

HISTORY OF CHILD SEXUAL ABUSE AND ACTING OUT AMONG
ADOLESCENTS IN RESIDENTIAL TREATMENT

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ABSTRACT

**KRISTIN WOLFF GATOUX: History of Child Sexual Abuse and Acting Out
Among Adolescents in Residential Treatment
(Under the direction of Rune J.Simeonsson)**

Adolescents in residential treatment with reported histories of CSA and diagnoses of PTSD exhibit significant acting out behaviors, especially during the evening. This study sought to evaluate whether child sexually abused (CSA) adolescents exhibiting significant psychopathology in residential treatment differed from non-abused peers in terms of frequency and time of acting out, number of total diagnoses, rates of PTSD diagnoses, and gender differences in behavior. The time of acting out incidents among 78 adolescents with reports of child sexual abuse (CSA) was compared to the timing of incidents among adolescents not reported to have been abused. Information was obtained from previously collected retrospective observations. Reliability of information collected was assessed by conducting a reliability study and reviewing a select number of records of subjects. An Independent Samples t-test analysis was performed to test the hypothesis that adolescents with reports of CSA experience more incidents during the evening than their non-CSA counterparts. Significant findings revealed higher total co-morbid diagnoses, higher diagnoses of PTSD, and gender differences in behavior shown. However, no significant group differences in frequency or time of acting out were found. The findings contribute to a better understanding of the function of acting out, as well as to creating appropriate prevention and treatment strategies to help reduce incidents and improve adolescent well-being.

DEDICATION

To Anne Janet Cullen Cirillo, whose consistent love, support and recognition of those in need inspired me to seek understanding and acknowledge their strengths.

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CHAPTER 1

INTRODUCTION

During adolescence, individuals face a time of uncertainty and questioning of who they are and who they are becoming. Erik Erickson's psychosocial theory defines this stage as identity versus role confusion. In a normally developing teen, the questions about where they fit into society can be quite overwhelming. When negative life experiences such as child sexual abuse (CSA) become part of an adolescent's history, increased stress adds to the complexity of one's life trajectory during this stage of development. Since adolescents with CSA histories vary in the symptoms and sequelae exhibited, it is difficult to create one symptom profile that applies to all adolescents. Understanding the multifarious nature of CSA allows for the selection of appropriate assessment tools and treatment plans tailored to the individual adolescent.

When adolescents with CSA histories are placed in residential care facilities, treatment can become a challenge due to the co-occurring disorders that have been assigned to them over the years. The psychological scars left on these individuals make it difficult for them to navigate through the psychosocial stage of development described above. These scars can result in the adolescent remaining stuck in an earlier stage, typically the time when the abuse occurred. The symptoms exhibited are often those found in other disorders, thereby adding to the challenge of how best to treat the adolescent.

One of the most prominent disorders associated with CSA is posttraumatic stress disorder (PTSD) (Ruggiero, McLeer & Dixon, 2000). Abuse victims tend to display symptoms consistent with the diagnosis of PTSD. Other diagnoses that have been identified with CSA are Attention Deficit Hyper-Activity Disorder (ADHD), Bipolar Disorder (BD), Borderline Personality Disorder (BPD), Depression, Anxiety, and Conduct Disorder (CD) (Doyle & Bauer, 1989; as cited in Brown, 1999; Goodwin, 1989; Walker et al., 2004). One symptom consistently demonstrated among CSA victims is acting out. Acting out can be described as any type of destructive behavior to others or oneself, as well as withdrawal type behaviors that require the presence of a therapist. Various definitions of abuse and methods used to identify abuse further contribute to the mixed care adolescents receive. Since adolescents with CSA histories have a high rate of co-morbid disorders in residential treatment, it is important to accurately assess those histories in the assignment of DSM-IV diagnoses so that appropriate treatment can be implemented.

The purpose of this study was to determine whether a primary manifestation of histories of CSA is acting out behavior during the evening hours since that was the time when most incidents occurred. Literature suggests that this is the time when adolescents with CSA histories tend to experience their greatest fears with resulting hyperarousal. PTSD symptom criteria have been used as a way to explain many of the hyperarousal symptoms found in adolescents with CSA histories. Therefore, the relationship between PTSD and CSA was examined to see if adolescents with CSA trauma histories were more likely to be diagnosed with PTSD than adolescents without CSA histories. The study also sought to determine whether those with histories of CSA would have more total diagnoses than their N-CSA counterparts due to the complexity of the trauma experienced. Finally, an

examination of gender and type of behavior exhibited sought to add insight to the mixed findings on gender discrepancies related to externalizing and internalizing behavior displayed by adolescents with CSA histories.

CHAPTER II

REVIEW OF THE LITERATURE

Definitions and Methodological Problems of Child Sexual Abuse

Inconsistent definitions of Child Sexual Abuse (CSA) have contributed to the disparity of prevalence rates and psychological disturbances reported by victims (Briere, 1992). Finkelhor (1986) and Beitchman et al. (1992) report that few studies utilize compatible definitions of child abuse. Studies differ in “how sexual behavior is defined, whether or not non-contact sexual events are included, whether or not wanted sexual experiences are included, whether an age differential between perpetrator and victim is set, and the upper age limit of the child” (Walker, Carey, Mohr, Stein & Seedat, 2004, p. 112). Holmes and Slap (1998) reviewed 149 studies on sexual abuse from 1985 to 1997 and reported more than 30 different methods used in gathering history and setting criteria requirements. Such variations in methodology and definitions affect accurate assessment of prevalence of CSA and resulting psychopathology (Browne & Finkelhor, 1986). Further, the result of incompatible definitions inhibits research, treatment, and advocacy efforts (Haugaard, 2000).

Prevalence rates of CSA are greatly affected by variations in definition. When Wyatt and Peters (1986a) re-computed prevalence rates from an earlier study using a narrower definition of CSA which included more restrictive criteria, overall prevalence rates

dropped by 8%. Roosa, Reyes, Reinholtz, and Angelini (1998) created eight different indicators of sexual abuse and found incidence rates within their large community sample to vary between 18% and 59%. Other methodological issues that affect prevalence rates and consequent psychopathology are sample characteristics which include age group; socioeconomic and ethnic makeup; gender; method of data collection (face-to-face, telephonic interviews or self-report questionnaires); and the number and type of questions used to elicit information about sexual abuse experiences (Goldman & Padayachi, 2000; Peters, Wyatt, & Finkelhor, 1986; Wyatt & Peters, 1986). Current statistics surrounding sexual abuse include the following findings: (a) 1 in 4 girls is sexually abused before the age of 18, as opposed to 1 in 6 for boys; (b) 1 in 5 children is sexually solicited on the internet. (c) Approximately 70% of all reported sexual assaults occur with children under age 17, and (d) About “39 million survivors of sexual abuse exist in America” (www.darkness2light.org/KnowAboutstatistics_2.asp).

Gender Differences in the Prevalence of CSA

The prevalence of CSA in girls is consistently higher than in boys. Prevalence rates range from 5.8% (Garnefski & Diekstra, 1997) to 33.8% (Halperin et al., 1996) in adolescent girls and 6% (Choquet et al., 1997) to 15.1% (Madu & Peltzer, 2000) in boys. Differences in prevalence rates may be attributed to different operational definitions of CSA, as well as differences in occurrence of CSA among varied populations across geographical regions (Walker et al., 2004). Gender specific factors involved in data collection and male definitions of abuse also affect prevalence rates. Boys are less likely to report abuse (Browne & Finkelhor, 1986; Finkelhor, Hotaling, Lewis & Smith, 1990). It is possible that boys are

less likely to disclose abuse for fear of losing a sense of power or masculinity. Boys may misinterpret sexual abuse as non-abusive acts due to various male socialization processes such as feeling they need to be tough in order to demonstrate masculinity (Widom & Morris, 1997). Further, boys' sexual reactions to CSA often result in erection or ejaculation which makes them less likely to interpret CSA as abusive (Holmes, Often, & Waller, 1997). Finally, there is the wide assumption that male victims are less adversely affected than female victims (Garnefski & Diekstra, 1997).

The prevalence of child sexual abuse is significantly higher for girls in psychiatric samples (Cappelleri, Eckenrode, & Powers, 1993; Finkelhor et al., 1990). Randall, Josephson, Chowannee, and Thyer (1994) found 13% of child and psychiatric inpatients to report sexual abuse. Further, Emslie and Rosenfeld (1983) and Sansonnet-Hayden, Haley, Marriage, and Fine (1987) found close to 40% of child and adolescent inpatients with reported histories of incest. These findings suggested that CSA is frequent among psychiatric inpatients.

Child sexual abuse occurs among children of all races and ethnicities, as well as socioeconomic and family circumstances (Finkelhor & Baron, 1986; Putnam, 2003). However, the combination of ethnic minority, lower socioeconomic status and psychiatric symptoms may increase the risk of experiencing child sexual abuse. Tzeng and Schwarzin (1990) found African American children of lower socioeconomic status with psychiatric symptoms to be 1.5 times more likely to experience sexual abuse than their Caucasian peers. It is clear that the prevalence of child sexual abuse is pervasive among clinical samples of ethnic minority and low socioeconomic status.

Child Sexual Abuse Sequelae

Children and adolescents with CSA histories often exhibit a range of sequelae. Although children and adolescents with reported histories of sexual abuse do not frequently self-report clinically significant levels of emotional distress (Berliner & Elliott, 2002), several studies indicate high rates of depressive, anxious, and lower self-esteem symptoms than their non-abused counterparts (Boney-McCoy & Finkelhor, 1995; Gidycz & Koss, 1989; McLeer et al., 1998; Mannarino & Cohen, 1996a, 1996b; Stern, Lynch, Oates, O'Toole, & Cooney, 1995; Banyard, Williams, & Siegel, 2001b). Further, acts of self-destruction and suicidal tendencies are often exhibited in children with reports of CSA (Lanktree, Briere, & Zaidi, 1991). Berliner and Elliott (2002) reported that sexually abused children in treatment settings demonstrate more compounding effects of the above symptoms.

Interpersonally, many CSA survivors manifest problems with peer, authoritative and familial relationships (Brown & Finkelhor, 1986; Cosentino & Collins, 1996; Kendall-Tackett, Williams, & Finkelhor, 1993). Expressions of anger and aggression are common (Brown & Finkelhor, 1986; Cosentino & Collins, 1996; Kendall-Tackett et al., 1993). Adolescents who have been sexually abused are more likely than non-victims to run away from home, use drugs, be bulimic (Hibbard, Ingersoll, & Orr, 1990) or have substance abuse disorders (Kilpatrick & Saunders, 1999). Further, disturbed object relations (relationships with others) often result from insecure attachments to caretakers as a consequence of CSA. Sexually abused children are less trusting of their immediate environment (Mannarino, Cohen, & Berman, 1994a), and consequently less trusting of caretakers around them.

Increased frequency of sexual behavior is specifically related to sexual abuse when comparing clinical samples of children with histories of sexual abuse to those with histories of neglect, physical abuse, or psychiatric presentation. Several studies found sexually abused children to exhibit more sexual behavior than their clinical counterparts (Adams, McClellan, Dougas, McCurry, & Storck, 1995; Cosentino, Meyer-Bahlburg, Alpert, Weinberg, & Gaines, 1995; Friedrich, Jaworski, Huxsahl, & Bengston, 1997; Kendall-Tackett et al., 1993). Sexually abused children tend to engage in sexual behavior that involves genital sexual activity (Friedrich et al., 2001). In adolescence, girls are more likely to engage in hypersexual behavior, whereas boys are likely to engage in genital exposure or sexual coercion (Adams et al., 1995).

CSA victims frequently report sleep disturbance and fears relating to nighttime (Finkelhor, 1979; Rotter, 1991; Dollinger, Horn & Boarin, 1988; Larson, 1996). Sleep disturbance can be defined as difficulties in initiating and maintaining sleep, as well as bedtime resistance, nightmares, or excessive sleepiness (Larson, 1996). Wolfe, Sas, and Wekerle (1994) found that 58% of sexually abused children reported dreams or nightmares about their abuse, as well as trouble falling asleep due to abuse-related intrusive thoughts.

Post trauma effects such as re-experiencing, avoidance, numbing, dissociation and hyperarousal symptoms are often reported in sexually abused children in both clinical and nonclinical samples (Boney-McCoy & Finkelhor, 1995; Briere, 1996a, 1996b; McLeer et al., 1998). More than one-third of children meet diagnostic criteria for posttraumatic stress disorder (PTSD) (Dubner & Motta, 1999; Kilpatrick & Saunders, 1999; Ruggiero, McLeer & Dixon, 2000). Sexually abused children are more likely to exhibit PTSD symptoms than physically abused or neglected children (Dubner & Motta, 1999).

Other effects of CSA are somatic complaints (de Chesnay, Stephens & West, 1990), hallucinations (Livingston, Lawson, & Jones, 1993), inattention or concentration difficulties, criminal behavior, and enuresis (Calam, Horne, Glasgow & Cox, 1998). In general, girls are more likely to present internalized behaviors such as depression, anxiety, post traumatic stress, suicidal ideation, as compared to boys who present more externalizing behaviors such as oppositional behavior, aggression, impulsivity, and substance abuse (Walker et al., 2004).

PTSD as a Sequelae of CSA

The literature on PTSD offers a conceptual framework for understanding sexual abuse sequelae (Mash & Barkley, 1998). The Diagnostic and Statistical Manual – Fourth Edition (DSM-IV-TR, 2000) includes the following symptoms of posttraumatic stress disorder: reexperiencing the event, persistent avoidance of stimuli associated with the trauma, a numbing of responsiveness or increased arousal in response to the event. These symptoms may manifest themselves in nightmares, hallucinations, dissociative episodes, physiological reactivity, restricted affect, difficulty trusting others, hypervigilance, increased irritability, outbursts of anger, psychological impairment, recurrent or intrusive thoughts about the event, fears, and sleep disturbances.

The effects of sexual abuse and the development of PTSD have been shown to impair psychological (Putnam, 2003) and neurological health (Teicher, 2002). Individuals with PTSD exhibit fluctuations in stress hormone secretion (Teicher, 2000). Further, the more invasive and chronic types of abuse are associated with greater detrimental impact on functioning.

Neuroendocrine Vulnerability

Severe stress experienced as a result of CSA and the development of PTSD have been shown to alter neuronal development in youths (Teicher, 2002). Early childhood brain development is vulnerable to environmental experience. CSA has been shown to affect the brain's left hemisphere, where language is both received and expressed (Teicher, 2002; Van der Kolk, McFarlane, & Weisaeth, 1996). Several studies report the experience of trauma to disrupt activity in cortical and subcortical regions in the brain (Bremner et al., 1999; Gurvits et al., 2000; Ratna & Muskergee, 1998; Stein, Yehuda; Koverola, & Hanna, 1997). There is some evidence to suggest that the dominant hemisphere is more sensitive to fluctuations in cortisol levels (van der Kolk et al., 1996).

Increases in cortisol level have been shown to decrease hippocampal activity (van der Kolk et al., 1996). CSA victims have been shown to have smaller hippocampal volume (Bremner et al., 1999; Ratna & Mukergee, 1998; Stein, Koverola, Hanna, Torchia, & McClarty, 1997; van der Kolk et al., 1996), particularly in the left hemisphere of the temporal region. Ito, Teicher, Glod, and Ackerman (1998) hypothesized that sexually abused children may store their distressing memories in the right hemisphere. Upon retrieving these memories, the right hemisphere will be stimulated and thereby weaken the left hemisphere. "Decreased hippocampal functioning causes behavioral disinhibition and hyperresponsiveness to environmental stimuli" (van der Kolk et al., 1996, p. 231).

The neurotransmitter serotonin is influential in activating inhibitory pathways that prevent the initiation of flight or fight responses until necessary (Gray, 1987). Traumatic experiences such as sexual abuse may alter serotonin levels in the body (van der Kolk, 1994), thereby affecting the brains' ability to inhibit impulsive or aggressive acts and the associated

hyperirritability and exaggerated startle responses to mild stimuli (Coccaro, Siever, Klar & Maurer, 1989). Further, Cohen et al. (1998) showed PTSD children and adolescents to be in a chronic state of hyperarousal.

Exposure to extreme traumatic events may lead to complex behavioral and physiological disturbances, which may become ingrained within the individual (Cohen et al., 1998). Eventually, the traumatized individual's ability to modulate affect becomes impaired, leading to inappropriate responses to stressful situations. The individual may overreact to situations in order to avoid perceived aversive stimuli. The hyperarousal state influenced by such reactions may trigger a reexperiencing characteristic of previous trauma related symptoms. Tachycardia, increased blood pressure, tremors, and excessive sweating are characteristic features of physiological hyperactivity/hyperarousal states (Kolb, 1987). McDonagh-Coyle et al. (2001) and Orr, Lasko, Metzger, Berry, Ahern, and Pitman (1998) found women with CSA and current PTSD to show larger physiologic responses to sexual abuse related imagery than those with CSA and no PTSD. Attention to abuse related stimuli in therapeutic treatment is essential in order to understand appropriate treatment modalities related to reducing physiological arousal symptoms.

Resnick et al.(1995) found rape victims to have lower plasma cortisol levels shortly after the rape. However, when assessing urinary cortisol levels 24 hours after reported abuse, Lemieux and Coe (1995) found higher cortisol levels in childhood sexual abuse survivors with PTSD. Stein et al. (1997) found female survivors of childhood sexual abuse to have enhanced suppression of plasma cortisol in response to dexamethasone (an exogenous steroid). Dexamethasone reduces cortisol levels. In addition, a number of studies have found male combat veterans with PTSD to have altered hypothalamic pituitary adrenal (HPA) axis

functioning (Stein, Yehuda, Keverola, & Hanna, 1997). They have been shown to have lower 24-hour urinary cortisol excretion (Yehuda et al., 1990). Further, they have been shown to have lower plasma cortisol levels in the morning (Bocarino et al., 1996), and at several times throughout the circadian cycle (Yehuda et al., 1994). When given low doses of dexamethasone, (Yehuda et al., 1993b, 1995a), plasma cortisol levels were suppressed. These findings suggest that cortisol plays a significant role in the pathophysiology of PTSD.

It appears that CSA survivors, particularly those with PTSD, share altered HPA axis functioning along with combat veterans with PTSD. Interestingly, such findings were not evident in CSA subjects with major depression. Joiner et al. (2002) supported these findings and suggested that physiological hyperarousal was more associated with anxiety than with depression. This finding strengthens the assumption that PTSD has its own “neuroendocrine finger print” (Stein et al., 1997). Understanding fluctuations in cortisol levels and neuroendocrine functioning among CSA survivors with PTSD is central in determining appropriate treatment.

Sleep Disturbance and CSA

Sleep disturbance is a central feature of PTSD in CSA survivors. Many victims report difficulty falling asleep. Hibbard and Hartman (1992) and Wells, McCann, Adams, Voris, and Ensign (1995) attribute intrusive thoughts to difficulty falling asleep. It has been proposed that physiological, psychological and situational etiologies influence sleep disturbances (Dollinger, 1986a; Wilson & Haynes, 1985; Coates & Thoresen, 1981). The aforementioned research has shown that activation of the HPA axis leads to arousal and difficulty falling asleep.

Since it has been shown that CSA survivors with PTSD are in a chronic state of autonomic arousal, such victims are likely to experience insomnia due to altered HPA axis functioning. Vgontzas et al. (2001) found individuals experiencing insomnia symptoms to have chronic activation of the HPA axis. Hypersecretion of adrenocorticotrophic hormone (ACTH) and cortisol were found to be more elevated in the afternoon and evening, although high cortisol levels are present throughout the 24-hour urinary free cortisol. Although patients with insomnia had continual activation of the HPA axis, chronically stressed patients experienced suppressed cortisol in the morning and elevated cortisol levels in the evening. The results of this study raise implications for increased activation of the HPA axis and cortisol levels in the evening and resulting autonomic hyperarousal in patients with CSA and PTSD. Future treatment of CSA survivors with PTSD should focus on reducing cortisol levels in the evening and resulting emotional hyperarousal. For example, exercise during the afternoon, breathing exercises, yoga, or meditation techniques may prove useful in reducing the rate at which cortisol levels rise in the evening.

Hyperarousal and hyperresponsiveness, especially to trauma-related information, are major components of PTSD in the waking state (Franzen, 2003). Further, it is believed that hyperarousal is the “mechanism through which insomnia develops in chronic PTSD” (Krakow et al., 2001, p. 648) The traumatized individual is purported to remain in a state of hyperalertness in order to protect against real or imagined threats, such as reexperiencing the traumatic event through nightmares (Krakow et al., 2001). The result is chronic hypervigilance and the ensuing insomnia symptoms. Several studies have supported the premise that elevated nocturnal arousal activity during the sleep state results in fragmented sleep, lending further support for continued hyperarousal symptoms during the sleep/wake

cycle (Mellman, David, Kulick-Bell, Hebding, & Nolan, 1995; Noll, Trickett, Susman & Putnam, 2005; Pillar, Malhotra, & Lavie, 2000).

Mellman, Kumar, Kulick-Bell, Kumar, and Nolan (1995) provide further support for elevated nocturnal arousal in PTSD patients. Measured catecholamine levels indicated that noradrenergic production does not diminish at night in PTSD patients compared to controls. Sleep recordings suggested “decreased sleep efficacy, a trend towards repetitive, mostly subthreshold entries to the wake state, and increased REM phasic activity consistent with heightened arousal occurring in relation to sleep” (Mellman et al., 1995, p. 176). Cuddy and Belicki (1992) compared sexually abused with physically abused undergraduate women on nightmare frequency and resulting sleep disturbance. The sexually abused group experienced almost double the nightmare frequency compared to the physically abused group. Consequently, the sexually abused group also experienced more difficulty in falling asleep after the nightmares. “Nightmares typically describe reexperiencing symptoms; and difficulty getting to sleep and staying asleep, typically describe arousal symptoms” (Noll, et al., 2005, p. 2). These findings are indicative of a relationship between sexual abuse and the resulting continued 24-hour state of hyperarousal in CSA survivors diagnosed with PTSD.

Sleep is deemed to naturally occur at a time and place which exudes safety and security (Noll et al., 2005; Noll, Trickett, Susman, & Putnam, 2006). When an individual feels a sense of safety and security, sleep is naturally induced. However, if an individual is feeling stressed or threatened, sleep efficiency will likely be affected (Dahl & Lewin, 2002). For traumatized adolescents, safety is a pertinent factor in the promotion of sleep. Sexual abuse compromises their safety due to a lack of being unprotected. As a result, sleep disturbances are a common consequence of CSA. Sexual abuse affects sleep safety because

it frequently occurs at night in a place where the child continues to sleep after experiencing abuse or during ongoing abuse (Finkelhor, 1979; Finkelhor, 1995; Noll et al., 2005; Rotter, 1991). In a series of studies, Dollinger and colleagues found children's sleep problems to be associated with fears similar to the trauma they experienced (i.e., bodily penetration) (Dollinger, O'Donnell, & Staley, 1984; Dollinger, 1986b; Dollinger, 1986c). Children may experience increased vulnerability during the time and place where sleep or rest normally occurs. Several studies by Sadeh and colleagues (Sadeh et al., 1995) reported interviews with abused children to reveal pronounced fear and stress associated with sleep, the bedroom, or darkness, as it reminded the victims of their abuse settings.

The presence of fearfulness among sexually abused children contributes to an impaired sense of safety and security (Briere & Elliott, 1994). Browne and Finkelhor (1986) and Wolfe and Wolfe (1988) suggest that fear is among the most commonly reported symptoms found in empirical studies. For example, Kendall-Tackett et al.'s (1993) review of literature noted that sexually abused children exhibited more fears than nonsexually abused, community children. A study by Wells, McCann, Adams, Voris and Ensign (1995) reported sexually abused females to experience specific fears such as a fear of being left with a particular individual and fear of males. In a study on general and abuse specific fears, Ligezinska and colleagues (1996) found children abused by a non-family member to report greater fearfulness than a community sample of nonsexually abused children. Specific fears such as those relating to setting, time, or specific individuals significantly impact psychological and psychophysiological outcomes.

Goodwin (1989) described the symptoms of PTSD in child sexual abuse victims using a mnemonic that spells the word "FEARS". **F** stands for fears and anxiety, along with

easy startle; **E** stands for ego – constriction, which describes the experience of psychic numbing, such as withdrawal from activities, concentration and attention difficulties, depression and anxiety; **A** stands for anger, as described as repressed anger, aggressive behavior, or over-compliance; **R** stands for repetition and reexperiencing, as can be seen in flashbacks or nightmares; and **S** stands for sleep disorder as well as sadness.

To describe the differential effect of intense and prolonged abuse, Goodwin (1989) distinguished a separate mnemonic, “BAD Fears,” to describe the sequelae that result from repeated rape, violent molestation, and ongoing sexual abuse that involves psychological coercion and terror. **B** stands for Borderline Personality Disorder, which involves affective and interpersonal instability, identity disturbance, suicidal impulses, and psychological defenses of denial, splitting, and projective identification as a means of attempting to cope with intense anxiety that is experienced as being intolerable; **A** stands for affective disturbance, which includes major depression and generalized anxiety; and the **D** stands for dissociation which includes trance like states often misdiagnosed as truancy, conduct problems, or moodiness.

There are marked differences among samples of abused children with regard to the extent that they experience ominous outcomes, with some demonstrating profound pathology and others exhibiting great resilience (Finkelhor & Brown, 1985; Trickett, Noll, Reiffman, & Putnam, 2001). This variation in symptom or outcome presentation can be attributed to the characteristics of the offense (Finkelhor, Hotaling, Lewis, & Smith, 1990). Recent findings, however, have cautioned against focusing on the “severity” of impact rather than in the “differential” impact of these characteristics (Freyd, 1994; Noll, Trickett, & Putnam, 2003b). Trickett et al., (2001) suggest that victims who experience seemingly “mild” types of abuse

appear to exhibit less deleterious symptoms acutely, but exhibit greater problematic symptoms later in development. For example, in the one study examining characteristics of sexual abuse and sleep problems, Rimsza, Berg and Locke (1988) found that the duration of abuse and age of onset of abuse correlated positively with sleep disturbances, as opposed to the type of abuse or characteristics of the perpetrator.

Several studies have shown that the longer the child experiences abuse, the more emotional and behavioral difficulties the child experiences (Browne & Finkelhor, 1986; Herman, Russell, & Trocki, 1986; Morrow & Sorrel, 1989; Sirles, Smith, & Kusama, 1989). Sirles and colleagues (1989) found that duration of abuse accounted for the most variance with regard to impaired psychiatric functioning in CSA victims. In addition, frequency of abuse has shown to impact psychological functioning. Some studies have shown that children who experience multiple episodes of sexual abuse were more likely to have psychiatric diagnoses than those who experienced only one incident of sexual abuse (Gray, Pithers, Busconi, & Houchens, 1999; McClellan, Adams, Douglas, McCurry, & Storck, 1995). However, Shaunessey, Cohen, Plummer, and Berman (1993) did not find duration or frequency of abuse to have greater impact on psychological functioning when compared to children who experienced a single incident.

Another predictor of increased psychological distress in CSA victims is the use of force involved in the attack. Finkelhor (1979) suggested that force alone accounted for more variance in symptoms than any other variable. The greater the amount of force used in the attack and the corresponding lack of control a child experiences, the more pronounced the trauma reported by victims (Finkelhor, 1979, 1984; Friedrich & Luecke, 1988). Kendler et al. (2000) found girls who experienced overt force during an abusive incident were three

times more likely to develop psychiatric diagnoses, as well as substance abuse disorders than girls who had not experienced abuse using overt force. Gomes-Schwartz, Horowitz, and Cardarelli (1990) found that more invasive acts of sexual abuse, such as intercourse and penetration, were more likely to involve overt aggression. Boney-McCoy and Finkelhor (1995) showed that penetrative forms of sexual abuse to be associated with higher PTSD symptomatology. In addition, Black, Dubowitz and Herrington (1994) found that sexually abused children who experienced genital contact manifested more behavioral problems than those who did not experience this form of abuse.

It appears that when children have close relationships with their victimizer, psychological impairment is greater. Children abused by their biological father or stepfather experience the most severe levels of trauma (Brown & Finkelhor, 1986; Finkelhor, 1979; Mian, Martin, & LeBaron, 1996). However, Cyr, Wright, McDuff, and Perron (2002) found that sibling sexual abuse impacts victims as much as victims who experienced sexual abuse by their fathers. Intrafamilial abuse seems to result in greater psychopathology than stranger abuse. Consequently, such abuse more profoundly affects children's sense of safety and security due to a mistrust of caretakers.

Regulation of Affect in CSA Children and Adolescents

van der Kolk, Pelcovitz, Roth, Mandel, McFarlane and Herman (1996) suggested that sexually abused children have greater difficulty than non-abused children and adolescents in regulating affect. As a result, they often exhibit either hyper-responsive (externalizing) or withdrawal (internalizing) behaviors in order to cope with intrusive memories of their abuse. Browne and Finkelhor (1985) find internalizing behaviors to originate from betrayal,

powerlessness, and stigmatization. Such dynamics can produce a sense of isolation, which serves as a protective mechanism from future abuse or betrayal. Isolating can lead to difficulties in establishing healthy relationships or complete social withdrawal. CSA victims experience a sense of powerlessness over being able to control one's body or protect oneself from one's abuser. Finally, the stigmatization of being abused induces feelings of shame and guilt, and thereby causes the victim to isolate him/herself from those around him/her.

Externalizing behaviors may also stem from the traumagenic dynamics of betrayal, powerlessness, and stigmatization (Finkelhor, 1988). Behavioral outbursts may be the result of difficulties modulating feelings of anger and frustration surrounding the shame, guilt, and vulnerability of being abused. Further, intrusive memories of the event or distorted perceptions of current happenings may also act as triggers for violent outbursts. Externalizing behaviors such as aggression, defiance, or tantrum behavior may serve as a method of protection against future abusers.

Neurological impairment has been implicated in playing role in the development of aggression. Specifically, executive functioning controlled by the frontal lobe is affected. The general functions of the frontal lobes include: (1) deciding what is worth attending to and what is worth doing; (2) providing continuity and consistency of behavior across time, central to planning and predictable of behavioral responses; (3) controlling emotional and interpersonal behavior so that drives are satisfied within the constraints of reality; and (4) monitoring, evaluating, and adjusting behavior (Hart & Jacobs, 1993; as cited in Golden, Jackson, Peterson-Rohne, & Gontkovsky, 2000, p. 41)

The frontal lobes are still developing throughout adolescence and into one's early twenties. Biological and environmental effects influence the development of the frontal lobe.

A history of sexual abuse may negatively impact growth in this region. Such a deficiency in this area can result in academic difficulties, impulsive behavior, difficulties in processing social information, a restricted behavioral repertoire, social rejection, and low self-esteem. Further, these deficits can lead to the development of substance abuse, school dropout, and gang participation (Furlong, Morrison, & Jimerson, 2004). All of these factors contribute to continued difficulties with life-course-persistent aggression.

Individuals exhibiting internalizing and externalizing behaviors experience other comorbid disorders (Mattison, Gadow, Sprafkin, & Nolan, 2002). Youths meeting criteria for conduct disorder may also present symptoms of attention-deficit/hyperactivity disorder, oppositional defiant disorder, and anxiety disorders (Furlong, Morrison, & Jimerson, 2004). Russo and Beidel (1994) suggest there is a significant comorbidity between anxiety disorders, externalizing disorders, and depression. Achenbach (1998) emphasized the importance of understanding the individual's developmental history and variety of behaviors due to the great degree of overlap among youths identified as having conduct disorder, as well as other disorders. In addition, Briere and Runtz (1985) noted that many of the behaviors exhibited by adults with CSA histories may present themselves as personality disorders, specifically "Borderline". As a result of these comorbid disorders, Briere and Runtz (1988) suggested using another more global notion of "post sexual abuse trauma" to describe the long-term effects of CSA. Due to such overlap among diagnoses associated with victims with sexual abuse trauma, careful assessment of symptoms is necessary in designating the most appropriate diagnosis and resulting treatment.

Reexperiencing, Dissociation, and Acting Out

Specific characteristics of abuse deemed more traumatic have been associated with severe PTSD symptoms such as dissociation, reexperiencing or hyperarousal (Johnson, Pike & Chard, 2001). For example, age of abuse onset has been found to be correlated with resulting dissociative symptoms in incest survivors (Briere & Conte, 1993; Zlotnick et al., 1994). Increased severity of abuse (e.g., penetration) has been related to dissociation in adulthood (Irwin, 1994). In addition, longer duration, increased severity, and earlier age of abuse have been found to be linked with a higher frequency of dissociation in adulthood (Kirby, Chu, & Dill, 1993). Finally, being victimized by a greater number of perpetrators has been associated with an increase of dissociative symptoms in CSA survivors (Roesler & McKenzie, 1994).

The function of dissociation has traditionally been viewed as “an adaptive response that serves to distance the survivor from the trauma during and/or after the event, therefore affording emotional safety” (Johnson et al., 2001, p. 182). However, according to Janet (1889), who posited the idea that dissociation results in an impairment of cognitive functioning and an inability to integrate memories, cognitions, and events into conscious experience, the trauma experience is temporarily split off from consciousness, only later to return in the form of “reminiscences” or flashbacks, nightmares, or other reexperiencing phenomenon (as cited in Johnson, 2001). Chu (1991) and van der Kolk and Kadish (1987) concur with Janet’s (1889) early theory and suggest that the lack of integrated experiences into conscious awareness results in various dissociative types of experiences. Several types of dissociative experiences of children have been described by James (1989) and include: going into trance-like states in response to certain stimuli, perceiving their surroundings as

being unreal, using another name, claiming not to be him or herself, claiming dual identity, referring to him or herself as “we”, shifting abilities to perform tasks, denying behaviors that have been observed by others, changing visual acuity, changing handwriting, changing style of dress, drastic changes in behavior, unexpected outbursts, disorientation, losing time, drawing him or herself as multiple persons, and getting lost coming home from familiar places. Further, more formally defined symptoms include depersonalization, repression, splitting, psychogenic amnesia, and multiple personalities.

Dissociative Behavioral Responses

Koopman et al. (2003) examined dissociative symptoms and physiological stress in relation to changes in evening salivary cortisol levels after recounting traumatic experiences among 49 women with PTSD due to CSA. High levels of dissociative symptoms in response to recent stressors reflected increased physiological arousal 24 hours after an interview about the trauma. This study suggests that dissociation may later result in physiological stress responses. Further, these results provide confirmation of an earlier study by Griffin, Resick, and Mechanic (1997) whereby findings point to peritraumatic dissociation being linked to an HPA axis stress response which becomes heightened and delayed (Koopman et al., 2003).

Trauma interferes with children’s ability to modulate arousal. Difficulties in modulating arousal present themselves in learning disabilities, various psychiatric disorders, and aggression (Arnold et al., 2003). Traumatized children tend to act rather than think through problems. Specifically, CSA survivors demonstrate incapacity to express affect states in words (Cicchetti & White, 1990). According to van der Kolk, Weisaeth, and van der hart (1996), the ability to “regulate internal states and behavioral responses to external

stress defines both one's core concept of oneself and one's attitude toward one's surroundings" (p. 64). Since a sense of self is influenced by the relationships a child has with his or her caregivers, trauma during this time has been shown to negatively affect the development of ego identity and the ability to create trusting and working relationships with others (Cole & Putnam, 1992; Herman, 1992).

Children may exhibit symptoms of reexperiencing the event and avoiding memories of the trauma. According to Briere (1996), reexperiencing symptoms form when an individual experiences difficulty in processing the traumatic event. Many times these symptoms (i.e., flashbacks, nightmares, acting out, etc.) assist the individual in self-healing. The mind attempts to desensitize itself against emotionally difficult memories, as well as to cognitively integrate the memories. Fear of self-exposure and subsequent shame involved with the traumatic event results in aggressive behavior and may result in the child reenacting the trauma through acting out to impose a sense of control for himself/herself or as an act of making meaning of the traumatic event. Namka (1995) suggests that "negative affect, anger-related thoughts, and aggression are common" in children and adolescents (p. 82). The child's altered perceptions of relationships and daily situations exacerbate the underlying anger. The child may then act out in order to keep individuals from coming close (Namka, 1995). The negative thoughts and feelings experienced during the trauma display themselves as outburst of anger or other acting out behaviors.

One common form of acting out behavior, seen both on inpatient and outpatient treatment facilities, is self-mutilation. Such acting out of destructive behavior may also serve as an active repetition of prior uncontrollable experiences of traumatic abuse. Chronic self-mutilating behavior may be linked to unresolved shame associated with not being able to

control or stop the abuse, experiencing self-blame or experiencing pleasure from the act (Shapiro, 1992). Repeated self-mutilation may be the result of the victim attempting to take control of his/her own body in order to gain mastery over her trauma. Shapiro (1992) suggests that he/she may be “dissociating, struggling with flashbacks, or in an acute psychotic episode” (p. 40).

Reexperiencing and Acting Out in Residential Treatment

According to traumagenic theory, Hartman and Burgess (1988) suggest that CSA survivors may repeat or reenact abusive acts in order to obtain mastery of the traumatic conflict. Many emotionally disturbed children referred for residential treatment programs have endured multiple forms of abuse. Abuse symptoms of children with CSA remain to be properly identified and may oftentimes be misdiagnosed with a constellation of disorders. For example, sexually abused adolescents tend to exhibit behavioral symptoms commonly seen in CD and PTSD, as well as other anti-social behavior disorders (Doyle & Bauer, 1989; as cited in Brown, 1999). Inappropriate identification of trauma history leads to a lack of proper care and treatment. Proper identification and treatment of CSA victims is paramount in residential treatment facilities in order to reduce the sequelae and possible retraumatizing experiences CSA victims often face. In residential treatment, it is important to note that victims may “reenact” the trauma as a means to work through the conflict. They may demonstrate such reenactment through acting out of power struggles with staff and peers, as well as in eliciting negative and punitive responses from staff (Chop, 2003; Snyder & Rogers, 2002; Zahn & Schug, 1993). Sgroi (1982) suggests that sexual abuse is an issue of “power” and the relationship between the victim and perpetrator are symbolic of an

imposition of power. When a child feels a lack of control, he/she may turn inward, only later to act out roles of victim and victimizer in order to make sense of the inflicted trauma. Self-injurious and aggressive behaviors are further examples of a child's attempt to work through the trauma (Zahn & Schug, 1993).

Subjecting oneself to cooperating with expectations of caregivers, such as staff, may trigger a sense of powerlessness or revictimization. Dominiak (1992) suggests that being placed in a treatment setting away from stressful circumstances or abusers can ironically stimulate the experience of abandonment and extreme isolation. Further, a depersonalization or dissociative reaction may occur in response to the unfamiliarity of the inpatient setting. For example, some patients may either ask to be physically restrained or act out in order to be restrained because they feel soothed by the experience. "Such a request typically comes at night when the therapist is unavailable to the patient or staff for consultation" (Dominick, 1992, p. 171).

Chop (2003) suggests that victims of sexual abuse suffer from the relational problem of perverse object contact. This is the belief that the only way to have a relationship is through violence, sexuality or both (Prior, 1996, pp. 68-69). An example of this dynamic relationship can be seen in a 15-year-old sexual offender who was placed in residential treatment. This adolescent had a history of sexual abuse by his father. During therapy, he would be asked to be "restrained" so that he would feel cared for. In another example, a 12-year-old CSA victim placed in residential treatment would become increasingly aggressive when he reached a level of success in the program. Upon receipt of feedback about his success, he would become aggressive toward staff, peers and property. Such behavior typically resulted in physical restraint and consequentially self injury. Upon processing with

this adolescent about his behavior, he suggested he would react this way in order to “test and know which staff really cared for him.”

Zahn and Schug (1993) provide an example of a girl working through trauma in residential treatment. This girl had been removed from her birth family due to neglect, incest, and extra-familial sexual abuse and was placed in residential schools for 5 years due to conflict with adoptive family members. She exhibited problems such as promiscuity, being demanding toward adults, lack of trust, secrecy, manipulation and rebelliousness. She had been diagnosed with a severe learning disability, exhibited by expressive and receptive language deficits, thereby explaining her difficulties in processing verbally presented information and expressing her fears and desires. Zahn and Schug (1993) suggest that an alternative interpretation of her behaviors could be her difficulty in coping with unresolved thoughts and feelings about the event and resulting acting out symptoms exhibited as a means of working through the conflict. Once she learned to see the relationship among her thoughts, feelings, behaviors and her abuse, she was able to view experiences in the milieu as being less harmful or abusive. As she began to trust those around her, she began to put her thoughts and feelings into words more easily. Since language is so heavily rooted in academic work, it is understandable how this girl improved academically.

It is clear that the therapeutic relationship between residential staff and adolescent is important in identifying appropriate treatment and understanding interpersonal engagements. A safe therapeutic alliance allows the adolescent to work through relationship difficulties, thereby correcting the experience. It is important for residential staff to learn about and understand the difficulties CSA victims face in order to develop interpersonal relationships of trust. Once trust is established, opportunities for victims to develop language and express

feelings appropriately come more freely. The result of proper adult-adolescent relationships allows the child to re-experience healthy attachment relationships and resolve internal conflict. Prior (1996) stated, “Only through relationship is trauma in relationship cured” (p. 174).

Staff training is important in helping develop CSA victims’ sense of safety and security in residential treatment. “Staff responses may heighten anxiety or stimulate feelings of guilt or rage” (Howard, Haynes & Atkinson, 1986, p. 352). Such interactions may reenact traumatic experiences the child victim previously experienced. Staff may not understand how their own fears related to children’s histories of abuse affect their relationships with clients.

Kohan, Pothier, and Norbeck (1987) surveyed staff in 110 psychiatric inpatient settings and found issues in staff-patient relationships and child behavior management. Staff listed several areas of discomfort in working with this population: 1) fear and anxiety; 2) shock or surprise; and 3) anger. More specifically, they expressed discomfort with children’s symptomatic behavior (e.g., exhibitionism, seductiveness, masturbation, sex play with others, and being frightened by children’s acting out behavior). Further, staff reported several areas where they lacked knowledge or understanding of symptoms, personal attitudes affecting care, and what constituted therapeutic care. Staff had trouble understanding specific symptoms exhibited by abused children such as highly sexualized behavior or interpreting the intent of the child’s touch. Personal attitudes and role perceptions inhibited the development of secure relationships between staff and children. Staff also reported difficulty in managing behavior due to lack of skill, inappropriate responses, and lack of knowing what to do. They reported not knowing how to respond to overt sexual behavior or seductive

behavior. “Inappropriate types of staff responses toward children with histories of sexual abuse included: withdrawal, avoidance, expression of disgust, restrictions, punishment, involvement in power struggles, and overprotection” (Kohan et al., 1987, p. 262). Lack of skill in managing behavior was demonstrated by staff’s inability to form a therapeutic relationship with the children. “Effective staff training is critical for dealing with behavior and for promoting age-and role-appropriate social relationships” on the unit (Howard et al., 1986, p. 353).

Paying particular attention to the time when significant incidents occur is critical in developing effective intervention strategies tailored to the time when most incidents occur. In one study which assessed self-destructive incidents among general hospital inpatients, most of the severe or fatal incidents occurred at night time. Specifically, 46% of self-destructive acts and 60% of fatal incidents occurred during the night shift (Hung et al., 2000). It is believed that insomnia and resulting cognitive impairment at night might weaken impulse control with acting out as a consequence.

Gender Differences in Acting Out Behavior

There are inconsistent findings on the differences in the behavioral reaction of boys and girls to sexual abuse. Recent research by Gore-Fleton, Koopman, McGarvey, and Hernandez (2001) has found incarcerated adolescent girls to be more negatively affected than adolescent boys. McCabe et al. (2002) found girls in the juvenile justice system to demonstrate higher rates of psychopathology than boys and consequently more total behavior problems than boys when assessed on the Child Behavior Check List and Youth Self-Report Inventory. This is consistent with earlier research among incarcerated adolescents

(Cauffman, Feldman, Waterman & Steiner, 1998; Steiner & Feldman, 1995), in addition to general samples of adolescents. It is important to note, however, that several of these studies used self-report measures. So, it is questionable as to whether girls were indeed more negatively affected or were more apt to report distressing behavior (Gore-Felton et al., 2001).

Ullman and Filipas (2005) found girls to exhibit more intense distress and self-blame at the time of abuse than boys. Girls tended to cope by withdrawing and trying to suppress the abuse. Further, Gore-Felton et al. (2001) found girls to demonstrate more internalizing problems. However, for younger adolescents, both boys and girls equally demonstrated externalizing behaviors as compared to older adolescents. In an outcome study on incarcerated, sexually abused adolescent females, scores on the Multidimensional Adolescent Assessment Scale (MAAS) resulted in females experiencing significant depression, aggression, confused thinking, and disturbing thoughts (Arnold et al., 2003). These findings are consistent with previous literature showing sexually abused incarcerated females experience high rates of depression, PTSD symptoms (Cauffman et al., 1998), family stressors (Williams & Hollis, 1999), and substance abuse (Ellis, O'Hara & Sowers, 2000).

Arnold et al. (2003) also found sexually abused adolescent females to report high rates of suicidal thoughts. The expression of anger and aggression may result in suicidal ideation or attempts. Often, such expressions are misdiagnosed as oppositional-defiant behavior or conduct disorder (Obeidallah & Earls, 1999). It is also important to consider the finding by Mannarino, Cohen, Smith, and Moore-Motily (1991) which suggests that the greater intensity of abuse, such as intercourse, results in more aggressive behaviors by females. When providing treatment, it is important to examine intensity and types of abuse (Consentino, Meyer-Bahlburg, Albert, & Gaines, 1993), duration, and age of victim (Rimsza,

Berg & Locke, 1988), as each has been found to result in aggressive behaviors in female adolescent sexual abuse victims. Finally, understanding the manifestations of anger in relation to various disorders will assist in management of those reported to have been sexually abused.

Some studies suggest that boys and girls who were sexually abused do not differ greatly in terms of outcome behavior (Jumper, 1995; Kendall-Tackett, Williams & Finkelhor, 1993). This finding may be the result of a dearth of male victims in the studies. However, Garnefski and Diekstra (1997) evaluated the emotional and behavioral problems among sexually abused boys and girls in comparison to non-sexually abused adolescents and found more total problems for boys than girls. CSA victims reported more difficulties with emotional and behavioral issues, as well as suicidality than non-CSA victims. Specifically, combinations of problem categories assessed were: emotional problems, aggressive/criminal behaviors, addiction-risk behaviors, and suicidality. For female sexual abuse victims, suicidality was reported 4.8 times more often than non-CSA victims. However, for male sexual abuse victims, the rate was 10.8 times more often than non-CSA victims. Further, CSA boys reported aggressive/criminal behaviors, addiction-risk behaviors, and suicidal thoughts more often than CSA girls. The prevalence of emotional problems was similar in both CSA boys and girls. This is in contrast to the finding among non-CSA boys and girls, whereby girls presented with greater emotional problems than boys.

The number of specific combinations of problem categories was higher for CSA boys than girls. For example, boys with emotional problems also experienced a high rate of suicidality. This was found 20 times more often in CSA boys than non-CSA boys. Further, CSA boys with emotional problems experienced higher co-occurrence rates with

aggressive/criminal behaviors, addictive behaviors, and suicidality than CSA girls. CSA boys experiencing addictive behaviors experienced double the amount of suicidality than their female counterparts. The most outstanding finding for CSA females was the combination between emotional problems and suicidality. It is interesting to note that the combination of suicidality and aggressive/criminal behavior was reported 13.3 times more often by CSA girls than non-CSA girls.

It seems that according to Garnefski and Diekstra's (1997) study, CSA boys experienced more disturbing combinations of emotional and behavioral problems than CSA girls. This finding contradicts the findings of Gore-Felton's (2001) study, which indicated greater problematic outcomes for females, especially in regards to externalizing behaviors. Garnefski and Diekstra (1997) suggest that boys may experience more complex problems because, unlike girls, most boys have been abused by a member of the same sex. Therefore, in addition to the shame, anger, horror and guilt they share with CSA female victims, they may also experience confusion about their sexual identity and consequent struggles with homosexuality (Garnefski & Diekstra (1997). This research points to the significance of future studies and assessment of CSA victims taking into account variables such as gender of the offender, age of abuse onset, duration of abuse, and type of abuse (Garnefski & Diekstra, 1997; Brown & Finkelhor, 1986; Beitchman et al., 1992).

Sleep and Acting Out

Sleep has also been associated with acting out behaviors. Sleep deprivation results in difficulties with attention and lack of impulse control (Dahl et al., 1996). Horne (1993) found that good sleep results in effective functioning of vigilance systems and higher cortical

functioning. As a result of poor sleep, adolescents experience ineffective control over emotions, as well as lowered inhibitions (Dahl, 1999). Therefore, examining a connection between sleep difficulties and behavioral manifestations of abuse victims is essential.

Research on the relationship between sleep problems and sexual abuse trauma is minimal (Noll et al., 2005). Krakow et al. (2002) reported that 77% of CSA victims report insomnia, nightmares and other sleep disorders. These disorders likely persist for several years after the abuse has terminated, but long term studies have not been conducted (Noll et al., 2005). Most studies focus on short-term effects of sexual abuse. Follow-up studies on the relationship between sexual abuse and sleep disorders are needed.

Many CSA victims experience fears related to sleep and bed-time. Such individuals respond to previous trauma with hostility, anxiety, interpersonal sensitivity, and re-enactment of abuse via acting out behaviors (Markt & Johnson, 1992). “The fear that these people experience at bedtime is probably indicative of the overall feelings of fear that permeate their lives” (Markt & Johnson, 1992, p. 170). CSA victims have had to learn to cope with unfortunate, uncontrollable trauma. As a result of this lack of control over their bodies and happenings around them, they have learned to act in whatever way they need to in order to help create a safe environment for them. It is probable that many of the behaviors they demonstrate will materialize around bed-time where most victims have experienced CSA trauma and a lack of control of what happens to them while they are asleep.

Rationale/Purpose/Hypotheses

The experience of Child Sexual Abuse (CSA) contributes to a manifestation of problem behavior and adjustment. Research has shown that individuals with reported

histories of CSA have more total diagnoses than their non-CSA counterparts. With an increased number of diagnoses comes a constellation of symptoms that leads to maladjustment. Due to such a mixed and complex number of symptoms, understanding how best to treat such an individual has become the primary focus of research in this area. Another major concern in the research is the fact that individuals with histories of CSA are often misdiagnosed or improperly diagnosed with a constellation of diagnoses while missing the primary diagnosis of CSA. Such misdiagnoses lead to difficulties in providing appropriate treatment.

Available research has shown the diagnostic symptoms closely associated with reported histories of CSA. These are the Axis I diagnoses of mood disorders (depressive and bipolar disorders), anxiety disorders (PTSD), Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorder (CD), and Axis II diagnosis of Borderline Personality Disorder (BPD). Frequent symptoms of these disorders that present themselves in CSA victims are dissociative experiences, somatic complaints, sleep disturbances, interpersonal difficulties, irritability, hypervigilance, hyperarousal, and outbursts of anger.

Many children with histories of CSA have been diagnosed with PTSD. Within the PTSD framework, dissociation is frequent. Dissociating children/adolescents are often diagnosed with Conduct Disorder, Attention Deficit Hyperactivity Disorder, Depression, Bipolar Disorder, Borderline Personality Disorder, among other diagnoses. These Axis I diagnoses include sleep disturbances and some form of hyperarousal symptoms such as outbursts of anger, hypervigilance and dissociating as a way to avoid thoughts of the trauma experienced and may be a misinterpretation of simple dissociation symptoms. It is quite possible that the CD and ADHD diagnoses are more accurately describing dissociative

states. These dissociative states may be presenting themselves as the significant incidents children demonstrate.

Children “act out” as a method of dissociation to avoid re-experiencing the trauma. However, this dissociative technique actually leads the child to re-experience the trauma through utilizing another form of trauma. Such dissociation can contribute to the child re-experiencing the traumatic consequences reminiscent of the trauma she/he previously experienced while under attack. A child may seek another form of re-experiencing by acting out with the idea of gaining control over his/her environment. Consequently, he/she may be re-traumatized by the resulting control taken by the staff involved when in residential treatment. Thus, the staff then takes on the role of the attacker. Little research has been done to investigate the relationship of evening incidents and CSA. Determining the primary function of acting out will assist in devising appropriate preventative measures in residential treatment centers.

Further, children and adolescents with CSA trauma have been shown to demonstrate neurobiological effects that influence diurnal and nocturnal behavior. Neurobiological effects of CSA are expressed by elevated cortisol levels at night, thereby affecting arousal and resulting sleep disturbances related to insomnia (inability to fall or remain asleep), nightmare frequency, and night terrors. Pharmacological treatments have focused on cortisol reduction related to time of trauma exposure. In one study, elevated cortisol levels were found 24 hours after the time of a stress related event such as re-experiencing past trauma (Koopman et al., 2003). Children with histories of CSA exhibit fears relating to bedtime and the bedroom due to the majority of attacks occurring while the child is asleep. These attacks

lead to a betrayal of trust with caretakers and resulting difficulties surrounding bedtime rituals.

Given these symptoms, adolescents with reported histories of CSA will likely have more significant incidents during the evening time as opposed to daytime incidents.

Dissociation leads to re-experiencing trauma and thereby is contraindicated of the premise of dissociation leading itself to avoiding a re-experience of the previous traumatic event.

Understanding the function of dissociation in reported CSA victims is a priority in order to promote appropriate treatment and caretaking roles, especially in residential treatment facilities.

The need for specific research regarding the function of acting out is paramount. Since research suggests a strong association between PTSD and CSA, and dissociation is a primary symptom of PTSD, it is likely that acting out serves as a dissociative response to coping with past trauma. Research suggests that children with histories of CSA fear night time since this is when most sexual abuse occurs. It is likely then that individuals with histories of CSA will experience an aversive response to evening time rituals such as avoidance of bed time or showering. Such avoidance behaviors may express themselves in the significant incidents (i.e., overt and covert behaviors requiring staff or therapeutic assistance) children experience. This study seeks to confirm the validity of this assertion.

The study compared the manifestations of behaviors exhibited by adolescents with reported histories of CSA and their counterparts in residential treatment. It is purported that adolescents with CSA will have more total diagnoses than their non-CSA counterparts, especially in the area of PTSD. Further, it hypothesized that greater behavior problems occurring during the evening would be found for male and female adolescents with reported

histories of CSA. An investigation of gender and type of behavior expressed was also conducted.

Hypothesis 1: Adolescents with a reported history of CSA will have more total diagnoses than their non-CSA counterparts.

Hypothesis 2: Adolescents with a reported history of CSA will be more frequently diagnosed with PTSD.

Hypothesis 3a: Adolescents with a reported history of Child Sexual Abuse will exhibit significantly higher rates of acting out behavior during the evening than adolescents without a reported history of CSA.

Hypothesis 3b: Significant differences will be found for total number of incidents between month 1 and average number of incidents per month for the later months.

Hypothesis 4a: Boys with a reported history of Child Sexual Abuse will exhibit a higher frequency of externalizing incidents than girls with a reported history of Child Sexual Abuse.

Hypothesis 4b: Girls with a reported history of Child Sexual Abuse will exhibit a higher frequency of internalizing incidents than boys with a reported history of Child Sexual Abuse.

CHAPTER III

METHODOLOGY

Participants

The data for this study were drawn from records of adolescents in residential treatment for adjudicated adolescents. Adolescents are placed here based on a court ruling due to exhibiting violent or law-breaking behaviors. The facility is locked-down and includes mental health treatment, as well as regular schooling for adolescents. Data were collected over a 2 and ½ year period due to availability of data. Data included information on 78 participants of reported significant incidents with regard to time of significant incidents, demographic and diagnostic information. Every child had at least one significant incident while in attendance. Participants were adolescents 13-18 years of age and assigned to one of two groups on the basis of having a reported history of CSA or not. There were 46 boys and 32 girls. Demographic information was obtained in order to document that the two groups were comparable across variables such as IQ, gender and race. Data for IQ was not available for two participants. Comparable values were obtained for Race and IQ for the CSA and N-CSA groups, but slightly different proportions were obtained in terms of gender. See Table 1 for a demographic comparison of groups.

Table 1

Demographic Comparison of Groups

Demographics	CSA Group <i>n</i> =48	N-CSA Group <i>n</i> =30
Race	No.	No.
White	23	16
Black	22	13
Other	3	1
Gender	No.	No.
Male	25	7
Female	23	23
Intelligence Quotient (IQ)	Mean	Mean
Full Scale IQ	85.59	83.77

Note. Race and gender are represented by the number represented in each category, while

FSIQ is represented by the average FSIQ for both CSA and N-CSA groups.

Diagnostic Profile of Participants

Adolescents with and without a reported history of Child Sexual Abuse (CSA) were diagnosed with Depression, Anxiety, Conduct Disorder (CD), Bipolar Disorder, Borderline Personality Disorder (BPD), Attention Deficit Hyperactivity Disorder (ADHD) and/or Posttraumatic Stress Disorder (PTSD). Adolescents were diagnosed more frequently with Conduct Disorder than with any of the other above diagnoses as seen in Table 2.

Table 2

Diagnoses of Participants

Description	CSA No. (%)	N-CSA No. (%)
	<i>n</i> =48	<i>n</i> =30
Depression	19 (39.60%)	6 (20.00%)
Anxiety	4 (8.30%)	0
Conduct/Oppositional Defiant Disorder	35 (72.90%)	27 (90.00%)
Bipolar Disorder	11 (22.90%)	2 (6.70%)
Borderline Personality Disorder	3 (6.30%)	1 (3.30%)
Attention Deficit Hyperactivity Disorder	13 (27.10%)	5 (16.70%)
Post Traumatic Stress Disorder	17 (35.4%)	1 (3.30%)
<i>Co-morbid diagnoses</i>	36 (75.0%)	11 (37.0%)

Note. Diagnostic information based on Diagnostic and Statistical Manual of Mental

Disorders-Fourth Edition (DSM-IV; APA, 1994) criteria were obtained from therapists via the retrospective data review.* The total number exceeds 100% in that children may carry more than one diagnosis.

Procedures

Files containing adolescents psychological and testing history were originally reviewed and data were collected and entered into a database by a staff psychologist at a residential treatment facility for adjudicated adolescents. The measure of primary interest in this study was of adolescent problem behavior documented in incident reports. The incident report included the name of student, date and time of incident, staff involved, as well as type and description of the incident. The nature of the incidents was assigned to one of four categories by the staff psychologist who collected the data. The categories were: Disruptive, Aggressive, Rule-Violation, and Therapeutic incidents. Criteria for coding each category was as follows: Disruptive--verbal events that disrupted the milieu or problems between people; Aggressive--aggression against self, others or property; Rule-Violation--behaviors that break the rules; Therapeutic—information that is to be noted as a concern and should be reported to staff and counselors. Such an incident does not result in a consequence to the student. Aggressive and Disruptive behaviors are considered destructive in nature and take the form of externalizing behaviors. Therapeutic behaviors require the assistance of a therapist or staff member to provide verbal mediation and take the form of internalizing behaviors. Rule-Violation behaviors will be counted into the total frequency of behaviors, but not into the Externalizing or Internalizing categories since these behaviors do not evidence internally driven or externally destructive behaviors.

The author conducted a test of the reliability of the behavior codes used in the study. Reliability of coding for type of significant incidents was carried out by taking a random sample of 24 students (2 students per each of 4 units over years 2003, 2004, and 2005) and coding for 5 significant incident reports per child. In order to select a random sample of students, a number assigned to each student was placed in a bowl according to one of the four

units students are housed, gender and year. One girl and one boy from each unit for every year were selected from the designated bowls at random and without replacement. A total of 120 significant incident reports were coded. In order to code the type of incident, original codes were deleted from the file with only the description of the incident available for review. Based on the descriptions, the incidents were coded as either: Disruptive, Aggressive, Rule-Violation, or Therapeutic. For the one code that was not originally assigned, a new code was assigned and checked by a dissertation committee member. For any incidents that did not have a description for the type of incident coded, these incidents were figured into the total incidents for each child but not the total type of incidents measured. Reliability of coding based on percentage of agreement was 89.2%. The primary researcher reviewed 48 student files for missing data such as diagnoses, date of birth, date of entry, date of discharge, IQ, history of CSA and race. 172 missing data were found out of 175.

Names of participants were coded by a number assuring the confidentiality with personal information kept with the primary researcher in a locked office.

Variables

The variables of interest in this study were race, diagnoses, unit in residence, gender, cognitive level, as well as nature and timing of incidents. Cognitive level was assessed with IQ scores. The timing was derived by tallying the number of incidents across a 24-hour period during the adolescent's time in residence and placing the total number into hourly units (i.e., 12 am - 1 am = 0, 1 am - 2 am = 1). In order to see if there was a difference in the average rate of incidents per month for children's entry month and remaining months in the residential program, separate variables were created for these time periods. Frequencies of

incidents for the first month were assigned to one variable, while an average of incidents per month for the later months served as another variable. IQ and frequency of incidents were continuous variables. Residence unit, diagnoses, gender, and race/ethnicity were categorical variables.

In order to control for the varying lengths of time students were residents of the facility and initial behavioral difficulties students face upon entering the facility, analysis of data was conducted in two ways. The first approach (Time 1) compared the frequency of incidents for participants with reported histories of CSA and those without reported histories of CSA groups for the entry month. The second approach (Time 2) compared the frequency of incidents for participants with reported histories of CSA and those without reported histories of CSA groups for the remaining months.

For the 9 cases for which data were unavailable for total incidents for month 1, values were imputed (2.55) by taking an average of mean month 1 incidents for each case. For one case for which date of discharge data was missing, a value was imputed (10.04) for the subject's time in program [number of months between entrance and discharge (days/30.5)] by taking the average length of stay for all subjects.

Data Analysis

Descriptive statistics were performed to describe the population of interest and the characteristics of incidents by time. An alpha of .05 was set for determining statistical significance in the hypothesis tests described below. For hypothesis 1, a t-test was utilized to determine if history of CSA was significantly associated with the number of diagnoses youth had.

The second hypothesis was tested with a crosstabulation of CSA and PTSD. A Pearson Chi-Square test was used to assess for a significant relationship between the two variables.

For hypothesis 3, t-test analyses were used to test whether CSA adolescents acted out more during the evening than daytime (3a), and whether participants acted out more during the entry month than on average during the remaining months of their stay (3b). “Evening” was defined inductively based on an analysis of the frequency of incidents throughout the 24-hour day as analyses unfolded (i.e., 4:00 p.m.-9:00 p.m. had the highest rising means of incidents for all participants). Therefore, “evening” was defined for the purposes of this study as being between the hours of 4:00 p.m. and 9:00 p.m. For hypothesis 3a, the independent variable was reported history of CSA, and the dependent variable was number of significant incidents during the evening. For hypothesis 3b, the independent variable was entry month vs. remaining months and the dependent variable was the number of incidents per month.

For hypothesis 4, t-test analyses were used to test whether there were gender differences in externalizing and internalizing behaviors.

Post-hoc power analyses were conducted to determine the effect sizes detectable in means comparisons with the highest and lowest sample sizes: 48 CSA vs. 30 NCSA youth in H1 and H3, and 25 CSA girls vs. 23 CSA boys in H4. A harmonic mean was calculated for the first analysis in order to create an effective sample size to perform the power analysis. Based on the harmonic mean and Cohen’s (1988) power tables, at the recommended power level of .80, only medium to large effects (.70 or higher) could be detected for H1 and H3. Further, only large effects (.90 or higher) could be detected for H4.

CHAPTER IV

RESULTS

Total Diagnostic Differences Between CSA and N-CSA Groups

The testing of the first hypothesis revealed significant differences between the CSA and N-CSA groups in regards to total number of diagnoses held ($t = 3.67$, $df = 76$, $p = .000$). Adolescents with a reported history of CSA had a significantly higher number of diagnoses ($M = 2.10$, $SD = .90$) than their non-CSA counterparts ($M = 1.40$, $SD = .67$). This finding documents the significant levels of psychopathology present in adolescents who have been sexually abused. Further, this result is consistent with current research findings regarding the relationship between CSA and increased number of diagnoses assigned.

Diagnostic Differences Between CSA/N-CSA and PTSD/N-PTSD Groups

As expected, testing of the second hypothesis revealed a significant relationship between CSA and PTSD [$\chi^2(1, N=78) = 10.71, p=.001$] as seen in Table 3. Of those with reported histories of CSA, 35.4% have PTSD and 64.6% did not have PTSD. For participants without PTSD, 51.7% have been sexually abused and 48.3% have not been abused. Further, 94.4% of individuals with PTSD have experienced CSA, and 5.6% have not experienced CSA. Findings indicate that with having a diagnosis of PTSD, a history of CSA is almost certain. Having a diagnosis of PTSD is a good predictor of CSA history. However, when a reported history of CSA is present, there is a 35.4% chance a diagnosis of PTSD will be assigned. More than half of those with reported histories of CSA have a diagnosis other than PTSD.

Table 3

Significant Differences Between the CSA and PTSD Groups

			CSA	N-CSA	Total
PTSD	Yes	Count	17	1	18
		% within PTSD	94.40%	5.60%	100%
		% within CSA	35.40%	3.30%	23.10%
		% of Total	21.80%	1.30%	23.10%
	No	Count	31	29	60
		% within PTSD	51.70%	48.30%	100%
		% within CSA	64.60%	96.70%	76.90%
		% of Total	39.70%	37.20%	76.90%
		Count	48	30	78
		% within PTSD	61.50%	38.50%	100%
		% within CSA	100%	100%	100%
		% of Total	61.50%	38.50%	100%

Note. Results are produced by a crosstabulation of CSA with PTSD.

Differences Between CSA and N-CSA Groups In Time of Acting Out

Contrary to prediction, analyses for the third hypotheses did not reveal significant differences for the CSA and N-CSA groups in regards to having more incidents during their first or later months. Further, the number of incidents occurring during evening hours did not differ across the two groups as is seen in Table 4. As no statistical difference was found between incidents for the first month and later months, the evening frequency of incidents was obtained for all months.

Table 4

Acting Out Behavior Among CSA and N-CSA Groups

Incidents	CSA <i>n</i> =48 Mean (SD)	N-CSA <i>n</i> =30 Mean (SD)	<i>t</i>	<i>p</i>
Month 1	2.68 (4.55)	2.34 (3.62)	0.35	0.73
Other Months	34.92 (40.87)	32.23 (33.24)	0.3	0.76
Evening	18.52 (23.04)	18.33 (18.99)	0.04	0.97

Note. Evening incidents occur between 4:00 p.m. and 9:00 p.m.

**p*<.05.

Impact of CSA on Type of Behavior for Adolescent Males and Females

In the test of hypothesis 4, significant differences were found for males and females in regards to total number of externalizing and internalizing behaviors for each group as shown in Table 5. Male adolescents had a significantly higher number of externalizing (disruptive) incidents than their female counterparts. Female adolescents displayed a marginally ($p < .09$) significant higher number of internalizing (therapeutic) incidents than their male counterparts. However, no statistically significant differences were found for externalizing (aggressive) behaviors between the male and female adolescents. These results support research findings which point to males being more likely to demonstrate externalizing behaviors than internalizing behaviors, as well as females being more likely to demonstrate internalizing behaviors than externalizing behaviors.

Table 5

Externalizing and Internalizing Behavior Among CSA Males and Females

Behavior	CSA Males	CSA Females	<i>t</i>	<i>p</i>
	<i>n</i> =23	<i>n</i> =25		
	Mean (SD)	Mean (SD)		
Disruptive	13.74 (13.31)	7.44 (8.43)	-1.98	0.05
Aggressive	6.26 (8.30)	9.88 (26.00)	0.64	0.53
Internalizing	8.57 (9.08)	14.60 (14.12)	1.74	0.09

Note. Disruptive and Aggressive behaviors are characterized as externalizing or destructive behaviors, while therapeutic behaviors are characterized as internalizing.

* $p < .05$

CHAPTER 5

DISCUSSION

Hypothesis 1

Results of tests of the first hypothesis endorsed significant differences between the CSA and N-CSA groups in terms of the number of DSM-IV diagnoses assigned. On average, CSA adolescents held two or more diagnoses compared to one diagnosis for N-CSA adolescents. Findings point to substantial elevated levels of psychopathology for CSA adolescents and are consistent with earlier reports in the literature. McLeer et al. (1998) assessed a sample (N = 80) of non-clinically referred sexually abused children and found that 62.8% presented with at least one psychiatric diagnosis and 29.5% presented with two or more diagnoses. Due to variability in symptom presentation among individuals based on type, duration, frequency or age of abuse, CSA youths are likely to be diagnosed with a constellation of disorders such as depression, bipolar disorder, dissociative disorder, posttraumatic stress disorder, borderline personality disorder, or multiple personality disorder (Shapiro & Dominiak, 1992), as well as conduct disorder, oppositional defiant disorder, and attention-deficit hyperactivity disorder (Furlong, Morrison, & Jimerson, 2004). Further, due to varying definitions of CSA and different methods use to gather and assess history of abuse, assigning various diagnoses is probable.

Variability of case presentation for CSA youths makes assigning one identifiable syndrome for each individual child difficult (Hébert, Parent, Daignault, & Tourigny, 2006). Adolescents with histories of CSA present with a constellation of symptoms demonstrated differently for each individual. Youths with sexual abuse histories are inclined to exhibit various symptoms such as "anxiety, depression, somatic complaints, social withdrawal, anger and aggressive behaviors" compared to youths without sexual abuse histories (Briere & Elliot, 2001; Cahill, Kaminer, & Johnson, 1999; McLeer et al., 1998; Paolucci & Genius, 2001; Wolfe, 1999; as cited in Hébert, 2006, p. 203). Lanktree, Briere, and Zaidi (1991) report that acts of self-destruction and suicidal tendencies are common in CSA youths. Youths with CSA histories in residential treatment settings demonstrate compounding effects of such symptoms (Berliner & Elliot, 2002) and are consistent with the symptoms exhibited by the adolescents in the present study.

A reasonable explanation for multiple diagnoses is understandably the significant impact of the trauma, specifically, significant levels of dissociative phenomena as post-trauma effects. Dissociative symptoms in children present as "trance-like states", as well as significant alterations in "behavior and functioning" (Friedrich, Jaworski, Huxsahl, & Bengtson, 1997). Briere and Runtz (1989) and Chu and Dill (1990) find dissociation to be closely connected to sexual abuse. In a study assessing dissociative symptoms in adolescents with a history of abuse, dissociation was found to be correlated with sexual abuse (Atlas & Hiott, 1994). Silberg (2000) found dissociative symptoms to be present 23% to 45% of sexually abused inpatient adolescents. Dissociative symptoms are evident among various diagnoses and present difficulties for clinicians when making a diagnosis. Mash and Barkley (2006) assert that dissociative disorders are not frequently diagnosed in children possibly

because current classification systems are derived from studies on adults versus children.

Dissociative symptoms in children are often seen as an indication of various disorders or problems (Mash & Barkley, 2006; Oldham, Skodal, & Bender, 2005). For example:

Patients with dissociative disorders displaying dissociative symptoms of hearing internal voices may be interpreted as psychosis (schizophrenia); symptoms of rapidly alternating shifts in mood may be confused with bipolar affective disorders, rapid cycling, or emotionally unstable personality disorders; symptoms of overwhelming anxiety may be confused with generalized anxiety disorder; symptoms of cognitive and attentional difficulties may be confused with attention deficit disorders and cognitive processing deficits; symptoms of explosive anger or denial of misbehaviours may be confused with conduct disorders; and symptoms of intractable pain and somatoform disturbances may be confused with physical disorders, somatization disorder or hypochondriacal disorder and hence get the wrong or improper treatment (Diseth, 2005, p. 81).

The multifarious nature of CSA youths point to the necessity for proper assessment tools to differentiate among the variety of symptoms found in multiple disorders. Since such an array of symptoms present as a form of dissociation, assessing dissociation along a continuum or dimension may be more adept at differentiating minor normative dissociation such as typical daydreaming from major psychopathological disorders such as borderline personality disorder (Diseth, 2005). A categorical approach, such as that found in the DSM-IV or ICD-10 places more restricted criteria on dissociative symptomatology, thereby forcing dissociation into either that of psychoform, somatoform or conversion classifications. Such limitations do not allow for a definitive assessment of dissociative features. Assessing levels of dissociation among sexually abused youths is important in order to provide appropriate care. More importantly, Hickey (1993) suggests that learning how sexual abuse influences testing behavior will help to distinguish sexual abuse from other psychiatric diagnoses which may present with analogous symptoms. Appropriate identification of sexual abuse symptoms leads to improved prognosis and intervention.

Hypothesis 2

Testing of the second hypothesis revealed significant differences for adolescents with histories of CSA/N-CSA and PTSD/N-PTSD diagnoses. Of those with reported histories of CSA, 35% have PTSD and 65% did not have PTSD. Findings revealed that 94% individuals with PTSD have experienced CSA, and 6% have not experienced CSA. It can be concluded that adolescents with a diagnosis of PTSD are likely to have a history of sexual abuse. However, when a reported history of sexual abuse is present, there is a 35% chance of a diagnosis of PTSD. Consequently, it is logical that 65% of those with reported histories of CSA have a diagnosis other than PTSD.

This finding is consistent with the literature in that a history of child sexual abuse increases one's vulnerability to posttraumatic stress disorder (Elliot & Briere, 1995; Rodriguez, Vande Kemp, & Foy, 1998; Tremblay, Hebert, & Piche, 2000; as cited in Twaite, 2004). Wolfe, Sas, & Werkle (1994) found high rates of PTSD in child sexual abuse survivors. Rowan, Foy, Rodriguez, & Ryan (1994) also found those with histories of child sexual abused tend to develop PTSD.

In a study comparing PTSD symptoms among women with and without sexual abuse histories, 86.7% of the CSA group met criteria for PTSD (Rodriguez, Ryan, Vande Kemp, & Foy, 1997). Several other studies support this finding. McLeer, Callagan, Henry, and Wallen (1994) and Sadeh, Hayden, McGuire, Sachs, and Clivita (1994) are two controlled studies which show higher PTSD rates in children with histories of CSA compared to those without histories of CSA. In looking at inpatient samples with histories of CSA and a diagnosis of borderline personality disorder, Saunders (1991) found higher PTSD rates than in children without histories of CSA.

It is important for inpatient clinicians to recognize the role of trauma in the development of PTSD given the high rate of trauma experienced by inpatient psychiatric populations (Escalona, Tupler, Saur, Ranga, Krishnan, & Davidson, 1997). McFarlane, Booklas and Air (2001) found 61% of traumatized inpatients to meet criteria for PTSD. Twenty-eight percent obtained a formal diagnosis of PTSD while 22% showed significant PTSD symptoms. Many of these patients either had previous diagnoses or went on to obtain other disorders. Those with a lifetime history of PTSD were 8 times more likely to have anxiety disorders and 10 times more likely to have a psychotic disorder (McFarlane et al., 2001). Since many symptoms of PTSD overlap with other disorders, appropriate diagnostic measures are essential to distinguish among disorders. Misdiagnosed PTSD leads to a lack of appropriate treatment and thereby, greater illness severity and poorer outcomes (McFarlane et al., 2001). Recognizing the key features of PTSD is essential for effective intervention.

Dissociation is one of the key features of PTSD. Research has shown that children and adolescents who are sexually abused separate from traumatic experiences by dissociating from trauma experiences (Evans & Sullivan, 1995; Everill, Waller, & Macdonald, 1995). A continuous response of dissociation does not allow the child to work through the traumatic event (Twaite, 2004). Not fully processing such stimuli may result in dealing with intrusive memories in the form of flashbacks or re-experiencing the trauma (Brown, 1994). The physiologic responses of re-experiencing the traumatic event lead to exaggerated startle responses and hyper-arousal symptoms so evident in PTSD (Mash & Barkley, 1998). Perhaps the acting out behaviors exhibited by the adolescents in the current study are actually

demonstrating various forms of dissociation. Future research points to the need for exploring the function of such behaviors.

Filipas and Ullman (2006) examined psychological sequelae of child sexual abuse and determinants that lead to recurrent victimization in traumatized individuals. Research suggests that individuals experiencing CSA who dissociate during the attack experience PTSD symptoms at higher rates than non-dissociators (Johnson, Pike, & Chard, 2001). Using dissociation to cope with trauma as it occurs may serve as useful during the episode. However, continuing with such a response to aversive stimuli may interfere with one's ability to be alert to one's environment, thereby making one more vulnerable to further retraumatization (Chu, 1992). Maladaptive coping responses such as disengaging from negative life events, was found to predict revictimization. If the adolescents in the present study are disengaging from previous trauma experiences in the form of significant incidents, they are likely to reexperience such trauma with the resulting restraints from staff

Maladaptive coping responses, in addition to self-blame and CSA severity all predicted increased PTSD symptoms (Filipas & Ullman, 2006). Findings indicated that increased PTSD symptoms correlated with increased maladaptive coping responses, as well as CSA frequency and duration. Abuse from a known assailant resulted in more PTSD symptom severity than an unknown assailant. Greater psychological distress is evidenced when a child is assaulted by a trusted caretaker or role model (Finkelhor & Brown, 1985). So, it is clear how one would experience increased psychopathology in response to such a betrayal of trust. It was also found that the younger the age of abuse, the greater the symptomatology. Self-blame during the attack also predicted increased PTSD symptoms, especially later on in life. Thus, research points to maladaptive coping responses, self-blame,

characteristics of CSA and abuse by a known assailant being a significant predictor of PTSD symptoms and consequent psychopathology. Findings may suggest that those in the present study experienced increased self-blame, more severe forms of sexual abuse, longer duration of abuse, abuse at an earlier age, or may have known their assailant, thereby resulting in increased levels of PTSD symptomatology.

The present study found 94% adolescents with PTSD to have histories of CSA. However, for those with reported histories of CSA, only 35% were found to have PTSD. This finding could be attributable to individual coping mechanisms, intelligence, or personality factors that may protect the adolescent from adverse trauma exposure. Dixon, Howie, and Franzcp (2005) reported similar findings to those of the present study. They found 62% of female sexual offenders with trauma histories such as sexual abuse, physical abuse, witnessing a violent crime or being confronted with traumatic news not to develop PTSD. Specifically, 40% of girls with sexual abuse histories did not develop PTSD. The present study found 65% of all CSA participants not to develop PTSD, but evidenced other diagnoses instead. In particular, 68% of girls with CSA histories and 61% of boys with CSA histories did not develop PTSD.

Findings from the current study and those of Dixon et al. (2005) point to the need for further research in identifying protective factors for traumatized individuals. Further, future studies should include groups separated by characteristics of abuse and abuser. Finally, future studies should use standardized measures to assess PTSD in individuals with histories of CSA to support the assumption that the CSA provides a link to the development of PTSD (Rodriguez et al., 1997).

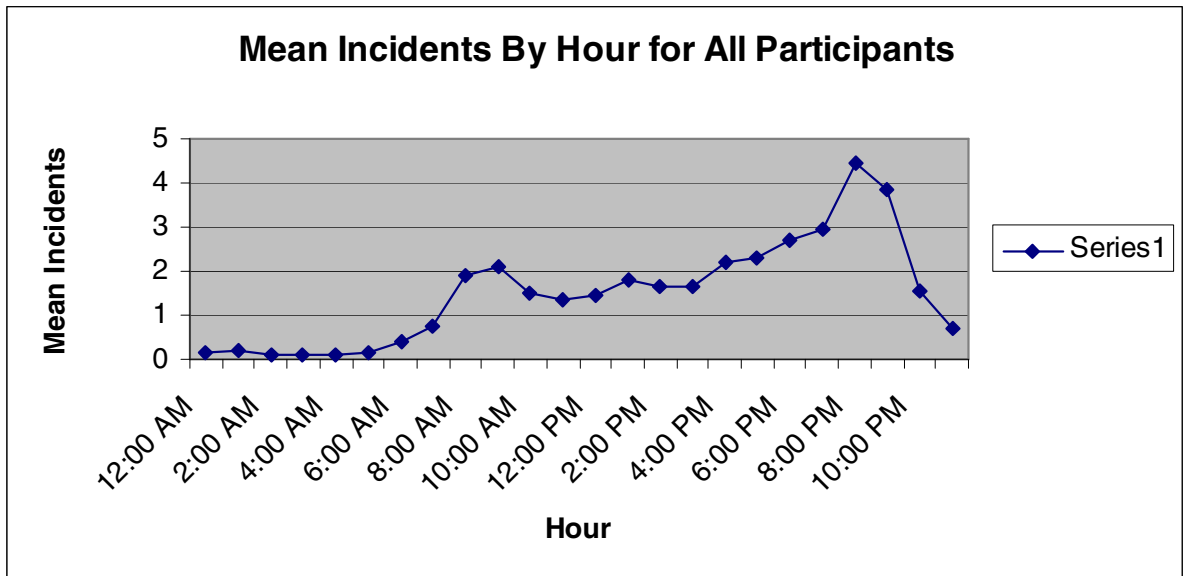
Hypothesis 3

In terms of time of acting out behavior, the test of hypothesis 3 did not reveal significant differences between CSA and N-CSA groups. Although the CSA group showed slightly higher means than the N-CSA groups for the entry month and later months in residence, means were not significantly different. Therefore, for analysis purposes, when assessing for frequency of evening frequency of incidents for both CSA and N-CSA groups, all months were utilized. Additionally, although the mean frequency of incidents during evening hours (4:00 p.m.-9:00 p.m.) was slightly higher for the CSA group versus the N-CSA group, statistical significance was not reached.

When looking at all incidents for all participants, it is clear that the frequency of incidents rises measurably from 4:00 p.m. until 9:00 p.m. as is seen in Figure 1.

Figure Caption

Figure 1. Average number of incidents exhibited by all participants over a 24-hour period.



Since the results do not statistically differentiate CSA from N-CSA groups for time of acting out behavior but reveal a rise of incidents during the evening for all students, it is necessary to explore possible explanations for such results. Some possible explanations for this finding are: (1) The rate of disclosure for sexually abused adolescents is low due to issues of shame, humiliation, and a fear of not having appropriate support, especially in males. (2) The sample presents with significant trauma histories such as physical and sexual abuse, as well as neglect. Although, much of the literature points to sexual abuses' significant contribution to acting out behaviors above all others, other types of trauma exposure, whereby one's sense of safety is compromised, can also lead to significant impairment. Understanding the contribution of trauma to acting out behaviors is essential. (3) Sexual abuse symptoms reveal a similar clinical presentation to other diagnoses, thereby making an accurate diagnosis more difficult. (4) Traumatic experiences have been shown to alter the brain's left hemisphere where fluctuations in cortisol levels have been found. For traumatized adolescents, alterations in HPA axis functioning leads to a chronic state of hyperarousal especially at night when one's sense of safety is compromised.

The low rate of disclosure of sexual abuse is seen to be associated with shame. The co-occurrence of shame, humiliation, embarrassment and anger with sexual abuse victims is frequent (Negrao, Bonanno, Noll, Putnam, & Trickett, 2005). Such an intrusion upon one's personal self contributes to feelings of low self-worth and the sense of demoralization. These feelings contribute to victims acting out in ways that mimic abuse and the co-occurring feelings stated above (Finkelhor & Browne, 1985). Victims, who experience increased shame, tend to demonstrate more difficulty with adjustment and processing of the event (Negrao et. al., 2005). Experiences of shame influence the rate of disclosure among abuse

victims. Victims are embarrassed by the horrific act and feelings of guilt associated with lack of personal control over their bodies. High rates of shame and humiliation influence rate of disclosure and emotional concealment (Negrao et al., 2005), especially for boys.

Research has found a link between feelings of shame and the presentation of anger and aggression in sexual abuse victims (Andrews, Brewin, Rose, & Kirk, 2000; Harper & Arias, 2004). Bennett, Sullivan and Lewis (2005) suggest that individuals who experience shame are more likely to show anger when interpersonal conflict arises. Bennett and colleagues suggest that a fear of exposure of flaws incites anger toward the individual believed to be exploiting them.

Shame has been found to “mediate” the relationship between childhood sexual abuse and resulting behavior (Feiring & Taska, 2005). When shame and anger co-occur, more maladaptive responses result in the form of unfocused or explosive rage (Bennett et al., 2005). Retzinger (1987) suggests that “rage differs from adaptive anger in that anger is associated with feelings of righteousness or feeling justified, whereas in rage, the feelings are of powerlessness and a drive to lash out at others” (as cited in Bennett et al., 2005, p. 319). Since shame was not directly related to externalizing behavior, it is possible that some individuals may experience varied levels of shame due to personal coping factors or forms of abuse. It is interesting to note that in conjunction with shame, anger has a more violent and overt expression.

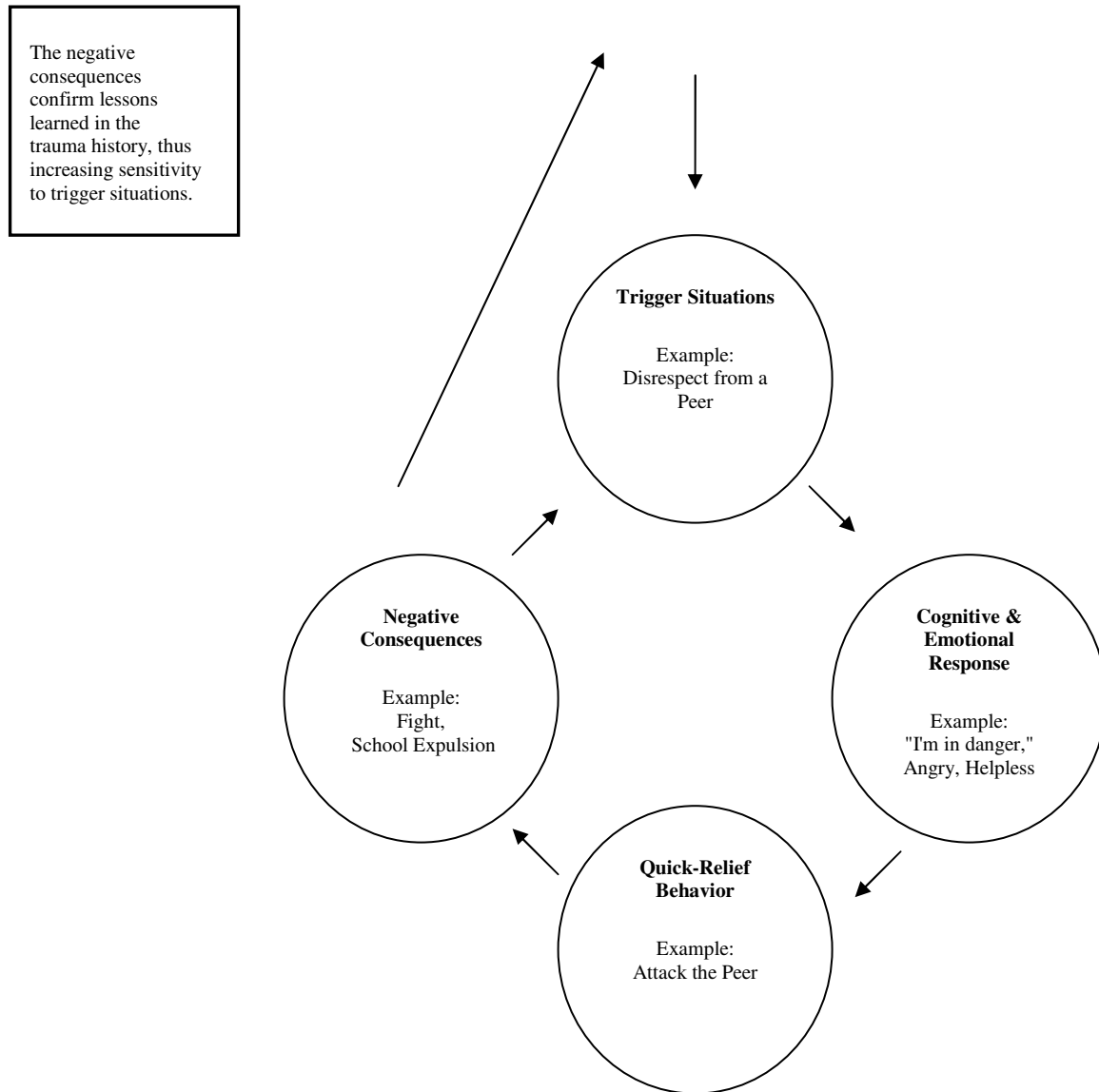
Perhaps some individuals in the present study did not disclose abuse due to the shame involved with experiencing such a trauma as sexual abuse. Further, if this were the case, some of the anger derived from shame may have materialized into acting out behaviors. It is

possible that more adolescents experienced sexual abuse in the present study. If this were true, it would help to explain the high rate of evening incidents.

Understanding how all forms of trauma contribute to manifestations of behavior is essential since the present population assessed in this study have experienced multiple forms of abuse. From reviewing Bennett et al. (2005) study, it is clear that a history of physical abuse leads to externalizing behaviors. It was also found in the study that neglect resulted in more internalizing behaviors. Trauma is believed to contribute significantly to the perseverance of conduct disorder. When traumatized youths feel threatened, they tend to misinterpret other's responses, experience increased agitation and rage, and respond with misplaced aggression (Greenwald, 2002). Processing information in this manner is better known as a "hostile attribution bias" typical of antisocial personalities in adolescents (Dodge & Frame, 1982). This information processing style continues the cycle of threats leading to aggression with aggression creating hostile reactions from others (Greenwald, 2002). This cycle of aggression serves to eliminate fear, which appears to fortify a sense of security in traumatized youths (Novaco, 1976,). However, ultimately, aggressive responses only lend themselves to re-experiencing the very feelings encountered with the original abuse as is seen in Figure 2.

Figure Caption

Figure 2. Trauma-Informed Offense Cycle (Greenwald, 2002, p.13)



(Intervention can occur at many points in the cycle, while the relevance of trauma is reiterated.)

Similar aversive reactions are also found in those with diagnoses of PTSD. Since anger and acting out are present in both CD and PTSD (Chemtob, Novaco, Hamada, Gross, & Smith, 1997), it may be difficult to differentiate between the two in traumatized adolescents (Atlas, DiScipio, Schwartz, & Sessions, 1991). Individuals with both diagnoses have been noted to have histories of trauma. When a diagnosis of CD is present, PTSD symptoms may be overlooked. In addition, histories of abuse may also be disregarded (Brown, 1999). Curcio-Chilton (1994) suggests that the stress from trauma may show itself in “aggressive, destructive, and anti-social behavior” which is common symptoms of CD (as cited in Brown, 1999, p. 33). Since many of the participants in this study have been diagnosed with various trauma histories, CD and PTSD, it would be important to properly assess such individuals so as to provide appropriate treatment, especially since CD and PTSD are the leading behavioral manifestations among adolescents (Hickey, 1993).

Within the PTSD framework, there appears to be a deficit in the capability to control fluctuations in arousal when presented with a stressful situation (Frewen & Lanius, 2006). This deficiency has been attributed to increased activation of the HPA axis and cortisol levels in the evening (Vgontzas et al., 2001) and 24 hours after recounting the traumatic experience (Griffin et al., 1997; Koopman et al., 2003) when cortisol has been found to rise. A perpetual state of arousal serves to protect the individual against threats such as re-experiencing symptoms such as nightmares or possible attack (Krakow et al., 2001). Chronic hypervigilance leads to insomnia and continued symptoms during the day. Such hypervigilance and lack of sleep makes a child more vulnerable to acting out, thereby re-enacting the trauma.

Such re-enactment of abuse may be a form of dissociation. Since dissociation is common sequelae of CSA, it is possible that the acting out adolescents demonstrate in this study may actually be dissociative events. Noll, Horowitz, Bonanno, Trickett and Putnam (2003) suggest that dissociation leads to further re-victimization . For example, Evans and Sullivan (1995) and Everill, Waller, & Macdonald (1995) suggest that both sexually and physically abused children and adolescents learn to separate from their traumatic histories by dissociating from the event. Sax, vander Kolk, Berkowitz, Chinman, Hall, Lieberg, et al. (1993), report child and adolescent psychiatry patients to display high rates of dissociative behaviors. “Peritraumatic dissociation can be a response to significant arousal” (Nixon, Resick, & Griffin, 2002, p. 195). Particularly, CSA is associated with self-destructive behaviors through an expression of dissociative experiences (Low, Jones, MacLeod, Power, & Duggan, 2000). Cyr, McDuff, Wright, Theriault, & Cing-Mars (2005) state that sexual abuse was most highly correlated to self-harming behaviors. Noll et al. (2003) found suicide and self-injurious behaviors to associate with dissociation. Noll and colleagues (2003) suggest that “self-harm may not be a direct response to sexual abuse but to the dissociative experiences that result from efforts to cope with the abuse” (p. 1466).

There is a relationship between acting out, dissociation and nightmares. Nightmares are thought to act as a coping strategy for traumatized children and adolescents (Agargun et al., 2003). Further, nocturnal auditory and visual hallucinations are common in children and adolescents with dissociative symptoms and histories of CSA. These hallucinations are dissociative in nature and may lead to children acting out in response to such hallucinations.

Since most of the acting out behaviors occur at night for adolescents with CSA histories in this study, understanding the function and nature of acting out will allow for the

implementation of interventions tailored to the adolescent and episode. Recognizing the differences among all forms of acting out, such as hallucinations, dissociation, self-harming behaviors, destruction of property, harming others, nightmares, seeking restraint, among other forms of acting out behaviors will aid in learning how to best address the event and reduce consequent self-harm.

The rate of comorbid diagnoses in CSA youths is high. For example, those diagnosed with CD have also been diagnosed with other disorders such as PTSD, mood disorders, ADHD, anxiety disorders and substance abuse (Gore-Felton, 2001). The present study supports this research in that adolescents with a reported history of CSA had a significantly higher number of diagnoses ($M=2.10$, $SD=.90$) than their non-CSA counterparts ($M=1.40$, $SD=.67$). Sexually abused youths are likely to demonstrate lower self-esteem, anxiety, sleep disturbances, depression, PTSD symptoms, dissociation, among other sequelae. Since such a variety of symptoms occurs in several disorders such as CD, PTSD, depression, anxiety, and personality disorders, it is essential to properly assess such symptomatology in order to get the most accurate diagnosis and resulting treatment. It is quite possible that N-CSA participants in this study could be misdiagnosed due to varied assessment tools or a misinterpretation of symptom presentation. Therefore, the true percentage of CSA adolescents is hard to determine.

Hypothesis 4

As predicted, the test of hypothesis 4 revealed significant differences between males and females in regards to total number of externalizing and internalizing behaviors for each group. Male adolescents showed a significantly higher number of externalizing (disruptive) incidents than their female counterparts. Consequently, female adolescents demonstrated a

marginally significant higher number of internalizing incidents (therapeutic) than their male counterparts. Statistically significant gender differences were not found for externalizing (aggressive) behaviors. These results support the research findings which point to males being more likely to demonstrate externalizing behaviors than internalizing behaviors (Garnefski & Diekstra, 1997), as well as females being more likely to demonstrate internalizing behaviors than externalizing behaviors (Gore-Felton et al., 2001; Ullman & Filipas, 2005). Not finding significant differences between gender groups in terms of aggressive behaviors in residential treatment is consistent with the research. Studies have found mixed results on aggressive behaviors for both boys and girls (Arnold et al., 2003; Garnefski & Diekstra, 1997; Gore-Felton et al., 2001; Mannarino et al., 1991; McCabe, Lansing, Garland, & Hough, 2002).

McCabe et al. (2002) looked to investigate psychological disturbance and environmental risk among adjudicated delinquent girls and boys aged 6-17. Both genders evidenced multiple diagnoses and higher rates of psychopathology than youths in the general population and are consistent with the population in the present study. It is clear from the findings of the present study, as well as other findings that youth with histories of CSA experience significant distress and complex behaviors as a consequence of abuse. How each individual demonstrates such behavior is determined by several factors such as age, intensity, frequency, type of abuse and perpetrator. Further, gender seems to play a role in the type of behavior demonstrated (Ullman & Filipas, 2005).

Research suggests higher rates of abuse in women versus men, and it is likely that women tend to report abuse more often than men (Gore-Felton et al., 2001; Lamb & Edgar-Smith, 1994). There are direct, more extreme detrimental effects of non-disclosure versus

the disclosure of abuse. Increased shame and anger have been found to be correlated with non-disclosure, as well as the consequence of externalizing problems versus internalizing problems in Bennett et al. (2005) study examining shame and anger and resulting behavior problems. Since boys are more often violated by a member of the same sex than girls, the consequence may be greater for boys to disclose than for girls, thereby inciting anger and consequent externalizing behaviors. In the present study, it is possible that girls who did not openly disclose their abuse may have exhibited more of the aggressive incidents than those girls who did disclose abuse. Future studies may investigate disclosure versus non-disclosure with the type of behavior expressed particularly in girls in residential treatment.

This aforementioned research points to the significance of future studies of CSA youths taking into account variables such as disclosure, gender of the offender, age of abuse onset, duration of abuse, and type of abuse when assessing for manifestations of various types of behaviors (Garnefski & Diekstra, 1997; Brown & Finkelhor, 1986; Beitchman et al., 1992), especially since greater rates of sexual abuse (Gore-Felton, et al, 2001) and mental disorder (McCabe et. al, 2002) are found among adolescents in residential treatment. Learning how anger manifests itself in boys and girls will assist in management of those reported to have been sexually abused. Since there was not a significant difference found for aggressive behaviors between girls and boys in this study, it is possible that both boys and girls in residential treatment evidence high levels of mental disturbance and resulting self-destructive behaviors. The present study suggests that girls may tend to withdraw into themselves, thereby transcending into a spiral of cognitive distortions and resulting self-destructive behaviors. Conversely, boys may tend to use anger as an expression of emotion and incite disruptive events among the milieu in order to displace their anger.

Implications for Research and Practice

It is clear from the present study that the significant psychopathology of CSA adolescents endures, especially in residential treatment. The results of the present study suggest that CSA adolescents present with a multitude of symptoms that cannot be grouped into a one-size-fits all category. Many of the CSA symptoms presented are also symptoms found in various disorders such as CD, ADHD, MPD, BPD, Dissociative Disorders, Anxiety Disorders, and Depressive Disorders to name a few. The complexity of CSA symptomatology varies according to several factors such as: age, type, frequency, and duration of abuse, gender and relationship of abuser to the child. Attempting to assess CSA according to a particular syndrome profile or categorical approach does not allow for capturing the range of behaviors such traumatized children demonstrate. Resiliency factors play a part in a child's display of emotion and behaviors. Some children may not show any symptoms at all (Kendall-Tackett, et al., 1993) and others may show a constellation of symptoms. Additionally, there may be lag time according to when a child exhibits symptoms or actually discloses abuse. Gender differences in rate of disclosure and display of behavior have also been cited as key factors in symptoms experienced. With such multiplicity of symptom presentation, assessing CSA symptoms along a continuum may prove most beneficial in identifying CSA and prescribing appropriate treatment.

Finkelhor (1990) suggests that profile symptoms (e.g., sleep disturbances, depression, dissociation, etc.) only show exhaustive responses to stress. Further, they do not represent asymptomatic individuals, and cannot differentiate among a variety of clinical populations or between "clinical and normal populations" (Haugaard & Reppucci, 1988; McCord, 1986; Melton & Limber, 1989; as cited in Oberlander, 1995, p. 482). Kuehnle

(1998) suggests that CSA is a “life event or series of events” that results in a sequence of behaviors in traumatized children (p. 7). Since characteristics of abuse, the personality of the child, resiliency factors, and how the child and family define the abuse all play a part in how and what type of symptoms are presented (Kuehnle, 1998), it is difficult to create one profile to identify CSA.

Although behaviors such as nightmares, dissociation, mood alterations, anxieties, and external and internal manifestations are oftentimes exhibited by CSA children and adolescents, not every symptom is displayed by all victims. Kendall-Tackett et. al., (1993) provide evidence for this assertion based on their finding that even though CSA children showed more psychopathology manifested in several symptoms, no particular symptom was evidenced by all sexually abused children. In addition, neither sexually abused nor non-sexually abused children exhibited greater symptoms than other clinical populations, with the exception of sexualized behaviors. It is important to consider all symptoms common to CSA such as PTSD, dissociation, anxiety, depression, sexualized behaviors, externalizing behaviors such as destruction to self and others, as well as internalizing behaviors commonly demonstrated by withdrawal or avoidance. More importantly, since these behaviors are also symptoms found in other disorders and traumatized children, adequate assessment of CSA is necessary in order to provide treatment tailored to individual presentation.

Taking into account differences in gender presentation of acting out behavior will aid in creating interventions geared toward modifying the type of behavior exhibited. In the present study, girls demonstrated more internalizing behaviors such as withdrawal and required the intervention of therapeutic counsel. In contrast, boys exhibited more disruptive

behaviors than girls and required more forceful interventions such as restraint. In terms of aggressive behaviors, results were not significant for boys demonstrating more aggressive behaviors than girls. The findings of the present study support the literature (Arnold et. al., 2003; Connor, Doerfler, Toscano, Volungis, & Steingard, 2004; Garnefski & Diekstra, 1997; Gore-Felton, et. al., 2001; Mannarino et. al., 1991; McCabe et. al., 2002).

Specifically, although a majority of research points to boys demonstrating high rates of externalizing behaviors and girls internalizing behaviors, some research suggests high rates of both types of behaviors and more aggressive behaviors for girls in residential treatment. It may be that girls demonstrate more verbal aggression and aggression against themselves than boys do (Arnold, et. al., 2003; Connor et. al., 2004). Boys tend to evidence more disruptive behaviors commonly associated with diagnoses of CD or ADHD (Connor et. al., 2004). However, according to Connor's (2004) study, both genders experience difficulties with impulse control in residential treatment. Individualized assessment that measures symptom behavior along a continuum will assist in the creation of individualized treatment for both genders.

Due to variations and lack of consistent practices in the clinical assessment of CSA, use of empirically based assessment tools can aid in the predictive accuracy of CSA allegations and can reduce diagnostic error among clinicians (Levenson & Morin, 2006). In the present study, different assessment tools were used by various clinicians to determine a history of CSA, as well as clinical diagnoses. Such practices can lead to a variety of notions regarding the cause of symptoms CSA adolescents demonstrate. Therefore, the predictive accuracy of CSA assessments in this study may be low.

Children and adolescents who experience sexual abuse demonstrate a number of symptoms and meet criteria for diagnoses listed in the DSM-IV. It is important for clinicians not to assume that because such symptoms are present that sexual abuse is present (Kuehnle & Sparta, 2006). Many children and adolescents both in and out of treatment exhibit symptoms such as nightmares, fears, acting out behaviors, difficulty concentrating, quick changes in mood and so on (Achenbach, 1991). For example, dissociative disorders and PTSD are found among CSA and physically abused adolescents. Sexualized behavior is common among CSA victims, but can also be learned through watching sexual behaviors in the home (Kuehnle & Sparta, 2006). Friedrich, Grambsch, Broughton, Kuiper, & Beilke (1991) suggest that children with behavior disorders such as CD or ODD can exhibit sexualized behaviors as well. So, it is clear that specific measures that aid in the identification of sexual abuse are needed especially most psychiatric patients have experienced some sort of trauma.

Multiple methods of data collection are utilized among clinicians in order to capture the individual characteristics of CSA victims. The complexity of CSA requires specific types of psychometric measures to aid in the accuracy of findings. Various measures used to assess for child sexual abuse are anatomically detailed dolls, drawings, projective techniques, checklists and specialized standardized instruments. These include the Child Behavior Inventory which measures developmentally related sexual behaviors and sexual abuse specific criteria, and the Trauma Symptom Checklist which measures underresponse and hyperresponse, presentation of anxiety, depression, anger, PTSD, and dissociation, as well as other sexual concerns (Kuehnle & Sparta, 2006). With the variety of assessment tools presented, standardized assessments yield the most reliable objective data.

Friedrich (2006) presents selected instruments based on Friedrich's (1995) and Friedrich's (2002) theoretical framework. This framework suggests that "the functioning of the sexually abused child can best be understood along the domains of attachment quality; dysregulation, such as posttraumatic stress disorder (PTSD); sexual behavior problems; dissociation; and self-perception, particularly shame and guilt related to abuse" (Friedrich, 2006, p. 412). Further, this particular assessment approach takes into account the parent-child relationship since the family environment significantly contributes to the outcomes of CSA (Friedrich, 2006). They recommend a comprehensive assessment that includes an evaluation of "sexual problems, PTSD symptomatology, the degree to which his or her self-perceptions have been altered by the abuse, and the impact of the abuse on the child's parents" (Friedrich, 2006, p. 412). Assessment tools are listed in Appendix A.

A multifaceted approach to assessing sexual abuse using measures such as those in Appendix A will capture symptom presentation using reliable standardized measures. Instruments that are carefully selected to assess CSA can contribute to valid treatment recommendations. Including non-offending parents in treatment with their children improves the outcomes of CSA victims and their families (Deblinger, Lippmann, & Steer, 1996).

Various intervention strategies such as play therapy, supportive counseling techniques, client-centered therapy, community treatment, family and psychodynamic therapy have all been utilized with CSA victims. However, recent reviews of literature suggest that trauma-focused cognitive-behavioral treatment (CBT) rates highest in empirical support for successfully treating CSA victims and PTSD both individually and in groups (American Academy of Child and Adolescent Psychiatry, 1998; National Registry

of Evidence-based Programs and Practices, Substance Abuse and Mental Health Services Administration, 2005; Putnam, 2003; Saunders, Berliner, & Hanson, 2003; as cited in Deblinger, Behl, & Glickman, 2006). Cohen, Deblinger, Mannarino and Steer (2004) assessed functioning of CSA children and their non-offending parents after being randomly assigned to CBT or client-centered treatment. Both parents and children from the CBT group showed improved functioning when compared to the client-centered therapy group. This finding has been generalized to other populations and locations, all with positive findings (Cohen et al., 2004; King et al., 2000). Having parent participation is central to this treatment approach, as it has been found to improve the behavior of victims of CSA.

Based on a series of studies using trauma-focused CBT (Cohen & Mannarino, 1996, 1998; Deblinger et al., 1996; Deblinger, Stauffer, & Steer, 2001), Deblinger et al.(2006) outlines guidelines for effective treatment (see Appendix B). In the beginning stages of treatment, both child and parent attend separate sessions. During this time, both are learning skills to assist with healthy communication about the abuse. With the development of essential coping skills, both parent and child begin to attend more sessions together. How the parent listens and responds to the child effects outcome behavior. So, the therapist hones in on assessing whether the parent is ready to communicate and listen to the child in a non-judgmental manner. Here the child and parent begin to process thoughts and feelings, as well as distortions about the abuse. The final sessions include instruction on healthy sexuality, personal safety, behavior management and cognitive re-structuring.

Administering the comprehensive treatment program described in Appendix B to both parent and child allows for increased functioning for the child victim and coping skills for parents. Although, this program has been empirically supported to work in both

individual and group therapy, it may not apply fully to all CSA victim situations that include an offending parent. As research has shown regarding outcomes for inpatient children and adolescents that have been abused intrafamilially, trajectories and symptomatology are more severe and require more intensive treatment. For such children, healthy relationships with caregivers in residential treatment centers and inpatient settings are paramount for assisting the child in working through the trauma.

Since CSA victims suffer from the relational problem of perverse object contact (interpersonal relationship difficulties) (Chop, 2003), they believe the only way to have a relationship is through violence or sexuality (Prior, 1996). Therefore, assisting CSA children and adolescents with improving interpersonal skills may positively influence recovery rates. In residential settings in particular, treatment should include skill building for both CSA victims and their caregivers. A safe therapeutic alliance allows a child to work through the trauma and thereby correct aberrant relational experiences.

In order to promote a sense of safety and security for CSA children and adolescents in residential treatment, caregivers need a good understanding of normative child development and manifestations of behavior for each individual according to age and complexity of experience (Kools & Kennedy, 2002). Modeling appropriate boundaries in terms of physical and emotional connections are paramount for the promotion of healthy, age appropriate relational experiences. Since many caregivers experience difficulty in understanding sexualized behaviors often exhibited by CSA children and adolescents, behavioral management issues often arise in residential treatment (Howard, Haynes, & Atkinson, 1986; Kohan, Pothier, & Norbeck, 1987; Kools & Kennedy, 2002). Without good staff education on various behavioral manifestations of CSA victims and how their

fears of children's abuse histories affect their relationships with such victims, staff may over-react or tend to apply the same treatment to all CSA victims thereby inciting anger and possible re-enactment of the trauma (Kools & Kennedy, 2002). It is important for caregivers to appreciate the developmental and individual presentation of behavioral responses in CSA victims. Staff should be trained on how to provide appropriate support using responses that allow the child to feel empowered, free from feeling labeled, and capable of engaging in normative relational bonds (Kools & Kennedy, 2002). Kools and Kennedy (2002) suggest that interventions be age-appropriate, allowing for tangible avenues to learn developmentally appropriate "physical, social and sexual" connections (p. 217).

Finally, it is essential to create interventions tailored to time of acting out. Since all incidents in the current study illustrate a rise in incidents from late afternoon (4:00 pm) through evening (9:00 pm), as well as other studies pointing to incidences occurring more during the evening/nighttime hours (Dominick, 1992; Hung et al., 2000), future treatment of CSA survivors should look to tailor interventions towards reducing incidents during afternoon and evening hours, as well as 24 hours after recounting trauma in individual and group therapies. Research has shown these are times when CSA victims appear to experience heightened alert. Since evening time presents as an unpredictable and fearful time for CSA victims, it is understandable that cortisol would tend to rise at this time in order to protect against possible assault. Unfortunately, such irregularity in HPA axis functioning leads to continual hyperresponsiveness and resulting re-experiencing of the trauma (e.g., nightmares, acting out, dissociative responses, etc.).

Inpatient settings should consider daily urinary-free cortisol testing for the first month a child enters treatment so as to establish times when elevations in arousal responses may occur. Then, treatment (i.e., trauma-focused CBT) can be individualized to reducing arousal responses at the times when they occur. Educating staff on different types of acting out responses (e.g., self-harm, dissociation, destruction of property, etc.) and times when acting out may occur more frequently, will assist in the prevention of an escalating incident. Having structured activities throughout the day will allow patients to feel more secure in their environment and with their caregivers. Although, the facility of the current study offers structured activities, CSA victims may anticipate the coming of evening and the unpredictability they face during this time.

Fear of trusting others and problems with their environment are great obstacles for CSA adolescents to overcome. Perhaps the clinicians and staff at this facility may take into account the individual histories of the adolescents such as time, type, location of abuse and gender of perpetrator when organizing evening activities for CSA victims. Adding more staff and assigning them to particular students to assist with relational development and gradual exposure to small groups will allow for individual skill building success. Clinicians can work with staff to educate them on the adolescent's abuse history and how to tailor support based on this history. Future studies may look to assess the effectiveness of adding mindfulness training for staff and patients during daily and nightly group sessions in order to assist in reducing arousal responses associated with the sympathetic nervous system. In addition, studies may research the benefits of offering more opportunities for exercise before 6:00 p.m. to further aid in reducing anxiety levels. Further, future studies may look at the importance of providing meals with good sources of nutrition (e.g., fresh

vegetables and fruits, no processed or prepared foods, grilled or baked chicken, fish or low fat beef, and whole grain foods). Such nutritionally valued foods will add vitality to individual physical and mental faculties.

Limitations

Although three of the four main hypotheses of this study were supported, there were several factors that limited the study from being as robust as desired. A relatively small sample size was used because of the limited amount of subjects available for the study. The group selected had the most accurate amount of data accessible for retrieval and examination. A larger sample size would assist in making this study more generalizable to other populations with CSA.

Further, the study had low power which limited the ability to detect group differences in certain hypotheses. Small to medium significant differences were unlikely to be detected given the sample sizes available. Only medium-large and large group differences were detected. More power would have shown a clinical difference between groups. Due to power being low (less than .80), there may have been true differences that could not be reported as significant. For example, because means were significantly different for boys with CSA and girls with CSA for (H4), such contrasts might have been significant with more power. Interestingly, regardless of power, there did not seem to be a clinically significant mean difference in adolescents with CSA or NCSA in terms of frequency of incidents during the evening hours (H3). Even with a larger sample size, enough to make the mean difference significant, the difference in means was not clinically meaningful. Therefore, looking for other confounding variables that might have affected results such as accuracy of diagnoses or

history of CSA may assist in explaining such a lack of significant findings for this hypothesis.

Due to a history of significant psychopathology, most of the participants had received a number of evaluations assessing for CSA histories. Several different evaluators and evaluation methods and tools were used to make the determination of sexual abuse. When using various evaluators and a number of diagnostic tools to evaluate CSA, there is a lack of consistency or reliability in procedures utilized and consequent findings. Future studies should include set criteria for assessors used, as well as assessment tools utilized for assessing CSA histories. Upon entry to the facility, such procedures should be implemented so that appropriate unit placement and treatment can be initiated.

When reviewing histories of CSA for participants, criteria for CSA histories included both non-contact (i.e., “encounters with exhibitionism or solicitation to engage in sexual activity”) and contact (“behaviors that include sexual contact”) abuse (Finkelhor, 1986, p. 23), as well as reports of allegations and substantiations of abuse. In order to obtain the most valid results for histories of CSA, future studies should consider whether or not a narrower definition of abuse or more broad definition of abuse should be used. For the purposes of this study, a broader definition allowed for capturing a more general history that included either contact or non-contact abuse. Some studies may consider including criteria such as age, frequency, duration, force, and type of abuse, relationship to perpetrator, and difference between age of victim and perpetrator in order to operationalize a more definitive definition and obtain specific findings.

The participants in this study all demonstrated significant clinical psychopathology. The comparison group consisted of adolescents in residential treatment for clinical

disorders and violent behaviors. It is difficult to generalize findings of this study to adolescents in out-patient settings or the non-clinical populations. Future studies would benefit from the inclusion of two other comparison groups such as an out-patient group and non-clinical group. Such extensive psychopathology experienced by both groups in this study make it hard to determine whether behavioral results were due to CSA histories or to clinical diagnoses.

Having a small sample size, low power, a lack of consistent, systematic assessment of abuse histories, a lack of specific criteria in terms of characteristics of abuse used for all participants, and the amount of psychopathology of participants, may have contributed to the lack of robust findings in regards to CSA predicting acting out during the evening hours. Eighty percent of the participants were diagnosed with Conduct Disorder, and sixty percent had co-morbid disorders (i.e., ADHD, PTSD, Depression, Bipolar Disorder, Anxiety, BPD). Since acting out is a common behavioral symptom of both Conduct Disorder and the above disorders, it is problematic to decipher which disorder or combination of disorders, along with a history of CSA contributed to the significant incidences evidenced by participants. Due to the complexity of histories for the participants in residential treatment, the inclusion of a non-clinical comparison group would contribute to the accuracy of findings in determining the cause of acting out behavior.

Conclusion

Results of this study support the overall premise that child sexual abuse is associated with significant psychopathology particularly for adolescents in residential treatment. Significant group differences were found for three of the four hypotheses.

Adolescents with histories of child sexual abuse evidenced more total diagnoses than those with histories of child sexual abuse. Further, findings revealed that almost all adolescents with posttraumatic stress disorder experienced histories of child sexual abuse. Such complex diagnoses for those with histories of CSA indicate the presence of significant levels of psychopathology for adolescents in residential treatment.

Even with such high levels of psychopathology, findings did not indicate a significant difference between the CSA and N-CSA groups on frequency of incidents during the evening or on month of entry of later months. Perhaps, the constellation of diagnoses and complexity of histories clouded precise results. Significant differences were found between boys and girls in type of behavior demonstrated. Boys exhibited more disruptive or externalizing behaviors than girls, while girls exhibited more therapeutic or internalizing behaviors than boys. However, it is interesting to note that significant differences were not found for aggressive behaviors. This may be attributed in part to high levels of psychopathology reported in girls in residential treatment who show high rates of self-harm.

Findings point to the need for appropriate assessment tools and consistency of methods used by evaluators in order to accurately identify a history of CSA and to differentiate among diagnoses given. Such methods will assist in determining the cause of significant incidents. Consequently, empirically based, gender specific prevention and intervention efforts can then be implemented and geared towards the time when most incidents occur. Finally, training staff on supportive intervention techniques will assist CSA adolescents in developing appropriate relational bonds with others in residential

treatment. Instructing parents, guardians and caregivers on the complex nature of CSA will assist in creating empathic support systems for adolescents with histories of sexual abuse.

Appendix A:

Representative Instruments to Assess Child Sexual Abuse

Child Sexual Abuse Symptoms	Instrument
Parent-Child Relations-Completed by Parent	Parent-Child Conflict Tactics Scales, Form A Parent Support Questionnaire
PTSD/Dissociation-Completed by Parent	Traumatic Events Screening Interview-Parent Child Dissociative Checklist Child Behavior Checklist-PTSD Parent Emotional Response Questionnaire Trauma Symptom Inventory Dissociative Experiences Schedule
PTSD/Dissociation-Completed by Child	Traumatic Events Screening Interview-Child Children's Impact of Traumatic Events Scale-Revised Trauma Symptom Checklist for Children Child PTSD Symptom Scale Adolescent Dissociative Experiences Scale
Sexual Behavior Problems-Completed by Parent	Child Sexual Behavior Inventory
Sexual Behavior Problems-Completed by Child	Adolescent Sexual Behavior Inventory
Self-Perception Evaluation Techniques-Completed by Child	Children's Attributions and Perceptions Scales My Feelings About the Abuse Negative Appraisals of Sexual Abuse Scale

Note. The following instruments are taken from Friedrich, 2006, p. 412.

Appendix B:

Trauma-focused Cognitive-behavioral Therapy

Child	Parent	Joint
<u>Early Stages</u>		
Rapport Building	Rapport Building	None or brief joint session; exchange praise
Introduce session structure	Introduce session structure	
	Offer treatment overview and rationales	
Skills building	Skills building	
Psychoeducation: Emotions, cognitive coping	Psychoeducation	
	Behavior management	
	Introduction to praise	
<u>Middle Stages</u>		
Begin gradual exposure/ narrative development	Encourage parents to share details of discovery of sexual abuse	Skills building
Process thoughts and feelings	Process thoughts and feelings	Psychoeducation
Identify and dispute abuse-related distortions	Share child's narrative	
	and/or other gradual exposure product	
Prepare for joint sessions	Prepare for joint sessions	Child shares narrative and/or other gradual exposure with parent
<u>Final Stages</u>		
	Behavior management continued-effective communication and discipline strategies	Address questions and cognitive distortions
Healthy sexuality	Healthy sexuality	Healthy sexuality Personal safety Prepare for graduation
Personal safety	Personal safety	
Prepare for graduation	Prepare for graduation	

Note. Treatment guidelines are for trauma-focused CBT sessions for children and nonoffending parents (Deblinger et al., 2006, p. 391).

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