer & McDonald, 1998; Showers et al., 1983). The likelihood of being assaulted by a stranger increases with age for both boys and girls (Green et al., 2001).

It has been reported that boys experience more serious acts of sexual abuse than girls, including more oral and anal intercourse (Dubé & Hébert, 1988; Farber et al., 1984; Fontanella et al., 2000; Gordon, 1990; Pierce & Pierce, 1985; Showers et al., 1983; Tzeng & Schwarzin, 1990). Latino boys were more likely than African-American boys to experience these sexually abusive behaviors (Moisan et al., 1997), while African-American males have a higher victimization rate and a higher rate of oral and anal sex than do Anglo males (Tzeng & Schwarzin, 1990). Fontanella et al. (2000) stated that boys also experience more fondling while girls are more vulnerable to be penetrated in some way, mostly digital and penile penetration (Fontanella et al., 2000). Both Anglo and African-American girls have been found to be equally vulnerable to incest and are equally low in vulnerability to oral and anal sex (Tzeng & Schwarzin, 1990). In a predominately Hispanic multiethnic female college student sample (Kenny & McEachern, 2000), mostly fondling was experienced. Also, Gordon (1990) discovered a trend for girls to have experienced more fondling and exhibitionism than boys. Overall for both boys and girls, African-American children are more vulnerable to rape and Anglo children are more vulnerable to child molestation (sexual touch for the perpetrator's gratification) (Tzeng & Schwarzin, 1990).

Duration of abuse is shorter for boys, and is often just one day (Green et al., 2001; Lamb & Edgar-Smith, 1994), although not all agree (Farber et al., 1984). Also, a large proportion of both a multiethnic sample of women and a sample of Latinas reported experiencing abuse over one day only (Kenny & McEachern, 2000; Romero et al., 1999). Among boys, a nonsignificant trend for Latino boys to be abused over a longer period of time than African-American boys was found (Moisan et al., 1997). Arata (1998) found a trend for more report with a shorter duration of abuse.

Pierce and Pierce (1985) reported that males experience more threat than females. Moisan et al. (1997) reported that both Latino and African-American boys experience force. For girls only, family members used threats significantly more often than non-family members (Farber et al., 1984).

Variables Related to Disclosure

Victim Characteristics

Gender

Boys are less likely to disclose sexual abuse than are girls (Finkelhor, 1980; Gordon, 1990; Gries et al., 1996; Lamb & Edgar-Smith, 1994; Reinhart, 1987). Reinhart (1987) reported that the sexual victimization of boys is disclosed by a third party (unintentional disclosure) more often than for female victims while rates of active disclosure are similar for boys and girls. However, other researchers have not found a relationship between disclosure and child gender (DiPietro et al., 1997; Fontanella et al., 2000; Sauzier, 1989) and attribute the lack of differences in disclosure type between genders to the ages of the children (Fontanella et al., 2000; Reinhart, 1987).

Reasons for males to resist disclosing their abuse may be different from reasons of females. Boys may be ashamed and refuse to discuss their feelings. Cultural beliefs about masculinity may inhibit boys from disclosing. They and others may not recognize their experiences as abusive (i.e., seduction by an older woman may be considered a positive experience). Boys may fear not being believed or being labeled as weak or helpless. If the perpetrator was male, their fear of being labeled homosexual or their fear that they might be homosexual may inhibit their disclosure (Faller, 1989; Nasjleti, 1980).

Ethnicity

Conflicting views concerning whether or not a relation exists between disclosure and victims' ethnicity are presented in the literature (Arata, 1998; DiPietro et al. 1997; Elliot & Briere, 1994; Fontes, 1993; Futa, Hsu, and Hansen, 2001; Romero et al., 1999; Sauzier, 1989; Tyagi, 2001; Tzeng & Schwarzin, 1990). Elliott and Briere (1994) report that African-American children are more likely not to intentionally disclose and to be identified by external evidence (accidental disclosure) than children of other ethnicities, while Anglo children are more likely than children of other ethnicities to recant their disclosure.

Disclosure for some may be especially difficult due to aspects of their culture. For example, Hispanic children are less likely than other ethnicities to make complete, credible disclosures, which may reflect a language barrier (Elliott & Briere, 1994). For Puerto Rican children living in America, components of their culture such as absolute obedience to adults, the use of corporal punishment, the importance of a girl's virginity, and restraint in discussing sexual issues may impede disclosure. Issues related to

discrimination, migration, poverty, and lack of bilingual services have also been cited as impediments to disclosure (Fontes, 1993).

Children in the Asian community who are sexually abused may feel certain pressures not to disclose their abuse due to the values emphasized in their culture. Specific barriers may include collectivity, conformity, and fatalism (Futa et al., 2001). Other values that are important in Asian culture and may present barriers to disclosure include inconspicuousness, middle position virtue, shame, self-control, and maintaining the honor of the family, including the honor of dead ancestors (Futa et al., 2001).

Some barriers to disclosure seem to apply regardless of membership in a given ethnic group. In a sample of Latina women who were sexually abused as children, reasons cited for not disclosing include the anticipation of a negative response (e.g., not being believed, being blamed, getting in trouble), feeling that they did not know how to tell or had no one to tell, stating that they wanted to forget the abuse, they wanted to protect others, they did not want family turmoil, they were ashamed (Romero et al., 1999). Similar reasons for lack of disclosure have been conveyed when discussing child sexual abuse in general (Macdonald et al., 1995; Sauzier, 1989).

Age

Developmental variables affect disclosure (Campis et al., 1993; Sorenson & Snow, 1991). DiPietro et al. (1997) found that victim's age greater than four years is correlated with disclosure. Preschool victims are more likely to disclose accidentally, while school-aged and adolescent victims are more likely to disclose intentionally (DiPietro et al., 1997; Campis et al., 1993). This may be due to the older child's greater

ability to communicate (Hewitt, 1991 as cited in Fontanella et al., 2000; Slusser, 1995 as cited in Fontanella et al., 2000; Macdonald et al., 1995) or to the lack of support younger victims receive when they disclose (Lamb & Edgar-Smith, 1994). Farrell (1988) stated that girls' self-reports of abuse increased as victims' age increased, with the majority of disclosures from girls 12- to 15-years old. However, other researchers believe that disclosure is not significantly related to age at victimization (Arata, 1998; Sauzier, 1989). Over half of the sexually abused children in Sauzier's (1989) sample revealed their abuse intentionally regardless of age.

Family Income

Although the literature fairly consistently cites low SES as a risk factor for sexual abuse, family income and its relation to disclosure of child sexual abuse has not been researched. This topic will be explored in this study.

Interrelations of victim characteristics

Male and female preschoolers (ages 2 - 5 years) are equally as likely to disclose intentionally or accidentally (Fontanella et al., 2000). Also, Moisan et al. (1997) noted that there were no statistical differences between Latino boys and African-American boys in the identity of the recipient of their disclosure, with approximately 20% of them initially disclosing to their mothers.

Abuse Characteristics

Relationship of the Perpetrator to the Victim

Research concurs that the less closely related the victim is to the perpetrator, the more likely the child is to intentionally disclose the abuse (Arata, 1998; DiPietro et al.,

1997; Sauzier, 1989; Smith, Letourneau, Saunders, Kilpatrick, Resnick, & Best, 2000). A child may experience greater loyalty toward a parent and thus be more reluctant to tell of abuse perpetrated by a parent (Sauzier, 1989).

Nature of the Abuse

Research has found that the more severe the abuse encountered, the less likely it is that the victim will disclose (Arata, 1998; Farrell, 1988).

Involvement of Threat in the Abuse

Considerable agreement exists among researchers that threats do decrease the victim's likelihood of disclosing their abuse (Lyon, 1996; Paine & Hansen, 2002; Sauzier, 1989; Tyagi, 2001). In Sauzier (1989), only 23% of the victims who were threatened told of the abuse immediately. However, in Hanson et al. (1999), reported cases were more likely to involve life threat and/or physical injury than non-reported cases.

Frequency of the Abuse

Sauzier (1989) found that victims of a single incident of sexual abuse may have a delayed disclosure or may never disclose, whereas Smith et al. (2000) stated that a series of childhood rapes may lead to a longer delay in disclosure. The relation between frequency of abuse and disclosure is unclear.

Duration of the Abuse

Research on the relation of duration of abuse to disclosure is equivocal. Sauzier (1989) found that a short duration of abuse lead to delayed disclosure or no disclosure. However, Arata (1998) noticed a trend for disclosure to be more likely for shorter

durations of abuse. In cases of incest, self-disclosure was more likely after 24 or more months of abuse (Farrell, 1988). However, other studies have found that a longer duration of abuse leads to more hesitancy to disclose (Paine & Hansen, 2002). One can note a lack of consensus among researchers concerning the relation between abuse duration and disclosure.

Interrelations of Abuse Characteristics

The child sexual abuse literature has not looked at the interrelations of abuse characteristics as they relate to disclosure. This will be addressed in the present study.

Interrelations of Victim and Abuse Characteristics

Fontanella et al. (2000) purported that preschoolers may be very reluctant to disclose their abuse because usually the perpetrator is a family member, although in her study male and female preschoolers (ages 2 - 5 years) were equally as likely to disclose intentionally or accidentally (Fontanella et al., 2000). However, Herman (1981) found the report of father-daughter incest, usually made at puberty, to be related to the age of the victim.

Defining Relevant Terms

In the current study, a broad definition of child sexual abuse is endorsed. Any unwanted or unsolicited act that may be sexual in nature that is directed toward a child of 17 years or younger is considered child sexual abuse. This includes noncontact sexual abuse. Sgroi et al.'s (1982) definitions of disclosure are used here. Intentional disclosure occurs when a child deliberately tells someone about the abuse. Accidental disclosure occurs when the abuse is discovered by chance rather than by the child

consciously telling (Sgroi et al., 1982). Recantation occurs when a child retracts a disclosure of abuse. Recantation can occur after an intentional disclosure. Recantation can also occur after an accidental disclosure in which the child confirms that the abuse occurred. Recantation cannot occur after an accidental disclosure in which the occurrence of the abuse was never confirmed by the child.

Although convincing information is lacking, much of the literature does note an association among variables related to victim characteristics and abuse characteristics, and the likelihood of intentionally disclosing or delaying disclosure. One could infer that a child who is unlikely to disclose and does disclose, may have disclosed accidentally.

Hypotheses

The goal of this project is to supplement the literature concerning correlates of disclosure of child sexual abuse. Information that is especially needed includes whether or not the disclosure was intended, the identity of the recipient of the disclosure, and if and when the victim recanted the disclosure. Interrelations among abuse characteristics as they relate to disclosure have not been addressed in the literature and will be examined in this study. Because so little research has been done concerning variables related to the process of disclosure and recantation, often, no information is available to direct hypotheses. Exploratory analyses were conducted in these instances.

Directional Hypotheses

1. Because girls are more likely to disclose, their disclosures are more likely to be intentional while the disclosures of boys are more likely to be accidental.

2. Girls will be more likely than boys to disclose to a family member (Gordon, 1990).
3. Because Anglos are less likely to have the additional cultural barriers to disclosure than ethnic minorities have, Anglos will be more likely to disclose intentionally.
4. Older children (school-age and adolescents) will be more likely than younger children (preschool) to disclose intentionally versus accidentally.
5. Victims of extrafamilial abuse will be more likely than victims of intrafamilial abuse to disclose intentionally versus accidentally.
6. Victims of intrafamilial abuse will be more likely than victims of extrafamilial abuse to recant.
7. Victims of less severe abuse (noncontact vs. fondling vs. penetration) will be more likely to disclose intentionally.
8. When threat is not involved, intentional disclosure is more likely.

Exploratory Analyses

1. How do the following variables independently affect the likelihood of an intentional disclosure: family income, frequency of abuse, duration of abuse?
2. How do the following variables independently affect the likelihood of disclosing to a family member: ethnicity, age, family income, relationship of the perpetrator to the victim, nature of the abuse, threat involved, frequency of abuse, duration of abuse?

3. How do the following variables independently affect the likelihood of recantation: gender, ethnicity, age, family income, nature of the abuse, threat involved, frequency of abuse, duration of abuse?
4. How do the following variables independently affect the timing of recantation: gender, ethnicity, age, family income, relationship of the perpetrator to the victim, nature of the abuse, threat involved, frequency of abuse, duration of abuse?
5. How do the relationship of the perpetrator to the victim and the nature of the abuse jointly affect: whether or not the disclosure is intentional, the identity of the recipient of the disclosure, whether or not the victim recants, and the timing of the recantation?
6. How do the relationship of the perpetrator to the victim and the involvement of threat jointly affect: whether or not the disclosure is intentional, the identity of the recipient of the disclosure, whether or not the victim recants, and the timing of the recantation?
7. How do the relationship of the perpetrator to the victim and the frequency of the abuse jointly affect: whether or not the disclosure is intentional, the identity of the recipient of the disclosure, whether or not the victim recants, and the timing of the recantation?
8. How do the relationship of the perpetrator to the victim and the duration of the abuse jointly affect: whether or not the disclosure is intentional, the identity of the recipient of the disclosure, whether or not the victim recants, and the timing of the recantation?

METHOD

Sample

This study analyzed archival data collected at child sexual abuse center in southeastern Texas. This center is an agency with the goal of helping sexually abused children and their families heal. Fifteen partner agencies are housed within the child sexual abuse center, including law enforcement, a medical school, a psychological/ psychiatric school, and governmental investigative organizations. When a report of child sexual abuse is made, Child Protective Services refers the child and other family members to Psychological Services for therapy.

Measures

A Child Therapy Client Chart Survey is completed on each child therapy client at the CAC. This form contains information on demographics, the abuse, mental health status, and therapy. Demographic information (victim characteristics) and information about the current incident of sexual abuse (abuse characteristics) were analyzed in this study. Data from the Chart Surveys from closed therapy cases were coded in SPSS. The information for this study comes from the Child Therapy Client Chart Surveys coded for child victims for closed cases in a 7-year period from 1992-1998.

Analyses

This study explored several aspects of disclosure in cases of child sexual abuse. Questions asked include whether or not any variable differentiates between the type of disclosure a child makes, the identity of the recipient of the disclosure, whether or not a child will recant, and if the child does recant, in what timeframe this occurs. A series of

chi-squares were used in these analyses. Bonferroni's correction of the acceptable level of probability for statistical significance was used due to the large number of comparisons. For each question, the sample was divided into two groups: (a) type of disclosure (accidental or intentional), (b) identity of the recipient of the disclosure (family or non-family), (c) whether or not the child recants (yes or no), and (d) if the child does recant, in what timeframe this occurs (< 3 months or > 3 months). Because age was maintained as a continuous variable, student's *t*-tests were used to analyze the relationship of age to aspects of disclosure.

Interactions of abuse characteristics as they relate to the nature of disclosure of child sexual abuse were also examined. These hypotheses were analyzed using log linear modeling.

RESULTS

The results of this study will be presented as follows: (a) data reduction, (b) victim characteristics (age, gender, ethnicity, family income), (c) abuse characteristics (relationship of the perpetrator to the victim, nature of the abuse, frequency of the abuse, involvement of threat, duration of the abuse), and (d) aspects of the disclosure (intentional, identity of the recipient, recantation, timing of recantation). Results of student's *t*-tests, chi-square analyses, and log-linear analyses will then be presented.

Data Reduction

The archival data from the 1992-1998 files of the CAC's Psychological Services included 1130 cases of child sexual abuse. Ten cases were excluded. Seven cases were excluded due to the age of the victim (older than 17 years of age). Three cases were excluded due to lack of information. For these, no information other than a code number assigned to each case in the data set was available.

One thousand one hundred twenty (1120) cases remained for analysis. Two data sets were merged. However, some of the data were recoded because the two data sets used different coding schemes for some of the variables. For age, one data set recorded the actual age of the child, while the other data set coded age into categories. The mean of the age category assigned to the case was recoded as the age of the child, in order to maintain age as a continuous variable. According to the CAC, intake is estimated to occur, on average, approximately one week after disclosure. Because of this short time interval, the age of the victim at intake and the age at disclosure are treated as equivalent in this study. Duration of the abuse was also coded differently in each data set. One

data set coded the duration variable by category (single instance, weeks, months, years) while the other data set recorded the duration as a continuous variable. Variation in how the duration data were coded resulted in only being able to code the duration variable categorically.

Although 1120 were cases available for analysis, most of the cases did not have available data for every variable. Cases with unknown data pertinent to a particular analysis were omitted in that analysis. Because of this, some of the sample sizes for the analyses are quite small.

Victim Characteristics

Information on age was available for 1117 cases. The mean age of the children at the time of disclosure was 9.89 years. Based on the data available (n = 1112), the sample was 71.8% female and 28.2% male. Based on the existing data (n = 795), approximately 35.1% of the children were Anglo, 29.2% were African-American, 33.2% were Hispanic, 1.6% were bi-racial, 0.3% were Asian, and 0.6% were from other ethnic groups. The percentage of the sample followed by the percentage of the 2001 population of the county in which the child sexual abuse center is located will be presented by ethnicity: Anglo 35.1%, 51%; African-American 29.2%, 16%; Hispanic 32.3%, 25%; Asian 0.3%, 3% (Klineberg, n.d.). Based on the data available (n = 234), the majority of victims were from lower income families (83.3%), while 3.8% were from low to middle income families, 9.8% were middle-income families, 0.9% were from mid-to-upper-income families, and 2.1% were from upper-income families.

Abuse Characteristics

Based on the data available (n = 855), the vast majority of children had been victimized by an intrafamilial perpetrator (92.9%) while the remaining children (7.1%) had been victimized by an extrafamilial perpetrator. Based on the existing data (n = 649), a preponderance of victims (84.4%) did not report threat associated with their abuse while 15.6% did report threat.

The nature of the abuse experienced was reported in 762 cases. Of these cases, 2.1% experienced noncontact sexual abuse only, 32% experienced fondling only, 25.9% experienced penetration only, and 1.6% experienced "other" sexual abuse (including bestiality and ritualistic abuse) only. Three percent (3%) experienced both noncontact sexual abuse and fondling, 1.2% experienced noncontact abuse and penetration, and 0.1% experienced noncontact abuse and "other" sexual abuse. Less than one-third (28.1%) experienced fondling and penetration and 0.8% experienced fondling and "other" sexual abuse. Less than one percent (0.5%) experienced penetration and "other" sexual abuse, 2.9% experienced noncontact abuse, fondling, and penetration, and 1.2% experienced fondling, penetration, and "other" sexual abuse. Less than one percent (0.7%) experienced all four types of abuse. When the data were categorized according to the most severe abuse experienced, 2.1% experienced noncontact sexual abuse, 35% experienced fondling, 58% experienced penetration, and 4.9% experienced "other" sexual abuse. (In this paper, "other'' sexual abuse is considered to the most severe of the types of abuse discussed.)

In terms of the frequency of the abuse, every victim had experienced multiple instances of abuse, although not always multiple instances of the same type of sexual abuse. To maintain some variability in the analyses, the frequency of abuse was analyzed separately for each type of abuse. Of the victims of noncontact sexual abuse (n = 63), 30.2% experienced a single instance while 69.8% of the victims experienced multiple instances. Of the victims of fondling (n = 421), 18.1% experienced a single instance while 81.9% experienced multiple instances. Of the victims of penetration (n = 378), 17.5% experienced a single occurrence, whereas 82.5% experienced multiple episodes. Lastly, of the victims of "other" types of sexual abuse (n = 27), 11.1% experienced a single incident of this abuse whereas 88.9% of these victims experienced multiple incidents.

Based on the available data for the duration of abuse (n = 266), the largest group of victims experienced more than one year of abuse (46.6%). Less than one-fifth (19.2%) experienced months of abuse, 1.1% experienced weeks of abuse, and 33.1% experienced a single instance of abuse.

Aspects of Disclosure

Based on the data available for the intentionality of the disclosure (n = 414), a majority of children disclosed intentionally (87.7%), whereas the remaining children (12.3%) disclosed accidentally. Based on the existing data for the identity of the recipient of the disclosure (n = 443), a preponderance of victims (74.3%) disclosed their abuse to a family member whereas 25.7% disclosed their abuse to someone outside of the family. Based on the data available for recantation (n = 417), most of the victims

(86.3%) did not recant their disclosures whereas 13.7% did. Because the sample available for the timing of recantation was so small (n = 46), the analyses run for timing of recantation had expected frequency counts that were too low for the analyses to be interpreted. Timing of recantation is not addressed further in the results of this study.

Student's *t*-tests Comparing Age and Aspects of Disclosure

For the following analyses, Bonferroni's corrections were used. Based on four tests per set, the accepted significance level used was p = 0.0125. Student's t-tests were conducted to examine the association between the age of the victim and aspects of the disclosure. (See Table 1.) Children who disclosed intentionally were older (M = 9.94 years, SD = 3.725) than children who disclosed accidentally (M = 8.57, SD = 3.390), which was marginally significant. Children who disclosed their abuse to a family member were significantly younger (M = 9.28 years, SD = 3.691) than children who disclosed to non-family members (M = 10.89 years, SD = 3.475). Children who recanted (M = 9.54 years, SD = 3.407) were not significantly younger than those who did not recant (M = 9.91, SD =3.759).

Table 1.

Student's t-tests Comparing Age and Aspects of Disclosure

Comparison	*df*	*t*	*p*	Cohen's *d*
Intentionality of Disclosure	412	-2.482	0.013	-0.385
Recipient of Disclosure	441	-4.086	0.0001	-0.449
Recantation	415	0.689	0.491	0.103

Table 2.

Chi-Square Analyses Relating Victim and Abuse Characteristics to Aspects of Disclosure

Comparison	*df*	*N*	χ^2	*p*	Φ	%[a]	*C*[c]
Gender * Intend	1	412	4.625	0.032	0.106	0[b]	0.11
Gender * Disclose	1	441	0.873	0.350	0.044	0[b]	0.04
Gender * Recant	1	415	2.941	0.086	0.084	0[b]	0.08
Ethnicity * Intend	5	291	2.192	0.822	0.087	41.7	0.09
Ethnicity * Disclose	5	306	9.356	0.096	0.175	41.7	0.17
Ethnicity * Recant	5	294	2.941	0.709	0.100	41.7	0.10
Income * Intend	4	140	1.977	0.740	0.119	60	0.12
Income * Disclose	4	138	1.700	0.791	0.111	60	0.11
Income * Recant	4	146	2.033	0.730	0.118	60	0.12
Perp * Intend	1	390	0.209	0.648	0.023	25	0.02
Perp * Disclose	1	415	0.526	0.468	-0.036	0[b]	0.04
Perp * Recant	1	390	1.136	0.286	0.054	25	0.05
Nature * Intend	12	384	17.495	0.132	0.213	69.2	0.21
Nature * Disclose	12	404	17.052	0.148	0.205	69.2	0.20
Nature * Recant	12	381	16.953	0.151	0.211	69.2	0.21
Threat * Intend	1	239	9.517	0.002	0.200	0[b]	0.20
Threat * Disclose	1	268	2.493	0.114	-0.096	0[b]	0.10
Threat * Recant	1	228	2.721	0.099	-0.109	0[b]	0.11
Freqnonc * Intend	1	37	1.567	0.211	-0.206	50	0.20
Freqnonc * Disclose	1	34	0.407	0.524	0.109	25	0.11
Freqnonc * Recant	1	37	2.153	0.142	0.241	50	0.23
Freqfond * Intend	1	245	0.719	0.397	0.054	25	0.05
Freqfond * Disclose	1	255	0.223	0.637	0.030	0[b]	0.03
Freqfond * Recant	1	244	1.511	0.219	-0.079	0[b]	0.08
Freqpene * Intend	1	216	0.123	0.725	0.024	0[b]	0.02
Freqpene * Disclose	1	224	0.418	0.518	0.043	0[b]	0.04
Freqpene * Recant	1	213	1.422	0.233	0.082	25	0.08
Freqoth * Intend	1	12	0.218	0.640	-0.135	75	0.13
Freqoth * Disclose	1	13	7.879	0.005	-0.778	75	0.61
Freqoth * Recant	1	13	0.965	0.326	-0.272	75	0.26
Duration * Intend	3	192	0.236	0.972	0.035	50	0.04
Duration * Disclose	3	190	2.097	0.552	0.105	25	0.10
Duration * Recant	3	195	4.552	0.208	0.153	37.5	0.15

[a] - The percentage of cells with expected frequencies fewer than five.

[b] - An acceptable percentage (0%) of cells with an expected frequency fewer than five.

[c] – Effect size for chi-square analyses (0.10 = small, 0.25 = medium, 0.40 = large)

Note: Gender = gender of the victim, Ethnicity = ethnicity of the victim, Income = family income of the victim, Perp = relationship of the perpetrator to the victim, Nature = nature of the abuse, Threat = involvement of threat in the abuse, Freqnonc = frequency of noncontact abuse, Freqfond = frequency of fondling, Freqpene = frequency of penetration, Freqoth = frequency of other types of abuse, Duration = duration of abuse, Intend = intentionality of Disclosure, Disclose = recipient of disclosure, Recant = recantation

Chi-Square Analyses Relating Victim and Abuse Characteristics to Aspects of Disclosure

For the following analyses, Bonferroni's corrections were used. Based on four tests per set, the accepted significance level used was $p = 0.0125$. (This level was reached by dividing the significance level of $p = .05$ by 4, for the number of tests per set.) Table 2 summarizes the results of the chi-square analyses relating victim and abuse characteristics to aspects of disclosure. In additional to the typical statistics reported with a chi-square, the Φ statistic and a percentage are provided in this table. The Φ statistic indicates the strength of association between two categorical variables (George & Mallery, 2001). The percentage refers to the percentage of cells with expected frequencies fewer than five, which greatly reduces statistical power.

The results of the chi-square analyses are discussed as follows: (a) the results of the significance tests are reported, (b) for each of the aspects of disclosure (intentionality of disclosure, the identity of the recipient of the disclosure, and recantation), the total sample available for that particular analysis is reported in Table 2, (c) for each category within each victim or abuse characteristic, the number of cases available for analysis is reported, and (d) the percentage of the number of cases from section (c) as it relates to the particular aspect of disclosure analyzed is reported.

Gender as It Relates to Aspects of Disclosure

In this study, gender was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. For the analysis of the intentionality of disclosure, 412 cases were available for analysis. Of the

71 males in the sample, 80.28% disclosed intentionally while 89.44% of the 341 females disclosed intentionally. For the analysis of the identity of the recipient of the disclosure, 441 cases were available for analysis. Of males (n = 75), 78.67% disclosed to a family member while 73.50% of the 366 females disclosed to a family member. For the analysis of recantation, 415 cases were available. Of the 69 males, 8.47% recanted while 15.03% of the 346 females recanted.

Ethnicity as It Relates to Aspects of Disclosure

Ethnicity was not found to be related to the intentionality of the disclosure, the recipient of the disclosure, and recantation. Based on the data available (n = 291), the percentage of children who disclosed intentionally within each ethnicity was as follows: 91.57% of 83 Anglos, 90.32% of 93 African-Americans, 87.25% of 102 Hispanics, 85.71% of 7 Bi-racial children, 100% of 2 Asians, and 75% of 4 children of "other" ethnicities. The percentage of children who disclosed to a family member within each ethnicity was as follows: 68.82% of 93 Anglos, 76.09% of 92 African-Americans, 77.78% of 102 Hispanics, 37.50% of 8 Bi-racial children, 50% of 2 Asians, and 100% of 3 children of "other" ethnicities. The percentage of children who recanted within each ethnicity was as follows: 15.29% of 85 Anglos, 13.19% of 91 African-Americans, 12.5% of 104 Hispanics, 12.5% of 8 Bi-racial children, 50% of 2 Asians, and 25% of 4 children of "other" ethnicities.

To correct for the low expected frequencies, analyses were also run with ethnicity collapsed into Anglo and ethnic minorities (African-American, Hispanic,

Asian, bi-racial, "other"). Although the low-count expected frequency issue was resolved, still none of the analyses were statistically significant.

Family Income as It Relates to Aspects of Disclosure

Family income was not related to the intentionality of the disclosure, the identity of the recipient of the disclosure, or recantation. The percentage of children who disclosed intentionally within each family income category was: 87.72% of 114 children from lower income families, 100% of 8 children from low to middle income families, 92.31% of 13 children from middle income families, 100% of the children from mid to upper income families (1 child only), and 100% of 4 children from upper income families. The percentage of children who disclosed to a family member within each family income category was: 74.34% of 113 children from lower income families, 75% of 8 children from low to middle-income families, 75% of 12 children from middle income families, 100% of the children from mid to upper income families (1 child only), and 100% of 4 children from upper income families. The percentage of children who recanted within each family income category was: 6.03% of 116 children from lower-income families, 0% of 8 children from low to middle-income families, 12.5% of 16 children from middle income families, 0% of the children from mid to upper income families (1 child only), and 0% of 5 children from upper income families.

Relationship of the Perpetrator to the Victim as It Relates to Aspects of Disclosure

The relationship of the perpetrator to the victim was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. Of the 27 victims of extrafamilial abuse, 85.19% disclosed intentionally

while 88.15% of the 363 victims of intrafamilial abuse disclosed intentionally. Of the 26 victims of extrafamilial abuse, 69.23% disclosed to a family member while 75.78% of the 389 victims of intrafamilial abuse disclosed to a family member. Of the 28 victims of extrafamilial abuse, 7.14% recanted whereas 14.36% of the 362 victims of intrafamilial abuse recanted.

Nature of the Abuse as It Relates to Aspects of Disclosure

The nature of the abuse was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. The percentage of children who disclosed intentionally within each "nature of abuse" category was: 100% of 3 victims who experienced noncontact sexual abuse only; 86.55% of 119 victims who experienced fondling only; 77.08% of 94 victims who experienced penetration only; 100% of 2 victims who experienced "other" sexual abuse only; 91.67% of 12 victims who experienced noncontact sexual abuse and fondling; 80% of 5 victims who experienced noncontact sexual abuse and penetration; 100% of victims (1 child only) who experienced noncontact sexual abuse and "other" sexual abuse; 94.07% of 118 victims who experienced fondling and penetration; 100% of 3 victims who experienced fondling and "other" sexual abuse; 100% of 2 victims who experienced penetration and "other" sexual abuse; 100% of 17 victims who experienced noncontact sexual abuse, fondling, and penetration; 100% of 4 victims who experienced fondling, penetration, and "other" sexual abuse, and 75% of 4 victims who experienced all four types of abuse.

The percentage of children who disclosed to a family member within each "nature of abuse" category was: 100% of 3 victims who experienced noncontact sexual abuse only; 75.19% of 129 victims who experienced fondling only; 74% of 100 victims who experienced penetration only; 33.33% of 3 victims who experienced "other" sexual abuse only; 60% of 10 victims who experienced noncontact sexual abuse and fondling; 66.67% of 3 victims who experienced noncontact sexual abuse and penetration; 100% of victims (1 child only) who experienced noncontact sexual abuse and "other" sexual abuse; 79.2% of 125 victims who experienced fondling and penetration; 66.67% of 3 victims who experienced fondling and "other" sexual abuse; 50% of 2 victims who experienced penetration and "other" sexual abuse; 47.06% of 17 victims who experienced noncontact sexual abuse, fondling, and penetration; 100% of 4 victims who experienced fondling, penetration, and "other" sexual abuse, and 100% of 4 victims who experienced all four types of abuse.

The percentage of children who recanted within each "nature of abuse" category was: 0% of 5 victims who experienced noncontact sexual abuse only; 15.97% of 119 victims who experienced fondling only; 5.62% of 89 victims who experienced penetration only; 33.33% of 3 victims who experienced "other" sexual abuse only; 0% of 11 victims who experienced noncontact sexual abuse and fondling; 0% of 4 victims who experienced noncontact sexual abuse and penetration; 0% of victims (1 child only) who experienced noncontact sexual abuse and "other" sexual abuse; 16.81% of 119 victims who experienced fondling and penetration; 0% of 3 victims who experienced fondling and "other" sexual abuse; 0% of 2 victims who experienced penetration and

"other" sexual abuse; 11.76% of 17 victims who experienced noncontact sexual abuse, fondling, and penetration; 25% of 4 victims who experienced fondling, penetration, and "other" sexual abuse, and 50% of 4 victims who experienced all four types of abuse.

To attempt to correct for the cells with low-expected frequencies, analyses were also run with the nature of abuse grouped into 4 categories, rather than 14, according to the most severe type of abuse encountered. Ranging from least severe to most severe the four categories include: noncontact sexual abuse, fondling, penetration, and "other." These analyses also failed to show any significant results, and problems were again encountered with inadequate expected frequencies.

Involvement of Threat in the Abuse as It Relates to Aspects of Disclosure

When threat was involved, intentional disclosure was more likely to occur than when threat was not involved. Of the 159 victims who did not encounter threat, 79.87% disclosed intentionally. Of the 80 victims who encountered threat, 95.00% disclosed intentionally.

The involvement of threat in the abuse was not found to be related to the identity of the recipient of the disclosure and of recantation. Of the 189 victims who did not experience threat, 70.37% disclosed to a family member while 79.75% of the 79 victim who experienced threat disclosed to a family member. Of the 151 victims who did not experience threat, 17.22% recanted while 9.09% of the 7 who did experience threat recanted.

Frequency of Noncontact Sexual Abuse as It Relates to Aspects of Disclosure

The frequency of noncontact abuse was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. Of the 12 victims who experienced a single episode of noncontact abuse, 100% disclosed intentionally while 88% of the 25 victims who experienced multiple episodes of noncontact sexual abuse disclosed intentionally. Of the 10 victims of a single instance of noncontact abuse, 70% disclosed to a family member while 58.33% of the 24 victims of multiple instances of noncontact abuse disclosed to a family member. Of the 12 victims of a single instance of noncontact abuse, 0% recanted while 16% of the 25 victims of multiple instance of noncontact abuse recanted.

Frequency of Fondling as It Relates to Aspects of Disclosure

The frequency of fondling was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. Of the 42 victims of a single instance of fondling, 88.10% disclosed intentionally while 92.12% of the 203 victims of multiple instances of fondling disclosed intentionally. Of the 40 victims of a single instance of fondling, 77.50% disclosed to a family member while 73.95% of the 215 victims of multiple instances of fondling disclosed to a family member. Of the 41 victims of a single instance of fondling, 19.51% recanted while 12.32% of the 203 victims of multiple instances of fondling recanted.

Frequency of Penetration as It Relates to Aspects of Disclosure

The frequency of penetration was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. Of the 46

victims of a single instance of penetration, 86.96% disclosed intentionally while 88.82% of the 170 victims of multiple instances of penetration disclosed intentionally. Of the 45 victims of a single instance of penetration, 80.00% disclosed to a family member while 75.42% of the 179 victims of multiple instances of penetration disclosed to a family member. Of the 43 victims of a single instance of penetration, 4.65% recanted while 10.59% of the 170 victims of multiple instances of penetration recanted.

Frequency of Other Types of Sexual Abuse as It Relates to Aspects of Disclosure

The frequency of "other" abuse was not found to be related to the intentionality of the disclosure and of recantation. Disclosure of abuse to family members was found to be more likely when the child experienced multiple acts of "other" abuse than when the child experienced a single act of other abuse. However, due to the low cell counts for the expected frequencies (75% of the cells have expected frequencies less than 5), these results are questionable.

Of the 2 victims of a single instance of "other" sexual abuse, 100% disclosed intentionally while 90% of the 10 victims of multiple instances of "other" sexual abuse disclosed intentionally. Of the 2 victims of a single instance of "other" sexual abuse, 0% disclosed to a family member while 90.91% of the 11 victims of multiple instances of "other" sexual abuse disclosed to a family member. Of the 2 victims of a single instance of "other" sexual abuse, 50% recanted while 18.18% of the 11 victims of multiple instances of "other" sexual abuse recanted.

Duration of the Abuse as It Relates to Aspects of Disclosure

The duration of the abuse was not found to be related to the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation. Of the 52 victims of a single instance of sexual abuse, 90.38% disclosed intentionally while 100% of the 2 victims of weeks of abuse, 91.30% of the 46 victims of months of abuse, and 91.30% of the victims of years of abuse disclosed intentionally. Of the 49 victims of a single instance of sexual abuse, 79.59% disclosed to a family member while 50% of the 2 victims of weeks of abuse, 73.91% of the 46 victims of months of abuse, and 69.89% of the victims of years of abuse disclosed to a family member. Of the 52 victims of a single instance of sexual abuse, 88.46% recanted while 50% of the 2 victims of weeks of abuse, 89.13% of the 46 victims of months of abuse, and 92.63% of the victims of years of abuse recanted.

Log-linear Models Relating Abuse Characteristics to Aspects of Disclosure

Hierarchical log-linear modeling is a statistically sound way to analyze data with more than two categorical variables. Stepwise elimination of effects is conducted to find the best-fitting model. Beginning with a saturated model, the contribution of each effect (starting with the highest-order association) to the overall fit of the model is analyzed and effects are eliminated until the best-fitting model is found. This occurs when all remaining effects contribute significantly to the model's fit. Because this analysis is hierarchical, the inclusion of a particular higher-order association necessitates the inclusion in the model of related lower-order associations (George & Mallery, 2001).

The main effects in a model are descriptive of the sample while the interactions in the model are meaningful in determining relationships among the variables.

Twenty-eight 3-way frequency analyses were performed to develop hierarchical log-linear models of disclosure in cases of child sexual abuse. SPSS HILOGLINEAR used simple deletion of effects to do a stepwise selection of a model for each analysis. For each log-linear analysis performed, the following will be described: (a) the variables used in the analysis; (b) the sample size for the usable data for each analysis. Five times the number of cases as cells is recommended by Tabachnick and Fidell (2001); (c) the percentage of cells in the 2-way contingency tables that provided expected frequencies less than 5. Expected cell frequencies of less than 5 in more than 20% of the cells results in a great loss of power; (d) description of outlier cases; and (e) the final log linear model generated.

For analyses with uninterpretable results due to too many cells (> 20%) with unacceptably low expected frequencies (< 5), the results will be summarized in Table 3. Tabachnick and Fidell (2001) stated that analyses with this issue provide results that are basically "worthless." For interpretable models (fewer than 20% of the cells having expected frequencies less than 5), the results will be presented in Table 3 and will also be discussed in more detail in the text and with tables. Additional statistics presented in these tables include the partial association chi-square, the log-linear parameter estimates, and the standardized parameter estimates. The partial association chi-square gives the unique contribution of the effect to the model (George & Mallery, 2001). Parameter estimates are helpful in establishing the relative strength of effects. The standardized

parameter estimate indicates the relative importance of the various effects on the model, with the largest standardized parameter estimate having the most influence on cell frequency (Tabachnick & Fidell 2001). None of the 3-way associations in any of the log-linear analyses reached statistical significance.

Table 3.

Log-linear Models Relating Abuse Characteristics to Aspects of Disclosure

Loglinear model	*N*	*df*	L.R χ^2	*p*	% [a]	Final model
Perp*Nature*Intend	381	37	42.08	0.26	57	Perp,Nature,Intend
Perp*Nature*Disclose	400	37	37.31	0.46	60	Perp,Nature,Disclose
Perp*Nature*Recant	377	25	26.68	0.37	57	Perp*Nature,Recant
Perp*Threat*Intend	235	3	4.21	0.240	12.5 [b]	Intend*Threat,Perp
Perp*Threat*Disclose	259	4	5.39	0.250	12.5 [b]	Perp,Threat,Disclose
Perp*Threat*Recant	222	4	3.64	0.46	12.5 [b]	Perp,Threat,Recant
Perp*Freqnonc*Intend	36	4	7.23	0.124	62.5	Freqnonc,Perp,Intend
Perp*Freqnonc*Disclose	33	5	6.83	0.233	37.5	Perp, Freqnonc
Perp*Freqnonc*Recant	36	4	3.84	0.428	62.5	Perp,Freqnonc,Recant
Perp*Freqfond*Intend	243	3	1.59	0.661	25	Perp*Freqfond,Intend
Perp*Freqfond*Disclose	253	3	0.58	0.901	12.5 [b]	Perp*Freqfond,Disclose
Perp*Freqfond*Recant	242	4	7.95	0.093	12.5 [b]	Freqfond,Perp,Recant
Perp*Freqpene*Intend	216	3	0.37	0.947	12.5 [b]	Perp*Freqpene, Intend
Perp*Freqpene*Disclose	224	3	2.05	0.561	12.5 [b]	Perp*Freqpene,Disclose
Perp*Freqpene*Recant	213	3	2.74	0.434	25	Perp*Freqpene, Recant
Perp*Freqoth*Intend	12	4	0.38	0.984	67	Perp,Freq,Intend
Perp*Freqoth*Disclose	13	3	0.000	1.000	67	Freqoth*Disclose, Perp
Perp*Freqoth*Recant	13	4	0.84	0.933	67	Perp,Freqoth,Recant
Perp*Duration*Intend	191	7	2.79	0.904	42	Perp*Duration,Intend
Perp*Duration*Disclose	189	7	3.10	0.876	25	Perp*Duration,Disclose
Perp*Duration*Recant	194	7	6.17	0.520	42	Perp*Duration,Recant

[a] - The percentage of cells with Expected Frequencies fewer than five.

[b] - An acceptable percentage (< 20%) of cells with an Expected Frequency fewer than five.

Note: Perp = relationship of the perpetrator to the victim, Nature = nature of the abuse, Threat = involvement of threat in the abuse, Freqnonc = frequency of noncontact abuse, Freqfond = frequency of fondling, Freqpene = frequency of penetration, Freqoth = frequency of other types of abuse, Duration = duration of abuse, Intend = intentionality of Disclosure, Disclose = recipient of disclosure, Recant = recantation

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Involvement of Threat in the Abuse, and the Intentionality of Disclosure

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the involvement of threat in the abuse (Threat), and (c) the intentionality of the disclosure (Intend). The resulting model included all first-order effects (Perp, Threat, Intend) and one of the three possible 2-way associations (Intend * Threat). The model had a likelihood ratio χ^2 (3) = 4.21, p = .204, indicating a good fit between observed frequencies and expected frequencies generated by the model. A summary of the model with the results of tests of significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 4.

With a standardized parameter estimate of -5.91, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of -0.08, is the three-way association between the relationship of the perpetrator to the victim, the involvement of threat, and the intentionality of the disclosure. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier.

In this analysis (n = 235), most victims (49.8%) experienced intrafamilial abuse without threat and disclosed intentionally. Another large group of victims (31.5%) experienced intrafamilial abuse with threat and disclosed intentionally. Another 11.9% experienced intrafamilial abuse without threat and disclosed accidentally, while 2.6%

experienced extrafamilial abuse without threat and disclosed intententionally. A relatively small percentage of victims (1.7%) experienced extrafamilial abuse without threat, and disclosed accidentally. Another 1.7% experienced intrafamilial abuse with threat, and disclosed accidentally. Only 0.9% experienced extrafamilial abuse with threat and disclosed intentionally. None of the victims (0%) experienced extrafamilial abuse with threat and intention disclosure. Statistically significant 2-way associations were not found between the relationship of the perpetrator to the victims and the involvement of threat or between the relationship of the perpetrator to the victim and the intentionality of the disclosure.

Table 4.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Involvement of Threat in the Abuse (Threat), and the Intentionality of the Disclosure (Intend)

Effect	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	231.01	-1.29	-5.91
Threat	24.36	0.68	3.12
Intend	124.52	-0.78	-3.55
Second-Order Effects:			
Perp*Threat	1.14	0.11	0.49
Perp*Intend	1.79	0.28	1.28
Threat*Intend	10.87	0.33	1.51
Third-Order Effects:			
Perp*Threat*Disclose		-0.02	-0.08

Note: Perp = relationship of the perpetrator to the victim, Threat = involvement of threat in the abuse, Intend = intentionality of disclosure

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Involvement of Threat in the Abuse, and Identity of the Recipient of the Disclosure

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the involvement of threat in the abuse (Threat), and (c) the identity of the recipient of the disclosure (Disclose). The resulting model included all first-order effects (Perp, Threat, Disclose). The model had a likelihood ratio χ^2 (4) = 5.39, p = 0.250, indicating a good fit between observed frequencies and expected frequencies generated by the model.

With a standardized parameter estimate of -8.46, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of -0.12, is the association between the involvement of threat and the identity of the recipient of the disclosure. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier. A summary of the model with the results of tests of significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 5.

In this analysis (n = 259), most of the victims (46.3%) experienced intrafamilial abuse without threat, and disclosed to a family member. Other common classifications were victims who experienced intrafamilial abuse with threat, and disclosed to a family member (23.9%) and victims who experienced intrafamilial abuse without threat, and disclosed to a non-family member (19.3%). Intrafamilial abuse with threat and

disclosure to a non-family member was experienced by 5.8% of the victims. Extrafamilial abuse without threat and disclosure to a family member was experienced by 2.3% of the victims. Extrafamilial abuse without threat, and disclosure to a non-family member was experience by 1.5% of the victims. Extrafamilial abuse with threat, and disclosure to a family member was experienced by 0.4% of the victims. Extrafamilial abuse with threat, and disclosure to a non-family member was also experienced by 0.4% of the victims. No 2-way or higher associations were statistically significant.

Table 5.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Involvement of Threat in the Abuse (Threat), and the Identity of the Recipient of the Disclosure (Disclose)

Effect	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	261.89	-1.43	-8.46
Threat	40.45	0.55	3.27
Disclose	56.78	0.33	1.95
Second-Order Effects:			
Perp*Threat	1.04	0.09	0.54
Perp*Disclose	1.03	-0.24	-1.41
Threat*Disclose	2.52	-0.02	-0.12
Third-Order Effects:			
Perp*Threat*Disclose		0.11	0.66

Note: Perp = relationship of the perpetrator to the victim, Threat = involvement of threat in the abuse, Disclose = recipient of disclosure

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Involvement of Threat in the Abuse, and Recantation

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the involvement of threat in the abuse (Threat), and (c) recantation (Recant). The resulting model included all first-order effects (Perp, Threat, Recant). The model had a likelihood ratio χ^2 (4) = 3.64, p = 0.46, indicating a good fit between observed frequencies and expected frequencies generated by the model. A summary of the model with the results of tests of significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 6.

With a standardized parameter estimate of -6.21, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of |0.31243|, are the association between the relationship of the perpetrator to the victim, the involvement of threat, and recantation; the association of the relationship of the perpetrator to the victim and the involvement of threat; and the association of the involvement of threat and recantation. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier.

In this analysis (n = 222), most of the victims (51.8%) experienced intrafamilial abuse without threat, and did not recant whereas 30.6% experienced intrafamilial abuse with threat and without recantation. Almost one-tenth (9.9%) experienced intrafamilial

abuse without threat and with recantation. Intrafamilial abuse with threat and with recantation was encountered by 3.2%. Extrafamilial abuse without threat and without recantation was also experienced by 3.2% of the victims. A relatively small percentage (0.9%) of victims experienced extrafamilial abuse with threat and without recantation. Only 0.5% experienced extrafamilial abuse without threat and with recantation. None of the victims (0%) experienced extrafamilial abuse with threat and with recantation. No 2-way or higher associations were statistically significant.

Table 6.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Involvement of Threat in the Abuse (Threat), and Recantation (Recant)

Effect	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	226.21	-1.43	-6.21
Threat	21.17	0.48	2.07
Recant	131.92	0.88	3.83
Second-Order Effects:			
Perp*Threat	1.16	0.07	0.31
Perp*Recant	0.19	-0.08	-0.34
Threat*Recant	2.16	-0.07	-0.31
Third-Order Effects:			
Perp*Threat*Recant		0.07	0.31

Note: Perp = relationship of the perpetrator to the victim, Threat = involvement of threat in the abuse, Recant = recantation

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Frequency of Fondling, and the Identity of the Recipient of the Disclosure

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the frequency of fondling (Freqfond), and (c) the identity of the recipient of the disclosure (Disclose). The resulting model included all first-order effects (Perp, Freqfond, Disclose) and one of the three possible 2-way associations (Perp*Freqfond). The model had a likelihood ratio χ^2 (3) = 0.58, p = 0.901, indicating a good fit between observed frequencies and expected frequencies generated by the model.

With a standardized parameter estimate of -7.85, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of 0.02, is the association between the frequency of fondling and the identity of the recipient of the disclosure. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier. A summary of the model with the results of tests of significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 7.

In this analysis (n = 253), the majority of victims (60.5%) experienced intrafamilial abuse with multiple instances of fondling, and disclosure to a family member. Approximately one-fifth (21.3%) of the victims experienced intrafamilial abuse with multiple instances of fondling and disclosure to a non-family member.

Approximately one-tenth (10.3%) encountered intrafamilial abuse with a single instance of fondling, and disclosure to a family member. A small portion of the victims (2.8%) encountered intrafamilial abuse with a single instance of fondling and disclosure to a non-family member while 2% experienced extrafamilial abuse with multiple instances of fondling and disclosure to a family member. A relatively small percentage of victims (1.6%) encountered extrafamilial abuse with a single instance of fondling and disclosure to a family member. Less than one percent (0.8%) encountered extrafamilial abuse with a single instance of fondling and disclosure to a non-family member. Another 0.8% of the children experienced extrafamilial abuse with multiple occasions of fondling and disclosure to a non-family member. A statistically significant 2-way association was not found between the relationship of the perpetrator to the victim and the identity of the recipient of the disclosure or between the frequency of fondling and the identity of the recipient of the disclosure.

Table 7.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Frequency of Fondling (Freqfond), and the Identity of the Recipient of the Disclosure (Disclose)

Effect	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	248.23	-1.16	-7.85
Freqfond	133.23	-0.49	-3.33
Disclose	62.41	0.46	3.11
Second-Order Effects:			
Perp*Freqfond	7.45	0.44	2.99
Perp*Disclose	0.27	-0.12	-0.78
Freqfond*Disclose	0.26	0.00	0.02
Third-Order Effects:			
Perp*Freqfond*Disclose		-0.05	-0.36

Note: Perp = relationship of the perpetrator to the victim, Freqfond = frequency of fondling, Disclose = recipient of disclosure

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Frequency of Fondling, and Recantation

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the frequency of fondling (Freqfond), and (c) recantation (Recant). The resulting model included all first-order effects (perp, freqfond, recant). The model had a likelihood ratio χ^2 (4) = 7.95, p = 0.093, indicating a good fit between observed frequencies and expected frequencies generated by the model. A summary of the model with the results of tests of

significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 8.

With a standardized parameter estimate of -5.50, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of 0.08, is the association between the relationship of the perpetrator to the victim, the frequency of fondling, and recantation. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier.

In this analysis (n = 242), the majority (70.2%) of victims experienced intrafamilial abuse with multiple occasions of fondling and no recantation. Intrafamilial abuse with a single instance of fondling and without recantation was experienced by 11.6% of the children. Approximately one-tenth of the victims (10.3%) experienced intrafamilial abuse with multiple instances of fondling and recantation. A relatively small percentage of victims (3.3%) encountered intrafamilial abuse with a single instance of fondling and recantation. Extrafamilial abuse with multiple instances of fondling and no recantation was experienced by 2.9% of the victims. Extrafamilial abuse with a single instance of fondling and no recantation was experienced by 1.7% of the children. None of the victims experienced extrafamilial abuse with a single instance of fondling with recantation (0%) or extrafamilial abuse with multiple instances of fondling with recantation (0%). No 2-way or higher-order associations reached statistical significance.

Table 8.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Frequency of Fondling (Freqfond), and Recantation (Recant)

Effects	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	245.99	-1.47	-5.50
Freqfond	118.49	-0.42	-1.59
Recant	142.70	1.00	3.76
Second-Order Effects:			
Perp*Freqfond	3.13	0.30	1.11
Perp*Recant	3.78	0.22	0.84
Freqfond*Recant	1.98	-0.15	-0.56
Third-Order Effects:			
Perp*Freqfond*Recant		0.02	0.08

Note: Perp = relationship of the perpetrator to the victim, Freqfond = frequency of fondling, Recant = recantation

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Frequency of Penetration, and the Intentionality of Disclosure

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the frequency of penetration (Freqpene), and (c) intentionality of disclosure (Intend). The resulting model included all first-order effects (Perp, Freqpene, Intend) and one of the three possible 2-way associations (Perp*Freqpene). The model had a likelihood ratio χ^2 (3) = 0.37, p = 0.947, indicating a good fit between observed frequencies and expected frequencies

generated by the model. A summary of the model with the results of tests of significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 9.

With a standardized parameter estimate of -5.70, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of -0.09, is the association between the relationship of the perpetrator to the victim, the frequency of penetration, and the intentionality of the disclosure. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier.

The most common experience (67.1% of victims) was intrafamilial abuse with multiple instances of penetration and intentional disclosure ($N = 216$). The next largest category of victims (13.9%) included those who had experienced intrafamilial abuse with a single instance of penetration and an intentional disclosure. Less than one-tenth (8.3%) experienced intrafamilial abuse with multiple occasions of penetration and an accidental disclosure. Extrafamilial abuse with a single instance of penetration and an intentional disclosure was encountered by 4.6% of the children. A relatively small percentage (2.8%) experienced extrafamilial abuse with multiple occasions of penetration and an intentional disclosure. Intrafamilial abuse with a single instance of penetration and an accidental disclosure was encountered by 1.9% of the victims. Less than one percent (0.9%) experienced extrafamilial abuse with a single instance of penetration and an accidental disclosure. Again less than one percent (0.5%)

experienced extrafamilial abuse with multiple instances of penetration and an accidental disclosure. A statistically significant 2-way association was not found between the intentionality of the disclosure and the relationship of the perpetrator to the victim or between the frequency of penetration and the intentionality of the disclosure.

Table 9.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Frequency of Penetration (Freqpene),and the Intentionality of the Disclosure (Intend)

Effects	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	170.79	-0.91	-5.70
Freqpene	75.73	-0.25	-1.55
Intend	144.63	-0.86	-5.38
Second-Order Effects:			
Perp*Freqpene	17.39	0.50	3.11
Perp*Intend	0.24	0.13	0.84
Freqpene*Intend	0.03	0.02	0.14
Third-Order Effects:			
Perp*Freqpene*Intend		-0.01	-0.09

Note: Perp = relationship of the perpetrator to the victim, Freqpene = frequency of penetration, Intend = intentionality of Disclosure

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Frequency of Penetration, and the Identity of the Recipient of the Disclosure

The relationship of the following variables was analyzed in the log-linear analysis: (a) the relationship of the perpetrator to the victim (Perp), (b) the frequency of penetration (Freqpene), and (c) identity of the recipient of the disclosure (Disclose). The resulting model included all first-order effects (Perp, Freqpene, Disclose) and one of the three possible 2-way associations (Perp*Freqpene). The model had a likelihood ratio χ^2 (3) = 2.05, p = 0.561, indicating a good fit between observed frequencies and expected frequencies generated by the model.

With a standardized parameter estimate of -7.22, the strongest predictor of cell size is the relationship of the perpetrator to the victim with the majority of perpetrators being intrafamilial. The least predictive of all the effects in the model, with a standardized parameter estimate of 0.29, is the association between the relationship of the perpetrator to the victim, the frequency of penetration, and the identity of the recipient of the disclosure. The percentage of cells with expected frequencies less than five was acceptable (12.5%). After the model was selected, none of the eight cells was an outlier. A summary of the model with the results of tests of significance (partial likelihood ratio χ^2) and log-linear parameter estimates in raw and standardized form appear in Table 10.

In this analysis (n = 224), the most common experience for the victims in this analysis (58.5%) was intrafamilial abuse with multiple instances of penetration and disclosure to a family member. Almost one-fifth (18.3%) experienced intrafamilial

abuse with multiple instances of penetration and disclosure to a non-family member. Slightly more than one-tenth (12.5%) of the victims experienced intrafamilial abuse with a single instance of penetration and disclosure to a family member. Extrafamilial abuse with a single instance of penetration and disclosure to a family member was experienced by 3.6% of the victims while 2.7% encountered intrafamilial abuse with a single occasion of penetration and disclosure to a non-family member. Extrafamilial abuse with multiple instances of penetration and disclosure to a family member was experienced by 1.8% of the victims. Extrafamilial abuse with multiple instances of penetration and disclosure to a non-family member was experienced by 1.3% of the victims. Another 1.3% experienced extrafamilial abuse with a single instance of penetration and disclosure to a non-family member. A statistically significant 2-way association was not found between the recipient of the disclosure and the relationship of the perpetrator to the victim or between the frequency of penetration and the recipient of the disclosure.

Table 10.

Summary of the Hierarchical Log-Linear Model Relating the Relationship of the Perpetrator to the Victim (Perp), the Frequency of Penetration (Freqpene), and the Identity of the Recipient of the Disclosure (Disclose)

Effects	Partial Association Chi-Square	Log-linear Parameter Estimate	Standardized Parameter Estimate
First-Order Effects:			
Perp	185.25	-0.96	-7.22
Freqpene	85.80	-0.34	-2.58
Disclose	65.41	0.47	3.54
Second-Order Effects:			
Perp*Freqpene	16.73	0.50	3.78
Perp*Disclose	1.55	-0.19	-1.40
Freqpene*Disclose	1.03	0.12	0.90
Third-Order Effects:			
Perp*Freqpene*Disclose		0.04	0.29

Note: Perp = relationship of the perpetrator to the victim, Freqpene = frequency of penetration, Disclose = recipient of disclosure

DISCUSSION AND CONCLUSIONS

Victim Characteristics

The characteristics of the sample in this study were fairly typical of the characteristics of other child sexual abuse samples. Like most studies researching child sexual abuse with both male and female victims, this study's sample was predominately female (Cupoli & Sewell, 1988; De Jong et al., 1982; Ellerstein & Canavan, 1980; Fischer & McDonald, 1998; Pierce & Pierce, 1985; Reinhart, 1987; Sauzier, 1989; Showers et al., 1983). The mean age of the victims was just under 10 years of age. The ethnic composition of the sample was under-representative of Anglos and Asians and was over-representative of Hispanics and African-Americans. This is reflective of Tzeng and Schwarzin's findings (1990) that child sexual victimization is reported more often for ethnic minorities than for Anglo children. The majority of victims in this study came from low-income families, which supports findings in the literature that child sexual victimization is more often reported for children from low-income families (Finkelhor, 1980; Sauzier, 1989; Tzeng & Schwarzin, 1990).

Abuse Characteristics

In this sample, the percentage of cases of intrafamilial abuse was uncharacteristically high. Typically, researchers have found intrafamilial abuse to occur in 40-60% of child sexual abuse cases (Dubé & Hébert, 1988; Finkelhor, 1980; Mian et al., 1986; Sauzier, 1989). In this sample, 92.9% of the victims were found to have experienced intrafamililal abuse. Most of the children did not report the involvement of threat, which coincides with Gordon's (1990) findings that threat is usually not involved

in instances of child sexual abuse. The majority of victims experienced severe abuse, with 58% experiencing penetration. Every child in this sample experienced multiple instances of abuse. When the frequency of abuse was categorized based on the nature of the abuse (noncontact, fondling, penetration, "other"), 69.8% - 88.9% of the victims experienced multiple instances of abuse within the categories. This is quite atypical compared to other child sexual abuse samples. Even researchers reporting that the experience of multiple instances of abuse is quite common report that less than 50% of the victims in the study experienced multiple instances of abuse (Farber et al., 1984; Lamb and Edgar-Smith, 1994; Siegel et al., 1987). Almost half of the victims in this sample experienced years of abuse.

Aspects of Disclosure

Literature concerning whether or not disclosure is typically intentional provides conflicting information (Sauzier, 1989; Sgroi et al., 1982; Sorenson & Snow, 1991). The results in this study tend to support Sauzier's (1989) conclusion that the majority of children disclose intentionally. This study's findings also support the idea that children usually disclose their abuse to a family member (Berliner & Conte, 1995; Fontanella et al., 2000; Gordon, 1990; Lamb & Edgar-Smith, 1994; Sauzier, 1989; Sinclair & Gold, 1997). Findings in this study support the literature stating that recantation is not very common (Bradley & Wood, 1996; Jones & McGraw, 1987 as cited in Bradley & Wood, 1996). Interestingly, the rate of recantation (13.7%) for this sample was in between the reported rates for recantation in police or child protective service settings (3-8%, Bradley & Wood, 1996; Jones & McGraw, 1987 as cited in Bradley & Wood, 1996) and reported

rates in therapy settings (22-27%; Gonzalez et al., 1993 as cited in Bradley & Wood, 1996; Sorenson & Snow, 1991). Although these data were collected in Psychological Services, the agency houses both therapy services and police/child protective services.

Directional Hypotheses

Most of the hypotheses proposed in this study were not supported by the data. Many of the analyses were limited by statistical concerns, which will be addressed in more detail below. First, the discussion is directed toward the directional hypotheses followed by discussion of the exploratory analyses.

Gender as It Relates to the Intentionality of Disclosure and the Identity of the Recipient of the Disclosure

In contrast to Directional Hypotheses 1 and 2, gender did not seem to have an effect on the likelihood of intentional disclosure or on the identity of the recipient of the disclosure. This finding falls in line with the findings of DiPietro et al. (1997), Fontanella et al. (2000), and Sauzier (1989) stating that gender and disclosure were not found to be related. That gender did not influence the identity of the recipient lends support to the idea that, regardless of other factors, family members are the typical recipients of disclosure (Berliner & Conte, 1995; Fontanella, Harrington, & Zuravin, 2000; Gordon, 1990; Lamb & Edgar-Smith, 1994; Sauzier, 1989; Sinclair & Gold, 1997).

Ethnicity as It Relates to the Intentionality of Disclosure

This analysis of Directional Hypothesis 3 relating ethnicity and the intentionality of disclosure was not interpretable because the expected frequencies for this analysis were

so low. Collapsing the categories of ethnicity into two categories (Anglo and Ethnic Minority) increased the expected frequencies to an acceptable level. This analysis did not indicate that ethnicity affected the intentionality of disclosure. Perhaps, ethnicity-specific reasons for reluctance to disclose sexual abuse (Elliot & Briere, 1994; Fontes, 1993, Futa et al., 2001; Romero et al., 1999) are less influential than reasons that are more "general" (Macdonald et al., 1995; Sauzier, 1989) in determining whether or not a child discloses intentionally. Another potential explanation could be that children belonging to ethnic minority groups are affected differently by ethnicity-specific reasons for lack of disclosure, and do not disclose leading to lack of representation in this data set.

Age as It Relates to the Intentionality of Disclosure

Directional Hypothesis 4, that older children are more likely to intentionally disclose their abuse, was marginally significant, supporting the findings of Campis et al. (1993) and DiPietro et al. (1997). This may be due to the more developed communication skills of the older child (Hewitt, 1991 as cited in Fontanella et al., 2000). Older children may also have a better understanding of the inappropriateness of the behavior of the perpetrator.

The Relationship of the Perpetrator to the Victim as It Relates to the Intentionality of the Disclosure and to Recantation

Directional Hypothesis 5, relating the relationship of the perpetrator to the victim to the intentionality of the disclosure, and Directional Hypothesis 6, relating the relationships of the perpetrator to the victim to recantation, were statistically non-

significant. These analyses could not be interpreted due to unacceptably high rates of low-count expected frequencies.

Nature of the Abuse as It Relates to the Intentionality of the Disclosure

Directional Hypothesis 7, relating the nature of the abuse to the intentionality of disclosure, was statistically non-significant. This analysis could not be interpreted due to an unacceptably high rate of low-count expected frequencies.

Threat as It Relates to the Intentionality of the Disclosure

Directional Hypothesis 8, stating that intentional disclosure is more likely when threat is not involved in the abuse, was not supported by the data. A significant result that the likelihood of intentional disclosure increases *with* the involvement of threat was found. The literature (Lyon, 1996; Paine & Hansen, 2002; Sauzier, 1989; Tyagi, 2001) does not support this finding. However, Hanson et al. (1999) did find that reported cases were more likely to involve threat and/or physical injury than non-reported cases. In the current sample, perhaps the fear that harm will come to them or those they love, led to help-seeking behavior, rather than compliance with the perpetrator.

Exploratory Analyses

Victim and Abuse Characteristics as Related to the Intentionality of the Disclosure

For Exploratory Analysis 1, the independent effects of 6 variables (family income; frequency of abuse including noncontact sexual abuse, fondling, penetration, "other" sexual abuse; duration of abuse) on the likelihood of intentional disclosure were explored. Most of the analyses were not interpretable due to low-count expected frequencies. The chi-square analyses relating the intentionality of disclosure

independently to the following variables were not significant, and encountered unacceptable rates of low-count expected frequencies: family income, frequency of noncontact sexual abuse, frequency of fondling, frequency of "other" sexual abuse, and the duration of sexual abuse. The frequency of penetration was found to be not found to be related to the intentionality of disclosure. The literature has conflicting information regarding the relationship of the frequency of abuse to disclosure (Sauzier, 1989; Smith et al., 2000). The finding in this study may explain the conflicting findings. Perhaps, these variables are not related (as found here), and the conflicting relations found between the frequency of abuse and disclosure are reflecting variation due to a third variable.

Victim and Abuse Characteristics as Related to the Identity of the Recipient of the Disclosure

For Exploratory Analysis 2, the independent effects of 11 variables (ethnicity; age; family income; relationship of the perpetrator to the victim; nature of the abuse; threat involved; frequency of abuse including noncontact sexual abuse, fondling, penetration, "other" sexual abuse; and duration of abuse) on the likelihood of disclosing abuse to a family member were explored. Most of the analyses were not interpretable due to unacceptable rates of low-count expected frequencies. The chi-square analyses relating the identity of the recipient of the disclosure independently to the following variables were not significant, and encountered unacceptable rates of low-count expected frequencies: ethnicity, family income, nature of the abuse, frequency of noncontact sexual abuse, and the duration of abuse. The frequency of "other" sexual abuse was

found to have a significant relationship with the likelihood of disclosing to a family member, but was not interpretable due to the unacceptable rate of low-count expected frequencies.

The analyses with the following variables had adequate expected frequencies, and were non-significant: threat, the relationship of the perpetrator to the victim, the frequency of fondling, and the frequency of penetration.

The identity of the recipient of the disclosure was not found to be related to the relationship of the perpetrator to the victim. Based on the available data (n = 415), more children disclosed to family members (n = 312) than to non-family members (n = 103). These results indicate that victims of child sexual abuse in this sample disclosed more often to family members than non-family members, regardless of their relationship to the perpetrator.

The identity of the recipient of the disclosure was not found to be related to the frequency of fondling. In the literature, the relationship of frequency of abuse to aspects of disclosure is equivocal and studies are limited. Based on the available data (n = 255), family members (n = 190) were more often recipients of disclosure than non-family members (n = 65). The identity of the recipient of the disclosure was not found to be related to the frequency of penetration. Again, based on the available data (n = 224), more family members (n = 171) received disclosures than non-family members (n = 53). In this sample, children disclosed their abuse to family members more often than to non-family members, regardless of the frequency of fondling or penetration.

Age was found to be a factor in determining the recipient of the disclosure. Children who disclosed their abuse to a family member were significantly younger than children who disclosed to a non-family member. Perhaps, this may be due to access to adults to whom they might disclose. Younger children tend to have less access to adults outside of the family than do older children.

Factors that did not influence to whom the victim discloses abuse include the involvement of threat, the relationship of the perpetrator to the victim, the frequency of fondling, and the frequency of penetration while age was found to be an influential factor in determining the recipient of the disclosure.

Victim and Abuse Characteristics as Related to Recantation

For Exploratory Analysis 3, the independent effects of 11 variables (gender; ethnicity; age; family income; nature of the abuse; threat involved; frequency of abuse including noncontact sexual abuse, fondling, penetration, "other" sexual abuse; and duration of abuse) on the likelihood of recantation were explored. Most of the analyses were not interpretable due to low-count expected frequencies. The chi-square analyses relating recantation independently to the following variables were not statistically significant, and encountered unacceptable rates of low-count expected frequencies: ethnicity, family income, nature of the abuse, frequency of noncontact sexual abuse, frequency of penetration, frequency of other types of sexual abuse, and the duration of abuse.

The analyses with the following variables had adequate expected frequencies, and were non-significant: gender, threat, and the frequency of fondling. In contrast to the

hypothesis in this paper, gender and recantation were not found to be related to each other. Based on the available data (n = 415), a majority of children (n = 358) did not recant. Perhaps, gender does not play a role in influencing children to hide their abuse or to retract claims of abuse as some literature has proposed (Faller, 1989; Nasjleti, 1980). Threat was also not found to be related to the victim's recantation, which supports the findings of Bradley and Wood (1996). Based on the available data (n = 228), most victims did not recant (n = 195).

Information about the relationship of recantation to the frequency of abuse has not been documented in the literature. In this study, recantation and the frequency of fondling were not found to be related. Based on the available data (n = 244), a majority of children in this sample chose not to recant (n = 211), regardless of whether fondling occurred once or many times.

In this study, age did not influence whether or not a child recanted. This finding is supported by the conclusions of Bradley and Wood (1996). In the current sample (n = 417), most children did not recant (n = 360). Lamb and Edgar-Smith (1994) suggested that the support received after disclosure may vary based on the age of the victim while other literature suggests that recantation is likely to occur when family support is lacking (Marx, 1999; Rieser, 1991; Summit, 1983) or when there is direct pressure to recant (Marx, 1999; Sgroi et al., 1982; Sorenson & Snow, 1991). Based on this literature, it is postulated that, in this sample, family support was not based on age, leading to fewer recantations and no differences in recantation based on age.

Factors that were not found to be related to recantation include the victim's gender, the victim's age, the involvement of threat in the abuse, and the frequency of fondling.

The Relationship of the Perpetrator to the Victim and the Nature of the Abuse as Related to Aspects of Disclosure

In Exploratory Analysis 5, analyses using log-linear modeling were conducted to explore how the relationship of the perpetrator to the victim and the nature of the abuse jointly affect aspects of disclosure (the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation). Each of these log-linear models had unacceptably high rates of low-count expected frequencies, and, thus, could not be interpreted.

The Relationship of the Perpetrator to the Victim and the Involvement of Threat in the Abuse as Related to Aspects of Disclosure

In Exploratory Analysis 6, analyses were conducted to explore how the relationship of the perpetrator to the victim and the involvement of threat jointly affect the aspects of disclosure (the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation).

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Involvement of Threat in the Abuse, and the Intentionality of Disclosure

In the model relating the relationship of the perpetrator to the victim (Perp), the involvement of threat (Threat), and the intentionality of the disclosure (Intend), the following factors, in order of importance, contributed to produce the best-fitting, most-parsimonious model: (1) Perp, (2) Intend, (3) Threat, and (4) Intend * Threat. In other

words, the relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. The interaction between the intentionality of disclosure and threat indicated that it was more likely for a victim to disclose the abuse intentionally when threat was involved. In this analysis, most victims experienced intrafamilial abuse without threat and disclosed intentionally.

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Involvement of Threat in the Abuse, and the Identity of the Recipient of the Disclosure

In the model relating the relationship of the perpetrator to the victim (Perp), the involvement of threat (Threat), and the identity of the recipient of the disclosure (Disclose), the following factors, in order of importance, contributed to produce the best-fitting, most-parsimonious model: (1) Perp, (2) Threat, (3) Disclose. In other words, the relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. However, the relationship of the perpetrator to the victim and the involvement of threat were not found to influence the identity of the recipient of the disclosure. In this analysis, most of the victims experienced intrafamilial abuse without threat, and disclosed to a family member.

The Log-linear Model Relating the Relationship of the Perpetrator to the Victim, the Involvement of Threat in the Abuse, and Recantation

In the model relating the relationship of the perpetrator to the victim (Perp), the involvement of threat (Threat), and recantation (Recant), the following factors, in order

of importance, contributed to produce the best-fitting most-parsimonious model: (1) Perp, (2) Recant, and (3) Threat. In other words, the relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. However, the relationship of the perpetrator to the victim and the involvement of threat were not found to influence the occurrence of recantation. In this analysis, most of the victims experienced intrafamilial abuse without threat, and without recantation.

The Relationship of the Perpetrator to the Victim and the Frequency of Abuse as Related to Aspects of Disclosure

In Exploratory Analysis 7, analyses were conducted to explore how the relationship of the perpetrator to the victim and the frequency of abuse jointly affect the aspects of disclosure (the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation). These analyses were grouped into four sets of analyses by the frequency of each type of abuse.

Frequency of Noncontact Sexual Abuse

All of the analyses relating the frequency of noncontact abuse to the aspects of disclosure were uninterpretable due to a violation of the criterion for the minimum number of cases (all had fewer than 40 cases), and unacceptably high rates of low-count expected frequencies.

Frequency of Fondling

The analyses relating the frequency of fondling to the intentionality of disclosure had an unacceptably high rate of low-count expected frequencies, and could not be

interpreted. The remaining two analyses relating the frequency of fondling to the identity of the recipient of the disclosure and to recantation had acceptable rates of expected frequencies.

The log-linear model relating the relationship of the perpetrator to the victim, the frequency of fondling, and the identity of the recipient of the disclosure. In the model relating the relationship of the perpetrator to the victim, the frequency of fondling, and the identity of the recipient of the disclosure, the following factors, in order of importance, contributed to produce the best-fitting, most parsimonious model: (1) Perp, (2) Freqfond, (3) Disclose, and (4) Perp * Freqfond. The relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. The interaction between the relationship of the perpetrator to the victim and the frequency of fondling indicated that it was more likely for a victim of intrafamilial abuse to experience multiple instances of fondling than a victim of extrafamilial abuse. However, the relationship of the perpetrator to the victim and the frequency of fondling were not found to influence the identity of the recipient of the disclosure In this analysis, the majority of victims experienced intrafamilial abuse with multiple instances of fondling, and disclosure to a family member.

The log-linear model relating the relationship of the perpetrator to the victim, the frequency of fondling, and recantation. In the model relating the relationship of the perpetrator to the victim (Perp), the frequency of fondling (Freqfond), and recantation (Recant), the following factors, in order of importance, contributed to produce the best-

fitting, most parsimonious model: (1) Perp, (2) Recant, and (3) Freqfond. The relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. However, the relationship of the perpetrator to the victim and the frequency of fondling were not found to influence the occurrence of recantation. In this analysis, the majority of victims experienced intrafamilial abuse with multiple occasions of fondling and no recantation.

Frequency of Penetration

In the analyses relating the frequency of penetration to aspects of disclosure, the analysis relating the relationship of the perpetrator to the victim (Perp), the frequency of penetration (Freqpene), and recantation (Recant) had an unacceptably high rate of low-count expected frequencies, and could not be interpreted. The remaining two analyses relating the frequency of penetration to the intentionality of the disclosure and to the identity of the recipient had acceptable rates of expected frequencies.

The log-linear model relating the relationship of the perpetrator to the victim, the frequency of penetration, and the intentionality of disclosure. In the model relating the relationship of the perpetrator to the victim (Perp), the frequency of penetration (Freqpene), and the intentionality of the disclosure (Intend), the following factors, in order of importance, contributed to produce the best-fitting, most- parsimonious model: (1) Perp, (2) Intend, (3) Perp * Freqpene, and (4) Freqpene. The relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. The interaction between

the relationship of the perpetrator to the victim and the frequency of penetration indicated that it was more likely for a victim of intrafamilial abuse to experience multiple instances of penetration than a victim of extrafamilial abuse. However, the relationship of the perpetrator to the victim and the frequency of penetration were not found to influence the identity of the recipient of the disclosure. The most common experience was intrafamilial abuse with multiple instances of penetration and intentional disclosure.

The log-linear model relating the relationship of the perpetrator to the victim, the frequency of penetration, and the identity of the recipient of the disclosure. In the model relating the relationship of the perpetrator to the victim (Perp), the frequency of penetration (Freqpene), and the identity of the recipient of the disclosure (Disclose), the following factors, in order of importance, contributed to produce the best-fitting, most-parsimonious model: (1) Perp, (2) Perp * Freqpene, (3) Disclose, and (4) Freqpene. The relationship of the perpetrator to the victim was the most important variable in determining in which category of the multi-way contingency table the case belongs. The interaction between the relationship of the perpetrator to the victim and the frequency of penetration indicated that it was more likely for a victim of intrafamilial abuse to experience multiple instances of penetration than a victim of extrafamilial abuse. However, the relationship of the perpetrator to the victim and the frequency of penetration were not found to influence the identity of the recipient of the disclosure. The most common experience for the victims in this analysis was intrafamilial abuse with multiple instances of penetration and disclosure to a family member.

Frequency of Other Types of Sexual Abuse

In the analyses relating the frequency of "other" abuse, the relationship of the perpetrator to the victim, and the aspects of disclosure, all violated the criterion for the minimum number of cases (all had fewer than 40 cases), and had unacceptably high rates of low-count expected frequencies. Due to these limitations, the analyses could not be interpreted.

The Relationship of the Perpetrator to the Victim and the Duration of the Abuse as Related to Aspects of Disclosure

In Exploratory Analysis 8, analyses were conducted to explore how the relationship of the perpetrator to the victim (Perp) and the duration of abuse (Duration) jointly affect the aspects of disclosure (the intentionality of the disclosure, the identity of the recipient of the disclosure, and recantation). Each of the analyses had unacceptably high rates of low-count expected frequencies. None of these analyses could be interpreted.

In each of the log-linear models that were not severely hampered by statistical limitations, the relationship of the perpetrator to the victim was the most important variable in determining the expected frequencies of the cells. From these results, we can conclude that, although other aspects of the abuse contribute to the process of disclosure for the victim, the relationship of the perpetrator to the victim may be the most important abuse characteristic in this process.

Strengths and Limitations of This Study

The need for this study was clear. The lack of research on disclosure of child sexual abuse needs to be addressed. Whereas most studies only examine the *likelihood* of disclosing, this study looked at the *nature* of the disclosure. This study also used an inclusive definition of child sexual abuse, which includes both contact and noncontact abuse, an upper age limit of 17 years for the victim, and no required age difference between the victim and perpetrator. The inclusive definition allows for a more complete picture of victims and their disclosures.

The current study analyzed cases involving reports of abuse made in childhood. This is both a strength and a weakness. While studying reports made in childhood reduces problems with recall that may be an issue in studies of adult samples, it also increases the selection bias. Abuse of child victims that is not reported is not available to study. Retrospective research of adult samples may lead to a more accurate picture of who is actually experiencing child sexual abuse.

This study had a number of statistical limitations. These limitations included the sample sizes of the analyses and the low expected frequency counts. Although the total sample size of 1120 cases exceeds most child sexual abuse studies, the sample sizes for the individual analyses were all under 500 cases. Seventeen of the 44 chi-square analyses (38.6%) had a sample of fewer than 100 cases. Tabachnick and Fidell (2001, p. 223) state that "at least five times the number of cases as cells" are necessary in log-linear modeling." Thirteen of the 28 log linear models (46.4%) failed this criterion, and also had samples of fewer than 100 cases.

The small samples sizes are related to the issue of the low-cell counts for expected frequencies. Cells with expected frequencies of fewer than five decrease the power of the analysis. Gravetter and Wallnau (2002) state that chi-square analyses should not be conducted when any cell has an expected frequency less than 5. In log-linear modeling when the percentage of cells with low-count expected frequencies exceeds 20%, the power in the analysis becomes so low that the analysis is rendered uninterpretable. Tabachnick and Fidell (2001, p. 223) stated that "power can be so drastically reduced with inadequate expected frequencies that the analysis is worthless." Many of the analyses in this study encountered this problem. Thirty-four of the 44 (77.3%) chi-square analyses were uninterpretable due to cells with expected frequencies below 5. Twenty-one of the 28 (75%) log-linear models also violated the criterion for expected frequencies.

The variable "timing of recantation" was removed from discussion in this study due to the limitations discussed above. The total number of cases with this variable coded was only 46. Because the sample size and the expected frequency counts for this variable were so low, many of the questions posed in this study were not answered.

Attempts to correct the issue of cells with low-count expected frequencies were made in two sets of chi-square analyses, one looking at the relationship of ethnicity to aspects of disclosure and the other looking at the relationship of the nature of the abuse to aspects of the disclosure. Because the variables "Ethnicity" and "Nature of Abuse" have more than two levels, the levels within them were collapsed into two remaining variables for "Ethnicity" and four remaining variables for "Nature of Abuse."

Collapsing across "Ethnicity" solved the expected frequency issue, although the results were still non-significant. Collapsing across the variable "Nature of Abuse" did not solve the expected frequency issue.

Many sources of error may be present in the data. The process of data collection involved many steps in which error could be introduced. For various reasons, some children may never go the child sexual abuse center, meaning they would be screened out of the sample. Reasons could include a guardian failing to bring the child to the center or a child recanting before arriving at the center. Other steps in the process include the cases notes written by the sexual abuse center worker who provided services to the child, the coding of information from these case notes, and the entry of these data into an SPSS file. Adequate definitions for the variables coded in the child therapy chart surveys are lacking, which could lead to inaccuracies in coding. The error present in the data set reduces the chances of finding significant results.

Other potential limitations of this study include the set of variables chosen and the sample used. Perhaps other victim and abuse characteristics are important in the process of disclosure, but were not examined in this study. Also, the sample of children studied may not include all children in service area of the CAC who disclosed their abuse. Some children may disclose their abuse, but due to the actions of the adults responsible for them, these children may not be brought to the attention of agencies such as the CAC. Other children may disclose, and receive help from other sources, such as private therapists.

Implications for Future Research

Research on aspects of disclosure of child sexual abuse is still lacking. Literature has shown that many adults were victimized as children, but did not disclose their abuse while it was occurring. Research, such as this may help make people aware of the patterns of disclosure that may occur in abused children.

Although many interesting questions were asked in this paper, due to statistical limitations, many of these questions have gone unanswered. Using a more complete data set is necessary to conduct this research. Future research is needed to explore more fully how victim characteristics and abuse characteristics affect the way in which children disclose sexual abuse.

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