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PSYCHOLOGICAL AND SUPPORT CHARACTERISTICS OF PARENTS OF CHILD SEXUAL ABUSE VICTIMS: RELATIONSHIP WITH CHILD FUNCTIONING AND TREATMENT

by

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PSYCHOLOGICAL AND SUPPORT CHARACTERISTICS OF PARENTS OF CHILD SEXUAL ABUSE VICTIMS: RELATIONSHIP WITH CHILD FUNCTIONING AND TREATMENT

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University of Nebraska, 2010

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Child sexual abuse continues to be a prevalent and complex problem in today's society as it poses serious and pervasive mental health risks to child victims and their non-offending parents. A variety of interventions are available, with group therapy considered by some to be the treatment of choice in addressing psychological symptoms, as well as feelings of isolation and stigmatization. The main objectives of this study were (a) to elucidate the psychological symptoms and support needs of parents of child sexual abuse victims as they present to group treatment, (b) to examine changes in psychological symptoms and support needs and their relationship with child functioning over the course of a parallel group treatment, and (c) to examine the impact of these factors on completion of group treatment.

Participants in this study included 104 sexually abused youth and their non-offending parent presenting to Project SAFE Group Intervention, a 12-session cognitive-behavioral group treatment for sexually abused children and their non-offending parents. To date, the majority of group treatment outcome studies have utilized only a handful of assessment instruments to assess parent and child characteristics over the course of treatment. This project had a unique advantage of utilizing a variety of demographic, parent-, and child-report measures, allowing for a more comprehensive examination of

change in symptomatology and needs over the course of treatment. Several significant findings were noted, including the identification of four distinct clusters of youth at pre-treatment, which were maintained at post-treatment; elevations on the CTQ Sexual Abuse scale; parents of youth sexually abused by a non-family member tended to have significantly higher PSI-Restriction of Role subscale scores; parental expectations of a negative impact on their child was worse for older children; several parent characteristics predicted client treatment retention (e.g., older parents, lower SCL-90-R GSI scores); and an early age of onset of sexual abuse also increased client treatment retention. Future directions and recommendations were discussed, including providing clinicians and researchers with information to aid in the development and refinement of interventions for this specific population and disseminating interventions within Child Advocacy Centers. Lastly, limitations of this dissertation were noted.

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Introduction

Child sexual abuse (CSA) continues to be a prevalent and complex problem in today's society as it poses serious and pervasive mental health risks to child victims and their non-offending family members. There is increasing documentation that child victims of sexual abuse and their non-offending parents and siblings are in need of mental health services. While those with significant mental health problems that warrant a diagnosis, such as depression or Posttraumatic Stress Disorder (PTSD) may benefit from receiving services, so might those with less severe symptoms who are nevertheless distressed, concerned about long-term functioning and revictimization, and wanting guidance and support (e.g., Baker, Tanis, & Rice, 2001; Heflin, Deblinger, & Fisher, 2000; Putnam, 2003; Swenson & Hanson, 1998).

In the aftermath of intrafamilial and/or extrafamilial CSA, families often face multiple challenges (e.g., loss of a caregiver or family member in cases of intrafamilial CSA, loss of income, change of residence, and limited community support). These environmental changes are often accompanied by psychological distress, such as depression, guilt, embarrassment, grief symptomatology, and secondary trauma (Deblinger, Hathaway, Lippman, & Steer, 1993; Manion et al., 1996; Regehr, 1990). Given these difficulties, the need for accessible interventions is paramount for not only CSA victims, but also for their non-offending family members, in particular their non-offending parents, who may be the child's greatest potential "natural resource" (Heflin et al., 2000, p.170).

While much research and clinical practice has focused on the heterogeneity of impact and difficulties experienced by child victims, non-offending parents have been

largely overlooked. This study was an attempt to elucidate the psychological symptoms and support needs of parents of child victims of CSA and the relationship between these characteristics and child functioning, prior to treatment and following a parallel group intervention conducted at a local Child Advocacy Center (CAC). First, psychological symptoms and support needs of parents following their child's disclosure of CSA are described. The impact of a parent's own abuse history is also discussed, on their own level of functioning as well as on the post-abuse adjustment of their child. Next, the impact of parent psychological and support characteristics and family factors on their child's emotional and behavioral symptoms are discussed. An overview of treatments available for child victims of CSA and their non-offending parents is provided, with an emphasis on group interventions. Finally, a brief description of CACs as initial access sites for therapy is included, given the intervention utilized in this study was conducted on-site at a local CAC. Before examining the impact of CSA on non-offending parents, and their psychological symptoms and support needs, more general issues are discussed regarding CSA and its impact on child victims.

Child Sexual Abuse

Definitional issues. Sexual abuse involves any activity with a child where consent cannot be or is not given. This includes any sexual contact that is conducted by force or threat of force, regardless of the age of the participants, and all types of sexual contact between an adult and child, irrespective of whether or not deception was involved. Sexual contact between children can also be considered abusive if there is a significant difference in age, developmental level, or size, rendering the younger child incapable of providing informed consent. While statutes vary by state on the age that an individual can

provide consent to sexual contact, which is usually between 14 and 18 years, sexual contact between an adult and minor under the age of consent is considered illegal. The type and severity of the sexual activity may also differ, from non-contact sexual acts (e.g., voyeurism, exposure) to contact sexual acts (e.g., fondling, penetration). In addition to the age or disparity in developmental levels of the participants, the relationship between the child and perpetrator is usually considered in defining CSA. In cases where the perpetrator is a family member, such as a biological parent, step-parent, sibling, or distant relative, the abuse is considered incest or intrafamilial sexual abuse. When the perpetrator is an individual who is not related to the child, either by blood or through marriage, the abuse is considered extrafamilial (Berliner & Elliott, 2002).

Prevalence and risk factors. According to retrospective studies, approximately 20-25% of females and 5-15% of males are estimated to have experienced at least one episode of sexual abuse during childhood (Finkelhor, 1994). However, prevalence rates continue to vary considerably, from 2-62% for women and 3-16% for men based on U.S. studies (Deblinger, Behl, & Glickman, 2006; Wolfe, 2006). While recent reports show that the rates of CSA may be declining (Finkelhor & Jones, 2004; Jones, Finkelhor, & Halter, 2006), incidences may still in fact be greater than the estimates if we consider the failure to substantiate cases and the effects of underreporting. As noted by Wolfe (2006), possibly 50-67% of sexually abused children may go undetected.

Across victims of CSA, several demographic and abuse-specific characteristics have been noted as increasing the risk for CSA. Victims are noted to be overwhelmingly female, younger with a reported mean age of onset of 9 years, more likely have a low IQ, be socially isolated, lack maternal support or an individual in whom to confide, and more

likely to have a physical disability (e.g., Putnam, 2003; Wolfe, 2006). While child maltreatment in general is strongly correlated with low income (Hecht & Hansen, 2001), this association is less conclusive for sexual abuse (Berliner & Elliott, 2002; Heflin et al., 2000; Wolfe, 2006). In an examination of cultural, ethnic, and racial factors, the association between these factors and risk for CSA appears to be largely inconclusive (Putnam, 2003; Wolfe, 2006). Rather, family factors such as less cohesion, more dysfunction, more disorganization, low maternal education, marital discord or divorce, maternal remarriage, parental psychopathology, parental substance abuse, and parent-child relationship problems, have shown to be associated with risk for CSA regardless of intrafamilial or extrafamilial CSA (e.g., Berliner & Elliott, 2002; Wolfe, 2006).

In addition, according to Adams-Tucker (1982), children who were unsupported compared to supported children were diagnosed with more emotional problems based on parent-report. Further, children who face three or more risk factors may be at as much as 50% increased risk for CSA (Wolfe, 2006). Thus, given the importance of family factors in increasing the risk for CSA, and the need to address mental health concerns for non-offending parents, the psychological symptoms and support needs of parents following their child's disclosure of CSA was explored. In addition, this study examined the implications of these characteristics over the course of group therapy, as well as for client retention.

Varied Impacts for Child Victims

In contrast to youth in general who may be referred for mental health services in response to behavioral problems, a psychological disturbance, or emotional distress, victims of CSA are initially brought to the attention of professionals for the trauma they

have endured. Thus, it is understandable that the impact of CSA has been identified as quite complex and heterogeneous in symptom presentation and is commonly described as short-term and/or long-term in its effects (e.g., Berliner & Elliot, 2002; Browne & Finkelhor, 1986; Gale, Thompson, Moran, & Sack, 1988; Heflin et al., 2000; Kendall-Tackett, Williams, & Finkelhor, 1993; Lynskey & Fergusson, 1997; Silverman, Reinherz, & Giaconia, 1996; Swenson & Hanson, 1998; Wolfe, 2006).

Literature on the short-term impact of CSA indicates that victims demonstrate a wide range of psychological difficulties that may include: depression, anxiety, sexually inappropriate behaviors, anger and hostility, poor self-esteem, suicidal ideation, self-destructive behaviors, symptoms of PTSD, somatic complaints, and behavior problems (e.g., Beitcham, Zucker, Hood, daCosta, & Akman, 1991; Browne & Finkelhor, 1986; Finkelhor, 1990; Gale et al., 1988; Wolfe, Gentile, & Wolfe, 1989). According to Wolfe (2006), approximately 30% of victims may demonstrate clinically-significant problems within the first several months following disclosure of their abuse. Among the short-term effects, symptoms of PTSD and sexualized behaviors are often regarded as hallmark symptoms characteristic of victims of CSA (Kendall-Tackett et al., 1993; Wolfe, 2006).

While for some victims these short-term symptoms may be resolved, such as through the utilization of timely and effective interventions, long-term sequelae may develop. The long-term impact of CSA may include: anxiety, sexual maladjustment, depression, suicidal ideation, suicidal behaviors, anger, self-mutilation, substance abuse, PTSD, somatization, revictimization, and feelings of isolation and stigmatization (e.g., Beitcham et al., 1992; Browne & Finkelhor, 1986; DiLillo, 2001; Silverman et al., 1996; Swanston et al., 2003; Wolfe, 2006). An examination of young adults who had been

exposed to CSA demonstrated an increased risk for the development of a variety of psychiatric disorders and adjustment difficulties, with specific elevated rates of anxiety disorders, major depression, alcohol abuse/dependence, other substance abuse/dependence, conduct disorder, post sexual abuse trauma, and attempted suicide (Lynskey & Fergusson, 1997).

In contrast to these noted impacts of CSA, approximately 20-50% of child victims may present as symptom-free during an initial assessment (Lynskey & Fergusson, 1997; Swenson & Hanson, 1998; Wolfe, 2006). However, it is important to note that the absence of symptomatology does not confirm that the victim will remain symptom-free. Such stressors as court appearances and subsequent changes in family dynamics (e.g., psychological and emotional functioning of family members), regardless of intrafamilial or extrafamilial CSA, may initiate the appearance of symptoms that were either previously undetected or not present (Finkelhor, 1990).

Non-Offending Parents of Child Sexual Abuse Victims

In a review of the literature, Corcoran (1998) noted that non-offending mothers had generally been viewed negatively by others, specifically as being passive, indifferent, and permissive of the sexual abuse. In addition, both Deblinger et al. (1993) and Heflin et al. (2000) noted that the literature on CSA has been highly critical of non-offending mothers of incest cases, and tended to view these mothers as indirectly responsible and denying the abuse, colluding with the perpetrator, encouraging their daughters to assume a parental/spousal role, and being socially isolated. However, few empirical studies support these negative views of non-offending parents. Rather, the majority of non-offending parents appear to suffer greatly or be traumatized upon discovery of their

child's sexual abuse (Corcoran, 1998; Deblinger et al., 1993; Manion et al., 1996; Newberger, Gremy, Waternaux, & Newberger, 1993). Given the importance of the non-offending parent in providing support and facilitating the child's post-abuse recovery, the following sections focus on the impact of disclosure on parent psychological functioning, the support needs presented by parents, and the potential impact of the parent's own trauma history on parent psychological functioning. Further, the impact of parent support and family factors on the child's level of functioning and adjustment are examined.

Impact on parent psychological functioning. Following disclosure of CSA, non-offending parents may demonstrate a range of reactions including anger toward the perpetrator, displaced anger toward family members, guilt, self-blame, helplessness, panic, shock, embarrassment, denial, feelings of betrayal, a desire for secrecy, and fear for the child victim (e.g., Elliott & Carnes, 2001; Manion et al., 1996). In a longitudinal study of maternal adjustment, Newberger et al. (1993) found that non-offending mothers exhibited a range of symptoms, which included depression, anxiety, hostility, somatic symptoms, paranoid ideation, and psychoticism. In addition, non-offending parents have been reported to attempt suicide or require hospitalization following their child's disclosure (Deblinger et al., 1993), and often display symptoms of PTSD and grief symptomatology (Elliott & Carnes, 2001; Manion et al., 1996). Stauffer and Deblinger (1996) noted that non-offending parents often experienced elevated levels of psychosocial distress up to an average of two years following their child's disclosure of CSA.

Regehr (1990) examined the impact of disclosure of extrafamilial CSA on the parent across several domains, specifically toward self, child, the system, and the

offender. Feelings toward self may include feelings of guilt of not being able to protect their child from the sexual assault, embarrassment to share the fact that their child had been assaulted, and becoming overprotective of their child by severely restricting activities of older children. Feelings toward their child may include anger for not having prevented the abuse, particularly for older children, not disclosing the abuse earlier or at all, and for disrupting the parents' lives. Feelings toward the system may include uncertainty regarding their decision to report the abuse, the push by investigators for the parent to be socially responsible to report and prosecute the abuser, and fear that the system and investigation may further traumatize their child. Finally, feelings toward the offender may include a desire for retribution or revenge, and even guilt for potentially marring the offender's name and family (Regehr, 1990).

Although the literature on paternal functioning following the disclosure of extrafamilial CSA has been limited, Manion et al. (1996) reported that fathers are just as likely to experience significant levels of distress as non-offending mothers. However, this response by fathers may be delayed (Grosz, Kempe, & Kelly, 1999). According to Manion et al. (1996), fathers may experience a delayed stress response due to greater difficulties in expressing their feelings and thoughts related to their child's victimization and/or because of a tendency to initially protect their family by putting aside their reactions to the abuse. While many parents may experience significant distress, Manion et al. (1996) found that the majority of families in their study were able to cope fairly well despite the disclosure of extrafamilial CSA. Thus, the impact on parents appears to be variable and warrants further examination.

Support needs of parents. In addition to these psychological difficulties, non-offending parents may also experience considerable social, emotional, and economic consequences (e.g., stigma, increased feelings of isolation, loss of partner or disruption of the family in cases of intrafamilial CSA, loss of income, and dependence on government assistance; Elliott & Carnes, 2001). As noted by Svedin et al. (2002), frequent changes of residence and social isolation appear to be more common among families where sexual abuse has occurred. According to Grosz et al. (1999), the anger and rage many parents may experience toward the perpetrator has been described as all-consuming and disruptive to their life schedules, sleep, and relationships. For many parents, the perpetrator may have been a trusted friend, partner, or other family member. This betrayal may result in many parents feeling inadequate, unable to trust their own judgment, and trust others. In addition, divorce/separation may be a consequence of sexual abuse within the family (Svedin et al., 2002). The response from family members or the community may also be critical of the non-offending parent's response to the abuse, as well as the parent's attempt to seek treatment for the child victim, which may be viewed by others as detrimental to the child's recovery due to having to talk about the abuse (Grosz et al., 1999). Thus, providing parents with a support group or other support systems may be especially critical during a time when they may feel most isolated.

Parent abuse history. In addition to the psychological and social impacts of disclosure of CSA on the non-offending parent, for some, their own history of childhood trauma may present further difficulties. In a study conducted by Faller (1989), nearly 50% of their sample of 154 mothers of intrafamilial CSA victims had themselves experienced sexual abuse. Deblinger et al. (1993) reported a comparable overall mean

rate of approximately 40% of sexual abuse histories for their total sample of 98 non-offending caregivers. These caregivers did not differ on rates of sexual abuse for mothers in incest cases, mothers of children abused by other relatives, and mothers of children victimized by non-relatives (Deblinger et al., 1993). Similarly, Svedin et al. (2002) reported that between 22% and 36% of child victims of CSA had mothers who were also abused as children.

In a review of the literature, Wind and Silvern (1994) noted that within nonclinical samples, women survivors of sexual abuse have been characterized by high depression, low self-esteem, elevated trauma symptoms, sexual dysfunction, and unusually frequent victimization as adults. Although a history of sexual abuse has not been shown to affect the level or quality of maternal support, Corcoran (1998) noted that the mother's adjustment may be a central moderating variable in decreasing the impact of sexual abuse on the child. As prior sexual abuse may be associated with maternal symptom distress following their child's disclosure of CSA, acknowledgment and resolution for her own abuse issues may be warranted for increasing maternal support (Corcoran, 1998). In addition to a history of sexual abuse, Corcoran (1998) noted that the rate of physical victimization of mothers of sexually abused children may be as high as 75%. As with sexual abuse, physical victimization may also impede a mother's ability to cope successfully with her child's victimization (Corcoran, 1998).

Parental support and impact on child adjustment. Across child victims, non-offending parents appear to play a crucial role in influencing their child's post-abuse adjustment and recovery. That is, assisting parents in overcoming psychosocial difficulties that may impede their ability to be supportive and therapeutic to their child

may thereby optimize the child's immediate and long-term adjustment (e.g., Corcoran, 2004; Deblinger et al., 1993; Deblinger, Stauffer, & Steer, 2001). According to the Tufts (1984) study, when mothers reacted to their child's disclosure with anger and punishment, the child victim exhibited more behavioral disturbances. Negative parental reactions appear to aggravate the trauma experienced by CSA victims, with greater maternal symptom distress being associated with poorer adjustment in child victims (Browne & Finkelhor, 1986; Deblinger et al., 2001).

Other factors may mitigate or buffer the adverse effects of CSA. Greater parental support, affection, nurturing, and belief, especially during disclosure, and the development of an adequate father/child bond may serve to mitigate the impact of CSA (Celano, Hazzard, Webb, & McCall, 1996; Corcoran, 1998; Lynskey & Fergusson, 1997; Stauffer & Deblinger, 1996). Higher levels of maternal support and the availability of a supportive relationship have been correlated with lower measures of psychological stress and behavior problems in child victims (Berliner & Elliott, 2002; Elliott & Carnes, 2001; Heflin et al., 2000). Conte and Schuerman (1987) found that victims who had supportive relationships with non-offending adults or siblings were less likely to be adversely affected.

In a sample of non-offending mothers studied by deYoung (1994), 60% provided some level of support or protection to their child within the first hour following disclosure. However, many studies have noted the impact of a non-offending caregiver's own immediate and long-term psychological distress on potentially diminishing their support toward their child (e.g., Regehr, 1990; Tourigny, Hébert, Daigneault, & Simoneau, 2005). Elliott and Carnes (2001) proposed that inadequate support by non-

offending parents may be due to several factors, including an initial lack of help during the crisis of disclosure and difficulty accessing services. Given these immediate stressors related to disclosure, as well as the varied parental responses to abuse allegations, the need to address these concerns promptly and involve non-offending parents in treatment appears to be vital. This may be particularly important with younger victims, as the trauma experienced by the non-offending parents is often thought to be more significant than the trauma to the child (MacFarlane et al., 1986).

Family factors and impact on child adjustment. As noted, family characteristics may play an important role in the adjustment of the child following disclosure of CSA. Families, in which a child has been sexually abused, regardless of intrafamilial or extrafamilial CSA, have been characterized as less cohesive, more disorganized, and more dysfunctional than other families (Alexander & Lupfer, 1987; Svedin, Back, & Söderback, 2002). Dadds, Smith, Weber, and Robinsson (1991) identified problems in communication, lack of emotional proximity, social isolation, and lack of flexibility as specific impairments common among families involved in intrafamilial sexual abuse. Other specific family factors that have been associated with adverse child outcomes include marital dysfunction, including divorce/separation/conflicts; domestic violence; larger families; and parental maladjustment, particularly alcohol abuse, criminal behavior, and psychiatric problems (Svedin et al., 2002; Wind & Silvern, 1994).

Treatment for Child Sexual Abuse

Given the impact of CSA on not only the child victim, but also on non-offending family members, in particular parents, the need for accessible mental health interventions is paramount. As parallel group treatment for child victims of CSA and their non-

offending parents is the context of this study, a brief overview of individual interventions (crisis and time-limited) will be provided, followed by a more specific examination of group interventions. For a more detailed review of individual and group treatments, which is beyond the scope of this study, please refer to the following literature (e.g., Celano et al., 1996; Cohen, Deblinger, Mannarino, & Steer, 2004; Cohen & Mannarino, 1998; Cohen & Mannarino, 2000; Corcoran, 2004; Deblinger, McLeer, & Henry, 1990; Deblinger, Lippmann, & Steer, 1996; Deblinger, Steer, & Lippmann, 1999; Deblinger et al., 2001; King et al., 2000; Reeker & Ensing, 1998; Stauffer & Deblinger, 1996; Tavkar & Hansen, in press; Tourigny, Hébert, Daigneault, & Simoneau, 2005).

Individual interventions. The disclosure of CSA and its immediate associated consequences frequently creates a period of crisis for the child and family, particularly in cases of intrafamilial CSA that may result in the removal of the offender or disruption of the family composition. During this time, the child and family may be more amenable to external sources of support, thus providing mental health professionals with a unique opportunity to intervene at a critical period (Heflin et al., 2000). Child victims may also necessitate help handling their immediate feelings about the sexual abuse (Schetky, 1988). Given the heterogeneity of presenting symptoms of child victims of CSA immediate treatment needs may vary considerably. While crisis interventions for child victims appear to be limited based on reviews of the literature, many emphasize the need for initial interviews, psychological evaluations, appropriate referrals for more intensive treatments, and crisis counseling sessions.

Immediate interventions for non-offending parents, which are more prevalent, may serve to facilitate the child victim's post-abuse recovery. To deal with concerns of

secondary trauma, as well as other psychosocial difficulties, it is recommended that non-offending parents should be immediately evaluated and offered appropriate treatment in order to provide support and guidance to the child victim (Deblinger et al., 1993; Newberger et al., 1993). Given this immediate need to increase parental support, Elliott and Carnes (2001) proposed that the goal should be to help parents remain calm, continue to focus attention to their child's needs, and objectively examine the emerging evidence of the abuse. For non-offending parents who demonstrate inconsistent or ambivalent support, Elliott and Carnes (2001) noted that the goal should be to quickly and effectively improve the parent's ability to offer consistent and strong support and protection, and provide the parents with considerable education and their own support. Overall, Corcoran (2004) proposed the need to implement and empirically evaluate more interventions during the disclosure phase, particularly given the importance of parental supportiveness at such a critical time.

Given the varied impacts and symptomatology that may emerge in child victims, individual time-limited interventions may provide the opportunity to focus on specific psychological difficulties (Nolan, Carr, & Fitzpatrick, 2002) such as trauma-related symptoms, and cognitive distortions. According to the Office for Victims of Crime (OVC) guidelines for empirically supported treatments for child physical and sexual abuse (Saunders, Berliner, & Hanson, 2004), only one treatment, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Chaffin & Friedrich, 2004; Cohen, Deblinger, & Mannarino, 2005) was found to be well-supported and efficacious. While originally developed to treat adult survivors of trauma in effectively addressing symptoms of PTSD, TF-CBT was modified for children and adolescents to reduce negative emotional and

behavioral responses and correct maladaptive attributions and beliefs related to the traumatic experiences. In order to optimize treatment for children and adolescents, TF-CBT also provides support and skills to non-offending parents to effectively respond to their children and cope with their own emotional distress (Cohen & Deblinger, 2004).

Many studies have been conducted that demonstrate the efficacy of TF-CBT for CSA victims and superior outcomes over other treatments. Benefits of TF-CBT include reductions in depression; reductions in shame, abuse-related attributions, and behavior problems; increased social competence; increased knowledge of body safety skills; and cognitive reframing to address self-blame, feelings of powerlessness and hopelessness, and sexualized behaviors (Cohen & Mannarino, 1998; Paul, Gray, Elhai, Massad, & Stamm, 2006). While TF-CBT is typically conducted individually, it has also been administered in group, family therapy, and in school-based and office-based settings (Cohen, Berliner, & Mannarino, 2000; Cohen & Deblinger, 2004).

As parental support has been shown to be a critical element influencing the victim's post-abuse long-term recovery, particularly for addressing depression and low self-esteem (Wind & Silvern, 1994), several time-limited individual interventions have been developed that include or focus on the non-offending parent. Mental health interventions may focus on strengthening the parent's support and belief of their child, reduce the child's symptoms (e.g., anxiety, anger, depression), attend to the parent's symptomatology (e.g., PTSD, guilt, sadness), address feelings of isolation and stigma, and address the economic consequences commonly associated with intrafamilial CSA (Swenson & Hanson, 1998). In addition, treatments for non-offending parents may contain similar elements of trauma-focused work, in order to reduce parental distress, as

well as behavior management strategies to address challenging behaviors exhibited by the child victim (Berliner & Elliott, 2002).

Group interventions. While individual-focused interventions may provide the opportunity to address psychological difficulties, distorted cognitions, feelings about the offender, and learn safety skills and parenting skills, often there remains the need to address the sense of social isolation and stigma many experience following CSA. Group interventions are considered by some to be the treatment of choice (e.g., Grayston & DeLuca, 1995; Reeker & Ensing, 1998), particularly for preadolescent and adolescent victims to target feelings of isolation, social stigmatization, and reduce desires for secrecy. As cost-effective and efficient ways to treat many with the fewest resources available, group interventions are frequently utilized with victims of CSA, as well as with non-offending family members to provide them with their own source of support (e.g., Avinger & Jones, 2007; Grayston & DeLuca, 1995; Heiman & Ettin, 2001; Reeker & Ensing, 1998; Sturkie, 1994).

Critical elements of group therapy for child victims include the opportunity to reduce the sense of stigma and isolation by creating a positive and safe environment to foster mutual self-disclosure, increase socialization, understand that CSA is a relatively common and shared experience, and provide the ability to learn by modeling positive coping strategies of other group members (Heflin et al., 2000; Silovsky & Hembree-Kigin, 1994; Sturkie, 1994; Tourigny et al., 2005; Wanlass, Moreno, & Thomson, 2006). By focusing on the child, group therapy can address feelings of being damaged, responsibility, guilt about the abuse, shame, blame, and secrecy (e.g., Silovsky & Hembree-Kigin, 1994) and thereby serve as a buffer as feelings and issues can be

discussed without as much disclosure as is common in individual therapy (Avinger & Jones, 2007). Also, the individual does not always have to be the focus of attention as with individual therapy (Hecht et al., 2002). Further, according to Corder, Haizlip, and DeBoer (1990), group psychotherapy provides a peer forum for the victimized child which is necessary for full recovery from CSA. Based on the literature on group treatments for child and adolescent victims, TF-CBT has been widely studied and shown to be effective in addressing symptoms associated with CSA (e.g., Cohen, Mannarino, Murray, & Igelman, 2006; Deblinger et al., 2001; Saywitz, Mannarino, Berliner, & Cohen, 2000). With TF-CBT groups, sessions may include telling and processing the trauma, graduated exposures, cognitive restructuring, and coping skills, such as relaxation skills (Avinger & Jones, 2007).

Non-offending parents often experience multiple emotions about their child (e.g., guilt, protectiveness), feelings toward the offender (e.g., desire for retribution, guilt about the impact on the offender's family), feelings about themselves (e.g., guilt, self-blame, doubt about their parenting abilities), and feelings toward the system (e.g., fear about the impact on the child, feeling that the investigation is beyond what seems reasonable). To respond to these concerns, Regehr (1990) suggested that they require the opportunity to vent their conflicting feelings in therapy sessions that do not include their child. Given that non-offending parents typically feel initially immobilized and overwhelmed following disclosure, and often experience a loss of trust in the safety of their family members, friends, and communities, Grosz et al. (1999) noted the need many may have to speak with other supportive adults. In addition, as the full extent of their anger and distress should not be expressed with their children, having a supportive group of other

non-offending parents provides this outlet (Grosz et al., 1999). Essentially, group treatment may offer non-offending parents with a “lifeline” when they feel most isolated and disconnected from their normal support systems (Grosz et al., 1999; Schetky, 1988). Whether non-offending parents may need assistance in dealing with their own abuse histories; feelings of anger, guilt, or self-blame; or learn how to manage their child’s sexually inappropriate behaviors, group treatment may provide an appropriate and effective environment to address these issues.

As the treatment for the non-offending parent is considered to be a critical element of the treatment for the child victim, several advantages have been identified. Lomonaco, Scheidlinger, and Aronson (2000) noted that group therapy for non-offending parents may be helpful by providing emotional support, learning new parenting skills, enhancing motivation in their support of the children’s group work, and providing the opportunity to share information about the child’s daily functioning. Grosz et al. (1999) also found that following participation in group treatment, non-offending parents demonstrated a decrease in anger, anxiety, sadness, and guilt. They also reported a renewed confidence in their parenting abilities as well as a restored sense of normalcy and pleasure in daily activities and routines. Corcoran (2004) and Lomonaco et al. (2000) also noted benefits of group treatment for parents that included increased support and recovery of the child victim, providing a supportive environment where parents can address their own emotional and psychological distress, and opportunities to model more effective coping strategies demonstrated by other group members. In addition, co-joint therapy for non-offending parents may decrease premature drop-out for the child (Celano et al., 1996).

While various treatment protocols for CSA victims and their non-offending parents have been developed and treatment outcome studies are increasingly published, cognitive-behavioral treatments have been shown to be superior to other modalities of treatment (e.g., nondirective support therapy [NST]; Celano et al., 1996; Cohen & Mannarino, 1996; Deblinger et al., 2001) in successfully treating symptoms associated with CSA. Across group interventions for child victims and their non-offending parents, several factors should also be considered, including number and length of sessions, age range of participants, structured versus unstructured groups, gender composition of group members and therapists, and topics covered. For group interventions for CSA victims the following topics are typically covered irrespective of theoretical orientation: reactions to disclosure, guilt and responsibility, secrets, sex education, body image, private parts, good touches/bad touches, anger control, problem-solving skills, assertiveness, coping skills, peer relations, anxiety management, depression, self-esteem, behavior management, free play for preschoolers, discussion of abuse experiences, discussion of offenders, and discussion of the court process (Reeker & Ensing, 1998; Silovsky & Hembree-Kigin, 1994; Stauffer & Deblinger, 1996).

Along with topics covered, the number and length of time of sessions may vary considerably. According to Reeker and Ensing (1998), longer treatments may demonstrate better gains, with 12 to 24 sessions needed to reduce clinically significant symptoms into the normal range of functioning. Overall, regarding length of sessions, a review of group treatments for sexually abused children by Sturkie (1994) found that 90 minutes may be optimal. Groups for CSA victims may also be either open- or close-

ended. According to Hecht et al. (2002), there is no accepted algorithm for this, and has been based on clinical judgment.

The composition of the group is also an important factor for consideration. Separate groups have been developed based on age of the child, specifically for preschoolers, school-aged children, and adolescents (Sturkie, 1994). However, separate groups based also on developmental understanding should be considered, as a developmental range no more than 2 to 4 years may be most advantageous for group members (Sturkie, 1994). This developmental range may result in optimal benefits for group members, and inform how to adjust information that is being discussed, as with sex education. In addition, gender composition should be considered. According to Sturkie (1994), same-sex groups may be better. Given the sensitivity of topics that are covered (e.g., discussing the trauma, sex education) group members may be uncomfortable sharing and discussing topics with children of the opposite gender, particularly after pubertal age.

Further, the number of participants per group has been examined. Several studies have noted that six to eight participants may be optimal (Schetky, 1988; Sturkie, 1994). Limiting the size of the group may be important, specifically to foster intimacy of the group and the amount of individual attention group members receive. These benefits of group may be minimized with larger groups. However, larger groups may afford greater opportunities for the normalization of each group member's experiences (Avinger & Jones, 2007).

Characteristics of the group therapists should also be considered (e.g., Silovsky & Hembree-Kigin, 1994; Sturkie, 1994). Sturkie (1994) suggested that it is essential for a

successful group experience to have multiple facilitators for each group, given the need for immediate feedback, neediness of the child clients, and potential absences of either of the group therapists. Regarding gender composition, Sturkie (1994) recommended that it would be best to use same-sex facilitation teams. However, others such as Schetky (1988) have noted that a male co-therapist may actually help female victims overcome the distrust they may feel towards males and learn to relate to males in an appropriate, nonsexual way. Grayston and DeLuca (1995) suggested that having one male and one female therapist may be the best approach for male CSA victims.

Lastly, given the duration of group therapy that may span weeks to months, group services must be particularly accessible in order to reduce potential group attrition. By conducting services in a child-friendly facility, this may further reduce the anxiety experienced by the child or adolescent victim, as well as their non-offending caregiver in presenting to group treatment. Further, by providing group therapy in an accessible area to public transportation, group attendance may be facilitated, especially given that only about 50% of clients have been shown to follow-through on referrals (Newman et al., 2005). Given the increasing role of CACs as initial access sites to therapy for child victims and non-offending family members, and that services provided in this study were conducted at a local CAC, a brief description of these centers is warranted.

Child Advocacy Centers

Child victims of maltreatment and their families have been directed customarily through multiple agencies in order to gather evidence of abuse and initiate the legal process in successfully prosecuting the alleged perpetrators. However, this approach has been criticized for its apparent shortcomings, including for inducing anxiety in the child

victim, non-offending parent(s), and non-abused sibling(s), due to needing to report the abuse to multiple individuals in numerous settings, difficulties in transportation to multiple locations (e.g., medical examinations, court), and overall lack of coordination across these agencies (Jackson, 2004; Jenson, Jacobson, Unrau, & Robinson, 1996; Smith, Witte, & Fricker-Elhai, 2006). As a result, many communities have established CACs to address these shortcomings.

With more than 900 established and developing CACs nationwide as of 2007 (National Children's Advocacy Center, 2007) CACs are being increasingly utilized as initial access sites for therapy, whether on-site and/or through prompt referrals to community agencies (Newman, Dannenfelser, & Pendleton, 2005). The CAC model advocates a clear need for mental health services, not only for the child victim, but also for non-offending family members who are also entangled in the aftermath of CSA. While the majority of NCA-accredited CACs provide mental health services to children and non-offending parents, only about 51% provide these services on-site (Jackson, 2004).

Purpose of the Present Study

In contrast to the earlier literature on non-offending parents, particularly mothers, who had been viewed negatively in their response to their child following disclosure, and blamed for colluding in the abuse, the literature on the psychological impact and distress experienced by parents of CSA victims is growing. Studies have examined the impacts of several of these psychological characteristics and parent demographics (e.g., trauma history, income) on other factors, including parent support and belief of the child (e.g., Elliott & Carnes, 2001; Sirles & Franke, 1989), satisfaction with the parenting role (e.g.,

Manion et al., 1996), and intercorrelations with child functioning (e.g., Newberger et al., 1993). In addition, the effectiveness of various modalities of treatments has been examined, including cognitive-behavioral group treatment for parents and child victims (e.g., Stauffer & Deblinger, 1996), utilizing numerous validated parent- and child-report measures to assess psychological and behavioral functioning. However, research is still limited in examining the change in psychological and support characteristics of parents and how this relates to change in the emotional and behavioral functioning of the child victim, over the course of a parallel group intervention. Further, with the growing numbers of children and families who initially present to CACs for mental health services, the implications of providing services on-site, such as increasing client retention, should be examined.

The main objectives of this study were (a) to elucidate the psychological symptoms and support needs of non-offending parents of child sexual abuse victims as they present to group treatment, (b) to examine changes in psychological symptoms and support needs over the course of parallel group treatment for parents and for their children who are victims of sexual abuse, and (c) to examine the impact of parent and child symptoms and parent needs on completion of group treatment. To date, the majority of group treatment outcome studies have utilized only a handful of assessment instruments to assess parent and child characteristics over the course of treatment. However, the relationship of change in parent characteristics with change in their child's emotional and behavioral symptoms, and its impact on completion of group treatment has not been examined. This project had a unique advantage of utilizing a variety of demographic, parent-report, and child-report measures, which allowed for a more

comprehensive examination of change of symptoms and needs over the course of treatment, and the impact of conducting services at a local CAC on client completion.

The specific aims and corresponding hypotheses of this study were to:

1. Examine the psychological symptoms and support needs of parents of child sexual abuse victims as they present to treatment.

A. **Identify the psychological symptoms and support needs of parents at Time 1.** Multiple measures were used to describe the psychological symptoms and support needs of parents as they presented to treatment (Time 1). As these parents were voluntarily presenting for group treatment, it was hypothesized that significant elevations for the sample would be present across the psychological assessment measures for which norms were available.

B. **Examine the relationship of the parent demographic characteristics, parent trauma history, parent psychological symptoms and support needs.** With the long-term impacts of CSA and the high rate of victimization present among parents, particularly mothers, it was expected that parents who had reported their own history of significant childhood trauma would demonstrate more distress across the measures of psychological symptoms and report more need for support. Given that these parents may feel more distressed, may exhibit difficulties in being able to cope effectively with their child's abuse, and may have difficulty separating their own feelings from those of their child (Newberger et al., 1993), it was also expected that these parents would report worse expectations for their child than parents who had not experienced significant childhood trauma. While parent support needs and psychological characteristics would also be compared to

parent demographics (e.g., age, income, number of children in the home), no definitive hypotheses were proposed.

C. **Examine the relationship of the child demographic and abuse characteristics with parent psychological and support variables.** While the present sample primarily consisted of female victims, there were a sizeable proportion of male victims. According to Finkelhor (1990), the impact of CSA has been similar for boys and girls, namely across fear, distractedness, and sleep disturbances. However, Wells, McCann, Adams, Voris, and Dahl (1997) found that although male and female CSA victims share many of the same behavioral and emotional symptoms, boys may be more prone to acting out with sexual aggression and demonstrate more behavioral problems in school. Thus, it was expected that parents would report worse expectations for male victims than female victims. Consistent with the literature that shows mixed findings for the impact of sexual abuse across abuse characteristics (e.g., age of onset of abuse, duration of abuse, relationship to perpetrator), it was expected that there would be no significant differences across the abuse characteristics for parent psychological symptoms and support needs.

2. Examine the relationship of parent demographics, parent trauma history, and psychological symptoms and support needs with child emotional and behavioral symptoms as they present to treatment. The use of hierarchical cluster analysis as a statistical method of identifying clinical profiles is increasingly being used to examine sexually abused youth (e.g., Hébert, Parent, Daignault, & Tourigny, 2006; Sawyer et al., 2005; Trickett, Noll, Reiffman, & Putnam, 2001). As a person-centered approach,

hierarchical cluster analysis focuses attention on traits which contribute to the total functioning of the individual. Individuals can be grouped based on scores on multiple characteristics or variables, in contrast to a variable-level approach, that often ignores the organization and complexity of traits within individuals (Crockett, Moilanen, Raffaelli, & Randall, 2006). Based on literature examining the heterogeneous symptom presentation of sexually abused youth (e.g., Berliner & Elliot, 2002; Heflin et al., 2000; Wolfe, 2006), and previous research utilizing Project SAFE data (e.g., Sawyer, 2008), it was expected that five clusters of youth would be identified, which would vary by symptom presentation and severity. Based both on speculation and previous research on cluster patterns of symptom presentation for youth, it was hypothesized that the following cluster profiles would be identified: highly distressed (e.g., high internalizing, externalizing, PTSD), primarily internalizing problems (e.g., anxiety, depression), primarily PTSD symptoms, sexual behavior problems and oppositional behaviors, and sub-clinical or asymptomatic. Given that this research objective was contingent upon cluster analysis for youth, no definitive hypotheses were proposed for the relationship between parent demographics, psychological symptoms, and support needs with cluster membership for youth.

3. Examine changes in parent psychological symptoms and support needs over the course of treatment.

A. **Examine the specific changes that occur in parent psychological symptoms and support needs over the course of treatment.** It was expected that overall parents would demonstrate clinically significant improvements in their level of psychological symptoms and support needs over the course of treatment, from

pre-treatment (Time 1) to post-treatment (Time 3). Given that the parallel group intervention would provide parents with opportunities to have a system of support and cope with their own abuse history, it was hypothesized that parents who reported a significant history of childhood trauma and those without a significant trauma history would show comparable improvements over the course of treatment. While parent demographics and child demographics would be compared to changes in parent psychological symptoms and support needs, no definitive hypotheses were proposed.

B. **Examine the relationship between changes in parent psychological symptoms and support needs and changes in child emotional and behavioral symptoms over the course of treatment.** A cluster analysis was conducted using the child emotional and behavioral measures (used in Aim 2) from both pre- and post-treatment assessments. It was expected that clusters of youth would be identified that showed different patterns of change over time. These clusters of youth were proposed to be examined in relation to parent psychological and support needs at pre- and post-treatment. As this research objective was contingent upon cluster analysis for youth, no definitive hypotheses were proposed for which cluster profiles would show change over the course of treatment.

4. **Examine parent participation in treatment.**

A. **Examine the relationship of parent demographics, psychological symptoms and support needs with treatment completion.** While significant psychological distress is a notable reaction among parents following their child's disclosure of CSA, and may contribute to dropout from treatment, all families in this study

were voluntarily participating in group intervention. Thus, differences in psychological functioning for the present sample were not expected to differentiate those completing treatment from those who chose to terminate. Given the economic challenges for many families of attending a 12-week group intervention, it was expected that income would be a significant predictor of dropout from treatment.

B. **Examine the relationship of child demographics, abuse characteristics, and child emotional and behavioral symptoms, and treatment completion.** It was expected that child demographics, abuse characteristics, and child emotional and behavioral symptoms would not differ significantly among treatment completers and those who chose to terminate treatment.

Research Design and Methods

Participants

Participants in this study included 104 sexually abused youth and their non-offending parent presenting to Project SAFE (Sexual Abuse Family Education) Group Intervention, a 12-week cognitive-behavioral parallel group treatment for sexually abused youth and their non-offending parents (e.g., Hansen, Hecht, & Futa, 1998; Hsu, 2003). Data for this study were archival. Families were referred primarily by child advocates at the Lincoln/Lancaster County CAC, with some being referred from the Department of Health and Human Services and by community mental health professionals. The Lincoln/Lancaster County CAC serves children in Southeast Nebraska who are 18 years and younger and are alleged victims of child sexual abuse, serious physical abuse, or have witnessed an injury or a violent crime. In 2008, 669 child victims (65% females,

35% males) were provided direct services at the CAC, including forensic interviews and medical examinations. Approximately 85% of the children seen at the CAC were referred for allegations of sexual abuse. Of those 567 children referred for allegations of sexual abuse, referrals to Project SAFE were provided for 76 (13.4%) children and their families, all by child advocates at the CAC following discussion of mental health services with families that were suitable for services (e.g., developmental criteria). Of those 76 referrals, 17 (22%) were referred specifically for the Project SAFE Group Intervention, with 14 (18%) having completed the initial assessment for the group. Although the number of referrals for 2008 were found to be somewhat lower than those for other years due to such factors as staff turn-over, the percentage of referrals specifically for the Project SAFE Group Intervention and completion of the initial assessment materials was estimated to be comparable to other years and group cycles. Specific demographic and abuse characteristic information is included in the results section.

To be included in this study, the following criteria were used: (a) an intake assessment had been completed by the child and the parent, (b) the child was between the ages of 7 and 16 years, and (c) the allegation of sexual abuse was investigated by protective services. The exclusionary criteria were: (a) youth who had been sexually abused by more than one perpetrator, (b) individuals who were significantly impaired in cognitive/intellectual functioning, (c) additional youth belonging to the same household and (d) additional caregivers belonging to the same household. One youth per household was selected for the present study based on the individual who was closest to the mean age for the total sample. As multiple youth from a single household were assumed to share the same family environment and its potential influences, and the family

environment was a major factor under consideration for the present study, that youth who was closest to the mean age in each family was selected. Individuals with multiple perpetrators were also excluded in the present study because the victim-perpetrator relationship was one of the sexual abuse characteristics being considered. For families with more than one caregiver participating, data from the parent who completed pre- and post-treatment measures were used as a comparison to single parent participants.

Measures

Parent Report Measures (see Appendix A)

Demographic Questionnaire. The Demographic Questionnaire was designed by Project SAFE to collect general information about the family. Specific information about the parents included age, marital status, ethnic background, family income, employment status, and educational achievement. Information about the child included age, gender, ethnic background, current school and grade. For the present study the following demographic information for the parent was used: age, marital status, family income, employment status, level of educational achievement, and number of children. For the child, age and gender was used.

Child History Form. The Child History Form (CHF) is an unstructured interview designed to collect relevant abuse-related information. The CHF is completed by one of the Project SAFE staff members as the parent provides information about their child's abuse in their own words. Abuse characteristics gathered include age of onset of abuse, abuse duration, frequency of abuse, number of times abused, nature of abuse, and relationship to perpetrator. For the present study the following information was used: age of onset of abuse, duration of abuse, form of abuse (e.g., fondling, penetration), severity

of abuse (i.e., use of force), relationship to perpetrator (intrafamilial versus extrafamilial sexual abuse), disclosed to whom (i.e., parent or non-parent), months between abuse and disclosure, months between disclosure and assessment, and months between abuse and assessment.

Childhood Trauma Questionnaire. The Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) is a 28-item self-report screening measure to detect cases of childhood trauma. Multiple types of abuse and neglect (i.e., sexual abuse, emotional and physical abuse and neglect) are assessed. Internal consistency reliability coefficients have ranged from satisfactory to excellent with alphas ranging from .60 to .95. The CTQ has also demonstrated good reliability and validity. The CTQ consists of five clinical scales (i.e., Emotional Abuse, Physical Abuse, Sexual Abuse, Emotional Neglect, and Physical Neglect), each which generates a Scale Total Score that can range from 5 to 25. Higher scores indicate greater severity of maltreatment (Bernstein & Fink, 1998). For the present study, Scale Total Scores were used. Classification of CTQ Scale Total Scores was based on the guidelines listed in Table B.1 of the manual (Bernstein & Fink, 1998). For example, for the Sexual Abuse scale, a Scale Total Score of 5 indicates none or minimal sexual abuse, 6-7 low to moderate, 8-12 moderate to severe, and 13 and greater severe to extreme sexual abuse.

Symptom Checklist-90-Revised. The Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1975) is a 90-item self-report index used to assess symptoms of psychopathology and a broad range of psychological problems. Designed for individuals 13 years of age and older, the SCL-90-R consists of nine primary symptom scales (i.e., Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety,

Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism) and three global indices (i.e., Global Severity Index [GSI], Positive Symptom Total [PST], and Positive Symptom Distress Index [PSDI]). The Global Severity Index (GSI), which was used in the present study, is designed to measure overall psychological distress. Scores are reported as T scores with a mean of 50 and a standard deviation of 10. Higher scores indicate greater psychological distress. Internal consistency reliability has been reported to be satisfactory, with alpha coefficients ranging from .77 to .90 (Payne, 1983).

Parental Efficacy Questionnaire. The Parental Efficacy Questionnaire (PEQ) is an 8-item measure that was modified by Project SAFE from Teti and Gelfand's Maternal Self-Efficacy Scale (Teti & Gelfand, 1991). Teti and Gelfand's Maternal Efficacy Scale consists of 10 items that are rated on a 4-point scale (1 = *not good at all*, 2 = *not good enough*, 3 = *good enough*, and 4 = *very good*) to assess maternal perceived efficacy for infants. Reliability and concurrent validity of the scale have been shown to be good, with an alpha of 0.79 for the scale (Kuhn & Carter, 2006). The PEQ consists of 8 items also on the same 4-point scale, but assesses parental perceived efficacy for children across different situations, rather than infants. The total score, which was used in the present study, may range from 0 to 24, with higher scores indicating greater perceived parental efficacy.

Parent Expectancies Scale. The Parent Expectancies Scale (PES) is a 13-item measure developed by Project SAFE to assess parental expectations of their child's functioning over the next 12 months across several areas, including emotional adjustment, relationships with others, and performance in school-related activities. The measure is based on a 10-point scale, from 1 to 10, with 10 indicating expectations that

are much better than most other children. The PES total score may range from 13 to 130, with higher scores indicating better parent expectations regarding their child's adjustment in functioning over the next 12 months. For the present study, the total score was used.

Post-Sexual Abuse Expectations Scale. The Post-Sexual Abuse Expectations Scale (PSAES) is an 8-item measure based on a 5-point scale (1 to 5, with 5 indicating a substantial negative impact) developed by Project SAFE to assess parent expectations of the future negative impact of the sexual abuse on their child across various areas, including relationships with others, behavioral adjustment, and emotional adjustment. The total score may range from 8 to 40, with higher scores indicating parent expectations of a more negative impact of the sexual abuse on their child's functioning. The total score was used in the present study.

Parenting Stress Index. The Parenting Stress Index (PSI; Abidin, 1983) is a 120-item self-report index used to assess stress that is associated with parenting and identify dysfunctions in parent-child relationships. Alpha reliability coefficients range from .55 to .80 for the Parent Domain. The PSI has a high degree of internal consistency as well as concurrent and construct validity. The two subscales that will be selected for the present study are Sense of Competence and Restriction of Role, both categorized under the parent domain. The Restriction of Role subscale consists of 7 items, with scores that may range from 7 to 35, and a mean of 21. Higher scores on the Restriction of Role subscale indicate that the parent likely perceives the parental role as restricting their freedom and frustrating, with heightened resentment and anger toward his/her child and/or spouse (Abidin, 1983). The Sense of Competence subscale consists of 13 items, with scores that may range from 13 to 65, and a mean 39. Higher scores on the Sense of Competence

subscale are indicative of parents who have a lower sense of competence in their parenting skills, do not find the role of a parent as reinforcing as they had expected, and lack knowledge in practical child development and child management skills (Abidin, 1983). The Total Score of these two subscales was used in analyses.

Family Adaptability and Cohesion Evaluation Scale. The Family Adaptability and Cohesion Evaluation Scale (FACES-III; Olson, 1986) is a 40-item self-report measure that assesses family cohesion, adaptability, and satisfaction. Respondents answer items for their current family system as well as for an ideal family system. This study included responses that were answered for the current family system, which consists of 10 items for the Adaptability Now and 10 items for the Cohesion Now subscales, with scores that may range from 10 to 50. The FACES-III has fair internal consistency, with alphas ranging from .62 to .77, and good face validity (Olson, 1986). Higher scores on the Cohesion Now subscale reflect better functioning and greater enmeshment within the family unit. Lower scores on the Adaptability Now subscale reflect better functioning and a less chaotic family unit.

Family Crisis Oriented Personal Evaluation Scales. The Family Crisis Oriented Personal Evaluation Scales (F-COPES; McCubbin, Larsen, & Olson, 1982) is a 30-item measure used to assess effective problem-solving attitudes and behaviors that families may develop in response to problems or difficulties that may arise. Family interactions are assessed across two domains. First, internal family strategies include resources within the immediate family system. Second, external family strategies consist of behaviors that are used to acquire resources external to the family. The F-COPES has an internal consistency of .86 and demonstrates good factorial validity and concurrent validity with

other family measures. According to McCubbin and Thompson (1991), the Total Score had a mean of 93.3 (*SD* = 13.62) for the normative sample. A higher Total Score indicates that the family is better able to identify behavioral and problem-solving strategies when faced by difficult and problematic situations. The Total Score was used in the present study.

Child Report Measures

Children's Depression Inventory. The Children's Depression Inventory (CDI; Kovacs, 1992) is a 27-item self-rated depressive symptom inventory. It is used to assess depression in children between the ages of 7 and 17. The Total Score can range from 0 to 54, with a cut-off of 20, or a T-score of 60 to 66 representing clinical significance. Higher scores indicate more depressive symptoms. Separate norms are available by gender, for ages 7-12 and 13-17. The CDI appears to have good internal consistency, with alphas ranging from .71 to .89 (Kovacs, 1992). For the purposes of the present study the Total Score was used.

Children's Impact of Traumatic Events Scale-Revised. The Children's Impact of Traumatic Events Scale-Revised (CITES-R; Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991) is a 78- item standardized interview designed to measure the impact of sexual abuse from the child's perspective for children between the ages of 8 and 16. Items on the CITES-R focus on four general areas: Post-traumatic stress disorder (PTSD), Attributions about Abuse, Social Reactions, and Eroticism. Social Reactions includes Negative Reactions From Others and Social Support. The content of the items reflect the child's perceptions, thoughts, and feelings about what happened to them, rather than actual events. For the purpose of the present study, scores on the PTSD subscale, which consist

of 26 items, with scores ranging from 0 to 52, and a mean of 26, were used. Higher scores on the PTSD subscale indicate more PTSD symptoms. The alpha value for the entire scale is .89, with a value of .88 for the PTSD subscale (Wolfe et al., 1991). Internal consistency of the scale was .69, with fairly low test-retest reliability (Chaffin & Schultz, 1999).

Coopersmith Self-Esteem Inventory. The Self-Esteem Inventory (SEI; Coopersmith, 1981) is a 58-item measure of children's attitudes about themselves in social, family, academic, and personal contexts. Self-esteem is measured as the child's approval or disapproval of him/herself. The SEI has adequate internal consistency (alphas = .80 to .92) as well as adequate construct and concurrent validity. The Total Self Score, which was used in the present study, consists of 50 items and may range from 0 to 100. Means have generally ranged from 70 to 80 with a standard deviation from 11 to 13 (Coopersmith, 1981). Higher scores on the SEI reflect higher self-esteem.

Revised Children's Manifest Anxiety Scale. The Revised Children's Manifest Anxiety Scale (CMAS-R; Reynolds & Richmond, 1985) is a 37-item measure of general anxiety in children and adolescents ages 6-19. The CMAS-R consists of five scales. The Total Anxiety score is comprised of 28-items pertaining to physiological, subjective, and motoric symptoms of anxiety. These items are furthered divided into Physiological Anxiety, Worry/Oversensitivity, and Social Concerns/Concentration subscales. The remaining nine items form the Lie scale. Normative information and clinical cut-offs are based on age and gender (Reynolds & Richmond, 1978). The CMAS-R has good reliability (alpha = .83). The Total Anxiety Score was used in the present analyses. A

Total Anxiety T-score above 60 is considered to be clinically significant, with higher scores reflecting more anxiety (Reynolds & Richmond, 1985).

Child Sexual Behavior Inventory-2. The Child Sexual Behavior Inventory-2 (CSBI-2; Friedrich et al., 2001) is a 36-item parent-report inventory, with scores ranging from 0 to 108. The second version was revised from the original CSBI, a 35-item inventory, which was designed to assess sexual behavior in children ages 2 to 12 years. The CSBI-2 includes nine new or reworded items. The CBSI-2, like the original measure, has demonstrated adequate reliability and validity (Friedrich et al., 2001). The alpha coefficient for the inventory was .82 for the normative sample and .93 for a clinical sample (i.e., children with a confirmed history of sexual abuse). Validity was demonstrated by significant differences between clinical and normative samples on a majority of the items as well as the Total Score. The CSBI-2 measures a variety of sexual behaviors related to self-stimulation, sexual aggression, gender-role behavior, and personal boundary violations. The Total Score of the CSBI-2 was used in analyses. A higher Total Score reflects more parent-reported sexualized behaviors.

Children's Fears Related to Victimization. The Children's Fears Related to Victimization (CFRV) is a 27-item subscale of the Fear Survey Schedule for Children – Revised (FSSC-R; Ollendick, 1983) and was previously known as the Sexual Abuse Fear Evaluation or SAFE; Wolfe & Wolfe, 1986). The measure lists situations that sexually abused children seem to find distressing (e.g., people not believing me). Initial psychometric data is available on the SAFE revealing two subscales (labeled as sex-associated fears and interpersonal discomfort) with alphas of .81 and .80, respectively (Wolfe et al., 1989; Wolfe, Gentile, & Klink, 1988). The Total Score, which was used in

the present study, may range from 27 to 81, with a mean score of 54. A higher Total Score on the CFRV reflects greater endorsement of fears related to victimization.

Child Behavior Checklist. The Child Behavior Checklist-Parent Report Form (CBCL; Achenbach, 1991) is a 113-item checklist that is used to assess parental perceptions of their child's social competence and behavioral problems. It is appropriate for parents of children who are between 4 and 18 years of age. Scales on the CBCL have been standardized, taking into account both age and gender. The CBCL is a widely used instrument with well-established reliability and validity (Achenbach, 1991). The Internalizing and Externalizing Scale Scores were used in the present analyses. For both the Internalizing and Externalizing Scales, a T-score above 65 is considered to be clinically significant. Higher scores on each scale reflect greater endorsement of symptoms.

Procedures

Recruitment. Participants were primarily recruited from the Lincoln/Lancaster County Child Advocacy Center, a non-profit organization which provides a coordinated, multidisciplinary approach to the problem of child abuse by establishing a safe, child friendly environment for forensic interviews and medical exams of the child victim. The child advocates at the Child Advocacy Center inform all eligible families of Project SAFE who indicate through a signed consent form whether or not they would like to be contacted about the service. In addition, families were recruited by contacting appropriate agencies in the community about Project SAFE and mailing brochures to provide Project SAFE information. Once families expressed an interest in Project SAFE groups and signed a release of information (if appropriate), they were contacted by the project

coordinator, a trained clinical psychology doctoral student therapist, via telephone. The inclusion criteria were screened during the telephone conversation. The project coordinator described Project SAFE groups to eligible families. Potential participants were informed that as part of their involvement in Project SAFE groups they are asked to voluntarily complete questionnaires that will assist the therapists in understanding some of the difficulties that families and children experience after sexual abuse.

Once families agreed to participate in Project SAFE groups, a pre-treatment assessment session (Time 1), with each family, was set for the earliest mutually convenient time. Assessments were completed three times, to show the progress made in treatment (i.e., midpoint [Time 2], post-treatment [Time 3]) and to monitor maintenance and progress after treatment at a final 3-month follow-up session. Families were paid $20 for the completion of the pre-treatment assessment and $20 at the 3-month follow-up assessment. It is believed that this monetary compensation for completion of assessments assists in increasing participation. For the present study data were used from the pretreatment assessment (Time 1) and post-treatment assessment (Time 3). Mid-point assessment data (Time 2) were not used in the present study due to the completion of a fewer number of measures than the full battery that is completed at Time 1 and Time 3. Completion of treatment was defined as the completion of the post-treatment assessment session. Three sessions of Project SAFE Group Intervention were typically run each year (i.e., Fall semester, Spring semester, and Summer) with an average of 6 families participating in each session.

Setting. Data collection was conducted at two different settings. From 1996 to 2001, the Project SAFE Group Intervention treatment and data collection were held at the

Psychological Consultation Center (PCC), the training clinic for the Clinical Psychology Training Program at the University of Nebraska-Lincoln. The PCC provides a range of outpatient mental health services for adults, children, couples, and families. Since 2001, all assessments and groups have been held at the Child Advocacy Center. The child and parent groups were held separately in private rooms. All procedures were the same at both settings.

Informed consent and data collection. At the pre-treatment assessment, the project coordinator described the study and Project SAFE groups, and answered any questions. Parents were asked to provide informed consent for their own participation as well as for their children's participation in the Project SAFE Group Intervention and data collection (see Appendix C). All youth were also asked for their consent to participate (see Appendix D). All were given an opportunity to ask questions about the content of Informed Consent (e.g., videotaping or audio-recording of sessions) and to withdraw from the study at any time without penalty or disruption of treatment services. Children, adolescents, and parents who agreed to participate were then separated and each family member completed the assessment measures. A staff member was present to administer the measures, as well as read instructions, answered questions, and read items to participants when necessary.

After the pre-treatment assessment was completed, parents were encouraged to express any concerns or to ask questions about the measures completed or the study in general. The pre-treatment assessment process, which included obtaining the consent forms and completing the questionnaires, takes approximately 1 to 2 hours to complete. The midpoint, post-treatment, and 3-month follow-up assessment sessions are also of

comparable length with the re-administration of the majority of assessment measures. For the present study, data from the pre-treatment assessment and post-treatment assessment were used. At each data collection, all children and parents were supervised by graduate students who were available to answer questions and assist participants if needed. Confidentiality was ensured using code numbers that were assigned to each participant. Monetary compensations were made after all questions were answered at the end of the pre-treatment assessment.

Each participant of Project SAFE Group Intervention was also treated as a client at the Psychological Consultation Center (PCC). Each family member was assigned a client code and case number, which is consistent with the standard PCC protocol. Video or audiotapes of sessions were not labeled with client names or identifying information. All clinical data and tapes were stored in locked cabinets in the PCC and only Project SAFE staff had access to these materials. As standard PCC procedure, this information is stored on file for seven years after the termination of therapy.

Treatment Overview

Project SAFE Group Intervention is a standardized parallel group treatment for sexually abused youth, ages 7 to 16, and their non-offending parents or caregivers. Project SAFE was developed in 1996 and is offered through the Psychological Consultation Center, the training clinic for doctoral students in the Clinical Psychology Training Program (CPTP) at the University of Nebraska-Lincoln (UNL). Project SAFE is a free service offered to any child and family who meets the criteria for eligibility. To date, 34 rounds of Project SAFE groups have been conducted. Two hundred twelve families have been served, comprising 205 children and 217 caregivers. Preferred group

size for youth is between five and eight participants, with no less than three group members. Separate groups for children, adolescents, and caregivers are conducted simultaneously for 90-minute sessions over 12 consecutive weeks. While there are no formal age cutoffs for youth groups, the developmental level for each child is considered.

The Project SAFE treatment protocol was developed from a systematic review of the literature on treatment programs for sexually abused children and their nonoffending parents. The intervention was designed to address three critical areas impacted by sexual abuse: the individual or self (self-esteem, internalizing feelings); relationships (social interactions and externalizing problems with peers and family); and sex (sexual knowledge and abuse related issues; Futa et al., 1996; Hansen et al., 1998). The goals of Project SAFE follow from this model, and include reducing children's sense of stigmatization and isolation associated with the abuse, assisting children to explore and cope with their feelings about the abuse, and empowering children in preventing future victimization. By assisting parents in understanding and dealing with their child's behavior and feelings, the parallel parent group attempts to ensure generalization and maintenance of their child's in-session therapeutic gains. Further, the parent group offers support for parents and other caregivers in recognizing the impact of the abuse on them and their entire family.

Parallel topics are covered in the sessions for youth and parents, incorporating education and strategies to help ensure positive outcomes and to prevent future sexual abuse. While Project SAFE follows a standardized manual and has the same goals for both child and adolescent groups, session outlines differ slightly for each group in order to appropriately emphasize salient issues and accommodate the developmental needs of

participants. For example, dating-related issues are more pertinent for the adolescent group. Additionally, the children's group tends to offer more non-verbal activities (e.g., worksheets, role plays) than discussion-oriented activities used with the adolescent group. Procedures used in sessions are psychoeducational, skill building, problem-solving, and supportive.

Each child group begins with "Check in" when each child shares with the group how his/her week went and ends with a "Circle Time," when the children and therapist state one good thing each group member did during the session. The "Circle Time" activity, led by one of the co-therapists, promotes children's positive self-esteem, helps provide a positive transition time, helps end the session on a positive note, and allows the lead therapist to check-in and talk to the parent group. Each parent group begins with a brief discussion of the child's behaviors at home during the previous week and ends with the lead child therapist checking in with the group. This check-in with the parent group affords the opportunity to discuss how the children reacted to that week's session material, answer any questions posed by the parents, and discuss any concerns the parent may have about their child directly with the child therapist. This check-in period is also useful in providing parents reassurance about how their children are doing in treatment, allowing parents to be informed on material that will be shared in the upcoming session, and to address any related concerns.

The following treatment modules comprise the Project SAFE protocol:

Module 1: Welcome and orientation. The goals of Module 1 are to introduce the purpose and intent of group, to discuss issues of confidentiality, to establish group rules, and to promote rapport building and group cohesion (e.g., describe unique qualities about

themselves and the meaning of being a part of a group). Parents are given basic information about sexual abuse (e.g., prevalence, definition) and the importance of parental support in their children's treatment.

Module 2: Understanding and recognizing feelings. Module 2 focuses on helping the children to identify feelings in themselves and others; to encourage the expression of feelings; to examine possible causes and consequences of feelings; and to understand the range and the multi-dimensionality of feelings. Parents are encouraged to identify how they respond to feelings, learn more appropriate and effective ways to express emotions, and learn ways to help their children express their feelings. Furthermore, parents discuss how their children express their feelings through their behavior, and how at times, the behavior might not seem to match the feeling. Parents are also encouraged to generate and discuss adaptive coping skills (e.g., engage in relaxing activities, seek social support).

Module 3: Learning about our bodies. Module 3 includes learning correct information about developing bodies, sexual development, and gender differences; discussing issues related to dating and decisions about sex; increasing comfort with dialogue in the family about sex-related issues; and improving the children's self-image and correcting misperceptions about themselves as "damaged goods." The parent's group focuses on increasing the parents' ability and comfort in discussing sexuality and other sex-related issues with their children. In addition, a discussion is held about their children's body image at their stage of development and how sexual abuse may affect body image. Specific ways to enhance their children's body image and self-esteem are identified.

Module 4: Standing up for your rights. The purpose of Module 4 is to empower the children, to prevent future abuse by appropriately asserting themselves, to identify a plan (e.g., whom to call, what to do) if abuse does happen again, and to enhance support networks. In the parent group, a brief discussion of assertiveness is conducted to help parents distinguish among assertion, aggression, and defiance in their children. Additionally, prevention issues are discussed and parents generate ways to prevent future abuse of their children.

Module 5: My family. Module 5 is intended to identify the strengths within the family, to discuss the effects of disclosure on the family, to address special concerns when the offender is a family member or close family friend, and to discuss supportive family members and other sources of support. A main goal of this module is to reduce feelings of isolation through identification of family strengths and sources of social support. Additional topics in the parent group include identifying the effects of disclosure on the parents' behavior toward the child and siblings (e.g., overprotectiveness) and how the family (e.g., relationships) may have changed.

Module 6: Sharing my feelings about what happened - Part I. This module is conducted in two sessions, focused on reducing feelings of isolation and stigmatization about the abuse through disclosure to the group. Other topics include dealing with others' reactions to disclosure, identifying feelings related to the abuse and disclosure, and encouraging expression of these feelings. When disclosing their abuse, youth are given the option to complete a summary sheet (modified from deYoung & Corbin, 1994) with various responses about different aspects of the abuse (e.g., where the abuse took place, how they felt about the abuser before the abuse) that served as a nonthreatening,

structured way to disclose their abuse to others. Each group member decides whether to read his/her responses off the sheet or to share his/her story in his/her own way. Therapists focus on normalizing these feelings and addressing any faulty assumptions or cognitive distortions that the children expressed. The parents are informed that the children were discussing difficult material and that they might be upset after the session and even during the upcoming week. A discussion is conducted on possible "regression" (e.g., return of problematic behaviors) that may result from talking about the abuse, and parents discuss ways to problem-solve should this occur. Parents are reminded to be sensitive listeners and to encourage their children's expression of feelings regarding the abuse. They are also reminded about the importance of being supportive of their children and being available to talk with them about these difficult topics.

Module 7: Sharing my feelings about what happened - Part II. Module 7 is an extension of Module 6, focusing on the offender. The goals include educating the adolescents on why offenders offend, placing the responsibility and blame on the offender, and dealing with issues involved in the offender's relationship to the family. Children are asked to talk about their feelings about their own offender and how their feelings might have changed from before the abuse. Similarly, parents are asked to describe their own feelings about the offender and how their feelings might have changed from pre-abuse to post-abuse. Parents are given support and ideas about how to be sensitive to their children's feelings surrounding the abuse, and how to deal with their own strong reactions of anger or guilt.

Module 8: Understanding my feelings about what happened to me. Module 8 is designed to assist the children in understanding their feelings surrounding the abuse and

enhance their positive self-image. Feelings that are targeted include stigmatization, guilt, and shame surrounding the abuse. Effects of these feelings on behaviors are discussed. Children are encouraged to channel negative feelings into an appropriate outlet (e.g., be angry at the offender and not at themselves) and to identify positive peer relationships. Parents explore the extent to which they shared the same feelings as their children (e.g., guilt, shame, and anger) and are encouraged to remain sensitive to their children's feelings. The stages of grief within the context of CSA (i.e., shock/denial, anger, guilt/depression, bargaining, and acceptance) are also discussed.

Module 9: Coping with my feelings. Module 9 is conducted in two sessions and focused on reducing present feelings of anxiety and depression, exploring the relationship between mood and behavior, and identifying coping skills, such as problem-solving and relaxation training. Parents generate a list of coping techniques they found useful when they experience distress. Coping techniques include problem-focused coping (e.g., problem solving, finding more information), tension reduction and relaxation techniques (e.g., engaging in pleasurable activities, exercise), and using social support systems (e.g., friends, family, church, mental health professionals).

Module 10: Summary and goodbye. The goal of Module 10 is to provide a summary of the group experience and to discuss ways of maintaining gains and dealing with separation. Children review content and information from group in a game format. Parents also review the major themes of the group and are asked to focus on the changes they have seen in their children and themselves. If necessary, referrals for additional services are discussed with families. At the end of session, parents and children join

together for a party to celebrate how hard the members worked and to help provide closure for the session.

In a recent examination of child and family outcome and social validity for the Project Group Intervention, post-treatment improvements in child behavior and functioning were demonstrated, based on parent report (Hsu, 2003). Children reported less post-traumatic stress symptoms, less anxiety, less negative perceptions of social reactions, less maladaptive abuse attributions, and increased basic sexual knowledge after treatment. Treatment gains were maintained three months after completion of treatment. According to subjective evaluations by parents and children participants, treatment goals, procedures, and outcomes were shown to be relevant, acceptable, and helpful to the families. Additional research has also supported the effectiveness and social validity of the Project SAFE treatment program (e.g., Futa, 1998; Hecht, Futa, & Hansen, 1996; Hsu et al., 2001; Hsu, Sedlar, Flood, & Hansen, 2002).

Therapists

Each group was facilitated by a lead therapist and a co-therapist, who were doctoral students in the Clinical Psychology Training Program at the University of Nebraska-Lincoln. Therapists were trained in the treatment manual and protocols by watching or listening to prior group sessions, attending weekly group supervision with a licensed clinical psychologist, and serving as a co-therapist for at least one prior group. The lead therapist for each group was an advanced doctoral student who had received his/her Master's degree and had previously co-facilitated another Project SAFE group. While most child groups were facilitated by two female therapists, based on availability male co-therapists had also been used to run mixed gender groups. Therapists received

supervision on a weekly basis with a licensed clinical psychologist. In addition, sessions were audiotaped or videotaped for supervisory purposes and adherence to treatment. Based on analyses of treatment integrity using detailed session protocol checklists, Hsu (2003) found that treatment integrity was strong in all Project SAFE groups, ranging from 95.83% to 100% for the child groups and 89.6% to 100% for the parent groups.

Results

Child Demographic and Abuse Specific Information

At the pre-treatment assessment youth ranged in age from 7 to 15.7 years, with a mean age of 11.35 years (*SD* = 28.49). The sample included 73 (70.2%) school-aged children (ages 7-12) and 31 (29.8%) adolescents (ages 13-16). Eighty-four (80.8%) were females and twenty (19.2%) were males. The majority of the youth were White (79.8%), and the remainder were Bi-racial (6.7%), Black (5.8%), Multi-racial (3.8%), Hispanic American (2.9%), and Native American (1%). The mean age of onset of CSA for the total sample was 9.03 years (*SD* = 2.9, range = 2 – 15 years), and the average duration of abuse was 13.59 months (*SD* = 22.16, range = 0 – 132 months). The average time between the end of the sexual abuse and the pre-treatment assessment was 10.6 months (*SD* = 15.95, range 0 – 72 months). The average time between disclosure of CSA and the pre-treatment assessment was 5.83 months (*SD* = 10.03, range = 0 – 61 months). The average time between the end of abuse and disclosure of CSA was 4.58 months (*SD* = 12.87, range = 0 – 71 months).

The relationship to the perpetrator was categorized as intrafamilial and extrafamilial, for 62.5% and 37.5% of the youth, respectively. For the present study, intrafamilial abuse was defined as abuse perpetrated by a family member, who included

biological parent, step-parent, adoptive parent, foster parent, grand-parent, parent's boyfriend/girlfriend, or sibling. Extrafamilial abuse was defined as abuse perpetrated by a non-family member, who included an adult family friend, child family friend, babysitter, teacher/coach, other family friend, neighbor, stranger, peer, or other individual. Type of CSA was categorized as contact (e.g., penetration, digital, fondling) versus non-contact abuse (i.e., exposure and pornography) for 89.4% and 9.6% of youth, respectively. For 40.7% of cases, force was used, 35% no force was used, and for 24.3% of the cases it was unknown whether force had been used. Seventy-one (71%) of youth disclosed the abuse to someone, either spontaneously or after being asked directly due to suspicion, while the abuse was discovered by other means (e.g., evidence, perpetrator told) for 29% of youth. Specific demographic characteristics of the youth are presented in Table 1.

Table 1

Demographic and Abuse-specific Characteristics of Youth at Pre-treatment Assessment

Demographic	%	*M*	*SD*
Child Gender	80.8% Female		
	19.2% Male		
Child Ethnicity	79.8% White		
	6.7% Bi-racial		
	5.8% Black		
	3.8% Multi-racial		
	2.9% Hispanic American		
	1.0% Native American		
Child Age		11.35 years	28.49
Age of onset of CSA		9.03 years	2.90
Duration of CSA		13.59 months	22.16

Table 1 (continued)

Demographic	%	*M*	*SD*
Time between end of CSA and assessment		10.60 months	15.95
Time between disclosure and assessment		5.83 months	10.03
Time between end of CSA and disclosure		4.58 months	12.87
Relationship to Perpetrator	62.5% Intra-familial 37.5% Extra-familial		
Type of CSA	89.4% Contact abuse 9.6% Non-contact abuse		
Use of Force	40.7% No force used 35% Do not know if force was used 24.3% Force used		
Disclosure	71% Child disclosed 29% Other (e.g., perpetrator told, medical findings)		

Parent Demographic Information

Non-offending parents consisted of 93 (89.4%) biological mothers and 11 (10.6%) biological fathers. The mean age for parents was 36.36 years (*SD* = 6.52, range = 23 – 60 years). The vast majority identified themselves as White (88.5%), and the remainder were Bi-racial (4.8%), Black (2.9%), Hispanic American (2.9%), and Multi-racial (1%). Most parents were married (41.2%), while the remainder were divorced (34.3%), separated (13.7%), had never been married but living with someone (6.9%), and never married and not living with someone (3.9%). Regarding educational achievement, 45.6% had completed some college or higher education, 44.6% had attended high school,

and 9.9% had completed junior high school or less. The majority (70.2%) of parents were employed. Family income varied considerably from 32% with an income $15,000 or less, 14% reporting an income of $15,001 to $25,000, 26% with an income of $25,001 to $40,000, 15% with an income of $40,001 to $60,000, 10% with an income of $60,001 to $100,000, and 3% reporting an income above $100,000. For the total sample, the mean number of children in the home was 3.61 (*SD* = 1.87, range = 1 - 9 children). Specific demographic characteristics of the sample of non-offending parents are presented in Table 2.

Table 2

Demographic Characteristics of Non-offending Parents at Pre-treatment Assessment

Demographic	%	*M*	*SD*
Parent Gender	89.4% Female 10.6% Male		
Parent Ethnicity	88.5% White 4.8% Bi-racial 2.9% Black 2.9% Hispanic American 1% Multi-racial		
Marital Status	41.2% Married 34.3% Divorced 13.7% Separated 6.9% Never married but living with someone 3.9% Never married, not living with someone		
Parent Age		36.36 years	6.52
Employment status	70.2% Employed 29.8% Unemployed		

Table 2 (continued)

Demographic	%	*M*	*SD*
Family Income	32% < $15,000		
	14% $15,001 - $25,000		
	26% $25,001 - $40,000		
	15% $40,001 - $60,000		
	10% $60,001 - $100,000		
	3% > $100,001		
Parent Educational Achievement	1% Elementary		
	8.9% Junior high school		
	44.6% High-school		
	22.8% Some college		
	9.9% Associates		
	11.9% Bachelors		
	1.0% Masters		
Number of children in the home		3.61	1.87

Research Aims

The following sections present the results of the present study organized according to the proposed research objectives. The first aim related to identification, description, and examination of the psychological and support characteristics of the non-offending parents presenting for treatment and their relationship to parent demographic variables and parent trauma history. The second aim involved an examination of symptomatology of child emotional and behavioral symptoms as they presented to treatment and how these clinical profiles related to parent demographics, parent trauma history, and psychological and support characteristics. To explore the within-group variation and identify the clinical profiles, hierarchical cluster analyses were performed on the data. Further, linear discriminant analyses were performed in order to identify

significant differences and similarities among the cluster profiles for youth based on parent demographics, parent psychological symptoms, and support needs.

The third aim involved an examination of the change in parent psychological symptoms and support needs over the course of treatment. Dependent *t*-tests were conducted to compare parents on their pre- and post-treatment scores of psychological symptoms and support needs. Multiple regression analyses were performed in order to identify variables that contributed to these changes in scores on measures of parent psychological symptoms and support needs. Hierarchical cluster analyses were performed pre- and post-treatment scores on measures of child emotional and behavioral symptoms. The relationships between the cluster profiles of youth and parent psychological symptoms and support characteristics over the course of treatment were then examined. The final aim involved an examination of parent participation in treatment and its relationship to parent demographic variables, parent trauma history, psychological symptoms, and support needs. Further, the relationship between treatment completion and child demographic variables, abuse characteristics, and child emotional and behavioral symptoms was also examined. Prior to conducting the main objectives of this study, all data were examined to explore data entry errors and standard methods of outlier detection were employed.

Specific Aim #1a: Identification of psychological symptoms and support needs of parents

Non-offending parents were assessed using scores from the following measures: the Global Severity Index (GSI) score from the SCL-90-R; total scores from the PEQ, PES, PSAES, and F-COPES; the Sense of Competence and Restriction of Role subscales from the PSI; the Adaptability Now and Cohesion Now subscales from the FACES-III;

and each of the 5 scale scores from the CTQ (i.e., Emotional Abuse, Physical Abuse, Sexual Abuse, Emotional Neglect, and Physical Neglect). For the total sample of 104 non-offending parents, the mean score on the CTQ Sexual Abuse scale was elevated within the moderate to severe range. All other measures did not meet clinical significance, based on criteria of the individual measures included. Means and standard deviations of all measures for the total sample are provided in Table 3. As the sample distributions for the CTQ Emotional Abuse and Emotional Neglect scale scores were both positively skewed, data cleaning was performed (i.e., base-10 log, and square root, respectively) and skewness was corrected.

Table 3

Means and Standard Deviations of Pre-treatment Measures of Parent Psychological Symptoms and Support Needs

Measure	*M*	*SD*
SCL-90-R GSI	45.54	11.81
PEQ – Total	16.81	4.22
PSI – Sense of Competence	32.51	6.53
PSI – Restriction of Role	19.52	5.76
F-COPES Total	101.52	14.50
FACES-III Adaptability Now	24.64	4.75
FACES-III Cohesion Now	36.30	6.90
PES Total	75.01	21.78
PSAES Total	19.26	7.28
CTQ Emotional Abuse Scale	11.29	5.00

Table 3 (continued)

Measure	*M*	*SD*
CTQ Physical Abuse Scale[1]	0.90	0.20
CTQ Sexual Abuse Scale	10.98*	7.12
CTQ Emotional Neglect Scale	11.42	5.17
CTQ Physical Neglect Scale[1]	2.82	0.62

* Mean scale score within moderate to severe range
[1] Scores used had undergone data cleaning.

Specific Aim #1b: Relationship between parent demographic characteristics, parent trauma history, and psychological symptoms and support needs at pre-treatment assessment

Parent demographic characteristics (i.e., age, gender, marital status, ethnicity, family income, number of children in the home, level of educational achievement, and employment status; shown in Table 2) were examined in relation to parent trauma history (i.e., scale scores of the CTQ) and their psychological and support characteristics. Chi-squares, Pearson product moment correlations, and one-way ANOVAs were performed (Tables 4, 5, and 6, respectively). Although several significant relationships were demonstrated across chi-square analyses of parent demographic characteristics and parent measures of psychological symptoms and support needs, these relationships are noted with caution given that for all analyses more than 15% of the cells had expected frequencies of less than 5. Across the sample, there was a significant relationship between gender of the parent and family income, $X^2(5) = 20.98$, $p < .01$. Follow-up

analyses demonstrated that mothers were more likely to report a family income of less than $15,000 compared to fathers. Those who reported a family income of $60,001-$100,000 were equally likely to be female or male. A significant relationship was demonstrated between gender of the parent and educational achievement, $X^2(6) = 17.15$, $p < .01$. Specifically, those who had an elementary school education were more likely to be male rather than female. Parents who had attained a junior high school education, high school education, some college education, or an Associates degree, were more likely to be female than male. Regarding the relationship between gender of the parent and employment status, $X^2(1) = 5.22$, $p < .05$, parents who were unemployed were more likely to be female than male.

Across marital status of the parent and family income, $X^2(20) = 37.98$, $p < .01$, several significant relationships were noted. Those who reported a family income of less than $15,000 were more likely to be divorced, separated, never married but living with someone, or never married, and not living with someone, rather than married. A significant relationship was demonstrated between marital status and employment status, $X^2(4) = 11.82$, $p < .05$. Follow-up analyses showed that parents who were employed were more likely to be married rather than divorced, whereas those who were unemployed were more likely to be divorced rather than married. Regarding ethnicity of parent and employment status, a significant relationship was noted, $X^2(4) = 13.80$, $p < .01$. Follow-up analyses showed that parents who were White were more likely to be employed, whereas those who were Bi-racial were more likely to be unemployed.

A significant relationship was noted between family income and educational achievement, $X^2(30) = 52.68$, $p < .01$. Follow-up analyses demonstrated several

significant relationships, with higher family income being associated with a higher level of educational achievement. A significant relationship was found between family income and employment status, $X^2(5) = 42.36$, $p < .01$, with parents who were employed being more likely to have a higher family income compared to those who were unemployed. Finally, a significant relationship was found between educational achievement and employment status, $X^2(6) = 14.10$, $p < .05$, with parents who reported a higher level of educational achievement being more likely to be employed than unemployed.

Table 4

Pearson's Chi-square Test of Independence across Parent Demographic Variables at Pre-treatment Assessment

Variables	Test of Significance (X^2)
Gender- Marital status	$X^2(4) = 2.02$
Gender – Ethnicity	$X^2(4) = 1.60$
Gender – Income	$X^2(5) = 20.98$**
Gender - Educational achievement	$X^2(6) = 17.15$**
Gender – Employment status	$X^2(1) = 5.22$*
Marital status – Ethnicity	$X^2(16) = 23.45$
Marital status – Income	$X^2(20) = 37.98$**
Marital status – Educational achievement	$X^2(24) = 27.25$
Marital status – Employment status	$X^2(4) = 11.82$*
Ethnicity – Income	$X^2(20) = 15.39$
Ethnicity – Educational achievement	$X^2(24) = 21.54$
Ethnicity – Employment status	$X^2(4) = 13.80$**

Table 4 (continued)

Variables	Test of Significance (X^2)
Income – Educational achievement	$X^2(30) = 52.68$**
Income – Employment status	$X^2(5) = 42.36$**
Educational achievement – Employment status	$X^2(6) = 14.10$*

* $p < .05$. ** $p < .01$

Several significant Pearson product-moment correlations were noted between parent demographic variables, trauma history, and psychological symptoms and support needs (Table 5). Specifically, parents who were older in age tended to have lower scores on the SCL-90-R GSI, CTQ Emotional Abuse scale, and the CTQ Physical Abuse scale.

Table 5

Pearson Product-Moment Correlations between Parent Demographic Characteristics, Trauma history, and Pre-treatment Psychological and Support Characteristics

	Parent Demographic Characteristics	
Measures	Age	Number of Children
SCL-90-R GSI	-0.22*	-0.15
PEQ Total	-0.15	0.04
PSI – Sense of Competence	-0.01	-0.07
PSI – Restriction of Role	-0.04	-0.06
F-COPES Total	0.05	0.05
FACES-III – Adaptability Now	0.04	-0.01
FACES-III – Cohesion Now	-0.11	0.05
PES Total	-0.02	-0.04
PSAES Total	-0.07	0.07

Table 5 (continued)

Measures	Parent Demographic Characteristics	
	Age	Number of Children
CTQ – Emotional Abuse	-0.41**	0.12
CTQ – Physical Abuse[1]	-0.25*	0.08
CTQ – Sexual Abuse	-0.05	-0.07
CTQ – Emotional Neglect	-0.10	0.03
CTQ – Physical Neglect[1]	0.04	-0.12

* $p < .05$. ** $p < .01$.
[1] Scores used had undergone data cleaning.

A series of one-way ANOVAs between parent demographics and psychological symptoms and support needs demonstrated several significant relationships (Table 6). For age and gender of the parent, $F(1,102) = 10.04$, $p < .01$, fathers were significantly older in age than mothers. For family income and age of parent, $F(5,94) = 6.60$, $p < .01$, family income tended to be higher for those who were older in age. Regarding age of parent and employment status, $F(1,102) = 10.69$, $p < .01$, parents who were employed were significantly older in age compared to those who were unemployed. A significant relationship was noted between the number of children in the home and parent marital status, $F(4,96) = 6.68$, $p < .01$, with parents who were married having significantly more children in the home compared to all other groups of marital status.

Regarding marital status and SCL-90-R GSI scores, $F(4,96) = 2.90$, $p < .05$, parents who were never married, either living with someone or not living with someone, or separated, had significantly higher scores compared to those who were married. Regarding family income and SCL-90-R GSI scores, $F(5,93) = 3.06$, $p < .05$, parents who

reported a family income of less than $15,000 had significantly higher scores compared to those with a family income of $60,001-$100,000. Parents with a family income of $15,001-$25,000 also had significantly higher SCL-90-R GSI scores than those with a family income of $60,001-$100,000. A significant relationship was noted between SCL-90-R GSI scores and employment status, $F(1,101) = 19.65$, $p < .01$, with parents who reported being unemployed having significantly higher GSI scores than those who were employed. A significant relationship was noted between CTQ Emotional Abuse scale scores and parent ethnicity, $F(4,60) = 2.62$, $p < .05$. Follow-up analyses revealed that parents who were Hispanic-American had significantly higher CTQ Emotional Abuse scale scores compared to those who were White or Black. Regarding CTQ Emotional Abuse scale scores and family income, a significant relationship was noted, $F(5,58) = 2.59$, $p < .05$, with those with a family income of less than $15,000 having significantly higher scores compared to those with a family income of $15,001-$25,000 or $40,001-$60,000. A significant relationship was noted between CTQ Emotional Abuse scale scores and employment status, $F(1,63) = 7.80$, $p < .01$, with significantly higher scores for those who were unemployed than those who were employed.

Regarding the relationship between CTQ Physical Abuse scale scores and employment status, $F(1,63) = 4.55$, $p < .05$, parents who were unemployed were more likely to have higher scores than those who were employed. Regarding the relationship between CTQ Sexual Abuse scale scores and parent ethnicity, $F(4,60) = 2.55$, $p < .05$, scores were significantly higher for Hispanic-American parents compared to those who were White or Black. A significant relationship was noted between CTQ Emotional Neglect scale scores and parent marital status, $F(4,59) = 2.83$, $p < .05$, with significantly

higher scores for those who were separated compared to all other marital groups. Finally, a significant relationship was noted between CTQ Physical Neglect scale scores and employment status, $F(1,63) = 6.51$, $p < .05$, with significantly higher scores for parents who were unemployed compared to those who were employed.

Table 6

One-way ANOVAs between Parent Demographic Variables, Trauma history, and Pre-treatment Psychological and Support Characteristics

Measures	Test of Significance (*F*)
Age – Marital status	$F(4,97) = 2.30$
Age – Ethnicity	$F(4,99) = 0.69$
Age – Gender	$F(1,102) = 10.04$**
Age – Income	$F(5,94) = 6.60$**
Age – Educational achievement	$F(6,94) = 1.38$
Age – Employment status	$F(1,102) = 10.69$**
Number of children – Marital status	$F(4,96) = 6.68$**
Number of children – Gender	$F(1,101) = 0.40$
Number of children – Ethnicity	$F(4,98) = 1.08$
Number of children – Income	$F(5,94) = 1.46$
Number of children – Educational achievement	$F(6,94) = 1.23$
Number of children – Employment status	$F(1,101) = 0.21$
SCL-90-R GSI – Marital status	$F(4,96) = 2.90$*
SCL-90-R GSI – Gender	$F(1,101) = 1.00$
SCL-90-R GSI – Ethnicity	$F(4,98) = 1.30$

Table 6 (continued)

Measures	Test of Significance (*F*)
SCL-90-R GSI – Income	$F(5,93) = 3.06$*
SCL-90-R GSI – Educational achievement	$F(6,94) = 0.84$
SCL-90-R GSI – Employment status	$F(1,101) = 19.65$**
PEQ Total – Marital status	$F(4,96) = 0.08$
PEQ Total – Gender	$F(1,101) = 0.01$
PEQ Total – Ethnicity	$F(4,98) = 0.93$
PEQ Total – Income	$F(5,93) = 0.51$
PEQ Total – Educational achievement	$F(6,93) = 0.64$
PEQ Total – Employment status	$F(1,101) = 0.16$
PSI - Sense of Competence – Marital status	$F(4,94) = 0.34$
PSI – Sense of Competence – Gender	$F(1,99) = 0.16$
PSI – Sense of Competence – Ethnicity	$F(4,96) = 0.47$
PSI – Sense of Competence – Income	$F(5,91) = 1.61$
PSI – Sense of Competence – Educational achievement	$F(6,91) = 1.24$
PSI – Sense of Competence – Employment status	$F(1,99) = 2.90$
PSI – Restriction of Role – Marital status	$F(4,96) = 1.03$
PSI – Restriction of Role – Gender	$F(1,101) = 0.78$
PSI – Restriction of Role – Ethnicity	$F(4,98) = 1.15$
PSI – Restriction of Role – Income	$F(5,93) = 1.04$
PSI – Restriction of Role – Educational achievement	$F(6,93) = 2.01$
PSI – Restriction of Role – Employment status	$F(1,101) = 3.11$

Table 6 (continued)

Measures	Test of Significance (*F*)
F-COPES Total – Marital status	$F(4,97) = 0.29$
F-COPES Total – Gender	$F(1,102) = 0.08$
F-COPES Total – Ethnicity	$F(4,99) = 2.37$
F-COPES Total – Income	$F(5,94) = 1.75$
F-COPES Total – Educational achievement	$F(6,94) = 1.60$
F-COPES Total – Employment status	$F(1,102) = 2.69$
FACES-III – Adaptability Now – Marital status	$F(4,97) = 0.78$
FACES-III – Adaptability Now – Gender	$F(1,102) = 0.77$
FACES-III – Adaptability Now – Ethnicity	$F(4,99) = 1.41$
FACES-III – Adaptability Now – Income	$F(5,94) = 0.75$
FACES-III – Adaptability Now – Educational Achievement	$F(6,94) = 0.90$
FACES-III – Adaptability Now – Employment status	$F(1,102) = 0.03$
FACES-III – Cohesion Now – Marital status	$F(4,97) = 0.57$
FACES-III – Cohesion Now – Gender	$F(1,102) = 1.72$
FACES-III – Cohesion Now – Ethnicity	$F(4,99) = 1.42$
FACES-III – Cohesion Now – Income	$F(5,94) = 1.73$
FACES-III – Cohesion Now – Educational achievement	$F(6,94) = 0.71$
FACES-III – Cohesion Now – Employment status	$F(1,102) = 0.01$
PES Total – Marital status	$F(4,82) = 0.63$
PES Total – Gender	$F(1,87) = 3.24$

Table 6 (continued)

Measures	Test of Significance (*F*)
PES Total – Ethnicity	$F(4,84) = 0.70$
PES Total – Income	$F(5,80) = 0.32$
PES Total – Educational achievement	$F(6,79) = 0.33$
PES Total – Employment status	$F(1,87) = 0.00$
PSAES Total – Marital status	$F(4,81) = 1.10$
PSAES Total – Gender	$F(1,86) = 0.01$
PSAES Total – Ethnicity	$F(4,83) = 0.10$
PSAES Total – Income	$F(5,79) = 0.59$
PSAES Total – Educational achievement	$F(6,78) = 0.54$
PSAES Total – Employment status	$F(1,86) = 0.00$
CTQ Emotional Abuse – Marital status	$F(4,59) = 1.97$
CTQ Emotional Abuse – Gender	$F(1,63) = 2.64$
CTQ Emotional Abuse – Ethnicity	$F(4,60) = 2.62^{*}$
CTQ Emotional Abuse – Income	$F(5,58) = 2.59^{*}$
CTQ Emotional Abuse – Educational achievement	$F(6,56) = 2.09$
CTQ Emotional Abuse – Employment status	$F(1,63) = 7.80^{**}$
CTQ Physical Abuse[1] – Marital status	$F(4,59) = 1.99$
CTQ Physical Abuse[1] – Gender	$F(1,63) = 1.33$
CTQ Physical Abuse[1] – Ethnicity	$F(4,60) = 2.02$
CTQ Physical Abuse[1] – Income	$F(5,58) = 2.07$
CTQ Physical Abuse[1] – Educational achievement	$F(6,56) = 2.25$

Table 6 (continued)

Measures	Test of Significance (*F*)
CTQ Physical Abuse[1] – Employment status	$F(1,63) = 4.55$*
CTQ Sexual Abuse – Marital status	$F(4,59) = 0.76$
CTQ Sexual Abuse – Gender	$F(1,63) = 1.67$
CTQ Sexual Abuse – Ethnicity	$F(4,60) = 2.55$*
CTQ Sexual Abuse – Income	$F(5,58) = 1.05$
CTQ Sexual Abuse – Educational achievement	$F(6,56) = 0.73$
CTQ Sexual Abuse – Employment status	$F(1,63) = 0.46$
CTQ Emotional Neglect – Marital status	$F(4,59) = 2.83$*
CTQ Emotional Neglect – Gender	$F(1,63) = 0.14$
CTQ Emotional Neglect – Ethnicity	$F(4,60) = 1.75$
CTQ Emotional Neglect – Income	$F(5,58) = 0.69$
CTQ Emotional Neglect – Educational achievement	$F(6,56) = 0.98$
CTQ Emotional Neglect – Employment status	$F(1,63) = 1.88$
CTQ Physical Neglect[1] – Marital status	$F(4,59) = 0.18$
CTQ Physical Neglect[1] – Gender	$F(1,63) = 1.39$
CTQ Physical Neglect[1] – Ethnicity	$F(4,60) = 0.93$
CTQ Physical Neglect[1] – Income	$F(5,58) = 1.04$
CTQ Physical Neglect[1] – Educational achievement	$F(6,56) = 1.18$
CTQ Physical Neglect[1] – Employment status	$F(1,63) = 6.51$*

* $p < .05$. ** $p < .01$.
[1] Scores used had undergone data cleaning.

Specific Aim #1c: Relationship between child demographic and abuse characteristics and parent psychological symptoms and support needs

Child demographic variables (i.e., age, gender, and ethnicity) and abuse-specific characteristics (i.e., age of onset of CSA, duration of abuse, type of abuse, relationship to perpetrator, disclosure, time between end of CSA and assessment, time between disclosure and assessment, time between end of CSA and disclosure, and use of force) were examined in relation to parent psychological and support characteristics. An examination of child demographic and abuse characteristics and parent psychological symptoms and support needs demonstrated several significant relationships across chi-squares, Pearson product-moment correlations, and one-way ANOVAs, as shown in Tables 7, 8, 9, and 10. Chi-square analyses (Table 7) revealed a significant relationship between gender of youth and disclosure, $X^2(1) = 5.36$, $p < .05$, such that female victims were more likely to disclose the abuse compared to male victims, who were equally likely to either disclose the abuse or not disclose the abuse. Further, all youth were more likely to disclose the abuse regardless of use of force, $X^2(2) = 6.23$, $p < .05$.

Table 7

Chi-square Test of Independence across Child Demographic and Abuse-Specific Variables at Pre-treatment Assessment

Variables	Test of Significance (X^2)
Gender – Ethnicity	$X^2(5) = 5.21$
Gender – Type of CSA	$X^2(1) = 3.42$
Gender – Relationship to Perpetrator	$X^2(1) = 3.24$
Gender - Disclosure	$X^2(1) = 5.36$*

Table 7 (continued)

Variables	Test of Significance (X^2)
Gender – Use of force	$X^2(2) = 2.57$
Ethnicity – Type of CSA	$X^2(5) = 4.03$
Ethnicity – Relationship to Perpetrator	$X^2(5) = 4.45$
Ethnicity – Disclosure	$X^2(5) = 2.65$
Ethnicity – Use of force	$X^2(10) = 12.20$
Type of CSA – Relationship to Perpetrator	$X^2(1) = 2.31$
Type of CSA – Disclosure	$X^2(1) = 0.38$
Type of CSA – Use of force	$X^2(2) = 1.01$
Relationship to Perpetrator – Disclosure	$X^2(1) = 0.02$
Relationship to Perpetrator – Use of force	$X^2(2) = 0.48$
Disclosure – Use of force	$X^2(2) = 6.23$*

* $p < .05$.

Several significant Pearson product-moment correlations were noted across child demographic characteristics and abuse-specific variables (Table 8). Victims who were older in age tended to have a later age of onset of CSA, $r = 0.56$, $p < .01$. Duration of CSA tended to be greater for children who were older in age at the time of the assessment, $r = 0.25$, $p < .05$. Time between CSA and T1 assessment tended to increase with age of the victim, $r = 0.21$, $p < .05$. A negative relationship was noted between duration of CSA and age of onset of CSA, $r = -0.47$, $p < .01$. Both the time between CSA and the T1 assessment and time between CSA and disclosure tended to decrease with a later age of onset of CSA, $r = -0.35$, $p < .01$ and $r = -0.31$, $p < .01$, respectively. Further,

greater time between CSA and T1 was associated with greater time between disclosure and T1, as well as with greater time between CSA and disclosure, $r = 0.59$, $p < .01$ and $r = 0.77$, $p < .01$, respectively.

Table 8

Pearson Product-Moment Correlations between Child Demographic and Abuse-specific Variables

Child Variables	Test of Significance (*r*)
Age – Age of onset of CSA	0.56**
Age – Duration of CSA	0.25*
Age – Time between abuse & T1	0.21*
Age – Time between disclosure & T1	0.09
Age – Time between abuse & disclosure	0.19
Age of onset of CSA – Duration of CSA	-0.47**
Age of onset of CSA – Time between abuse & T1	-0.35**
Age of onset of CSA – Time between disclosure & T1	-0.15
Age of onset of CSA – Time between abuse & disclosure	-0.31**
Duration of CSA – Time between abuse & T1	0.06
Duration of CSA – Time between disclosure & T1	-0.05
Duration of CSA – Time between abuse & disclosure	0.11
Time between abuse & T1 – Time between disclosure & T1	0.59**
Time between abuse & T1 – Time between abuse & disclosure	0.77**

Table 8 (continued)

Child Variables	Test of Significance (*r*)
Time between disclosure & T1 – Time between abuse & disclosure	-0.06

* $p < .05$. ** $p < .01$.

Several significant Pearson product-moment correlations between child demographic and abuse-specific variables and parent measures of psychological symptoms and support needs were also noted (Table 9). Parents of older children were associated with higher scores on the PSAES, $r = 0.20$, $p < .05$. Greater duration of CSA was associated with higher total scores on the F-COPES, $r = 0.21$, $p < .05$. Greater time between disclosure of CSA and T1 was associated with lower PSAES scores, $r = -0.30$, $p < .01$. Finally, greater time between CSA and T1 was associated with lower FACES-III Adaptability Now scores, $r = -0.21$, $p < .05$, and PSAES total scores, $r = -0.27$, $p < .05$.

Table 9

Pearson Product-Moment Correlations between Child Demographic and Abuse-specific Variables and Parent Pre-treatment Psychological and Support Characteristics

	Child Demographic and Abuse-specific Variables					
Parent Measures	Age	Age of onset	Duration of CSA	Time Abuse & Disclosure	Time Disclosure & T1	Time Abuse & T1
SCL-90-R GSI	-0.18	-0.18	0.01	-0.16	0.11	-0.06
PEQ Total	-0.05	-0.10	0.08	0.12	0.04	0.13
PSI – Sense of Competence	-0.01	0.08	-0.12	-0.14	0.07	-0.08
PSI – Restriction of Role	-0.07	0.00	-0.02	-0.13	-0.12	-0.19

Table 9 (continued)

Parent Measures	Child Demographic and Abuse-specific Variables					
	Age	Age of onset	Duration of CSA	Time Abuse & Disclosure	Time Disclosure & T1	Time Abuse & T1
F-COPES Total	0.03	-0.14	0.21*	.09	0.13	0.15
FACES-III Adaptability Now	0.04	0.14	-0.07	-0.13	-0.15	-0.21*
FACES-III Cohesion Now	-0.17	-0.09	0.08	-0.08	-0.02	-0.08
PES Total	-0.12	-0.06	-0.16	0.10	-0.13	0.01
PSAES Total	0.20*	0.22	0.04	-0.08	-0.30**	-0.27*
CTQ Emotional Abuse	-0.06	-0.13	-0.02	-0.02	0.11	0.02
CTQ Physical Abuse[1]	-0.01	-0.13	0.10	0.01	0.13	0.07
CTQ Sexual Abuse	0.06	-0.04	-0.08	0.25	0.01	0.24
CTQ Emotional Neglect	0.13	-0.01	0.09	-0.01	0.03	0.00
CTQ Physical Neglect[1]	0.09	0.04	0.03	0.02	0.00	0.02

* $p < .05$. ** $p < .01$.
[1] Scores used had undergone data cleaning.

A series of one-way ANOVAs was conducted across child demographic and abuse-specific characteristics and parent measures of psychological symptoms and support needs and demonstrated several significant relationships (Table 10). Regarding child ethnicity, time between disclosure of CSA and T1 was significantly greater for children who were Bi-racial, Multi-racial, or Native-American, compared to those who were Black, White, or Hispanic-American, $F(5,94) = 3.62$, $p < .01$. A significant

relationship was found between child ethnicity and the F-COPES score, $F(5,98) = 3.93$, $p < .01$. Follow-up analyses demonstrated that parents of children who were White had significantly higher F-COPES scores compared to those who were Hispanic-American. Further, parents of children who were Hispanic-American had significantly lower F-COPES scores compared to children of all other ethnic groups. A significant relationship between child ethnicity and parent FACES-III Cohesion Now subscale scores was also found, $F(5,98) = 3.91$, $p < .01$. Follow-up analyses demonstrated that parents of children who were Hispanic-American had significantly lower F-COPES scores compared to children of all other ethnic groups. A significant relationship between child ethnicity and parent CTQ Emotional Abuse scale scores, $F(5,59) = 3.18$, $p < .05$ was found. Follow-up analyses showed that parents of children who were Hispanic-American had significantly higher CTQ Emotional Abuse scale scores compared to children of all other ethnic groups. Further, parents of children who were Bi-racial had significantly higher CTQ Emotional Abuse scale scores compared to those who were Black, White, Native-American, or Multi-racial.

A significant relationship was noted between child ethnicity and CTQ Sexual Abuse scale scores, $F(5,59) = 3.18$, $p < .05$. Follow-up analyses demonstrated several significant relationships; including parents of children who were Multi-racial had significantly higher CTQ Sexual Abuse scale scores compared to those who were Black, White, or Native-American. Regarding relationship to the perpetrator and duration of CSA, $F(1,97) = 18.10$, $p < .01$, the duration of CSA was significantly greater for children who were sexually abused by a family member compared to those abused by a non-family member. Finally, a significant relationship was noted between relationship to the

perpetrator and PSI-Restriction of Role, $F(1,101) = 4.26$, $p < .05$, with parents of children sexually abused a non-family member having significantly higher PSI-Restriction of Role subscale scores compared to those abused by a family member.

Table 10

One-way ANOVAs between Child Demographic and Abuse-specific Variables and Parent Pre-treatment Psychological and Support Characteristics

Variables	Test of Significance (*F*)
Gender – Age	$F(1,102) = 2.50$
Gender – Age of onset of CSA	$F(1,96) = 1.55$
Gender – Duration of CSA	$F(1,97) = 0.03$
Gender – Time between abuse & T1	$F(1,94) = 0.34$
Gender – Time between disclosure & T1	$F(1,98) = 0.94$
Gender – Time between abuse & disclosure	$F(1,94) = 0.05$
Gender – SCL-90-R GSI	$F(1,101) = 0.00$
Gender – PEQ Total	$F(1,101) = 0.01$
Gender- PSI-Sense of Competence	$F(1,99) = 1.13$
Gender – PSI-Restriction of Role	$F(1,101) = 0.02$
Gender – F-COPES Total	$F(1,102) = 0.02$
Gender – FACES-III Adaptability Now	$F(1,102) = 3.42$
Gender – FACES-III Cohesion Now	$F(1,102) = 0.03$
Gender – PES Total	$F(1,87) = 1.37$
Gender – PSAES Total	$F(1,86) = 0.02$
Gender – CTQ Emotional Abuse	$F(1,63) = 2.41$

Table 10 (continued)

Variables	Test of Significance (*F*)
Gender – CTQ Physical Abuse[1]	$F(1,63) = 0.03$
Gender – CTQ Sexual Abuse	$F(1,63) = 0.00$
Gender – CTQ Emotional Neglect	$F(1,63) = 0.03$
Gender – CTQ Physical Neglect[1]	$F(1,63) = 0.65$
Ethnicity – Age	$F(5,98) = 0.87$
Ethnicity – Age of onset of CSA	$F(5,92) = 0.92$
Ethnicity – Duration of CSA	$F(5,93) = 0.87$
Ethnicity – Time between abuse & T1	$F(5,90) = 2.18$
Ethnicity – Time between disclosure & T1	$F(5,94) = 3.62$**
Ethnicity – Time between abuse & disclosure	$F(5,90) = 0.28$
Ethnicity – SCL-90-R GSI	$F(4,98) = 1.50$
Ethnicity – PEQ Total	$F(5,97) = 1.77$
Ethnicity – PSI-Sense of Competence	$F(5,95) = 0.36$
Ethnicity – PSI-Restriction of Role	$F(5,97) = 1.51$
Ethnicity – F-COPES Total	$F(5,98) = 3.93$**
Ethnicity – FACES-III Adaptability Now	$F(5,98) = 0.60$
Ethnicity – FACES-III Cohesion Now	$F(5,98) = 3.91$**
Ethnicity – PES Total	$F(5,83) = 0.58$
Ethnicity – PSAES Total	$F(5,82) = 1.36$
Ethnicity – CTQ Emotional Abuse	$F(5,59) = 2.42$*
Ethnicity – CTQ Physical Abuse[1]	$F(5,59) = 1.19$

Table 10 (continued)

Variables	Test of Significance (*F*)
Ethnicity – CTQ Sexual Abuse	$F(5,59) = 3.18$*
Ethnicity – CTQ Emotional Neglect	$F(5,59) = 2.18$
Ethnicity – CTQ Physical Neglect[1]	$F(5,59) = 0.68$
Type of CSA – Age	$F(1,101) = 0.60$
Type of CSA – Age of onset of CSA	$F(1,96) = 0.07$
Type of CSA – Duration of CSA	$F(1,97) = 1.32$
Type of CSA – Time between abuse & T1	$F(1,94) = 1.64$
Type of CSA – Time between disclosure & T1	$F(1,97) = 0.82$
Type of CSA – Time between abuse & disclosure	$F(1,94) = 0.84$
Type of CSA – SCL-90-R GSI	$F(1,100) = 1.11$
Type of CSA – PEQ Total	$F(1,100) = 1.01$
Type of CSA – PSI-Sense of Competence	$F(1,98) = 0.83$
Type of CSA – PSI-Restriction of Role	$F(1,100) = 0.00$
Type of CSA – F-COPES Total	$F(1,101) = 0.85$
Type of CSA – FACES-III Adaptability Now	$F(1,101) = 0.01$
Type of CSA – FACES-III Cohesion Now	$F(1,101) = 1.29$
Type of CSA – PES Total	$F(1,86) = 0.97$
Type of CSA – PSAES Total	$F(1,85) = 0.14$
Type of CSA – CTQ Emotional Abuse	$F(1,63) = 3.54$
Type of CSA – CTQ Physical Abuse[1]	$F(1,63) = 0.00$

Table 10 (continued)

Variables	Test of Significance (*F*)
Type of CSA – CTQ Sexual Abuse	$F(1,63) = 0.25$
Type of CSA – CTQ Emotional Neglect	$F(1,63) = 3.62$
Type of CSA – CTQ Physical Neglect[1]	$F(1,63) = 0.59$
Relationship to perpetrator – Age	$F(1,102) = 0.98$
Relationship to perpetrator – Age of onset	$F(1,96) = 2.71$
Relationship to perpetrator – Duration of CSA	$F(1,97) = 18.10$**
Relationship to perpetrator – Time between abuse & T1	$F(1,94) = 0.39$
Relationship to perpetrator – Time between disclosure & T1	$F(1,98) = 0.18$
Relationship to perpetrator – Time between abuse & disclosure	$F(1,94) = 0.32$
Relationship to perpetrator – SCL-90-R GSI	$F(1,101) = 0.02$
Relationship to perpetrator – PEQ Total	$F(1,101) = 2.80$
Relationship to perpetrator – PSI-Sense of Competence	$F(1,99) = 2.68$
Relationship to perpetrator – PSI-Restriction of Role	$F(1,101) = 4.26$*
Relationship to perpetrator – F-COPES Total	$F(1,102) = 0.03$
Relationship to perpetrator – FACES-III Adaptability Now	$F(1,102) = 0.58$
Relationship to perpetrator – FACES-III Cohesion Now	$F(1,102) = 0.08$
Relationship to perpetrator – PES Total	$F(1,87) = 0.00$
Relationship to perpetrator – PSAES Total	$F(1,86) = 2.23$
Relationship to perpetrator – CTQ Emotional Abuse	$F(1,63) = 2.10$
Relationship to perpetrator – CTQ Physical Abuse[1]	$F(1,63) = 1.73$
Relationship to perpetrator – CTQ Sexual Abuse	$F(1,63) = 0.21$

Table 10 (continued)

Variables	Test of Significance (*F*)
Relationship to perpetrator – CTQ Emotional Neglect	$F(1,63) = 0.51$
Relationship to perpetrator – CTQ Physical Neglect[1]	$F(1,63) = 0.48$
Disclosure of CSA – Age	$F(1,98) = 0.25$
Disclosure of CSA – Age of onset of CSA	$F(1,93) = 0.07$
Disclosure of CSA – Duration of CSA	$F(1,94) = 0.03$
Disclosure of CSA – Time between abuse & T1	$F(1,90) = 1.11$
Disclosure of CSA – Time between disclosure & T1	$F(1,94) = 0.95$
Disclosure of CSA – Time between abuse & disclosure	$F(1,90) = 0.27$
Disclosure of CSA - SCL-90-R GSI	$F(1,97) = 0.76$
Disclosure of CSA – PEQ Total	$F(1,98) = 0.58$
Disclosure of CSA – PSI-Sense of Competence	$F(1,97) = 0.06$
Disclosure of CSA – PSI-Restriction of Role	$F(1,98) = 0.22$
Disclosure of CSA – F-COPES Total	$F(1,98) = 1.14$
Disclosure of CSA – FACES-III Adaptability Now	$F(1,98) = 0.23$
Disclosure of CSA – FACES-III Cohesion Now	$F(1,98) = 0.09$
Disclosure of CSA – PES Total	$F(1,83) = 0.16$
Disclosure of CSA – PSAES Total	$F(1,82) = 1.70$
Disclosure of CSA – CTQ Emotional Abuse	$F(1,60) = 0.12$
Disclosure of CSA – CTQ Physical Abuse[1]	$F(1,60) = 0.94$
Disclosure of CSA – CTQ Sexual Abuse	$F(1,60) = 0.04$

Table 10 (continued)

Variables	Test of Significance (*F*)
Disclosure of CSA – CTQ Emotional Neglect	$F(1,60) = 0.55$
Disclosure of CSA – CTQ Physical Neglect[1]	$F(1,60) = 0.67$
Use of force – Age	$F(2,100) = 0.04$
Use of force – Age of onset of CSA	$F(2,94) = 1.13$
Use of force – Duration of CSA	$F(2,95) = 0.71$
Use of force – Time between abuse & T1	$F(2,92) = 0.94$
Use of force – Time between disclosure & T1	$F(2,96) = 0.28$
Use of force – Time between abuse & disclosure	$F(2,92) = 1.18$
Use of force - SCL-90-R GSI	$F(2,99) = 0.08$
Use of force – PEQ Total	$F(2,99) = 2.93$
Use of force – PSI-Sense of Competence	$F(2,97) = 1.36$
Use of force – PSI-Restriction of Role	$F(2,99) = 0.73$
Use of force – F-COPES Total	$F(2,100) = 0.91$
Use of force – FACES-III Adaptability Now	$F(2,100) = 2.94$
Use of force – FACES-III Cohesion Now	$F(2,100) = 1.50$
Use of force – PES Total	$F(2,85) = 2.12$
Use of force – PSAES Total	$F(2,84) = 1.29$
Use of force – CTQ Emotional Abuse	$F(2,61) = 0.31$
Use of force – CTQ Physical Abuse[1]	$F(2,61) = 0.40$
Use of force – CTQ Sexual Abuse	$F(2,61) = 2.42$
Use of force – CTQ Emotional Neglect	$F(2,61) = 0.43$

Table 10 (continued)

Variables	Test of Significance (*F*)
Use of force – CTQ Physical Neglect[1]	$F(2,61) = 0.44$

* $p < .05$. ** $p < .01$.

Specific Aim #2: Cluster Analysis

Youth were assessed using scores from the following measures: total T-scores from the CDI, CMAS-R, CBCL Internalizing Scale score, and the CBCL Externalizing Scale score; and Total scores from the CFRV, CSBI-2, CITES-R–PTSD Scale score, and SEI Total Self Scale score. For the total sample of 104 youth, the mean of each measure did not meet clinical significance, based on criteria of the individual measures included. Means and standard deviations of each measure for the sample are provided in Table 11. Both the CDI Total score and CSBI-2 Total score were positively skewed and data cleaning was performed in order to reduce skewness. Extreme scores on the CDI Total score were replaced with the most extreme acceptable value (i.e., windsorize). Skewness for the CSBI-2 distribution was corrected using the square root transformation.

Table 11

Means and Standard Deviations for Measures of Adjustment for Total Sample

Measure	*M*	*SD*
CDI Total [1,a]	53.54	12.70
CFRV Total[2]	52.94	10.24
PTSD Scale – CITES-R[2]	27.09	10.41
CMAS-R Total[1]	52.90	13.73

Table 11 (continued)

Measure	*M*	*SD*
SEI Total Self Inverse Scale[2,3]	63.38	20.06
CSBI-2 Total[2,a]	1.86	1.50
CBCL Internalizing Scale[1]	60.83	12.16
CBCL Externalizing Scale[1]	58.46	12.55

[1] T-score.
[2] Total score.
[3] Higher score on this measure indicates better functioning. For all other scales, higher scores suggest poorer functioning.
[a] Scores used had undergone data cleaning and outliers were converted into most extreme scores.

A cluster analysis was performed using the measures listed in Table 11. The cluster analysis was conducted using Ward's method and Squared Euclidean Differences to create clinical profiles of the participants. All T-scores, Total scores, and Subscale Scores were converted into z-scores before being entered into the cluster analysis in order to eliminate any potential conflicts due to standardization differences among the various measures.

Ward's method was chosen because it minimizes within cluster variance, thereby generating relatively homogeneous groups (Aldenderfer & Blashfield, 1984). The squared Euclidean distance was used to measure the similarity between the cases. In order to decide the "correct" number of clusters to maintain, the agglomeration schedule was examined to assess significant changes in total "error" or in the coefficient values. By examining the step-by-step clustering process and each successive increase in the total "error" in the clustering solution, the increase in within-cluster variability was 9.3%

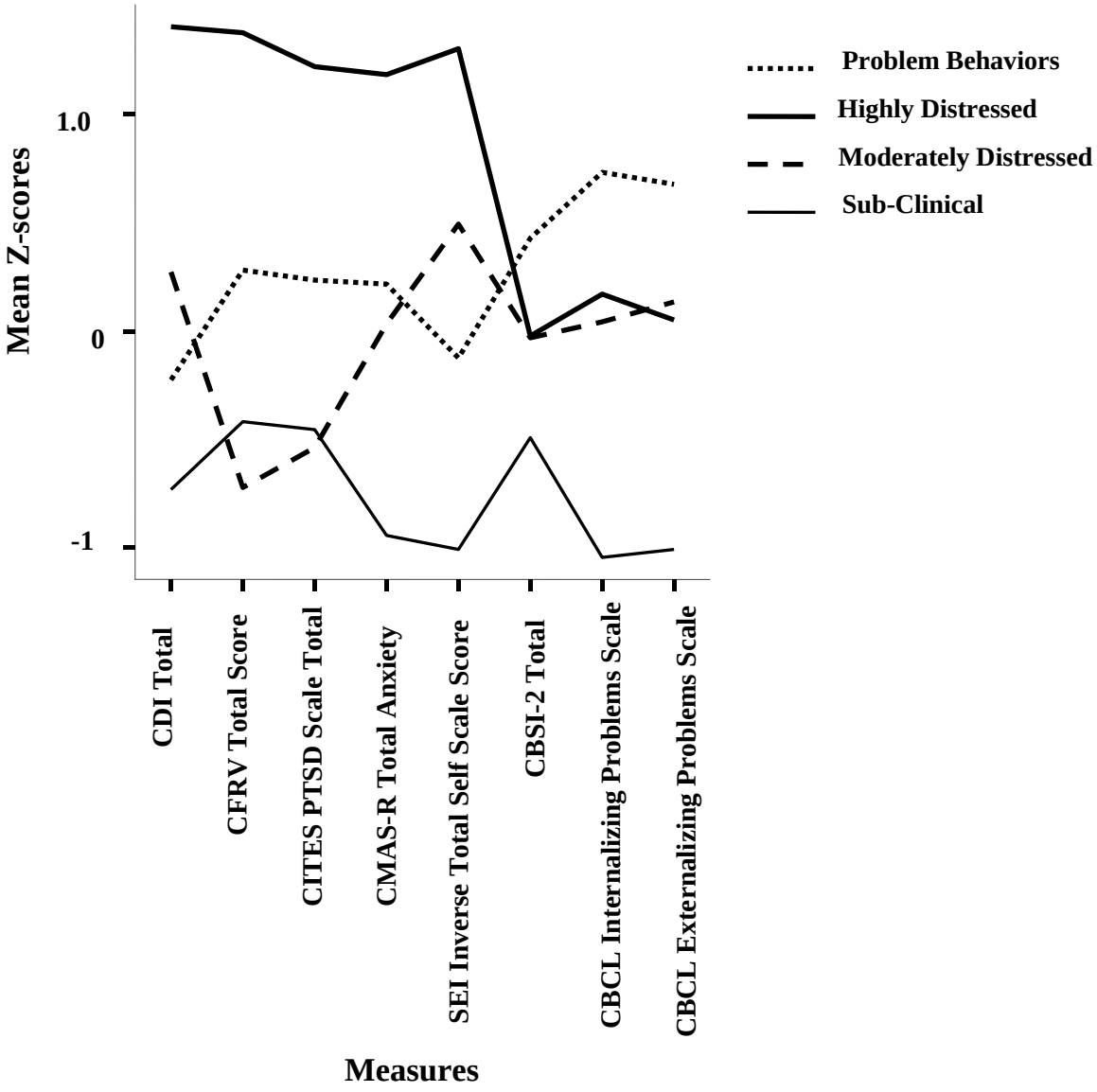
before four clusters were combined to form three clusters. The within-cluster variability of reducing a four-cluster solution into a three-cluster solution resulted in a 24.8% increase in error, suggesting that a four-cluster solution was the best fit. A four-cluster solution was also supported by a visual examination of the dendogram.

Cluster description. For the four-cluster solution, 35 youth (33.7%) comprised the first cluster, 15 (14.4%) were included in the second cluster, 26 (25%) comprised the third cluster, and 28 (26.9%) comprised the fourth cluster. Figure 1 is a graphical representation of the four cluster profiles based on mean z-scores for the selected measures used to create the clusters. The first cluster was the largest cluster (N = 35) and labeled "Problem Behaviors." This cluster was characterized by significant elevations of fears, PTSD symptoms, general anxiety, and the highest elevations on parent-reported internalizing, externalizing, and sexualized behaviors. This cluster was also characterized by a below average level of depressive symptoms and above average level of self-esteem. The second cluster was the smallest cluster (N = 15) and labeled "Highly Distressed." This cluster was marked by significant elevations of depressive symptoms, fears, symptoms of PTSD, general anxiety, and low self-esteem, and moderate elevations of internalizing and externalizing behaviors.

The third cluster (N = 26) was labeled "Moderately Distressed" and characterized by moderate elevations of depressive symptoms, low self-esteem, general anxiety, and parent-reported internalizing and externalizing behaviors. The fourth cluster (N = 28) was labeled "Sub-clinical" and was characterized by below average symptoms of depression, fears, PTSD, general anxiety, and significantly elevated self-esteem. The parents of these

youth reported significantly lower than average internalizing, externalizing, and sexualized behaviors.

Figure 1. Clinical profiles based on z-scores of assessments measuring adjustment and functioning for four clusters.



A series of one-way ANOVAs was conducted to compare the means of each of the clusters on the selected measures of symptom presentation. Pairwise comparisons using LSD minimum mean differences revealed significant between-group differences for each of the selected measures (see Table 12) and indicated multiple significant differences across the profiles, suggesting that the clusters differed in multiple areas of adjustment. Both the CDI Total score and SEI Total Self Inverse score variables were able to differentiate each cluster from the other clusters. The Sub-clinical cluster had significantly lower scores on multiple measures; however, it did not differ significantly from the Moderately Distressed cluster on the CITES-R PTSD subscale, CFRV, and CSBI-2, and from the Highly Distressed cluster on the CSBI-2. Similarly, the Highly Distressed cluster had significantly elevated scores on multiple measures; however, it did not differ significantly from the Moderately Distressed cluster on the CSBI-2 and CBCL-Externalizing subscale, from the Sub-clinical cluster on the CSBI-2, and the Problem Behaviors cluster on the CBCL-Internalizing subscale score. The Problem Behaviors cluster differed significantly from the other clusters on the majority of measures, with the exception of the CMAS-R from the Moderately Distressed cluster, and the CBCL-Internalizing subscale from the Highly Distressed cluster. Finally, the Moderately Distressed cluster differed significantly from the other clusters on only a few measures, specifically the CDI, SEI, and CBCL-Internalizing subscale.

Table 12

Between-Group Differences Means and Standard Deviations for Child Symptom Measures of Adjustment across Four Cluster Profiles

Measure	Cluster 1 Problem Behaviors (n = 35)		Cluster 2 Highly Distressed (n = 15)		Cluster 3 Moderately Distressed (n = 26)		Cluster 4 Sub-Clinical (n = 28)		F
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
CDI Total	50.71_c	8.27	71.47_a	10.61	57.00_b	12.69	44.25_d	5.64	29.7**
CFRV Total	55.80_b	7.29	67.07_a	3.41	45.54_c	7.91	48.68_c	8.73	31.1**
CITES-R PTSD Scale	29.54_b	7.31	39.87_a	7.07	21.50_c	8.19	22.36_c	10.30	19.3**
CMAS-R Total	55.91_b	8.54	69.20_a	11.18	53.42_b	10.70	39.93_c	11.06	28.9**
SEI Total Self Inverse Scale[1]	34.23_c	11.42	62.93_a	11.88	46.50_b	16.38	16.36_d	11.74	48.7**
CSBI-2 Total	2.51_a	1.62	1.82_b	1.55	1.81_b	1.16	$1.12_{b,c}$	1.28	5.0*
CBCL-Internalizing Scale	69.74_a	7.86	62.93_a	12.02	61.35_b	8.47	48.07_c	8.37	31.6**
CBCL-Externalizing Scale	67.03_a	9.33	59.13_b	9.97	60.19_b	10.72	45.79_c	8.27	26.3**

df = 3, 100; *$p < .01$; **$p < .001$.
[1] Higher score on this measure indicates better functioning. For all other scales, higher scores suggest poorer functioning.
Note. Means with dissimilar subscripts differ significantly at $p < .05$, based on LSD minimum mean differences.

Linear discriminant function (LDF) analyses were performed using the z-scores of the eight measures used in the cluster analysis as predictors of membership in the resulting cluster groups. Thus, an internal LDF was used as a follow-up to the cluster

analysis in order to determine the reliability of correct reclassification in the appropriate subgroups, to provide description of the clusters, and to help determine which variables separated what groups. The LDF revealed a three function solution. The first discriminant function ($\lambda = .084$, $\chi^2(24) = 240.157$, $p < .001$, R^2 - canonical = .856), the second discriminant function ($\lambda = .315$, $\chi^2(14) = 111.920$, $p < .001$, R^2 - canonical = .682) and the third function ($\lambda = .590$, $\chi^2(6) = 51.118$, $p < .001$, R^2 - canonical = .640) reliably differentiated among the four cluster profiles. The three discriminant functions accounted for 63.7%, 20.2%, and 16.1% of the between-group variability, respectively. Discriminant functions correctly classified 94.3% of the first group, 93.3% of the second group, 80.8% of the third group, and 96.4% of the fourth group, with an overall correct classification rate of 91.3%, suggesting that the measures accurately and reliably discriminated each of the groups. These classification rates helped confirm the results of the cluster analysis.

Structure weights revealed that all eight variables contributed to discrimination among the groups. Standardized canonical coefficients and structure weights are displayed in Table 13. Inspection of the structure weights revealed that multiple measures showed significant correlations with the first discriminant function, including CMAS-R, CBCL Internalizing and Externalizing, SEI Total Self Inverse Scale score, CDI Total score, CFRV, and CITES-R PTSD. That is, function one is interpretable as a measure of higher symptoms reported by both youth as well as their parents. The second discriminant function was significantly correlated with CBCL Internalizing, CBCL Externalizing, SEI Total Self Inverse Scale score, and CDI Total Score. Function two is interpretable as a measure of lower depressive symptoms and higher self-esteem, but greater parent-

reported behaviors. The third discriminant function was significantly correlated with CFRV, CITES-R PTSD, and CBCL Externalizing and Internalizing scales. Thus, the third function is interpretable as a measure of higher level of post-traumatic stress symptoms, fears related to victimization, and fewer parent-reported problems.

Table 13

Within-Group Correlations between Discriminating Variables of Child Functioning and Standardized Canonical Discriminant Functions (Function Structure Matrix)

Variable	Function 1	Function 2	Function 3
CMAS-R Total	.553	-.173	.021
CBCL Internalizing	.493	.457	-.374
SEI Total Self Inverse Scale	.618	-.645	-.264
CDI Total[1]	.456	-.603	.040
CSBI-2[1]	.175	-.245	-.140
CFRV Total	.444	.025	.750
CITES-R PTSD	.379	-.015	.516
CBCL Externalizing	.430	.410	-.438

[1] Scores used had undergone data cleaning and outliers were converted into most extreme scores.

Figure 2 presents a graphical depiction of group centroid means for function one and function two. Figure 3 presents a graphical depiction of group centroid means for the third function. These figures show that there is clear separation among the four groups.

Figure 2. Group centroids plot for Functions 1 and 2 from an "internal" linear discriminant function analysis for cluster membership.

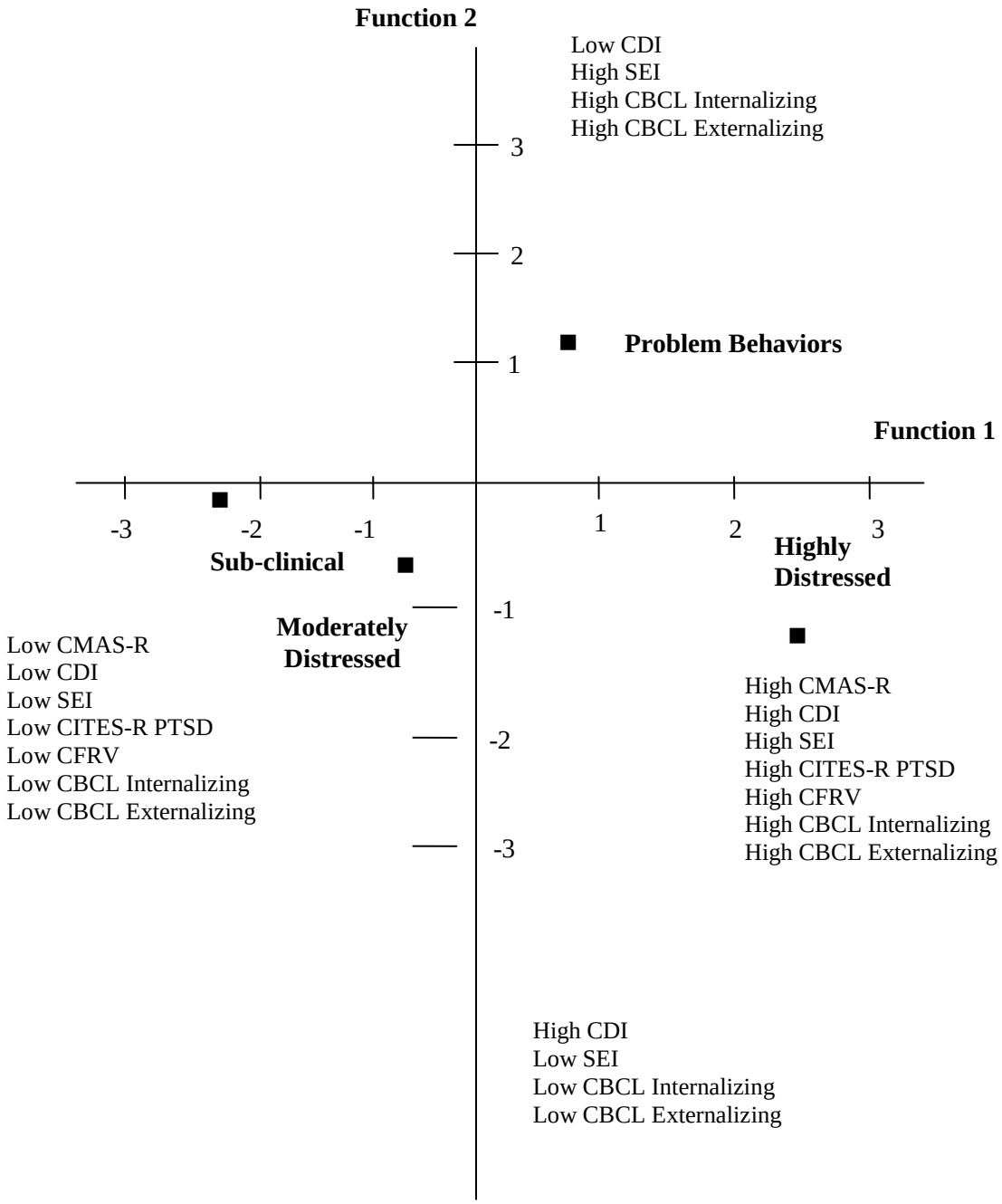
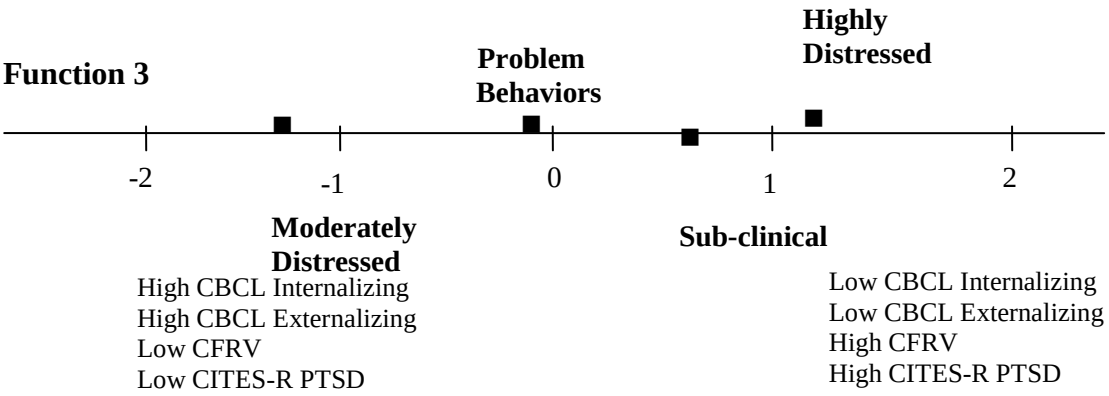


Figure 3. Group centroids plot for Function 3 from an "internal" linear discriminant function analysis for cluster membership.



Child factors related to group membership. To further explore the nature of the four clusters, the relationship among child demographics (i.e., age, gender, ethnicity) and abuse characteristics (i.e., age of onset, duration of CSA, type of CSA, relationship to the perpetrator, disclosure, time between CSA and assessment, time between disclosure and assessment, time between CSA and disclosure, and use of force) with the clinical profiles was examined through a series of ANOVAs and chi-squares. As shown in Table 14, ethnicity of the youth was the sole child variable to significantly differ among the four cluster profiles, $\chi^2(3) = 25.443$, $p < .044$. Youth who were identified as Hispanic-American tended to belong to either the Highly Distressed cluster or the Moderately Distressed cluster. All youth who were classified as Native-American belonged to the Sub-clinical cluster. Youth who were classified as Black belonged to either the Moderately Distressed cluster or the Problem Behaviors cluster. Further, youth who were identified as Multi-racial belonged either to the Problem Behaviors cluster or the Highly Distressed cluster. Child age was also found to be significant in discriminating among the clusters, $F(3,100) = 3.185$, $p < .05$, such that children belonging to the Moderately

Distressed cluster were significantly older than youth in the other three clusters. "External" LDF analyses were then performed using the child demographic and abuse-specific variables noted above. These LDF analyses revealed no significant discriminant functions.

Table 14

Prevalence (%) and Means of Child Demographic and Abuse-Specific Characteristics among Four Cluster Profiles

	Cluster 1 Problem Behaviors	Cluster 2 Highly Distressed	Cluster 3 Moderately Distressed	Cluster 4 Sub-clinical	F (3,100)	p-value
Child age	127.37_a	139.33_a	148.96_b	133.64_a	3.185	.03*
Onset of CSA (years)	8.41	9.2	9.24	9.58	.862	.46
Duration of CSA (years)	14.46	15.2	17.68	7.36	.986	.40
Time between CSA & assessment (months)	9.61	4.12	13.76	12.02	1.159	.33
Time between disclosure & assessment (months)	7.63	3.11	5.96	5.02	.743	.53
Time between CSA & disclosure (months)	2.00	1.00	7.60	6.65	1.469	.23
					χ^2	*p*-value
Child gender						
Female	22.8%	13.3%	23.1%	14.3%	$\chi^2(3) =$	.72
Male	77.1%	86.7%	76.9%	85.7%	1.321	

Table 14 (continued)

	Cluster 1 Problem Behaviors	Cluster 2 Highly Distressed	Cluster 3 Moderately Distressed	Cluster 4 Sub-clinical	F (3,100)	p-value
					X^2	*p*-value
Child Ethnicity						
White	77.14%	73.33%	69.23%	96.43%		
Black	8.57%	0%	11.54%	0%	χ^2 (15) = 25.443	.04*
Hispanic American	0%	13.33%	3.85%	0%		
Native American	0%	0%	0%	3.57%		
Bi-racial	5.71%	6.67%	15.38%	0%		
Multi-racial	8.57%	6.67%	0%	0%		
Type of CSA						
Contact	85.7%	100%	84%	96.4%	4.781	.19
No contact	14.3%	0%	16%	3.57%		
Relationship to perpetrator						
Intrafamilial	57%	53.3%	69.2%	67.9%	1.812	.61
Extrafamilial	42.9%	46.7%	30.8%	32.1%		
Disclosure						
Child	73.5%	57.1%	69.2%	76.9%	1.894	.60
disclosed	26.5%	42.9%	30.8%	23.1%		
Other						
Use of Force						
Force Used	25.7%	20%	16%	32%	5.685_b	.46
No force	40%	26.7%	44%	46.4%		
Do not know	34.3%	53.3%	40%	21.4%		

Note. Means with dissimilar subscripts differ significantly at $p < .05$, based on LSD minimum mean differences.

Parent factors related to group membership. To further explore the nature of the four clusters, the relationship among parent demographic variables (i.e., age, gender, ethnicity, marital status, income, number of children in the home, level of educational

achievement, and employment status) and psychological symptoms and support needs (i.e., SCL-90-R GSI, PEQ Total, PSI-Sense of Competence, PSI-Restriction of Role, F-COPES Total, FACES-III Cohesion Now, FACES-III Adaptability Now, PES Total, PSAES Total, CTQ Emotional Abuse Scale, CTQ Physical Abuse Scale, CTQ Sexual Abuse Scale, CTQ Emotional Neglect Scale, and CTQ Physical Neglect Scale) with the clinical profiles was examined through a series of ANOVAs and chi-squares. As shown in Table 15, both parent ethnicity and employment status significantly differentiated the four cluster profiles, $\chi^2(12) = 28.83$, $p < .01$ and $\chi^2(3) = 22.05$, $p < .01$, respectively. Regarding ethnicity, parents who identified themselves as minority status (i.e., Hispanic-American, Biracial, and Multiracial), with the exception of Black, were parents of youth who belonged either to the Problem Behaviors cluster or the Highly Distressed cluster. With regards to employment status, parents of youth who belonged to the Problem Behaviors cluster differed from the other groups as the majority of these parents (57.1%) identified themselves as unemployed.

Table 15

Prevalence (%) and Means of Parent Demographic Variables among Four Cluster Profiles

	Cluster 1 Problem Behaviors	Cluster 2 Highly Distressed	Cluster 3 Moderately Distressed	Cluster 4 Sub-clinical	*F*	p-value
Parent Age	35.37	35.73	37.69	36.68	$F(3,100) = .69$	.56
Number of Children	3.54	3.79	3.58	3.64	$F(3,99) = .06$	.98
					χ^2	*p*-value
Gender						
Female	91.4%	93.3%	84.6%	89.3%	$\chi^2(3) = 1.03$	.795
Male	8.6%	6.7%	15.4%	10.7%		

Table 15 (continued)

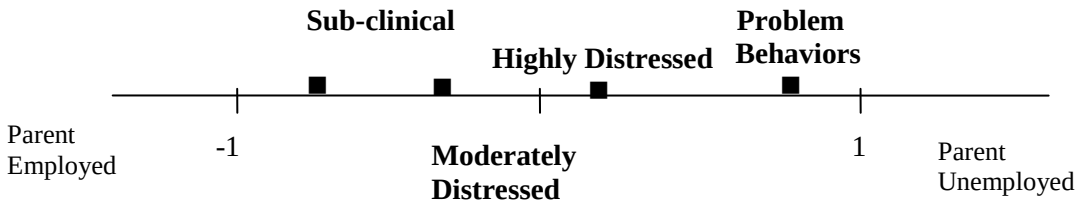
	Cluster 1 Problem Behaviors	Cluster 2 Highly Distressed	Cluster 3 Moderately Distressed	Cluster 4 Sub-clinical	*F*	p-value
White	82.9%	66.7%	3.8%	100%		
Black	2.9%	6.7%	96.2%	0%	$\chi^2(12) =$	.001**
Hispanic American	0%	20%	0%	0%	28.83**	
Bi-racial	11.4%	6.7%	0%	0%		
Multi-racial	2.9%	0%	0%	0%		
Marital Status						
Married	29.4%	42.9%	65.4%	32.1%	$\chi^2(12) =$	.21
Divorced/Separated	55.9%	57.1%	23.1%	57.1%	15.58	
Never Married	14.7%	0%	11.5%	10.7%		
Income						
$15,000 or less	48.5%	42.9%	12%	25%	$\chi^2(15) =$	.18
$15,001-$25,000	15.2%	7.1%	20%	10.7%	19.72	
$25,001-$40,000	15.2%	28.6%	36%	28.6%		
$40,001-$60,000	15.2%	0%	16%	21.4%		
$60,001-$100,000	6.1%	14.3%	16%	7.1%		
$100,000 or more	0%	7.1%	0%	7.1%		
Education	8.6%	21.4%	12%	3.7%		
Junior High or less	48.6%	64.3%	32%	40.7%	$\chi^2(18) =$	.09
High School	20%	14.3%	20%	33.3%	26.49	
Some College	22.9%	0%	36%	22.2%		
Post-college						
Employment Status	42.9%	66.7%	84.6%	92.9%	$\chi^2(3) =$	.001**
Employed	57.1%	33.3%	15.4%	7.1%	22.05	
Unemployed						

** $p < .01$.

External LDF analyses were run to determine the utility of each variable in differentiating the subgroups and to further examine the similarities and differences among the clusters. The LDF revealed a single concentrated function solution. The discriminant function ($\lambda = .642$, $\chi^2(24) = 39.388$, $p < .05$, R^2 - canonical = .482) reliably differentiated among the four cluster profiles and accounted for 61.8% of the between-

group variability. The discriminant function correctly classified 53.1% of the first group, 38.5% of the second group, 45.8% of the third group, and 59.3% of the fourth group, with an overall correct classification rate of 51.0%. An examination of the structure weights revealed that only employment status contributed to the discrimination among the groups. Figure 4 presents a graphical depiction of group centroid means for the single discriminant function.

Figure 4. Group centroids plot for Function 1 from an "external" linear discriminant function analysis for cluster membership based on parent demographic variables.



A series of one-way ANOVAs was conducted to compare the means of each of the clusters on the selected measures of parent psychological symptoms and support needs. Pairwise comparisons using LSD minimum mean differences revealed significant between-group differences for several of the selected measures (see Table 16) and indicated multiple significant differences across the profiles, suggesting that the clusters differed in multiple areas of parent adjustment. Parent scores on the PEQ Total, PSI – Sense of Competence, and PSAES Total significantly differentiated the Sub-clinical group from the other groups. That is, parents of children who demonstrated sub-clinical symptoms tended to endorse a greater sense of competence in their parenting skills, greater efficacy in their parenting ability, and better expectations of the impact of CSA on

their child. Parents of children who belonged to the Highly Distressed cluster significantly differed from the other groups on the FACES-III Cohesion Now subscale, indicating that these parents endorsed significantly lower sense of functioning and cohesiveness within the family unit.

Table 16

Prevalence (%) and Means of Parent Pre-treatment Measures of Psychological Functioning and Support Needs among Four Cluster Profiles

Measure	Cluster 1 Problem Behaviors (n = 35)		Cluster 2 Highly Distressed (n = 15)		Cluster 3 Moderately Distressed (n = 26)		Cluster 4 Sub-Clinical (n = 28)		F
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
SCL-90-R	51.46_{a}	12.0	$47.73_{a,b}$	12.0	$43.96_{b,c}$	10.2	38.19_{c}	8.6	8.16**
PEQ Total[2]	16.31_{a}	3.9	14.07_{a}	4.5	$16.54_{a,}$	4.2	19.22_{b}	3.2	6.03**
PSI – Sense of Competence	34.21_{a}	6.4	35.53_{a}	4.8	32.42_{a}	7.0	28.85_{b}	5.6	5.23**
PSI – Restriction of Role	19.97	5.6	21.80	5.3	19.81	6.1	17.41	5.5	2.16
F-COPES[2]	103.49	12.3	93.73	17.5	101.08	14.4	103.64	14.7	1.91
FACES-III Adaptability Now	24.46	5.5	25.67	4.1	24.50	4.4	24.46	4.5	0.27
FACES-III Cohesion Now[2]	37.14_{a}	5.8	31.20_{b}	8.3	35.81_{a}	7.1	38.43_{a}	6.0	4.20**
PES Total[2]	72.97	21.5	67.00	21.0	75.81	19.8	80.96	23.6	1.32
PSAES Total	21.10_{a}	6.4	21.15_{a}	7.7	20.67_{a}	8.1	14.96_{b}	5.7	4.59**
CTQ Emotional Abuse	$12.75_{a,b}$	4.8	14.22_{b}	5.4	8.77_{c}	4.2	$10.30_{a,c}$	4.8	3.33*
CTQ Physical Abuse[1]	0.95	0.2	0.99	0.2	0.89	0.2	0.84	0.2	1.85

Table 16 (continued)

Measure	Cluster 1 Problem Behaviors (n = 35)		Cluster 2 Highly Distressed (n = 15)		Cluster 3 Moderately Distressed (n = 26)		Cluster 4 Sub-Clinical (n = 28)		F
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
CTQ Sexual Abuse	11.95	7.4	15.22	7.4	7.92	4.1	10.22	7.5	2.19
CTQ Emotional Neglect	12.15	6.2	13.78	3.8	10.38	5.0	10.43	4.6	1.22
CTQ Physical Neglect[1]	2.94	0.6	2.82	0.6	2.77	0.6	2.75	0.7	0.35

df = 3, 100; *p < .05; **p < .01

[1] Scores used had undergone data cleaning

[2] Higher score on this measure indicates better functioning. For all other scales, higher scores suggest poorer functioning.

Note. Means with dissimilar subscripts differ significantly at $p < .05$, based on LSD minimum mean differences.

External LDF analyses were run to determine the utility of each of the parent symptom variables in differentiating the subgroups and to further examine the similarities and differences among the clusters. The LDF revealed a single concentrated function solution. The discriminant function ($\lambda = .302$, $\chi^2(42) = 62.282$, $p < .05$, R^2 - canonical = .729) reliably differentiated among the four cluster profiles and accounted for 69.9% of the between-group variability. The discriminant function correctly classified 57.9% of the first group, 66.7% of the second group, 53.8% of the third group, and 81.0% of the fourth group, with an overall correct classification rate of 66.1%. An examination of the structure weights revealed that five variables contributed to the discrimination among the groups, specifically the SCL-90-R GSI, PEQ Total, PSI – Sense of Competence, PSI – Restriction of Role, PSAES, and CTQ Emotional Abuse scale. Standardized canonical coefficients and structure weights are displayed in Table 17. Inspection of the structure

weights revealed that multiple measures showed significant correlations with the first discriminant function. The single discriminant function is interpretable as a measure of higher symptoms of parent psychological distress, lower sense of perceived efficacy regarding their parenting ability, lower sense of competence in parenting ability, perceiving the parenting role as more restrictive and frustrating, having worse expectations of a future negative impact of CSA on the child, and greater severity of parent childhood emotional abuse. Figure 5 presents a graphical depiction of group centroid means for the single discriminant function.

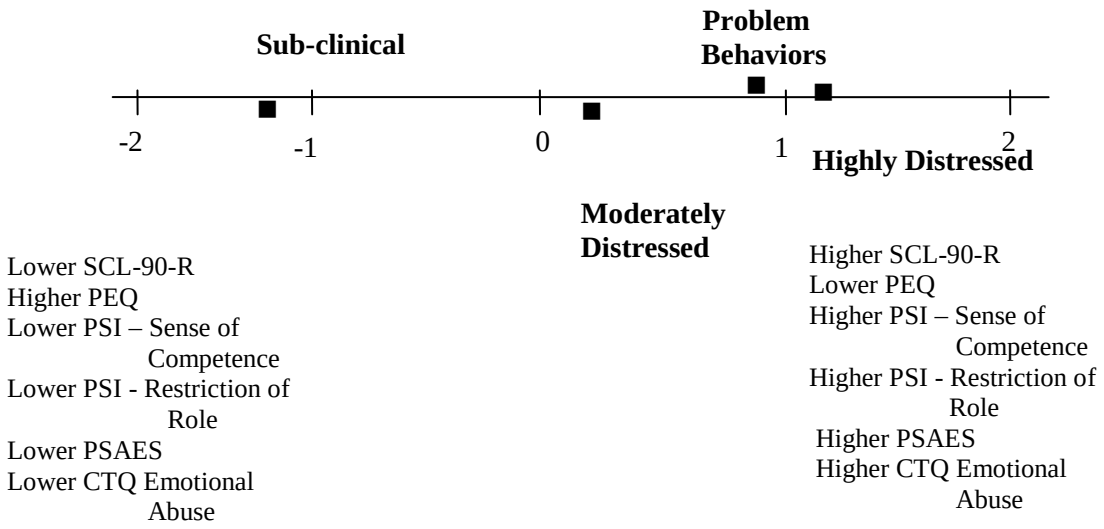
Table 17

Within-Group Correlations between Discriminating Variables of Parent Functioning and Standardized Canonical Discriminant Functions (Function Structure Matrix)

Variable	**Function 1**
SCL-90-R-GSI	.431
PEQ Total	-.465
PSI – Sense of Competence	.418
PSI – Restriction of Role	.291
PSAES Total	.389
CTQ Emotional Abuse[1]	.207

[1] Scores used had undergone data cleaning and outliers were converted into most extreme scores.

Figure 5. Group centroids plot for Function 1 from an "external" linear discriminant function analysis for cluster membership based on parent symptom presentation.



Specific Aim #3a: Change in parent psychological symptoms and support needs over treatment

Pre- and post-treatment scores for non-offending parents who had completed treatment were examined using the following measures: the Global Severity Index (GSI) score from the SCL-90-R; total scores from the PEQ, PES, PSAES, and F-COPES; the Sense of Competence and Restriction of Role subscales from the PSI; and the Adaptability Now and Cohesion Now subscales from the FACES-III. For the total sample of 58 non-offending parents, none of measures met clinical significance, based on criteria of the individual measures included. Means and standard deviations of all measures for the sample are provided in Table 18. Paired sample *t*-tests were conducted between each of the pre- and post-treatment measures of parent functioning (Table 18). The mean score on the SCL-90-R GSI was significantly lower at post-treatment (M = 40.83, SD = 8.56)

than at pre-treatment (*M* = 43.52, *SD* = 10.60), *t*(57) = 2.70, *p* < .01. The mean score on the FACES-III Adaptability Now subscale was also significantly lower at post-treatment (*M* = 23.09, *SD* = 5.1.8) than at pre-treatment (*M* = 24.98, *SD* = 4.30), *t*(56) = 2.83, *p* < .01. Change scores were generated for each measure of parent psychological symptoms and support needs by subtracting the T3 score from each T1 score (Table 18). Of the T3 measures, the SCL-90-R GSI mean score was corrected outliers by replacing extreme scores with the most extreme acceptable value (i.e., windsorize).

Table 18

Means, Standard Deviations, Paired Sample t-tests, and Change Scores of Pre- and Post-treatment Measures of Parent Functioning

Measure	*M* (T1)	*SD* (T1)	*M* (T3)	*SD* (T3)	t-tests	Change Scores (*M*)
SCL-90-R GSI[1]	43.52	10.60	40.83	8.56	2.70**	2.41[a]
PEQ – Total	16.46	3.95	16.83	3.85	-0.91	-0.39
PSI – Sense of Competence	32.14	6.28	31.60	7.91	0.62	0.57
PSI – Restriction of Role	18.53	5.91	19.00	5.36	-0.74	-0.43
F-COPES Total	104.22	14.19	104.00	14.41	0.17	0.29
FACES-III Adaptability Now	24.98	4.30	23.09	5.18	2.83**	1.91[a]
FACES-III Cohesion Now	36.26	6.55	34.91	7.59	1.90	1.56
PES Total	74.86	20.75	72.96	12.21	0.57	1.51
PSAES Total	18.50	6.44	18.38	5.95	0.23	0.20

[1]Post-treatment scores had undergone data cleaning
[a] Change scores reflected significantly improved functioning at post-treatment
* *p* < .05. ** *p* < .01.

Pearson product moment correlations were conducted between these parent change scores and parent and child demographic variables (Table 19). A significant relationship was found between the change score on the PSI – Restriction of Role subscale and the age of onset of CSA, $r = -0.27$, $p < .05$. Thus, parents of children with a later age of onset of CSA tended to have lower PSI – Restriction of Role subscale scores, indicating that they felt more restricted in their parenting role. A significant relationship was also found between the change score on the PSI – Restriction of Role subscale and duration of CSA, $r = 0.33$, $p < .05$. Thus, parents of youth who endured a longer duration of CSA tended to endorse feeling more restricted in their parenting role. A significant negative relationship was noted between the change score on FACES-III Adaptability Now subscale and the time between the abuse and disclosure of CSA, $r = -0.27$, $p < .05$. Thus, parents of youth for whom the time between the abuse and disclosure of CSA was greater tended to endorse poorer functioning and a more chaotic family environment.

Table 19

Pearson Product-Moment Correlations between Parent Change Scores and Parent Demographics, Child Demographics, and Abuse-specific Variables

Variables	Test of significance (*r*)
Change score SCL-90-R GSI – Parent age	0.07
Change score SCL-90-R GSI – Number children in the home	-0.06
Change score SCL-90-R GSI – Child age	0.01
Change score SCL-90-R GSI – Age of onset of CSA	0.03
Change score SCL-90-R GSI – Duration of CSA	-0.03

Table 19 (continued)

Variables	Test of significance (*r*)
Change score SCL-90-R GSI – Time between abuse & T1	-0.03
Change score SCL-90-R GSI – Time between disclosure & T1	-0.14
Change score SCL-90-R GSI – Time between abuse & disclosure	0.11
Change score PEQ – Parent age	0.06
Change score PEQ – Number of children in the home	-0.05
Change score PEQ – Child age	0.08
Change score PEQ – Age of onset of CSA	0.05
Change score PEQ – Duration of CSA	0.06
Change score PEQ – Time between abuse & T1	0.02
Change score PEQ – Time between disclosure & T1	0.00
Change score PEQ – Time between abuse &disclosure	0.03
Change score PSI – Sense of Competence – Parent age	0.06
Change score PSI – Sense of Competence – Number of children in the home	0.14
Change score PSI – Sense of Competence – Child age	0.13
Change score PSI – Sense of Competence – Age of onset of CSA	0.16
Change score PSI – Sense of Competence – Duration of CSA	-0.03
Change score PSI – Sense of Competence – Time between abuse & T1	-0.06
Change score PSI – Sense of Competence – Time between disclosure & T1	0.01
Change score PSI – Sense of Competence – Time between abuse & disclosure	-0.10

Table 19 (continued)

Variables	Test of significance (*r*)
Change score PSI – Restriction of Role – Parent age	0.01
Change score PSI – Restriction of Role – Number of children in the home	0.06
Change score PSI – Restriction of Role – Child age	-0.06
Change score PSI – Restriction of Role – Age of onset of CSA	-0.27*
Change score PSI – Restriction of Role – Duration of CSA	0.33*
Change score PSI – Restriction of Role – Time between abuse & T1	-0.08
Change score PSI – Restriction of Role – Time between disclosure & T1	-0.18
Change score PSI – Restriction of Role – Time between abuse & disclosure	0.06
Change score F-COPES – Parent age	-0.15
Change score F-COPES – Number of children in the home	0.02
Change score F-COPES – Child age	-0.16
Change score F-COPES – Age of onset of CSA	-0.15
Change score F-COPES – Duration of CSA	0.05
Change score F-COPES – Time between abuse & T1	0.04
Change score F-COPES – Time between disclosure & T1	-0.02
Change score F-COPES – Time between abuse & disclosure	0.09
Change score FACES-III – Adaptability Now – Parent age	0.09
Change score FACES-III – Adaptability Now – Number of children in the home	-0.09
Change score FACES-III – Adaptability Now – Child age	0.07

Table 19 (continued)

Variables	Test of significance (*r*)
Change score FACES-III – Adaptability Now – Age of onset of CSA	0.04
Change score FACES-III – Adaptability Now – Duration of CSA	0.11
Change score FACES-III – Adaptability Now – Time between abuse & T1	-0.23
Change score FACES-III – Adaptability Now – Time between disclosure & T1	-0.07
Change score FACES-III – Adaptability Now – Time between abuse & disclosure	-0.27*
Change score FACES-III – Cohesion Now – Parent age	-0.03
Change score FACES-III – Cohesion Now – Number of children in the home	-0.05
Change score FACES-III – Cohesion Now – Child age	0.07
Change score FACES-III – Cohesion Now – Age of onset of CSA	0.14
Change score FACES-III – Cohesion Now – Duration of CSA	0.06
Change score FACES-III – Cohesion Now – Time between abuse & T1	-0.23
Change score FACES-III – Cohesion Now – Time between disclosure & T1	-0.19
Change score FACES-III – Cohesion Now – Time between abuse & disclosure	-0.12
Change score PES – Parent age	-0.13
Change score PES – Number of children in the home	-0.14
Change score PES – Child age	-0.12
Change score PES – Age of onset of CSA	-0.11

Table 19 (continued)

Variables	Test of significance (*r*)
Change score PES – Duration of CSA	-0.27
Change score PES – Time between abuse & T1	-0.02
Change score PES – Time between disclosure & T1	0.00
Change score PES – Time between abuse & disclosure	-0.02
Change score PSAES – Parent age	0.10
Change score PSAES – Number of children in the home	0.13
Change score PSAES – Child age	0.10
Change score PSAES – Age of onset of CSA	0.05
Change score PSAES – Duration of CSA	0.06
Change score PSAES – Time between abuse & T1	-0.14
Change score PSAES – Time between disclosure & T1	-0.14
Change score PSAES – Time between abuse & disclosure	-0.06

* $p < .05$

One-way ANOVAs were then conducted between each of the parent change scores and demographic variables (Table 20). A significant relationship was noted between the change score on the SCL-90-R GSI scale and parent ethnicity, $F(4,53) = 5.59$, $p < .01$. Follow-up analyses showed that parents who were Hispanic-American had significantly higher change scores on the SCL-90-R GSI in comparison to all other groups. Also, parents who were Black had significantly lower change scores on the SCL-90-R GSI in comparison to those identified as White, Bi-racial, or Multi-racial. The change score on the PSI – Restriction of Role subscale was significantly related to the

type of CSA, $F(1,55) = 5.89$, $p < .05$. Specifically, parents of children for whom CSA was defined as contact abuse had significantly higher change scores on the PSI – Restriction of Role subscale than for non-contact CSA. A significant relationship was found between the change on the F-COPES Total score and parent ethnicity, $F(4,54) = 2.82$, $p < .05$. Follow-up analyses indicated that parents who were Hispanic-American had significantly lower change scores on the F-COPES Total in comparison to all other ethnic groups.

The change score on the FACES-III Adaptability Now subscale was significantly related to the parent's level of educational achievement, $F(5,51) = 2.90$, $p < .05$. Follow-up analyses showed that parents with a junior high school education had significantly higher change scores on the FACES-III Adaptability Now subscale in comparison to all other groups, with the exception of those with an Associates degree. Further, those with a Bachelors degree had significantly lower change scores on the FACES-III Adaptability Now subscale compared to those with a high school education or an Associates degree. The change score on the FACES-III Adaptability Now subscale was also significantly related to parent's employment status, $F(1,56) = 4.02$, $p < .05$. Specifically, parents who were unemployed had significantly higher change scores on the FACES-III Adaptability Now subscale in comparison to those who were employed. Lastly, a significant relationship was noted between the change score on the PES Total scale and parent gender, $F(1,48) = 4.70$, $p < .05$. That is, mothers had significantly higher change scores on the PES Total compared to fathers.

Table 20

One-way ANOVAs between Parent Change Scores and Child Demographic and Abuse-specific Variables and Parent Demographics

Variables	Test of Significance (*F*)
Change score SCL-90-R GSI – Parent gender	$F(1,56) = 0.56$
Change score SCL-90-R GSI – Marital status	$F(4,52) = 0.22$
Change score SCL-90-R GSI – Parent ethnicity	$F(4,53) = 5.59$**
Change score SCL-90-R GSI – Family income	$F(5,50) = 0.74$
Change score SCL-90-R GSI – Educational achievement	$F(5,51) = 0.66$
Change score SCL-90-R GSI – Employment status	$F(1,56) = 2.30$
Change score SCL-90-R GSI – Child gender	$F(1,56) = 0.87$
Change score SCL-90-R GSI – Child ethnicity	$F(4,53) = 1.02$
Change score SCL-90-R GSI – Type of CSA	$F(1,56) = 2.64$
Change score SCL-90-R GSI – Relationship to perpetrator	$F(1,56) = 0.80$
Change score SCL-90-R GSI – Disclosure of CSA	$F(1,52) = 0.42$
Change score SCL-90-R GSI – Use of force	$F(2,54) = 0.75$
Change score PEQ – Parent gender	$F(1,55) = 1.40$
Change score PEQ – Marital status	$F(4,51) = 0.29$
Change score PEQ – Parent ethnicity	$F(4,52) = 0.39$
Change score PEQ – Family income	$F(5,49) = 0.56$
Change score PEQ – Educational achievement	$F(5,50) = 0.98$
Change score PEQ – Employment status	$F(1,55) = 0.32$
Change score PEQ – Child gender	$F(1,55) = 0.80$

Table 20 (continued)

Variables	Test of Significance (*F*)
Change score PEQ – Child ethnicity	$F(4,52) = 2.28$
Change score PEQ – Type of CSA	$F(1,55) = 0.79$
Change score PEQ – Relationship to perpetrator	$F(1,55) = 0.03$
Change score PEQ – Disclosure of CSA	$F(1,52) = 3.69$
Change score PEQ – Use of Force	$F(2,53) = 0.16$
Change score PSI – Sense of Competence – Parent gender	$F(1,54) = 0.53$
Change score PSI – Sense of Competence – Marital status	$F(4,50) = 0.41$
Change score PSI – Sense of Competence – Parent ethnicity	$F(4,51) = 0.74$
Change score PSI – Sense of Competence – Family income	$F(5,48) = 1.01$
Change score PSI – Sense of Competence – Educational achievement	$F(5,49) = 2.33$
Change score PSI – Sense of Competence – Employment status	$F(1,54) = 0.01$
Change score PSI – Sense of Competence – Child gender	$F(1,54) = 0.04$
Change score PSI – Sense of Competence – Child ethnicity	$F(4,51) = 1.30$
Change score PSI – Sense of Competence – Type of CSA	$F(1,54) = 1.13$
Change score PSI – Sense of Competence – Relationship to perpetrator	$F(1,54) = 1.79$
Change score PSI – Sense of Competence – Disclosure of CSA	$F(1,52) = 0.13$
Change score PSI – Sense of Competence – Use of Force	$F(2,52) = 0.41$
Change score PSI – Restriction of Role – Parent gender	$F(1,55) = 0.02$
Change score PSI – Restriction of Role – Marital status	$F(4,51) = 1.84$

Table 20 (continued)

Variables	Test of Significance (*F*)
Change score PSI – Restriction of Role – Parent ethnicity	$F(4,52) = 1.92$
Change score PSI – Restriction of Role – Family income	$F(5,49) = 0.64$
Change score PSI – Restriction of Role – Educational achievement	$F(5,50) = 0.87$
Change score PSI – Restriction of Role – Employment status	$F(1,55) = 0.22$
Change score PSI – Restriction of Role – Child gender	$F(1,55) = 0.02$
Change score PSI – Restriction of Role – Child ethnicity	$F(4,52) = 0.14$
Change score PSI – Restriction of Role – Type of CSA	$F(1,55) = 5.89$*
Change score PSI – Restriction of Role – Relationship to perpetrator	$F(1,55) = 0.03$
Change score PSI – Restriction of Role – Disclosure of CSA	$F(1,52) = 2.42$
Change score PSI – Restriction of Role – Use of Force	$F(2,53) = 0.29$
Change score F-COPES – Parent gender	$F(1,56) = 0.87$
Change score F-COPES – Marital status	$F(4,53) = 0.69$
Change score F-COPES – Parent ethnicity	$F(4,54) = 2.82$*
Change score F-COPES – Family income	$F(5,51) = 0.30$
Change score F-COPES – Educational achievement	$F(5,52) = 0.78$
Change score F-COPES – Employment status	$F(1,57) = 0.10$
Change score F-COPES – Child gender	$F(1,57) = 0.71$
Change score F-COPES – Child ethnicity	$F(4,54) = 0.71$
Change score F-COPES – Type of CSA	$F(1,57) = 0.08$
Change score F-COPES – Relationship to perpetrator	$F(1,57) = 0.17$

Table 20 (continued)

Variables	Test of Significance (*F*)
Change score F-COPES – Disclosure of CSA	$F(1,53) = 0.41$
Change score F-COPES – Use of Force	$F(2,55) = 0.64$
Change score FACES-III – Adaptability Now – Parent gender	$F(1,56) = 1.74$
Change score FACES-III – Adaptability Now – Marital status	$F(4,52) = 0.05$
Change score FACES-III – Adaptability Now – Parent ethnicity	$F(4,53) = 0.75$
Change score FACES-III – Adaptability Now – Family income	$F(5,50) = 0.61$
Change score FACES-III – Adaptability Now – Educational achievement	$F(5,51) = 2.90$*
Change score FACES-III – Adaptability Now – Employment status	$F(1,56) = 4.02$*
Change score FACES-III – Adaptability Now – Child gender	$F(1,56) = 1.34$
Change score FACES-III – Adaptability Now – Child ethnicity	$F(4,53) = 0.25$
Change score FACES-III – Adaptability Now – Type of CSA	$F(1,56) = 1.74$
Change score FACES-III – Adaptability Now – Relationship to perpetrator	$F(1,56) = 0.73$
Change score FACES-III – Adaptability Now – Disclosure of CSA	$F(1,52) = 1.56$
Change score FACES-III – Adaptability Now – Use of Force	$F(2,54) = 2.44$
Change score FACES-III – Cohesion Now – Parent gender	$F(1,56) = 0.35$
Change score FACES-III – Cohesion Now – Marital status	$F(4,52) = 0.37$
Change score FACES-III – Cohesion Now – Parent ethnicity	$F(4,53) = 0.31$
Change score FACES-III – Cohesion Now – Family income	$F(5,50) = 0.93$

Table 20 (continued)

Variables	Test of Significance (*F*)
Change score FACES-III – Cohesion Now – Educational achievement	$F(5,51) = 0.98$
Change score FACES-III – Cohesion Now – Employment status	$F(1,56) = 2.38$
Change score FACES-III – Cohesion Now – Child gender	$F(1,56) = 0.02$
Change score FACES-III – Cohesion Now – Child ethnicity	$F(4,53) = 0.14$
Change score FACES-III – Cohesion Now – Type of CSA	$F(1,56) = 0.21$
Change score FACES-III – Cohesion Now – Relationship to perpetrator	$F(1,56) = 1.83$
Change score FACES-III – Cohesion Now – Disclosure of CSA	$F(1,52) = 0.19$
Change score FACES-III – Cohesion Now – Use of Force	$F(2,54) = 0.76$
Change score PES – Parent gender	$F(1,48) = 4.70$*
Change score PES – Marital status	$F(4,44) = 0.57$
Change score PES – Parent ethnicity	$F(3,46) = 0.13$
Change score PES – Family Income	$F(5,42) = 0.95$
Change score PES – Educational achievement	$F(5,43) = 0.54$
Change score PES – Employment status	$F(1,48) = 1.77$
Change score PES – Child gender	$F(1,48) = 0.32$
Change score PES – Child ethnicity	$F(3,46) = 0.08$
Change score PES – Type of CSA	$F(1,48) = 1.95$
Change score PES – Relationship to perpetrator	$F(1,48) = 2.15$
Change score PES – Disclosure of CSA	$F(1,44) = 0.18$

Table 20 (continued)

Variables	Test of Significance (*F*)
Change score PES – Use of Force	$F(2,46) = 1.00$
Change score PSAES – Parent gender	$F(1,49) = 0.49$
Change score PSAES – Marital status	$F(4,45) = 0.17$
Change score PSAES – Parent ethnicity	$F(3,47) = 0.61$
Change score PSAES – Family income	$F(5,43) = 0.50$
Change score PSAES – Educational achievement	$F(5,44) = 0.42$
Change score PSAES – Employment status	$F(1,49) = 0.49$
Change score PSAES – Child gender	$F(1,49) = 0.56$
Change score PSAES – Child ethnicity	$F(3,47) = 2.29$
Change score PSAES – Type of CSA	$F(1,49) = 0.01$
Change score PSAES – Relationship to perpetrator	$F(1,49) = 0.01$
Change score PSAES – Disclosure of CSA	$F(1,45) = 2.08$
Change score PSAES – Use of Force	$F(2,47) = 0.80$

* $p < .05$. ** $p < .01$.

Pearson product-moment correlations were then conducted between parent change scores and parent trauma history based on the scales of the CTQ (Table 21). The change score on the SCL-90-R GSI was significantly related to the CTQ Emotional Abuse Scale score, $r = 0.42$, $p < .01$, as well as the CTQ Sexual Abuse Scale score, $r = 0.34$, $p < .05$. A significant negative relationship was found between the change score on the PEQ Total and the CTQ Emotional Abuse Scale score, $r = -0.34$, $p < .05$. Lastly, the change score on

the F-COPES Total was significantly related to the CTQ Sexual Abuse Scale score, $r = -0.36$, $p < .05$.

Table 21

Pearson Product-Moment Correlations between Parent Change Scores and Parent Trauma History

Variables	Test of significance (*r*)
Change score SCL-90-R GSI – CTQ Emotional Abuse	0.42**
Change score SCL-90-R GSI – CTQ Physical Abuse[1]	0.15
Change score SCL-90-R GSI – CTQ Sexual Abuse	0.34*
Change score SCL-90-R GSI – CTQ Emotional Neglect	0.03
Change score SCL-90-R GSI – CTQ Physical Neglect[1]	-0.07
Change score PEQ – CTQ Emotional Abuse	-0.34*
Change score PEQ – CTQ Physical Abuse[1]	-0.25
Change score PEQ – CTQ Sexual Abuse	-0.15
Change score PEQ – CTQ Emotional Neglect	-0.13
Change score PEQ – CTQ Physical Neglect[1]	-0.13
Change score PSI –Sense of Competence – CTQ Emotional Abuse	-0.03
Change score PSI –Sense of Competence – CTQ Physical Abuse[1]	-0.22
Change score PSI –Sense of Competence – CTQ Sexual Abuse	-0.01
Change score PSI –Sense of Competence – CTQ Emotional Neglect	-0.01
Change score PSI –Sense of Competence – CTQ Physical Neglect[1]	0.04
Change score PSI –Restriction of Role – CTQ Emotional Abuse	-0.16
Change score PSI –Restriction of Role – CTQ Physical Abuse[1]	-0.10

Table 21 (continued)

Variables	Test of significance (*r*)
Change score PSI –Restriction of Role – CTQ Sexual Abuse	0.07
Change score PSI –Restriction of Role – CTQ Emotional Neglect	-0.15
Change score PSI –Restriction of Role – CTQ Physical Neglect[1]	-0.03
Change score F-COPES – CTQ Emotional Abuse	-0.08
Change score F-COPES – CTQ Physical Abuse[1]	-0.18
Change score F-COPES – CTQ Sexual Abuse	-0.36*
Change score F-COPES – CTQ Emotional Neglect	-0.23
Change score F-COPES – CTQ Physical Neglect[1]	-0.21
Change score FACES-III – Adaptability Now – CTQ Emotional Abuse	0.14
Change score FACES-III – Adaptability Now – CTQ Physical Abuse[1]	-0.15
Change score FACES-III – Adaptability Now – CTQ Sexual Abuse	-0.12
Change score FACES-III – Adaptability Now – CTQ Emotional Neglect	0.04
Change score FACES-III – Adaptability Now – CTQ Physical Neglect[1]	-0.14
Change score FACES-III – Cohesion Now – CTQ Emotional Abuse	-0.01
Change score FACES-III – Cohesion Now – CTQ Physical Abuse[1]	-0.01
Change score FACES-III – Cohesion Now – CTQ Sexual Abuse	-0.25
Change score FACES-III – Cohesion Now – CTQ Emotional Neglect	0.18
Change score FACES-III – Cohesion Now – CTQ Physical Neglect[1]	-0.13
Change score PES – CTQ Emotional Abuse	0.09

Table 21 (continued)

Variables	Test of significance (*r*)
Change score PES – CTQ Physical Abuse[1]	-0.11
Change score PES – CTQ Sexual Abuse	0.08
Change score PES – CTQ Emotional Neglect	0.07
Change score PES – CTQ Physical Neglect[1]	-0.04
Change score PSAES – CTQ Emotional Abuse	-0.03
Change score PSAES – CTQ Physical Abuse[1]	-0.03
Change score PSAES – CTQ Sexual Abuse	0.15
Change score PSAES – CTQ Emotional Neglect	-0.11
Change score PSAES – CTQ Physical Neglect[1]	0.03

[1] Scores used had undergone data cleaning
* $p < .05$

Multiple regression analyses were conducted for parent change scores as the criterion variables (Table 22). Parent demographic variables, trauma history, child demographic variables, and abuse-specific variables, which were found to be significantly correlated with the parent change scores, were used as the predictor variables. For the change score on the SCL-90-R GSI, the multiple regression model with three predictors (i.e., parent ethnicity, CTQ Emotional Abuse Scale, and CTQ Sexual Abuse Scale) produced $R^2 = 0.23$, $F(3,34) = 3.29$, $p < .05$. While none of the predictors contributed to the multiple regression model, each contributed individually to the model. For the change score on the PEQ Total, the multiple regression model with a single predictor (i.e., CTQ Emotional Abuse Scale) produced $R^2 = 0.12$, $F(1,35) = 4.64$, $p < .05$.

The predictor contributed to the multiple regression model, b = -0.178, $p < .05$. The change score on the PSI – Sense of Competence subscale was not significantly correlated with any of the parent or child variables. For the change score on the PSI – Restriction of Role subscale, the multiple regression model with three predictors (i.e., age of onset of CSA, duration of CSA, and type of CSA) produced $R^2 = 0.20$, $F(3,53) = 4.50$, $p < .01$. Only type of CSA contributed to the multiple regression, b = 3.716, $p < .05$.

For the change score on the F-COPES Total, the multiple regression model with two predictors (i.e., parent ethnicity, CTQ Sexual Abuse Scale) produced $R^2 = 0.15$, $F(2,35) = 3.14$, $p > .05$. However, with CTQ Sexual Abuse Scale as the single predictor, the multiple regression model produced $R^2 = 0.13$, $F(1,36) = 5.27$, $p < .05$, b = -0.644, $p < .05$. For the change score on the FACES-III Adaptability Now subscale, the multiple regression model with four predictors (i.e., time between abuse and disclosure, educational achievement, employment status, and child ethnicity) produced $R^2 = 0.18$, $F(4,49) = 2.62$, $p < .05$. However, none of the predictors contributed to the multiple regression model. The change score on the FACES-III Cohesion Now scale was not significantly correlated with any of the parent or child variables. For the change score on the PES Total, the multiple regression with a single predictor (i.e., parent gender) produced $R^2 = .09$, $F(1, 48) = 4.70$, $p < .05$. Lastly, the change score on the PSAES scale was not significantly correlated with any of the parent or child variables.

Table 22

Multiple Regression Analyses of Parent Change Scores

Parent change score	Test of significance
Change score SCL-90-R GSI	$R^2 = 0.23$, $F(3,34) = 3.29$*
Change score PEQ Total	$R^2 = 0.12$, $F(1,35) = 4.64$*
Change score PSI – Restriction of Role	$R^2 = 0.20$, $F(3,53) = 4.50$**
Change F-COPES Total	$R^2 = 0.15$, $F(2,35) = 3.14$
Change FACES-III Adaptability Now	$R^2 = 0.18$, $F(4,49) = 2.62$*
Change PES Total	$R^2 = 0.09$, $F(1,48) = 4.70$*

*$p < .05$. **$p < .01$.

Pearson product-moment correlations and one-way ANOVAs were conducted between parent post-treatment measures of psychological functioning and support needs, trauma history, and parent and child demographics (Tables 23, 24, and 25). As shown in Table 23, several significant relationships were found between the parent T3 scores and parent and child demographic variables. Post-treatment scores on the PSI – Restriction of Role subscale were significantly correlated with the time between the abuse and disclosure of CSA, $r = -0.27$, $p < .05$. Post-treatment scores on the FACES-III Cohesion Now subscale were significantly correlated with the age of the child, $r = -0.4$, $p < .01$, and age of onset of CSA, $r = -0.33$, $p < .05$.

Table 23

Pearson Product-Moment Correlations between Parent Post-treatment Scores and Parent Demographics, Child Demographics, and Abuse-specific Variables

Variables	Test of significance (*r*)
T3 SCL-90-R GSI – Parent age	-0.16
T3 SCL-90-R GSI – Number children in the home	-0.05
T3 SCL-90-R GSI – Child age	-0.03
T3 SCL-90-R GSI – Age of onset of CSA	-0.08
T3 SCL-90-R GSI – Duration of CSA	0.08
T3 SCL-90-R GSI – Time between abuse and T1	-0.15
T3 SCL-90-R GSI – Time between disclosure and T1	-0.03
T3 SCL-90-R GSI – Time between abuse and disclosure	-0.18
T3 PEQ – Parent age	-0.20
T3 PEQ – Number of children in the home	0.07
T3 PEQ – Child age	-0.05
T3 PEQ – Age of onset of CSA	-0.17
T3 PEQ – Duration of CSA	0.10
T3 PEQ – Time between abuse and T1	0.25
T3 PEQ – Time between disclosure and T1	0.14
T3 PEQ – Time between abuse and disclosure	0.21
T3 PSI – Sense of Competence – Parent age	-0.02
T3 PSI – Sense of Competence – Number of children in the home	-0.09
T3 PSI – Sense of Competence – Child age	-0.17

Table 23 (continued)

Variables	Test of significance (*r*)
T3 PSI – Sense of Competence – Age of onset of CSA	-0.06
T3 PSI – Sense of Competence – Duration of CSA	-0.18
T3 PSI – Sense of Competence – Time between abuse and T1	-0.04
T3 PSI – Sense of Competence – Time between disclosure and T1	-0.01
T3 PSI – Sense of Competence – Time between abuse and disclosure	-0.04
T3 PSI – Restriction of Role – Parent age	0.02
T3 PSI – Restriction of Role – Number of children in the home	-0.02
T3 PSI – Restriction of Role – Child age	-0.16
T3 PSI – Restriction of Role – Age of onset of CSA	-0.03
T3 PSI – Restriction of Role – Duration of CSA	-0.10
T3 PSI – Restriction of Role – Time between abuse and T1	-0.22
T3 PSI – Restriction of Role – Time between disclosure and T1	-0.03
T3 PSI – Restriction of Role – Time between abuse and disclosure	-0.27*
T3 F-COPES – Parent age	-0.07
T3 F-COPES – Number of children in the home	0.19
T3 F-COPES – Child age	-0.04
T3 F-COPES – Age of onset of CSA	-0.15
T3 F-COPES – Duration of CSA	0.22
T3 F-COPES – Time between abuse and T1	-0.01

Table 23 (continued)

Variables	Test of significance (*r*)
T3 F-COPES – Time between disclosure and T1	
T3 F-COPES – Time between abuse and disclosure	-0.11
T3 FACES-III – Adaptability Now – Parent age	-0.16
T3 FACES-III – Adaptability Now – Number of children in the home	0.13
T3 FACES-III – Adaptability Now – Child age	-0.18
T3 FACES-III – Adaptability Now – Age of onset of CSA	-0.14
T3 FACES-III – Adaptability Now – Duration of CSA	0.05
T3 FACES-III – Adaptability Now – Time between abuse & T1	-0.01
T3 FACES-III – Adaptability Now – Time between disclosure & T1	-0.18
T3 FACES-III – Adaptability Now – Time between abuse & disclosure	0.18
T3 FACES-III – Cohesion Now – Parent age	-0.22
T3 FACES-III – Cohesion Now – Number of children in the home	0.09
T3 FACES-III – Cohesion Now – Child age	-0.40**
T3 FACES-III – Cohesion Now – Age of onset of CSA	-0.33*
T3 FACES-III – Cohesion Now – Duration of CSA	0.09
T3 FACES-III – Cohesion Now – Time between abuse & T1	0.07
T3 FACES-III – Cohesion Now – Time between disclosure & T1	0.11
T3 FACES-III – Cohesion Now – Time between abuse & T1	-0.01
T3 PES – Parent age	0.05

Table 23 (continued)

Variables	Test of significance (*r*)
T3 PES – Number of children in the home	0.01
T3 PES – Child age	-0.01
T3 PES – Age of onset of CSA	0.04
T3 PES – Duration of CSA	0.06
T3 PES – Time between abuse & T1	0.10
T3 PES – Time between disclosure & T1	0.00
T3 PES – Time between abuse & disclosure	0.14
T3 PSAES – Parent age	-0.23
T3 PSAES – Number of children in the home	0.01
T3 PSAES – Child age	0.13
T3 PSAES – Age of onset of CSA	0.08
T3 PSAES – Duration of CSA	-0.04
T3 PSAES – Time between abuse & T1	-0.03
T3 PSAES – Time between disclosure & T1	-0.17
T3 PSAES – Time between abuse & disclosure	0.14

*$p < .05$. **$p < .01$.

Several significant relationships were also noted between parent post-treatment scores and parent demographic variables and abuse-specific characteristics (Table 24). The sample T3 SCL-90-R GSI score was significantly correlated with use of force used during the CSA, $F(2,55) = 5.19$, $p < .01$. Follow-up analyses showed that parents of

children for whom force was used during the CSA had significantly lower T3 SCL-90-R GSI scores compared to those for whom force was either not used or when the use of force was unknown. The post-treatment score on the PSI – Sense of Competence subscale was also significantly correlated with use of force, $F(2,54) = 3.72$, $p < .05$. Follow-up analyses showed that parents of children for whom force was used during the CSA had significantly lower T3 PSI – Sense of Competence subscale scores compared to those for whom force was either not used or it was unknown. The post-treatment score on the PSI – Restriction of Role subscale was significantly correlated with use of force, $F(2,55) = 3.41$, $p < .05$. Follow-up analyses showed that parents of children for whom force was used during the CSA had significantly lower PSI – Sense of Competence subscale scores compared to those for whom force was either not used or it was unknown.

The sample T3 score on the FACES-III Adaptability Now subscale was found to be significantly related to parent educational achievement, $F(5,51) = 3.42$, $p < .01$. Follow-up analyses showed that parents who had attained a Bachelors degree tended to have significantly higher FACES-III Adaptability Now scale scores compared to parents with a junior high school education, high school education, some college education, or an Associate's degree. Further, the parent with an elementary school education endorsed a significantly higher T3 FACES-III Adaptability Now subscale score compared to those with a junior high school education, high school education, some college education, or an Associate's degree. The sample T3 score on the FACES-III Adaptability Now scale was also significantly related to use of force, $F(2,54) = 3.67$, $p < .05$. Follow-up analyses showed that parents of children for whom force was used during the CSA tended to have

significantly higher T3 FACES-III Adaptability Now scores compared to those for whom the use of force was unknown.

The sample T3 score on the PES Total was significantly related to the child's relationship to the perpetrator, $F(1,49) = 5.24$, $p < .05$. Follow-up analyses showed that parents of youth for whom the perpetrator was a family member tended to have significantly higher T3 PES Total scores compared to those who were abused by a non-family member. Lastly, the sample T3 score on the PSAES Total was significantly related to use of force, $F(2,48) = 10.48$, $p < .01$. Follow-up analyses showed that parents of children for whom the use of force was unknown tended to have significantly higher T3 PSAES Total scores compared to those for whom force was used or when force was not used.

Table 24

One-way ANOVAs between Parent Post-treatment Scores and Child Demographic and Abuse-specific Variables and Parent Demographics

Variables	Test of Significance (*F*)
T3 SCL-90-R GSI – Parent gender	$F(1,57) = 0.03$
T3 SCL-90-R GSI – Marital status	$F(4,53) = 1.49$
T3 SCL-90-R GSI – Parent ethnicity	$F(4,54) = 1.51$
T3 SCL-90-R GSI – Family income	$F(5,51) = 1.47$
T3 SCL-90-R GSI – Educational achievement	$F(5,52) = 0.48$
T3 SCL-90-R GSI – Employment status	$F(1,57) = 3.77$
T3 SCL-90-R GSI – Child gender	$F(1,57) = 0.19$
T3 SCL-90-R GSI – Child ethnicity	$F(4,54) = 2.15$

Table 24 (continued)

Variables	Test of Significance (*F*)
T3 SCL-90-R GSI – Type of CSA	$F(1,57) = 2.91$
T3 SCL-90-R GSI – Relationship to perpetrator	$F(1,57) = 0.08$
T3 SCL-90-R GSI – Disclosure of CSA	$F(1,53) = 0.32$
T3 SCL-90-R GSI – Use of force	$F(2,55) = 5.19$**
T3 PEQ – Parent gender	$F(1,57) = 1.82$
T3 PEQ – Marital status	$F(4,53) = 0.43$
T3 PEQ – Parent ethnicity	$F(4,54) = 0.26$
T3 PEQ – Family income	$F(5,51) = 0.43$
T3 PEQ – Educational achievement	$F(5,52) = 1.02$
T3 PEQ – Employment status	$F(1,57) = 0.58$
T3 PEQ – Child gender	$F(1,57) = 0.02$
T3 PEQ – Child ethnicity	$F(4,54) = 0.16$
T3 PEQ – Type of CSA	$F(1,57) = 1.28$
T3 PEQ – Relationship to perpetrator	$F(1,57) = 0.54$
T3 PEQ – Disclosure of CSA	$F(1,53) = 0.92$
T3 PEQ – Use of Force	$F(2,55) = 2.36$
T3 PSI – Sense of Competence – Parent gender	$F(1,56) = 0.02$
T3 PSI – Sense of Competence – Marital status	$F(4,52) = 0.46$
T3 PSI – Sense of Competence – Parent ethnicity	$F(4,53) = 0.74$
T3 PSI – Sense of Competence – Family income	$F(5,50) = 0.60$
T3 PSI – Sense of Competence – Educational achievement	$F(5,51) = 1.16$

Table 24 (continued)

Variables	Test of Significance (*F*)
T3 PSI – Sense of Competence – Employment status	$F(1,56) = 1.36$
T3 PSI – Sense of Competence – Child gender	$F(1,56) = 0.19$
T3 PSI – Sense of Competence – Child ethnicity	$F(4,53) = 0.56$
T3 PSI – Sense of Competence – Type of CSA	$F(1,56) = 3.90$
T3 PSI – Sense of Competence – Relationship to perpetrator	$F(1,56) = 0.10$
T3 PSI – Sense of Competence – Disclosure of CSA	$F(1,53) = 0.45$
T3 PSI – Sense of Competence – Use of Force	$F(2,54) = 3.72$*
T3 PSI – Restriction of Role – Parent gender	$F(1,57) = 0.36$
T3 PSI – Restriction of Role – Marital status	$F(4,53) = 0.92$
T3 PSI – Restriction of Role – Parent ethnicity	$F(4,54) = 0.43$
T3 PSI – Restriction of Role – Family income	$F(5,51) = 1.41$
T3 PSI – Restriction of Role – Educational achievement	$F(5,52) = 0.64$
T3 PSI – Restriction of Role – Employment status	$F(1,57) = 2.63$
T3 PSI – Restriction of Role – Child gender	$F(1,57) = 0.00$
T3 PSI – Restriction of Role – Child ethnicity	$F(4,54) = 0.54$
T3 PSI – Restriction of Role – Type of CSA	$F(1,57) = 2.56$
T3 PSI – Restriction of Role – Relationship to perpetrator	$F(1,57) = 0.93$
T3 PSI – Restriction of Role – Disclosure of CSA	$F(1,53) = 0.97$
T3 PSI – Restriction of Role – Use of Force	$F(2,55) = 3.41$*
T3 F-COPES – Parent gender	$F(1,57) = 3.01$

Table 24 (continued)

Variables	Test of Significance (*F*)
T3 F-COPES – Marital status	$F(4,53) = 1.03$
T3 F-COPES – Parent ethnicity	$F(4,54) = 2.00$
T3 F-COPES – Family income	$F(5,51) = 0.68$
T3 F-COPES – Educational achievement	$F(5,52) = 0.22$
T3 F-COPES – Employment status	$F(1,57) = 1.18$
T3 F-COPES – Child gender	$F(1,57) = 1.29$
T3 F-COPES – Child ethnicity	$F(4,54) = 0.98$
T3 F-COPES – Type of CSA	$F(1,57) = 1.90$
T3 F-COPES – Relationship to perpetrator	$F(1,57) = 0.22$
T3 F-COPES – Disclosure of CSA	$F(1,53) = 0.07$
T3 F-COPES – Use of Force	$F(2,55) = 2.46$
T3 FACES-III – Adaptability Now – Parent gender	$F(1,56) = 1.86$
T3 FACES-III – Adaptability Now – Marital status	$F(4,52) = 1.30$
T3 FACES-III – Adaptability Now – Parent ethnicity	$F(4,53) = 0.48$
T3 FACES-III – Adaptability Now – Family income	$F(5,50) = 0.81$
T3 FACES-III – Adaptability Now – Educational achievement	$F(5,51) = 3.42$**
T3 FACES-III – Adaptability Now – Employment status	$F(1,56) = 3.57$
T3 FACES-III – Adaptability Now – Child gender	$F(1,56) = 0.96$
T3 FACES-III – Adaptability Now – Child ethnicity	$F(4,53) = 1.37$
T3 FACES-III – Adaptability Now – Type of CSA	$F(1,56) = 0.93$
T3 FACES-III – Adaptability Now – Relationship to perpetrator	$F(1,56) = 0.27$

Table 24 (continued)

Variables	Test of Significance (*F*)
T3 FACES-III – Adaptability Now – Disclosure of CSA	$F(1,52) = 0.67$
T3 FACES-III – Adaptability Now – Use of Force	$F(2,54) = 3.67$*
T3 FACES-III – Cohesion Now – Parent gender	$F(1,56) = 0.50$
T3 FACES-III – Cohesion Now – Marital status	$F(4,52) = 1.01$
T3 FACES-III – Cohesion Now – Parent ethnicity	$F(4,53) = 0.55$
T3 FACES-III – Cohesion Now – Family income	$F(5,50) = 0.71$
T3 FACES-III – Cohesion Now – Educational achievement	$F(5,51) = 0.19$
T3 FACES-III – Cohesion Now – Employment status	$F(1,56) = 1.04$
T3 FACES-III – Cohesion Now – Child gender	$F(1,56) = 0.15$
T3 FACES-III – Cohesion Now – Child ethnicity	$F(4,53) = 1.01$
T3 FACES-III – Cohesion Now – Type of CSA	$F(1,56) = 1.56$
T3 FACES-III – Cohesion Now – Relationship to perpetrator	$F(1,56) = 0.51$
T3 FACES-III – Cohesion Now – Disclosure of CSA	$F(1,52) = 0.07$
T3 FACES-III – Cohesion Now – Use of Force	$F(2,54) = 1.58$
T3 PES – Parent gender	$F(1,49) = 0.12$
T3 PES – Marital status	$F(4,45) = 0.31$
T3 PES – Parent ethnicity	$F(3,47) = 0.26$
T3 PES – Family Income	$F(5,43) = 1.03$
T3 PES – Educational achievement	$F(5,44) = 0.53$
T3 PES – Employment status	$F(1,49) = 0.04$

Table 24 (continued)

Variables	Test of Significance (*F*)
T3 PES – Child gender	$F(1,49) = 0.49$
T3 PES – Child ethnicity	$F(3,47) = 0.30$
T3 PES – Type of CSA	$F(1,49) = 0.30$
T3 PES – Relationship to perpetrator	$F(1,49) = 5.24$*
T3 PES – Disclosure of CSA	$F(1,45) = 0.01$
T3 PES – Use of Force	$F(2,47) = 1.76$
T3 PSAES – Parent gender	$F(1,50) = 0.96$
T3 PSAES – Marital status	$F(4,46) = 0.18$
T3 PSAES – Parent ethnicity	$F(3,48) = 1.10$
T3 PSAES – Family income	$F(5,44) = 0.37$
T3 PSAES – Educational achievement	$F(5,45) = 0.78$
T3 PSAES – Employment status	$F(1,50) = 0.34$
T3 PSAES – Child gender	$F(1,50) = 0.93$
T3 PSAES – Child ethnicity	$F(3,48) = 0.64$
T3 PSAES – Type of CSA	$F(1,50) = 0.02$
T3 PSAES – Relationship to perpetrator	$F(1,50) = 0.02$
T3 PSAES – Disclosure of CSA	$F(1,46) = 3.11$
T3 PSAES – Use of Force	$F(2,48) = 10.48$**

* $p < .05$. ** $p < .01$.

Post-treatment scores for the sample were examined according to parent trauma history (Table 25). Post-treatment SCL-90-R GSI scores were significantly correlated

with CTQ Physical Abuse scale scores, $r = 0.37$, $p < .05$, and CTQ Emotional Neglect scale scores, $r = 0.61$, $p < .01$. No significant relationships were noted between T3 PEQ Total scores and parent and child variables. Post-treatment scores on the PSI – Sense of Competence subscale were significantly correlated with CTQ Emotional Neglect Scale score, $r = 0.34$, $p < .05$. For the T3 F-COPES Total scores, a significant relationship was noted with the CTQ Sexual Abuse Scale scores, $r = -0.21$, $p < .01$. Lastly, on the T3 PSAES Total scores, a significant relationship was noted with CTQ Emotional Neglect Scale scores, $r = 0.39$, $p < .05$.

Table 25

Pearson Product-Moment Correlations between Parent Post-treatment Scores and Parent Trauma History

Variables	Test of significance (*r*)
T3 SCL-90-R GSI – CTQ Emotional Abuse	0.11
T3 SCL-90-R GSI – CTQ Physical Abuse[1]	0.37*
T3 SCL-90-R GSI – CTQ Sexual Abuse	-0.21
T3 SCL-90-R GSI – CTQ Emotional Neglect	0.61**
T3 SCL-90-R GSI – CTQ Physical Neglect[1]	0.27
T3 PEQ – CTQ Emotional Abuse	0.17
T3 PEQ – CTQ Physical Abuse[1]	-0.09
T3 PEQ – CTQ Sexual Abuse	0.30
T3 PEQ – CTQ Emotional Neglect	-0.32
T3 PEQ – CTQ Physical Neglect[1]	-0.19
T3 PSI –Sense of Competence – CTQ Emotional Abuse	0.08

Table 25 (continued)

Variables	Test of significance (*r*)
T3 PSI –Sense of Competence – CTQ Physical Abuse[1]	0.29
T3 PSI –Sense of Competence – CTQ Sexual Abuse	-0.15
T3 PSI –Sense of Competence – CTQ Emotional Neglect	0.34*
T3 PSI –Sense of Competence – CTQ Physical Neglect[1]	0.19
T3 PSI –Restriction of Role – CTQ Emotional Abuse	0.07
T3 PSI –Restriction of Role – CTQ Physical Abuse[1]	0.05
T3 PSI –Restriction of Role – CTQ Sexual Abuse	-0.31
T3 PSI –Restriction of Role – CTQ Emotional Neglect	0.28
T3 PSI –Restriction of Role – CTQ Physical Neglect[1]	0.01
T3 F-COPES – CTQ Emotional Abuse	0.19
T3 F-COPES – CTQ Physical Abuse[1]	0.11
T3 F-COPES – CTQ Sexual Abuse	0.48**
T3 F-COPES – CTQ Emotional Neglect	-0.21
T3 F-COPES – CTQ Physical Neglect[1]	-0.12
T3 FACES-III – Adaptability Now – CTQ Emotional Abuse	0.03
T3 FACES-III – Adaptability Now – CTQ Physical Abuse[1]	0.18
T3 FACES-III – Adaptability Now – CTQ Sexual Abuse	0.23
T3 FACES-III – Adaptability Now – CTQ Emotional Neglect	-0.14
T3 FACES-III – Adaptability Now – CTQ Physical Neglect[1]	-0.03

Table 25 (continued)

Variables	Test of significance (*r*)
T3 FACES-III – Cohesion Now – CTQ Emotional Abuse	0.20
T3 FACES-III – Cohesion Now – CTQ Physical Abuse[1]	0.03
T3 FACES-III – Cohesion Now – CTQ Sexual Abuse	0.28
T3 FACES-III – Cohesion Now – CTQ Emotional Neglect	-0.30
T3 FACES-III – Cohesion Now – CTQ Physical Neglect[1]	-0.09
T3 PES – CTQ Emotional Abuse	-0.03
T3 PES – CTQ Physical Abuse[1]	0.14
T3 PES – CTQ Sexual Abuse	0.15
T3 PES – CTQ Emotional Neglect	-0.17
T3 PES – CTQ Physical Neglect[1]	0.11
T3 PSAES – CTQ Emotional Abuse	0.25
T3 PSAES – CTQ Physical Abuse[1]	0.26
T3 PSAES – CTQ Sexual Abuse	-0.21
T3 PSAES – CTQ Emotional Neglect	0.39*
T3 PSAES – CTQ Physical Neglect[1]	0.07

[1] Scores used had undergone data cleaning
* $p < .05$. ** $p < .01$.

Multiple regression analyses were then conducted with parent T3 scores as the criterion variables (Table 26). Parent demographic variables, trauma history, child demographic variables, and abuse-specific variables, which were found to be significantly correlated with the parent post-treatment scores, were used as the predictor

variables. For the T3 SCL-90-R GSI scores, the multiple regression model with three predictors (i.e., force, CTQ Physical Abuse Scale, and CTQ Emotional Abuse Scale) produced $R^2 = 0.431$, $F(3,33) = 8.32$, $p < .001$. However, only CTQ Emotional Neglect Scale contributed to the multiple regression model (b = 1.16, $p < .001$). CTQ Physical Abuse Scale was found to be a suppressor variable. When the multiple regression model was conducted without CTQ Physical Abuse Scale, only the CTQ Emotional Neglect Scale contributed to the model, $R^2 = 0.43$, $F(2,34) = 12.85$, $p < .001$, b = 1.15, $p < .001$. No significant relationships were noted between T3 PEQ Total scores and parent and child variables.

A multiple regression model for T3 PSI – Sense of Competence subscale was conducted with two predictors (i.e., force and CTQ Emotional Neglect Scale). The model produced $R^2 = 0.17$, $F(2,34) = 3.42$, $p < .05$. However, neither variable contributed to the full model. When force alone was used as the predictor variable, the model produced $R^2 = 0.11$, $F(1,55) = 6.59$, $p < .05$, b = 3.41, $p < .05$. When CTQ Emotional Neglect Scale was entered individually, the model produced $R^2 = 0.11$, $F(1,36) = 4.60$, $p < .05$, b = 0.72, $p < .05$. A multiple regression model for T3 PSI – Restriction of Role subscale was conducted with two predictors (i.e., time between abuse and disclosure and force) and produced $R^2 = 0.15$, $F(2,51) = 4.46$, $p < .05$. However, only force contributed to the model, b = 1.86, $p < .05$.

A multiple regression model for T3 F-COPES was conducted with CTQ Sexual Abuse Scale as the single predictor and produced $R^2 = 0.23$, $F(1,36) = 10.82$, $p < .01$. CTQ Sexual Abuse Scale was found to contribute to the model, b = 1.02, $p < .01$. For T3 FACES-III Adaptability Now, a multiple regression model with two predictors (i.e.,

educational achievement and force) produced $R^2 = 0.14$, $F(2,53) = 4.38$, $p < .05$. Force was found to be a suppressor variable, b = -2.193, $p < .05$, and educational achievement did not contribute to the model. For T3 FACES-III Cohesion Now, a multiple regression model with two predictors (i.e., child age and age of onset of CSA) produced $R^2 = 0.16$, $F(2,53) = 4.92$, with neither contributing to the model. When age was entered alone, the model produced $R^2 = 0.16$, $F(1,56) = 10.43$, $p < .01$, b = -0.11, $p < .01$. Further, when age of onset of CSA was entered alone, the model produced $R^2 = 0.11$, $F(1,54) = 6.39$, $p < .05$, b = -0.87, $p < .05$. Thus, both predictors contributed to the model when entered individually.

For T3 PES Total, a multiple regression model with relationship to the perpetrator as the single predictor produced $R^2 = 0.10$, $F(1,49) = 5.24$, $p < .05$. The child's relationship to the perpetrator was found to contribute to the model, b = 7.97, $p < .05$. Lastly, a multiple regression model for T3 PSAES Total was conducted with two predictors (i.e., force and CTQ Emotional Neglect) and produced $R^2 = 0.35$, $F(2,34) = 9.03$, $p < .001$. Force was shown to contribute to the multiple regression model, b = 3.86, $p < .01$. When CTQ Emotional Neglect was entered alone, the model produced $R^2 = 0.15$, $F(1,36) = 6.41$, $p < .05$, and was found to contribute to the model, b = 0.57, $p < .05$.

Table 26

Multiple Regression Analyses of Parent Post-treatment Scores

Parent Post-treatment score	Test of significance
T3 SCL-90-R GSI	$R^2 = 0.43$, $F(3,33) = 8.32$**
T3 PSI – Sense of Competence	$R^2 = 0.17$, $F(2,34) = 3.42$

Table 26 (continued)

Parent Post-treatment score	Test of significance
T3 PSI – Restriction of Role	$R^2 = 0.15$, $F(2,51) = 4.46$*
T3 F-COPES Total	$R^2 = 0.23$, $F(1,36) = 10.82$**
T3 FACES-III Adaptability Now	$R^2 = 0.14$, $F(2,53) = 4.38$*
T3 FACES-III Cohesion Now	$R^2 = 0.16$, $F(2,53) = 4.92$**
T3 PES Total	$R^2 = 0.10$, $F(1,49) = 5.24$*
T3 PSAES Total	$R^2 = 0.35$, $F(2,34) = 9.03$**

*$p < .05$. **$p < .01$.

Specific Aim #3b: Cluster profiles of pre- and post-treatment functioning

A cluster analysis was performed using pre- and post-treatment scores from the following measures: the Total T-scores from the CDI, and CMAS-R; the Internalizing and Externalizing Scale T-scores from the CBCL (Parent Report Form); Total scores from the CSBI-2 and CFRV; the Total PTSD Scale score from the CITES-R; and the Total Self Scale Inverse score from the SEI. The cluster analysis was conducted using Ward's method and Squared Euclidean Differences to create clinical profiles of the participants. All T-scores, Total scores, and Subscale Scores were converted into z-scores before being entered into the cluster analysis in order to eliminate any potential conflicts due to standardization differences among the various measures.

By examining the step-by-step clustering process and each successive increase in the total "error" in the clustering solution, the increase in within-cluster variability was 8.7% before four clusters were combined to form three clusters. The within-cluster

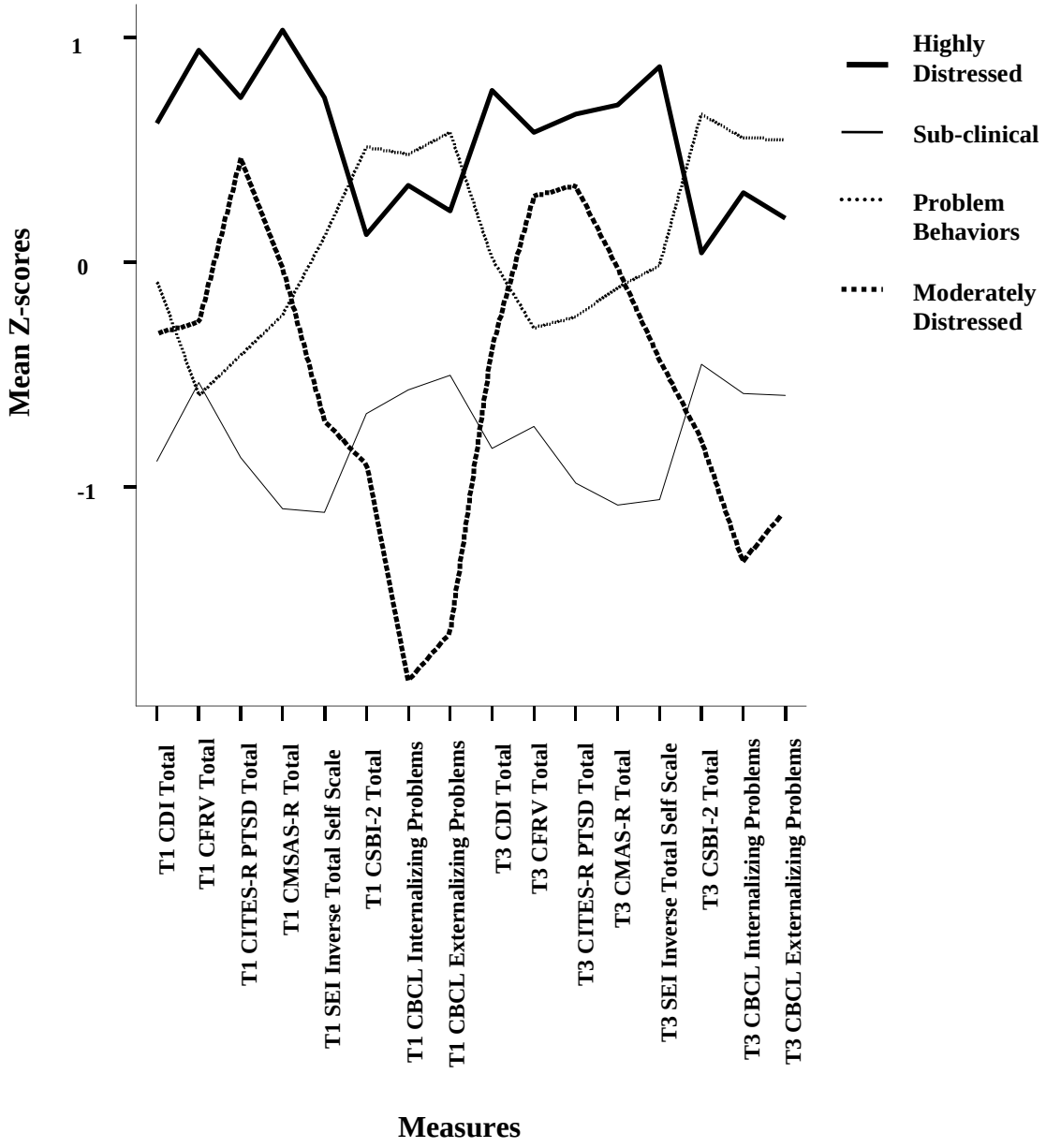
variability of reducing a four-cluster solution into a three-cluster solution resulted in a 14.5% increase in error, suggesting that a four-cluster solution was the best fit. A four-cluster solution was also supported by a visual examination of the dendogram.

Cluster description. For the four-cluster solution, 20 youth (37%) comprised the first cluster, 12 (22.2%) were included in the second cluster, 16 (29.6%) comprised the third cluster, and 6 (11.1%) comprised the fourth cluster. Figure 6 is a graphical representation of the four cluster profiles based on mean z-scores for the selected measures used to create the clusters. The first cluster was the largest cluster (N = 20) and labeled "Highly Distressed." This cluster was characterized by significant elevations of fears, PTSD symptoms, general anxiety, and above average elevations reported by parents for internalizing, externalizing, and sexualized behaviors at both pre- and post-treatment. This cluster was also characterized by an above average level of depressive symptoms and below average level of self-esteem at both pre- and post-treatment. The second cluster (N = 12) was labeled "Sub-clinical" and was characterized by below average symptoms of depression, fears, PTSD, general anxiety, and significantly elevated self-esteem and both pre- and post-treatment. The parents of these youth also reported significantly lower than average internalizing, externalizing, and sexualized behaviors at both pre- and post-treatment.

The third cluster (N = 16) was labeled "Problem Behaviors." This cluster was marked by significant elevations of depressive symptoms, fears, symptoms of PTSD, general anxiety, and low self-esteem, and the highest elevations of internalizing, externalizing, and sexualized behaviors and both pre- and post-treatment. The fourth cluster was the smallest cluster (N = 6) and was labeled "Moderately Distressed." This

cluster was characterized by moderate elevations of depressive symptoms, low self-esteem, general anxiety, and parent-reported internalizing and externalizing behaviors, at both pre- and post-treatment. Overall, each of the initial clusters appeared to have been maintained over the course of treatment, with slight increases or decreases on several of the measures for each cluster profile.

Figure 6. Clinical profiles based on z-scores of assessments of pre- and post-treatment adjustment and functioning for four clusters.



A series of one-way ANOVAs was conducted to compare the means of each of the clusters on the selected measures of symptom presentation. Pairwise comparisons using LSD minimum mean differences revealed significant between-group differences for each of the selected measures (see Table 27) and indicated multiple significant differences across the profiles, suggesting that the clusters differed in multiple areas of adjustment. The Highly Distressed cluster had significantly higher scores than the other clusters on the CDI total and SEI Total Self Inverse Scale score. The Sub-clinical cluster had significantly lower scores than the other three clusters on the CITES-R PTSD Scale and CMAS-R Total. However, the Sub-clinical cluster did not differ significantly from the Moderately Distressed cluster on the CDI Total, SEI Total Self Inverse Scale score, CSBI-2, CBCL - Internalizing Problems Scale, and CBCL - Externalizing Scale; and from the Highly Distressed cluster on the CSBI-2. Similarly, the Highly Distressed cluster had significantly elevated scores on multiple measures; however, it did not differ significantly from the Moderately Distressed cluster on the CFRV Total, CITES-R PTSD Scale, CMAS-R Total, and CSBI-2, and the Problem Behaviors cluster on the CBCL - Internalizing Problems and CBCL-Externalizing Problems Scale scores. The Problem Behaviors cluster differed significantly from all of the other clusters on only the CSBI-2.

Linear discriminant function (LDF) analyses were performed using the z-scores of the 16 measures used in the cluster analysis as predictors of membership in the resulting cluster groups. Thus, an internal LDF was used as a follow-up to the cluster analysis in order to determine the reliability of correct reclassification in the appropriate subgroups, to provide description of the clusters, and to help determine which variables separated what groups. The LDF revealed a two function solution. The first discriminant function

(λ = .029, $\chi^2(48)$ = 152.116, $p <$ .001, R^2 - canonical = .894), and the second discriminant function (λ = .145, $\chi^2(30)$ = 82.976, $p <$ .001, R^2 - canonical = .874) reliably differentiated among the four cluster profiles. The two discriminant functions accounted for 50.8%, and 41.3%, respectively, of the between-group variability. Discriminant functions correctly classified 100% of the first group, 91.7% of the second group, 100% of the third group, and 100% of the fourth group, with an overall correct classification rate of 98.1%, suggesting that the measures accurately and reliably discriminated each of the groups. These classification rates helped to confirm the results of the cluster analysis.

Table 27

Between-Group Differences Means and Standard Deviations for Child Symptom Measures of Post-treatment Adjustment across Four Cluster Profiles

Measure	Cluster 1 Highly Distressed (n = 20)		Cluster 2 Sub-Clinical (n = 12)		Cluster 3 Problem Behaviors (n = 16)		Cluster 4 Moderately Distressed (n = 6)		F
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
CDI Total	54.40_a	11.67	37.58_b	2.68	46.50_c	9.91	$42.33_{b,c}$	1.37	9.2**
CFRV Total	53.70_a	8.47	39.75_b	8.53	$44.44_{b,c}$	10.41	$50.67_{a,c}$	10.84	6.5**
CITES-R PTSD Scale	27.60_a	10.43	10.75_b	6.54	18.38_c	8.40	$24.33_{a,}$	4.59	10.4**
CMAS-R Total	56.00_a	13.02	31.67_b	7.19	44.88_c	10.76	$46.17_{a,c}$	6.97	13.0**
SEI Total Self Inverse Scale[1]	48.70_a	20.14	8.50_b	5.40	30.25_c	15.40	$21.67_{b,c}$	10.54	17.7**
CSBI-2Total	1.69_a	1.15	1.08_a	0.94	2.46_b	1.29	0.67_a	0.82	5.3*
CBCL-Internalizing Scale	60.00_a	11.68	48.58_b	7.85	63.06_a	9.69	39.00_b	8.12	11.7**
CBCL-Externalizing Scale	59.05_a	10.33	49.50_b	10.83	63.31_a	9.76	43.33_b	8.96	8.1**

Table 27 (continued)

df = 3, 50; *p < .01; **p < .001.
[1] Higher score on this measure indicates better functioning. For all other scales, higher scores suggest poorer functioning.
Note. Means with dissimilar subscripts differ significantly at p < .05, based on LSD minimum mean differences.

Structure weights revealed that all 16 variables contributed to discrimination among the groups. Standardized canonical coefficients and structure weights are displayed in Table 28. Inspection of the structure weights revealed that multiple measures showed significant correlations with the first discriminant function, including T1 and T3 CMAS-R, T1 and T3 SEI Self Inverse Scale, T1 and T3 CITES-R PTSD Scale, T1 and T3 CDI Total, and T1 CFRV. Function one is interpretable as a measure of higher symptoms reported by youth of anxiety, low self-esteem, depressive symptoms, PTSD symptoms at both pre- and post-treatment, and fears at pre-treatment. The second discriminant function was significantly correlated with pre- and post-treatment CBCL Internalizing and CBCL Externalizing Problems Scale scores. Thus, function two is interpretable as a measure of higher parent-reported problems. Figure 7 presents a graphical depiction of group centroid means for function one and function two. This figure shows that there is clear separation among the four groups.

Table 28

Within-Group Correlations between Discriminating Variables of Child Functioning and Standardized Canonical Discriminant Functions (Function Structure Matrix)

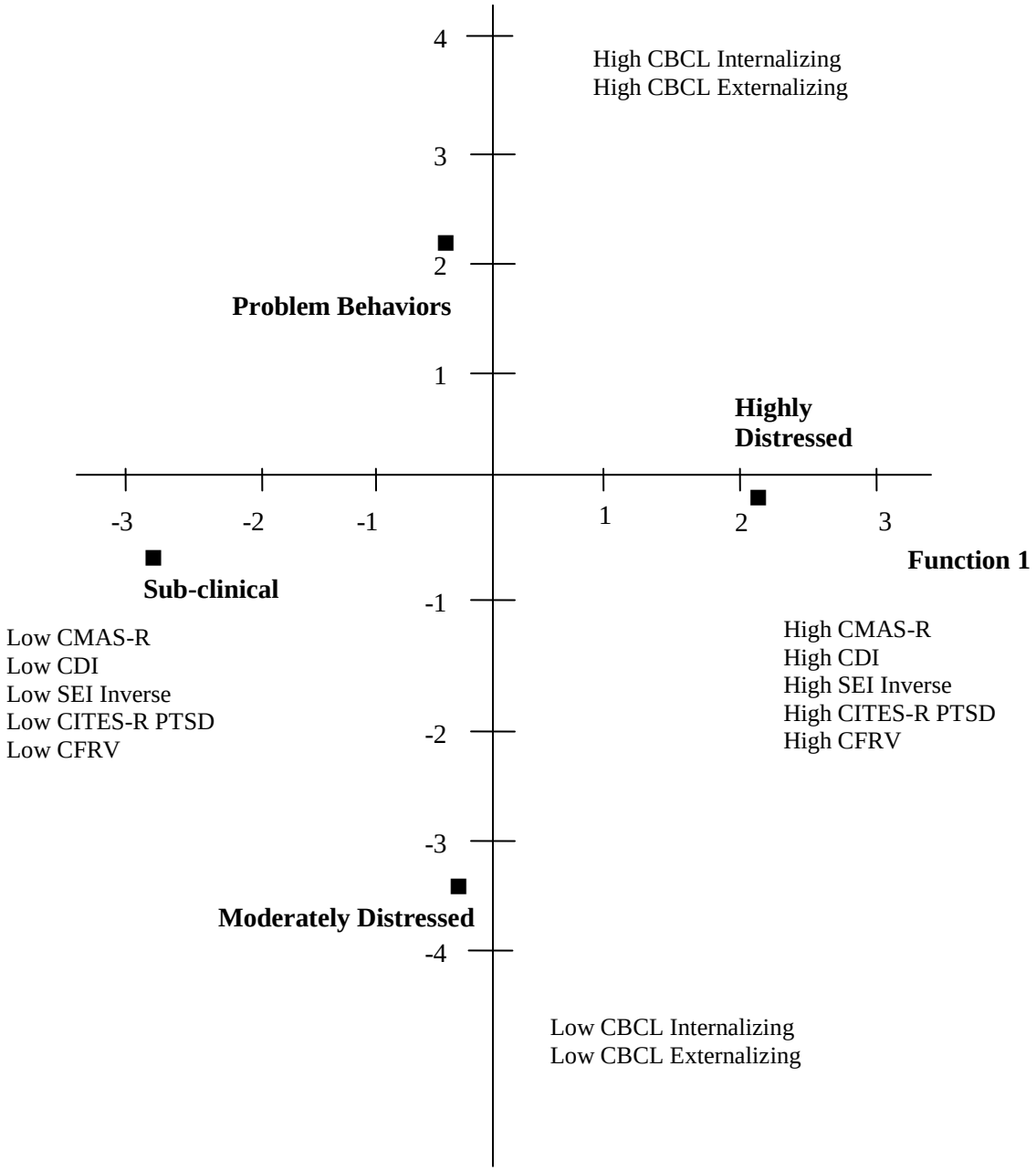
Variable	**Function 1**	**Function 2**
T1 CMAS-R Total	0.669	-0.067

Table 28 (continued)

Variable	Function 1	Function 2
T3 SEI Total Self Scale - Inverse	0.508	0.087
T1 SEI Total Self Scale- Inverse	0.470	0.181
TI CITES-R PTSD	0.458	-0.202
T3 CMAS-R	0.440	-0.002
T1 CDI Total[1]	0.395	0.051
T3 CITES-R PTSD	0.382	-0.094
T1 CBSI-2[1]	0.149	0.282
T3 CDI Total[1]	0.365	0.068
T3 CFRV Total	0.297	-0.106
T1 CBCL Internalizing Problems	0.261	0.534
T1 CBCL Externalizing Problems	0.177	0.465
T3 CBCL Internalizing Problems	0.211	0.395
T3 CBCL Externalizing Problems	0.167	0.339
T3 CSBI-2[1]	0.083	0.296
T1 CFRV Total	0.395	-0.139

[1] Scores used had undergone data cleaning and outliers were converted into most extreme scores.

Figure 7. Group centroids plot for Functions 1 and 2 from an "internal" linear discriminant function analysis for cluster membership of child pre- and post-treatment functioning.



Parent change scores related to group membership. To further explore the nature of the four clusters, an external LDF analysis was conducted using the change scores of parent psychological symptoms and support needs (i.e., SCL-90-R GSI, PEQ Total, PSI - Sense of Competence, PSI - Restriction of Role, F-COPES Total, FACES-III Cohesion Now, FACES-III Adaptability Now, PES Total, and PSAES Total). No significant functions were found that differentiated the clusters. A series of one-way ANOVAs was conducted to compare the means of each of the clusters on the selected measures of parent psychological symptoms and support needs. Pairwise comparisons using LSD minimum mean differences revealed no significant between-group differences for the selected measures (see Table 29).

Table 29

Linear Discriminant Function Analysis of Child Cluster Profiles of Pre- and Post-treatment scores and Parent Psychological Symptoms and Support Needs

Change Scores	Test of Significance (*F*)
SCL-90-R GSI	0.07
PEQ Total	0.16
PSI – Sense of Competence	0.26
PSI – Restriction of Role	0.71
F-COPES Total	0.87
FACES-III Adaptability Now	1.36
FACES-III Cohesion Now	1.11
PES Total	0.07
PSAES Total	0.87

df = 3,40

Specific Aim #4a: Participation in treatment and parent variables

Of the total 104 parents presenting for treatment 58 (55.8%) completed treatment (i.e., completed T3 assessment) while 46 (44.2%) did not complete treatment. A series of

one-way ANOVAs, chi-squares, and Independent *t*-tests were conducted to compare parents who completed treatment (i.e., completed T3) and those who had not completed treatment (i.e., not completed T3) across parent demographic variables, and psychological symptoms and support needs. As shown in Table 30, those who completed treatment were significantly older in age (M = 37.95, SD = 6.48) than those who did not complete treatment (M = 34.35, SD = 6.05), $t(102) = -2.90$, $p < .01$. No other significant differences were noted across the parent demographic variables.

Table 30

Independent t-tests and Chi-squares of Parent Demographic Variables for Parent Treatment Completion

Variables	Test of significance
Parent age – Treatment completion	$t(102) = -2.90$**
Number of children in the home – Treatment completion	$t(101) = -0.65$
Parent gender – Treatment completion	$X^2(1) = 0.31$
Parent ethnicity – Treatment completion	$X^2(4) = 2.08$
Parent marital status – Treatment completion	$X^2(4) = 3.23$
Family income – Treatment completion	$X^2(5) = 3.04$
Level of educational achievement – Treatment completion	$X^2(6) = 5.41$
Employment status – Treatment completion	$X^2(1) = 2.02$

** $p < .01$

Across the pre-treatment measures of parent psychological functioning and support needs, parents who did not complete treatment were more likely to have higher pre-treatment scores on the SCL-90-R GSI, $t(101) = 2.00$, $p < .05$, and PSI – Restriction of

Role subscale, $t(101) = 1.99$, $p<.05$, and lower scores on the F-COPES Total, $t(102) = -2.18$, $p < .05$ (shown in Table 31).

Table 31

Independent t-tests of Parent Psychological Symptoms and Support Needs for Treatment Completion

Variables	Test of significance
SCL-90-R GSI – Treatment completion	$t(101) = 2.01$*
PEQ Total – Treatment completion	$t(101) = 0.94$
PSI – Sense of Competence - Treatment completion	$t(99) = 0.38$
PSI – Restriction of Role – Treatment completion	$t(101) = 1.99$*
F-COPES Total – Treatment completion	$t(102) = -2.18$*
FACES-III Adaptability Now – Treatment completion	$t(102) = -0.82$
FACES-III Cohesion Now – Treatment completion	$t(102) = 0.07$
PES Total – Treatment completion	$t(87) = 0.07$
PSAES Total – Treatment completion	$t(86) = 1.13$
CTQ Emotional Abuse – Treatment completion	$t(63) = 1.94$
CTQ Physical Abuse[1] – Treatment completion	$t(63) = 0.12$
CTQ Sexual Abuse – Treatment completion	$t(63) = 0.54$
CTQ Emotional Neglect – Treatment completion	$t(63) = 1.23$
CTQ Physical Neglect[1] – Treatment completion	$t(63) = 1.62$

* $p < .05$.
[1]Measures had undergone data cleaning.

Specific Aim #4b: Participation in treatment and child variables

Independent *t*-tests and chi-squares were conducted to compare youth of parents who had completed treatment and those who had not completed treatment across child demographic variables, abuse-specific variables, and measures of psychological functioning. As shown in Table 32, youth of parents who did not complete treatment had an earlier age of onset of CSA (M = 8.36 years, SD = 2.945) than those who completed treatment (M = 9.54 years, SD = 2.789), $t(96) = -2.02$, $p < .05$.

Table 32

Independent t-tests and Chi-squares between Child Demographic Variables, Abuse-specific Symptoms and Symptom Presentation and Treatment Completion

Variables	Test of significance
Child age – Treatment completion	$t(102) = -1.62$
Age of onset of CSA – Treatment completion	$t(96) = -2.02$*
Duration of CSA - Treatment completion	$t(97) = -0.02$
Time between CSA and assessment – Treatment completion	$t(94) = 1.06$
Time between disclosure and assessment – Treatment completion	$t(94) = 0.07$
Time between abuse and disclosure – Treatment completion	$t(94) = 0.01$
Child gender – Treatment completion	$X^2(1) = 1.16$
Child ethnicity – Treatment completion	$X^2(5) = 2.77$
Use of Force – Treatment completion	$X^2(2) = 0.84$
Type of CSA – Treatment completion	$X^2(1) = 0.84$

Table 32 (continued)

Variables	Test of significance
Relationship to perpetrator – Treatment completion	$X^2(1) = 0.09$
Disclosure – Treatment completion	$X^2(1) = 6.26$

* $p < .05$.

Across the pre-treatment measures of child psychological functioning, parents who completed treatment did not differ significantly from those who did not complete treatment (Table 33).

Table 33

Independent t-tests of Child Emotional and Behavioral Symptoms for Parent Treatment Completion

Variables	Test of significance
CDI Total[a] – Treatment completion	$t(102) = 0.33$
CFRV Total – Treatment completion	$t(102) = -0.39$
CITES-R PTSD – Treatment completion	$t(102) = -0.09$
CMAS-R Total – Treatment completion	$t(102) = -0.71$
SEI Total Inverse – Treatment completion	$t(102) = -0.28$
CSBI-2[a] – Treatment completion	$t(102) = 0.44$
CBCL-Internalizing – Treatment completion	$t(102) = 0.93$
CBCL-Externalizing – Treatment completion	$t(102) = 0.08$

[a] Measures had undergone data cleaning

Discussion

Research has increasingly demonstrated that non-offending parents may experience significant psychological distress and may require greater support following their child's disclosure of CSA. Several studies have examined the impacts of psychological characteristics as well as parent demographics on such factors as parent support and belief of the child (e.g., Elliott & Carnes, 2001; Sirles & Franke, 1989), satisfaction with the parenting role (e.g., Manion et al., 1996), and the relationship with their child's level of functioning (e.g., Newberger et al., 1993) using a variety of parent- and child-report assessment measures. Further, CBT group interventions have shown much empirical support for addressing many of these psychological needs and increasing parent support of their child (e.g., Cohen et al., 2006; Deblinger et al., 2001; Saywitz et al., 2000). Given the growing numbers of children and families who present to CACs for mental health services, the implications of providing services on-site are important to consider, as this may also impact whether families complete treatment or terminate services prematurely.

The present study was unique in its detailed examination of parents participating in a particular cognitive-behavioral parallel group intervention for sexually abused youth and their non-offending parents. This dissertation sought to explore the relationships between parent psychological symptoms and support needs and child psychological and behavioral functioning, as well as relevant demographic variables (e.g., income, parent trauma history, severity of the CSA). Through a variety of parent- and child-report assessment measures, changes in symptomatology from pre-treatment to post-treatment were examined.

Parent Psychological Symptoms and Support Needs at Pre-treatment

To examine the first aim of the study, means and standard deviations of parent pre-treatment measures of psychological symptoms and support needs were examined. As noted in the literature, non-offending parents may experience significant distress or be traumatized upon discovery of their child's sexual abuse (e.g., Corcoran, 1998; Elliott & Carnes, 2001). However, contrary to the hypothesis that parents would be elevated on all measures of symptomatology, the present sample showed elevations only on the CTQ Sexual Abuse Scale score, which was within the moderate to severe range. Although the present findings support the literature that there is a high prevalence of parent-reported history of childhood sexual trauma (e.g., Svedin et al., 2002), these parents did not report elevations on any other symptoms of psychological functioning or support needs. It is important to note that all of the non-offending parents in the present study were voluntarily participating in treatment. Further, the mean time between the end of the CSA and disclosure was 4.58 months, and time between disclosure of CSA and the pre-treatment assessment was 5.83 months, which may have provided some time to buffer the impact of the disclosure on the parent, such as through receiving crisis counseling sessions or through the support of others.

As noted, in addition to the range of symptomatology non-offending parents may experience following their child's disclosure of CSA, many may also experience considerable social, emotional, and economic difficulties (e.g., Elliot & Carnes; Svedin et al., 2002). The impact of these stressors may in turn influence not only their own level of functioning but also their ability to be supportive of their child and the child's immediate and long-term adjustment (e.g., Corcoran, 2004; Deblinger et al., 2001). Relationships

between parent psychological symptoms and support needs and parent demographic variables were examined through Pearson product-moment correlations and chi-square analyses. Although parent trauma history was not associated with greater overall psychological distress, as hypothesized, several scales of the CTQ were associated with various parent demographic variables, including parents who were unemployed tended to have higher scores on the CTQ Emotional Abuse Scale, CTQ Physical Abuse Scale, and CTQ Physical Neglect Scale. Parent marital status was associated with psychological distress, mainly with parents who were never married, either living with someone or not living with someone, or separated, had significantly higher scores on the SCL-90-R GSI compared to those who were married. Thus, parents who appeared to have a limited support system, whether due to their child's sexual abuse (i.e., intrafamilial CSA when the perpetrator was a spouse or significant partner), or prior to the CSA, tended to endorse higher SCL-90-R GSI scores, a measure of overall psychological distress. As noted, although several significant relationships were demonstrated across chi-square analyses of parent demographic characteristics and parent measures of psychological symptoms and support needs, these relationships were noted with caution due to limited sample size. Thus, a larger sample would be needed in order to verify the significance of these relationships.

The relationships between child demographic variables and abuse characteristics with parent psychological symptoms and support needs were then examined through Pearson product-moment correlations and chi-square analyses. As noted, the literature is overall inconclusive regarding the impact of CSA on female versus male victims, as Finkelhor (1990) found comparable symptoms of fear and sleep disturbances while Wells

et al. (1997) noted more behavioral problems and sexually acting out for male victims. Contrary to the hypothesis that parents of male victims would be more likely to endorse symptoms of distress and worse expectations for their child, no relationships between gender of child and parent symptoms were found in the present findings. However, it is important to consider that the number of male victims included in the present study were limited. Scores on the PSAES, a measure of parental expectations of future negative impact of the CSA on their child, were higher for parents of older children and for those with greater time between the CSA and the pre-treatment assessment. The association between the age of the victim and worse parental expectations for the child highlights the need to address feelings the parent may have toward their child, particularly for its potential impact on the child's psychological and emotional functioning, as well as behavioral and/or emotional disturbances that may be present. Further, parents of children who were sexually abused by a non-family member tended to have significantly higher PSI – Restriction of Role subscale scores, indicating that these parents were likely to perceive their parental role as more restrictive of their freedom, more frustrating, and were more likely to experience resentment and anger toward their child and/or spouse. As noted by Regehr (1990), parents of children affected by extrafamilial CSA may become overly protective of their child and severely restrict their activities. This may also have an impact on their own activities and sense of freedom as a parent.

Cluster Analysis of Child Pre-treatment Functioning

To examine the second aim of the study, a hierarchical cluster analysis was conducted on scores from select pre-treatment parent- and child-report measures in order to identify patterns of functioning and adjustment associated with CSA. The Ward's

method with Squared Euclidean distance was used as the primary method of clustering. The within-cluster variability of reducing a four cluster solution into three clusters and a visual examination of the dendogram supported a four cluster solution. Several studies utilizing hierarchical cluster analysis have identified distinct clinical profiles of sexually abused youth (e.g., Hébert et al., 2006; Trickett et al., 2001).

As expected, one cluster was characterized by youth who did not exhibit clinical elevations on any measures of child- or parent-report symptoms of psychological and behavioral functioning. This Sub-clinical cluster consisted of 28 individuals, which was 26.9% of the sample. This was consistent with the literature that between 20-50% of youth may present as symptom-free during an initial assessment (Lynskey & Fergusson, 1997; Swenson & Hanson, 1998; Wolfe, 2006). The Highly Distressed cluster was comprised of youth who exhibited significant elevations on multiple measures of behavioral and psychological functioning, based on both child- and parent-report. This cluster was the smallest group and consisted of 15 individuals, which was 14.4% of the sample. In comparison, higher percentages have been reported in the literature of victims who evidenced clinically-significant problems within the first several months following disclosure, such as 30% reported by Wolfe (2006). Youth with clinically elevated symptoms may require individual services prior to inclusion in group treatment. This may have resulted in lower percentages of such youth presenting for group therapy in the present study.

The largest cluster, which consisted of 35 youth and 33.7% of the sample, was identified as the Problem Behaviors cluster. This cluster was marked by the highest levels on parent-reported symptoms of internalizing, externalizing, and sexual behavior

problems, as well as elevations for PTSD, fears, and general anxiety. The final cluster was labeled Moderately Distressed, and consisted of 26 youth, which was 25% of the total sample. The Moderately Distressed cluster was characterized by moderate elevations on child-reported symptoms of depression, low self-esteem, and general anxiety, and moderate elevations on parent-reported symptoms of internalizing and externalizing behaviors.

Interestingly, differences between the Moderately Distressed cluster and the Problem Behaviors cluster appeared to be partly related to the identity of the informant, as measures were completed by both parents and youth. Parents of youth belonging to the Problem Behaviors cluster reported significantly higher symptoms of internalizing, externalizing, and sexual behavior problems compared to those belonging to the Moderately Distressed cluster. Further, some significant differences were also noted in child-reported measures of functioning between these two groups, with youth belonging to the Problem Behaviors cluster reporting higher fears and PTSD symptoms and youth belonging to Moderately Distressed cluster reporting more depressive symptoms and lower self-esteem. The current sample demonstrated modest agreement about child symptomatology across the four clusters, which is consistent with the literature of general agreement between parent- and child-reports of symptomatology reported to be modest to low (e.g., Achenbach, McConaughty, & Howell, 1987; Phares, Compas, & Howell, 1989). That is, for youth belonging to the Moderately Distressed and Sub-clinical clusters, there appeared to be general agreement between youth and parent report of symptoms. However, for youth belonging to the Highly Distressed and Problem Behaviors clusters, there was more disparity between child and parent report of

symptoms. Overall, it is likely that the four clusters noted in the present study were representative of child symptomatology and not merely a product of the informant.

Contrary to previous research and as hypothesized, a cluster based solely on the presence of symptoms of PTSD (e.g., Sedlar, 2001), which is considered to be a hallmark symptom of CSA (Kendall-Tackett et al., 1993; Wolfe, 2006), was not identified. While youth belonging to the Highly Distressed cluster did demonstrate significantly higher PTSD symptoms than the other clusters, and Problem Behaviors cluster was significantly higher than both the Moderately Distressed cluster and Sub-clinical cluster, the four clusters did not differ solely based on symptoms of PTSD. The lack of a cluster profile based on PTSD symptoms in the present study may be attributed to several factors. First, the CITES-R (Wolfe et al., 1991) is a general measure of the impact of CSA from a child's perspective, which includes PTSD symptoms, rather than a measure purely to assess symptoms of PTSD. Therefore, it would be beneficial for future studies to select a measure that is more specific and sensitive to the symptoms of PTSD. Second, youth who demonstrated elevations in symptoms of PTSD also tended to display elevations on other symptoms, thus making the existence of a PTSD cluster unnecessary. This is consistent with the literature that there is often a wide range of symptoms evidenced by youth, rather than solely symptoms of PTSD or sexualized behavior problems (e.g., Beitcham et al., 1991; Browne & Finkelhor, 1986; Finkelhor, 1990; Wolfe et al., 1989).

A series of one-way ANOVAs and LDF analyses were performed to further examine the differences among the clusters for child symptoms of psychological and behavioral functioning. Results indicated that there were several significant and meaningful differences among the four profiles on the multiple measures used in the

cluster analysis, which verified the existence of the four clusters. For example, differences were significant between each of the four clusters on measures of depression and self-esteem. Further, youth belonging to the Sub-clinical cluster demonstrated significantly lower symptoms than the other clusters on five of the eight measures (i.e., CDI Total, CMAS-R Total, SEI Total Self Inverse Scale, CBCL Internalizing, and CBCL Externalizing scales). Results of the LDF analyses demonstrated three significant functions, with differences based mainly on identity of the informant. That is, the first function was related to higher symptoms reported by both parents and youth. The second function was related to higher symptoms reported mainly by parents. Lastly, the third function was related to higher symptoms reported mainly by youth.

To further examine the differences among the four clusters, child demographic (e.g., age, gender) and abuse characteristic (e.g., severity, duration, relationship of perpetrator) variables were examined in relation to each cluster. While child ethnicity differed significantly among the four clusters, these relationships were noted with caution due to limitations in sample size. Thus, a larger sample would be needed in order to verify the significance of these relationships. However, age of the victim differed significantly among the clusters, such that youth belonging to the Moderately Distressed cluster tended to be significantly older in age than the other three clusters. Interestingly, no differences were noted between the four clusters with regard to abuse-specific characteristics.

Parent demographic variables were then examined in relation to each cluster. While parent ethnicity was found to differ significantly among the four clusters, caution was again noted due to a limited sample size. Parent employment status was found to

differentiate youth belonging to the Problem Behaviors cluster from the other clusters, as parents of these youth tended to be unemployed. Difficulties associated with being unemployed, such as limited family income and resources, may have contributed to a higher level of parent-reported symptoms in comparison to the other clusters, as well as having an impact on the child as demonstrated by elevations on child-reported symptoms. Further, parent employment status was identified as the sole parent demographic variable to discriminate the child clusters, with parents who were unemployed having a higher level of parent-reported child symptomatology.

One-way ANOVAs and LDF analyses were then conducted to examine the differences among the four clusters for parent measures of psychological symptoms and support needs. Several significant and meaningful differences were noted among the four profiles. The results of the present study were consistent with the literature that greater parental symptom distress has been associated with poorer adjustment in child victims (e.g., Browne & Finkelhor, 1986; Deblinger et al., 2001). In the present study, parents of youth belonging to the Sub-clinical cluster tended to endorse a greater sense of competence in their parenting skills, greater efficacy in their parenting ability, and better expectations of the impact of CSA on their child. As noted, youth belonging to the Sub-clinical cluster also endorsed a lower level of symptoms on the majority of measures of functioning. Thus, less parental symptom distress may have served as a protective factor in buffering the potential negative impact of CSA on the victim. Further, a single discriminant function was identified, which was characterized by elevations on several measures of parent functioning and childhood history of emotional abuse. Consistent with

the literature, the impact on parent functioning may affect their ability to support their child, and thereby affect the impact on the child's level of adjustment following CSA.

Change in Parent Psychological Symptoms and Support Needs from Pre- to Post-Treatment

As hypothesized, parents demonstrated some significant improvements in functioning from pre- to post-treatment, namely on overall distress, as measured by the SCL-90-R GSI, and on perceptions of better functioning and having a less chaotic family unit, as measured by the FACES-III Adaptability Now subscale. Although it was hypothesized that parents would not differ across change scores of their psychological symptoms based on childhood trauma history, several significant differences were identified. For example, the change scores on overall distress, as measured by the SCL-90-R GSI, were significantly greater for parents who had higher scores on the CTQ Emotional Abuse Subscale and CTQ Sexual Abuse Subscale. Thus, these parents endorsed greater improvements on overall distress following completion of treatment. Parents who endorsed higher CTQ Emotional Abuse Subscale scores also tended to endorse less improvement on perceived efficacy of their parenting role, as measured by the PEQ Total. Further, parents who endorsed higher CTQ Sexual Abuse Subscale scores also tended to endorse less improvement on their ability to identify behavioral and problem-solving strategies, as measured by the F-COPES Total. Although parent childhood sexual trauma history has not been associated with the quality or level of support provided to the child victim, these findings highlight the potential impact trauma history may have on parental functioning (e.g., Wind & Silvern, 1994), and possible

impact treatment may have on addressing the parent's own history of childhood trauma (Lanktree, 1994; Tavkar & Hansen, in press).

Through a series of multiple regression analyses, several variables of parent and child demographics and abuse characteristics were shown to significantly predict the multiple regression models for change scores. For example, the change score on the PES Total, a measure of the parent's expectations regarding their child's adjustment in functioning over the following year, was significantly predicted by the gender of the parent. Specifically, results demonstrated that mothers endorsed better expectations for their child's adjustment in comparison to fathers. However, for several models, none of the predictors contributed significantly. Thus, for these multiple regression models, including the PSI – Sense of Competence subscale and the FACES-III Adaptability Now Subscale, other factors that had not been considered may have contributed to differences among subgroups. Future studies may benefit from the inclusion of additional variables that had not been examined here.

Post-Treatment Measures of Parent Psychological Symptoms and Support Needs

Parent post-treatment scores of psychological functioning were then examined in relation to abuse-specific characteristics and demographic variables. Several significant and meaningful differences were noted. For example, higher overall distress at post-treatment, as measured by the SCL-90-R GSI, was associated with parents of youth for whom force had been used during the CSA. Interestingly, parents who endorsed better functioning and greater enmeshment within their family unit at T3, as measured by the FACE-III Cohesion Now Scale, tended to have children who had an earlier age of onset of CSA and children who were younger in age. While the trauma experienced by non-

offending parents is often believed to be more significant than the trauma experienced by victims, especially for younger victims (MacFarlane et al., 1986), these parents endorsed better functioning on this measure in comparison to parents of older victims. A possible explanation for this finding may be that presenting for and completing a 12-week parallel group treatment with their child contributed to their sense of enmeshment as a family unit.

Parent post-treatment scores on measures of psychological functioning and support needs were examined in relation to parent trauma history. Parents who endorsed higher levels of overall distress at T3 tended to have higher scores on the CTQ Emotional Neglect Subscale and CTQ Physical Abuse Subscale. Further, parents who endorsed being better able to identify behavioral and problem-solving strategies when faced by problematic situations, as measured by the F-COPES Total, were more likely to have lower CTQ Sexual Abuse Subscale scores. Thus, as is consistent with the literature that childhood sexual abuse and physical victimization may impede a parent's ability to cope with their child's victimization (Corcoran, 1998), the present study found that parent trauma history appeared to have an impact on parent functioning at post-treatment.

Child Cluster Profiles over the Course of Treatment

To examine the third aim of the study, a hierarchical cluster analysis was conducted on scores from select pre- and post-treatment parent- and child-report measures in order to identify patterns of functioning and adjustment associated with CSA over the course of treatment. The Ward's method with Squared Euclidean distance was again used as the primary method of clustering given its utility as a person-centered approach to grouping individuals based on scores on multiple variables (Crockett et al.,

2006). The within-cluster variability of reducing a four cluster solution into three clusters and a visual examination of the dendogram supported a four cluster solution.

As hypothesized, distinct clusters of youth were identified that differed significantly across measures of symptom presentation over the course of treatment. Interestingly, the original four child clusters that had been based on measures of pre-treatment functioning were maintained. The first cluster, which was the largest, consisted of 20 youth (37%), and was labeled Highly Distressed. The second cluster was the Sub-clinical group and consisted of 12 youth (22.2%). The third cluster was the Problem Behaviors group, which was comprised of 16 youth (29.6%). Finally, the fourth cluster was the Moderately Distressed cluster, and consisted of 6 youth (11.1%). While the individual clusters were maintained, the percentage of the youth who belonged to each cluster changed over the course of treatment.

While the Problem Behaviors cluster was the largest group at pre-treatment, 19 of these youth (54.3%) did not complete treatment. A decline in number of these youth participating in treatment may be attributed to difficulties experienced by parents as they tended to report a higher level of symptoms than youth. For youth who were described as Highly Distressed at pre-treatment, an additional 5 youth were identified as belonging to this cluster at post-treatment. Such an increase in symptomatology for these youth may be understood by the possible emergence of the longer-term impact of CSA that may have gone undetected at the pre-treatment assessment or emerged due to ongoing stressors (e.g., Finkelhor, 1990). For youth who belonged to the Sub-clinical cluster at pre-treatment, 16 of these youth (57.1%) did not complete treatment. For these youth, premature drop-out may be due to such factors as both parents and youth perceiving a

limited utility of attending a 12-week parallel group treatment, participation in other activities (e.g., social events) due to a lower level of distress or impairment, as well as the potential adverse effects for families of being exposed to youth and parents who were experiencing more clinically significant symptoms. Lastly, for youth who belonged to the Moderately Distressed cluster at pre-treatment, 20 of these youth (76.9%) did not complete treatment. Such a notable decrease in youth belonging to the Moderately Distressed cluster may attributed to difficulties experienced by both parents and youth.

Linear discriminant function analyses were then conducted at T3, and two significant functions were identified. In contrast to the three functions identified at pre-treatment, the two functions at post-treatment were characterized by either elevated parent-reported symptoms or elevated child-reported symptoms. Thus, there was less continuity across measures of child symptomatology over the course of treatment based on the identity of the informant. External LDF analyses between parent symptoms of psychological functioning and support needs and youth cluster profiles did not demonstrate any significant differences among the four clusters.

Treatment Completion

Parent demographic variables were examined in relation to treatment completion. In contrast to the hypothesis that having a lower family income would result in higher treatment dropout, family income was not found to be a significant predictor. Interestingly, parents who were older in age were more likely to complete treatment compared to parents who were younger. Further, parents who did not complete treatment had reported significantly higher levels of overall distress, feeling more restricted in their parenting role, and having more difficulties being able to identify behavioral and

problem-solving strategies, in comparison to parents who completed treatment. Thus, several measures of parent psychological functioning were significant predictors of treatment completion, contrary to the hypothesis that only family income would affect treatment completion.

Youth demographic variables, abuse characteristics, and symptoms of psychological and behavioral functioning, were then examined in relation to treatment completion. Contrary to the hypothesis that several factors would predict treatment completion, only the age of onset of CSA was significantly different among those who completed treatment and those who terminated prematurely. Specifically, families who completed treatment were more likely to have a child with an earlier age of onset of CSA. A possible explanation for this retention in treatment may be that parents of these youth were more likely to have experienced more psychological symptoms, given that parents of younger victims may be more adversely affected than the child victim (MacFarlane et al., 1986), thereby causing these parents to continue and complete services.

Limitations of the Present Study and Future Directions

The present study sought to further the literature on the impact of CSA on the victim and non-offending parent, and examined the relationships between various parent and child variables on parent and child symptomatology, at pre-treatment as well as upon completion of group treatment. However, limitations existed and warrant discussion. First, although the sample of 104 youth and their non-offending parents was larger in comparison to many other studies of CSA, the sample size limited the reliability of several of the relationships that were noted. Future studies that utilize larger samples of youth and parents may allow for greater confidence in the findings.

Second, generalizability of the present sample to other populations is limited due to its characteristics and how the participants were recruited. As noted, all participants included in this study were presenting voluntarily for a parallel group treatment. Further, the sample was relatively homogenous with regards to several characteristics, including racial identity, the relationship between the parent and child, the gender of the parent and child, and geographic location. However, given that symptom presentation of youth were heterogeneous and were similar to previous findings (e.g., Hébert et al., 2006), the results of the present study may be similar to those obtained from a non-treatment seeking population or a more demographically-heterogeneous group. Overall, future studies should recruit a more diverse sample and attempt to include families who have not sought treatment services.

Third, while a variety of parent and child-report measures of psychological functioning were utilized, future studies should continue to incorporate valid measures that are more specific to assessing relevant symptomatology (e.g., PTSD, child-reported conduct and sexual behaviors). Further, several measures of functioning were developed by Project SAFE. Although these measures have been shown to be valid and reliable for participants attending Project SAFE services, these measures should be evaluated with larger samples of participants.

Conclusions

Child sexual abuse continues to be a prevalent and complex problem in today's society as it poses serious and pervasive mental health risks to child victims and their non-offending parents. The heterogeneity and potential severity of symptom presentation necessitates the development and access to effective and timely interventions. Although

group therapy has been shown to be a cost- and time-effective treatment, and has been noted by some to be the treatment of choice (e.g., Avinger & Jones, 2007; Heiman & Ettin, 2001; Reeker & Ensing, 1998), the ability to address needs for youth and parents who present with such heterogeneity of symptomatology continues to be a challenge. Therefore, an examination of child and parent demographic variables and measures of functioning is important for understanding and tailoring effective interventions for the individual needs for victims and their non-offending parents. Further, the relationship between child and parent characteristics and client retention is vitally important in order to decrease the high rate of treatment attrition which continues to a prevalent problem.

The current research findings further suggest that an examination of parents, their own history of trauma and victimization, and psychological symptoms and support needs is necessary given the impact on the sexually abused child. Further, similarities between youth symptom presentation and parent symptomatology were noted. For example, children with sub-clinical symptoms tended to have parents who also reported sub-clinical symptoms. Children with clinically elevated symptoms tended to have parents who also reported elevated symptoms. This highlights the critical need to provide services for parents of youth who present as highly distressed or with elevations in symptomatology, as these parents may also be experiencing similar symptoms and greater support needs. While a sizeable portion of youth present for services with little to no symptoms, the current findings suggest that some children may demonstrate symptoms at a later time, particularly due to either the emergence or continuation of stressors (e.g., Finkelhor, 1990). As noted, an additional 5 youth in the present study were identified as belonging to the Highly Distressed cluster at post-treatment than at pre-

treatment. Given that this is the first study of its kind in examining the psychological symptoms and support needs of non-offending parents and its impact on victim symptom presentation at pre- and post-treatment for a parallel CBT group intervention, future studies should continue to examine these clinical presentations, particularly with larger samples. Lastly, given the access of mental health services conducted on-site at CACs, which are being increasingly utilized, the dissemination of such effective and efficient interventions is critical (Tavkar & Hansen, in press).

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Appendix A:

Parent and Family Measures

Parent ID: _____ Child ID: _____
Date: _____

DEMOGRAPHIC QUESTIONNAIRE

1. Are you:
   _____ married
   _____ widowed
   _____ divorced
   _____ separated
   _____ never married but living with someone
   _____ never married, not living with someone

If you are/were married, for how long?
_____

If separated or divorced, when did you separate?
_____

2. Please list all the children you have had (or acted as a parent for), their ages, and their relationship to the child in treatment here (for example, full brother or sister, step-brother, etc.):

_____
_____
_____
_____
_____

3. List all the people who are currently living in your home, and their relationship to you:

_____
_____
_____
_____
_____
_____
_____

4. Are you employed now? Yes No
   What is your usual occupation?
   _____
   If your partner is not participating in treatment, what is his/her usual occupation?
   _____

5. What is your combined family income?
   _____ $15,000 or less
   _____ $15,001 to $25,000
   _____ $25,001 to $40,000
   _____ $40,001 to $60,000
   _____ $60,001 to $100,000
   _____ over $100,000

6. What was the highest grade in school you completed? _____

7. Date of birth: _____
   How old are you? _____

8. What is your ethnic background?
   _____ African American
   _____ Asian American/Pacific Islander
   _____ Caucasian (White)
   _____ Hispanic American
   _____ Native American
   _____ Other (please specify: _____)

---

9. Child's birth date: _____
   How old is your child? _____

10. Child's gender: Male Female

11. What school does your child attend?
    _____
    What grade is your child in? _____

12. What is your child's ethnic background?
    _____ African American
    _____ Asian American/Pacific Islander
    _____ Caucasian (White)
    _____ Hispanic American
    _____ Native American
    _____ Other (please specify: _____

Parent ID: _____ Child ID: _____
Date: _____ DOB: _____ age: ____

Child History Form

INTERVIEWER: Have parent(s) describe the abuse his/her child has experienced and fill out the form below. Ask the specifics below as necessary. If there was more than one perpetrator or time frame, repeat as necessary (add another column).

Age of child at onset of abuse:_____
Age of child at end of abuse: _____
Duration (months): _____

Perpetrator's Relationship to Child: _____
Sex: _____
Age: _____ (at time of the abuse)

Frequency of Abuse:

one time only once a year 2-5 times a year more than 5 times a year

once a month 2-3 times a month once a week 2 or more times a week Don't Know (DK)

Total Number of Times Abused:

1 2 3 4 5 6-10 11-15 16-20 21-25

26-50 51-75 76-100 more than 100 DK

What Abuse Consisted Of: *(circle all that apply)*

exposure pornography fondling anal sex oral sex

vaginal sex digital penetration making child perform acts on another

Was force used (circle one)? YES NO DK

When was the abuse disclosed? _____

How? Who told? _____
_____

Were the police involved? YES NO DK

Was there a trial or court as a result of this abuse? YES NO DK

Interviewer calculate:
Time since end of the abuse and this assessment (months): _____
Time since disclosure and this assessment (months): _____

Parental Expectancies Scale (PES)

We are interested in how you expect your child to compare with most other children similar in age to your child. Please think about your expectations for your child over the **next 12 months**. Please rate your expectations for your child in the following areas according to the scale below:

10	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Much better than most other children				**About the same as most other children**				**Much worse than most other children**	

1. Schoolwork
   10 9 8 7 6 5 4 3 2 1

2. Getting along with other children
   10 9 8 7 6 5 4 3 2 1

3. Motivation in school
   10 9 8 7 6 5 4 3 2 1

4. Emotional adjustment
   10 9 8 7 6 5 4 3 2 1

5. Participating in extracurricular activities (e.g., sports) with other children
   10 9 8 7 6 5 4 3 2 1

6. Spending quality time with his/her family
   10 9 8 7 6 5 4 3 2 1

7. Making new friends
   10 9 8 7 6 5 4 3 2 1

8. Getting along with his/her brothers and/or sisters
   10 9 8 7 6 5 4 3 2 1 N/A

9. Getting along with you
   10 9 8 7 6 5 4 3 2 1

10. Getting along with his/her other caregivers
    10 9 8 7 6 5 4 3 2 1 N/A

11. Following rules at home
    10 9 8 7 6 5 4 3 2 1

12. Keeping the friends he/she already has
    10 9 8 7 6 5 4 3 2 1

Post Sexual Abuse Expectations Scale

Please answer the following questions about the **next 12 months**.

What future negative impact do you expect sexual abuse to have on the child you are bringing to treatment in the following areas:

5	4	3	2	1
Substantial negative impact				No negative impact

1. School
   5 4 3 2 1

2. Peer relationships
   5 4 3 2 1

3. Relationship with you
   5 4 3 2 1

4. Relationship with other caregivers
   5 4 3 2 1 N/A

5. Relationship with brothers and/or sisters
   5 4 3 2 1 N/A

6. Behavioral adjustment
   5 4 3 2 1

7. Emotional adjustment
   5 4 3 2 1

8. Overall, what future negative impact do you expect sexual abuse to have on your child
   5 4 3 2 1

Appendix B

Parent Consent Forms

INFORMED CONSENT FORM

An Evaluation of Project SAFE Group Treatment

The present study will evaluate the effectiveness of a standardized treatment for sexually abused children (ages 7-16) and their nonoffending caregivers being offered by the Psychological Consultation Center of the University of Nebraska-Lincoln. The goal is to ensure that the best services available are provided to families such as yourself. Your participation in this study will consist of four assessment sessions, each lasting between 1 to 2 hours. Upon completion of the treatment program, you will also be asked about your family's willingness to participate in additional follow-up assessment sessions. During the assessment sessions, you will be asked to provide basic demographic information about your family. In addition, you and your child will be asked to fill out several questionnaires to provide information on your child's and family's experiences following disclosure of sexual abuse. These sessions will occur in the Psychological Consultation Center or the Child Advocacy Center.

Given that this is a sensitive topic, it is possible that some of the questions may bring up painful emotions and memories. If any child or parent becomes too upset, the assessment will end. If you feel that you would like additional services at any time during your participation in this project, the appropriate referral will be made. As researchers, we are legally bound to report any instances that a child is being hurt or mistreated. If this case arises, every effort will be made to talk with the parents before reporting the information to the authorities.

The information obtained through this research will help provide better treatment for other children and families dealing with the aftermath of sexual abuse. Any information that could possibly identify you or your child will be kept strictly confidential. Information from the larger study may be published in scientific journals or presented at scientific meetings, but your family's identity will be kept strictly confidential.

Each family participating in this study will receive a client code and a case number. All of your family's records will include this number, and not your name. All of the clinical data will be kept in locked files in the Psychology Department at the University of Nebraska-Lincoln or the Child Advocacy Center, and only project staff will have access to them. This information will not be shared with anyone outside this project unless you sign a release of information saying that it is OK to do so.

Each of the four assessment periods will take approximately 1 to 2 hours. Each family will receive $20 for the intake, pre-treatment assessment and $20 for the three-month follow-up assessment.

If you have any questions about the study, please contact the Project Clinical Coordinator, Poonam Tavkar, at 402-472-8795 or the Clinical Supervisor, Dr. David Hansen at 402-472-2619. If you have any questions about your rights as a research participant that have not been answered by the investigator, or if you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you choose) concerns to the University of Nebraska-Lincoln Institutional Review Board at 402-472-6965.

You are free to decide not to participate in this study or to withdraw your participation at any time without hurting your relationship with the University of Nebraska, the Psychological Consultation Center, the Child Advocacy Center, or any of the researchers and therapists working on this project. Your decision will not result in any loss of benefits to which you are otherwise entitled.

YOU ARE VOLUNTARILY MAKING A DECISION WHETHER OR NOT TO PARTICIPATE IN THIS RESEARCH AND TREATMENT STUDY. **YOUR SIGNATURE CERTIFIES THAT THE CONSENT FORM HAS BEEN FULLY EXPLAINED TO YOU AND THAT YOU HAVE DECIDED TO PARTICIPATE. YOUR SIGNATURE ALSO CERTIFIES THAT YOU GIVE PERMISSION FOR YOUR CHILD TO PARTICIPATE.** YOUR SIGNATURE ALSO CERTIFIES THAT YOU HAVE HAD ALL OF YOUR QUESTIONS ANSWERED TO YOUR SATISFACTION. IF YOU THINK OF ANY QUESTIONS DURING THE COURSE OF THE STUDY, PLEASE CONTACT THE INVESTIGATORS. You will be given a copy of this consent form to keep.

YOUR SIGNATURE HERE MEANS THAT YOU AGREE TO PARTICIPATE IN THIS PROJECT.

_____ _____

Signature of Participant **Date**

YOUR SIGNATURE HERE MEANS THAT YOU AGREE TO ALLOW YOUR CHILD TO PARTICIPATE IN THIS PROJECT.

_____ _____

Signature of Participant **Date**

_____ _____

Signature of Witness **Date**

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Department of Psychology
University of Nebraska-Lincoln
(402) 472-2619

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Poonam Tavkar, M.A.
Family Interaction Skills Clinic
Psychological Consultation Center
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Appendix C

Youth and Child Assent Forms

YOUTH ASSENT FORM

An Evaluation of Project SAFE Group Treatment

We are interested in seeing how we can help adolescents like yourself. We would like for you and your parent(s) to answer several questions about your feelings about what happened to you and your feelings about your family and friends. We will ask you these questions four times over the next few months. Each of these sessions will last between 1 to 2 hours and each family will receive $20 for the intake assessment and $20 for the three-month follow-up assessment. After completing the treatment program, you will be asked about your willingness to participate in future information gathering sessions.

We will be asking you to talk about what happened to you, but we don't want to know any of the details. This can be scary and unpleasant for you. We do know, though, that other adolescents have felt better after talking about what happened to them. If you get too upset or don't want to talk anymore, that's OK. You can stop whenever you want to.

The information we get from this project will make sure that we are providing the best treatment for adolescents and families like your own. You and your family will get a client code and a case number. All of your family's records will include this number, and not your name. All this information will remain confidential and will not be shared with anyone outside this project unless your parents sign a release of information saying that it is OK to do so.

Your parents will also be asked to give their permission for you to take part in this study. Please talk this over with your parents before you decide whether or not to participate.

You can stop answering questions at any time. And you don't have to answer any questions you don't want to. No one will get upset if you want to stop.

IF YOU SIGN THIS FORM IT MEANS THAT YOU HAVE DECIDED TO PARTICIPATE AND HAVE READ EVERYTHING THAT IS ON THIS FORM.

_____ _____

Signature of Participant **Date**

_____ _____

Signature of Witness **Date**

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CHILD ASSENT FORM

An Evaluation of Project SAFE Group Treatment

We are interested in seeing how we can help children like yourself. We would like for you and your parent(s) to answer a lot of questions about your feelings about what happened to you, and your feelings about your family and friends. We will ask you these questions several times over the next few months. We will also ask if you would like to come back for later sessions after you finish the program.

We will be asking you to talk about what happened to you, but we don't want to know any of the details. This can be scary and unpleasant for you. We do know, though, that lots of other kids have felt better after talking about what happened to them. If you get too upset or don't want to talk anymore, that's OK. You can stop whenever you want to.

Your parents will also be asked to give their permission for you to take part in this study. Please talk this over with your parents before you decide whether or not to participate.

You can stop answering questions at any time. And you don't have to answer any questions you don't want to. No one will get upset if you want to stop.

IF YOU SIGN THIS FORM IT MEANS THAT YOU HAVE DECIDED TO PARTICIPATE AND HAVE READ EVERYTHING THAT IS ON THIS FORM.

_____ _____

Signature of Participant **Date**

_____ _____

Signature of Witness **Date**

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