THE INFLUENCE OF CHILDHOOD ABUSE AND FAMILY ENVIRONMENT ON THE PSYCHOLOGICAL ADJUSTMENT OF ADOLESCENTS

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CHAPTER I

INTRODUCTION

Nearly three million cases of child abuse and neglect are reported to child protection agencies in the United States each year and the actual occurrence of abuse is assumed to be much higher (American Humane Association, 1994). Likewise, the immediate and long-term effects of child abuse remain almost as elusive as the prevalence of maltreatment itself. Despite the abundance of research concerning child abuse, there is no clear-cut pattern of symptomatology that can be used to distinguish between an abused child and a nonabused child (Lipovsky, Saunders & Murphy, 1989; Kendall-Tackett, Williams, & Finkelhor, 1993).

Research on childhood abuse has centered predominantly on sexual abuse and has primarily focused on determining the extent to which sexual abuse during childhood affects later psychological functioning (e.g., Mennen & Meadow, 1994). Within this framework, there is an abundance of research indicating that the experience of childhood sexual abuse gives rise to a range of psychological and behavioral problems (e.g., Beitchman, Zucker, Hood, DaCosta, & Akman, 1991). In their review of the short-term effects of sexual abuse, Beitchman, Zucker, Hood, DaCosta and Akman (1991) indicate that the effects of abuse are quite variable, and include sexualized behavior, withdrawn behavior, acting out, academic problems, depression, low self esteem, and suicidal

ideation. In addition, research has indicated that the long-term effects of childhood sexual abuse may be different than those which are evident in childhood and adolescence and include sexual disturbance or dysfunction, depression, fear, and anxiety (Beitchman, Hood, DaCosta, Akman, & Cassavia, 1992). Despite the evidence indicating that the occurrence of abuse is harmful, researchers have yet to agree on a relation between a history of childhood sexual abuse and a specific post-abuse syndrome (Beitchman, et al., 1992; Cicchetti & Toth, 1995).

Despite the abundance of research that has revealed numerous detrimental effects of childhood sexual abuse, the majority of investigations have utilized samples of adult women. As such, studies of children, and particularly adolescents, are limited. Given the developmental and maturational differences between adolescents and adults, generalizing from the adult literature may be problematic. Investigations which focus on samples of adolescents would add to the body of knowledge regarding the effects of sexual abuse across developmental periods.

Similar to the research on the effects of childhood sexual abuse, the documented effects of physical abuse include a variety of psychological and behavioral sequelae. Importantly, unlike sexual abuse, our understanding of the effects of physical abuse comes from a limited number of empirical investigations. Despite the overall dearth of empirical investigations, there have been a number of consistent findings. Existing research has indicated that physically abused children display more externalizing behavior problems such as aggression, antisocial behavior and destructiveness compared to children without a sexual abuse history (Green, 1988; Kolko, Moser, & Weldy, 1988). In addition, cognitive deficits (Green, 1988) as well as low-self esteem, depression, social skill deficits,

problematic peer relationships (Kolko, Moser, & Weldy, 1988; Wind & Silvern, 1992), and posttraumatic stress symptomatology (Boney-McCoy & Finkelhor, 1995) have been documented in physically abused children. Long-term effects of physical abuse indicated by studies of adult women include depression, low self-esteem (Wind & Silvern, 1992; Mullen, Martin, Anderson, Romans, & Herbison, 1996), marital and interpersonal problems (Mullen et al., 1996), and general distress (Margo & McLees, 1991).

Investigations of physical abuse are limited in a similar capacity as sexual abuse, yet more limited in breadth. Existing research is conducted primarily with child and adult samples leading to a lack of investigations which employ adolescent populations. Thus, similar caution must be employed when generalizing the findings of research to disparate developmental cohorts.

Notably, research that has systematically investigated the effects of abuse is complicated by a limited number of published reports that have compared the psychological functioning of survivors of different types of abuse (e.g., sexual vs. physical). Some research has suggested that the effects of sexual and physical abuse are similar (Wind & Silvern, 1992), while others have emphasized the differences in the psychological sequelae associated with either abuse type. No one type of abuse is associated with a specific pattern of symptomatology (Kendall-Tackett, Willliams, & Finkelhor, 1993). The inability to distinguish the psychological symptom expression in victims of the two types of abuse necessitates that future research account for the occurrence of both physical and sexual abuse when discussing long-term effects.

In order to further clarify the relationship between the occurrence of abuse and subsequent psychological symptomatology, researchers have expanded their analyses to

include other variables which may influence the development of maladaptive psychological functioning. Recently, investigators have begun to explore the impact of the family environment on the psychological functioning of individuals with a sexual abuse history. Previous research has revealed that specific dimensions of family environment are independently associated with poor psychological functioning (Hulsey, Sexton, & Nash, 1992). As noted, these findings are of particular interest, given that these dimensions also tend to be associated with families in which abuse has occurred (e.g., Martin & Walters, 1982; Yama, Tovey, & Fogas, 1993). These interrelationships are especially important in understanding the sequelae associated with abuse given the intimate relationship between child abuse and family environment.

The following review of the literature will 1) discuss the effects of childhood sexual and physical abuse, highlighting previous investigations that utilized adolescent populations, 2) discuss previous attempts to account for poor psychological adjustment in survivors of sexual abuse and physical abuse, and 3) elucidate the importance of family environment in the development of psychological problems in individuals with and without an abuse history.

CHAPTER II

LITERATURE REVIEW

Overview

In recent decades, the long-term effects of childhood abuse have been widely investigated and often disputed, particularly with regard to sexual abuse (e.g., Browne & Finkelhor, 1986; Rind, Tromovitch, & Bauserman, 1998). Despite overall heightened attention on the topic, few studies have examined the effects of childhood sexual and/or physical abuse among the adolescent population. The dearth of literature pertaining to this cohort is problematic for several reasons. First, it is reasonable to speculate that the experience of adolescents is different than the experience of children or adults given their stage of emotional, social and physical development (e.g., Williamson, Borduin, & Howe, 1991). Secondly, this period may serve as a window in which the negative psychological sequelae, consistently identified in adult populations of individuals sexually or physically abused as children, may be circumvented. Finally, it has been suggested that the ability to clarify abuse-related sequelae may be improved by investigation of separate age cohorts (Hussey & Singer, 1992). In spite of this, research on the effects of childhood abuse on adolescents is scarce (Beitchman, et al., 1991).

In the following review, the relationship between sexual and physical abuse and subsequent psychological functioning will be discussed. Because of the lack of attention

on the effects of childhood abuse on individuals during adolescence, the literature review will include studies that have sampled children and adults. Following this discussion will be a review of family environment characteristics which have been shown to be influential in the development of psychopathology in individuals with and without an abuse history. The relevance of such factors to understanding long-term psychological functioning will be discussed.

Childhood Sexual Abuse and Psychological Adjustment

In most states, the legal definition of child sexual abuse is "an act of a person, which forces, coerces, or threatens a child to engage in any form of sexual contact or sexual activity at his or her direction" (American Humane Association, 1994). Among substantiated victims of child maltreatment in 1992, approximately 14% suffered sexual abuse (American Humane Association, 1994). According to the American Humane Association (1994), this translates into approximately 500,000 children who were victims of sexual abuse or molestation.

With regard to the psychological and behavioral sequelae associated with childhood sexual abuse, numerous acute and long-term effects of sexual abuse have been documented. Investigating the acute effects of sexual abuse, Beitchman, Zucker, Hood, DaCosta, and Akman (1991) reported that sexually abused preschoolers often show abnormal sexual behaviors, are more passive and less aggressive than non-abused controls, and show more social withdrawal behavior as opposed to acting out behavioral difficulties. Once the sexually abused child reaches school age, behavioral problems may become more noticeable (Dubowitz, Black, Harrington & Verschoore, 1993). Psychological difficulties

may include depression, anxiety, somatic complaints, aggression, nightmares, post-traumatic stress disorder (PTSD), cruelty towards others, regressive behavior, self-injurious behavior, externalizing behavior, hyperactivity, and inappropriate sexual behavior (Beitchman, et al., 1991; Dubowitz et al., 1993; Kendall-Tackett, Williams, & Finkelhor, 1993). School-related problems, such as learning disabilities and increased enrollment in special education, have also been noted (Beitchman, et al., 1991). Others have also shown that sexually abused girls are more likely to show depressive symptoms and that, in general, children who were sexually abused have more internalizing difficulties than clinical controls (Beitchman, et al., 1991).

Similar to research on the acute effects of sexual abuse, researchers have investigated numerous long-term effects of sexual abuse. Within this body of literature, the vast majority of research on the effects of sexual abuse utilize samples of adult college women. While the findings of this research are informative, it is necessary to keep in mind potential biases that may arise on the basis of sampling from a relatively high functioning, developmentally homogeneous sample of individuals. As such, generalizing the results of this literature to other populations, like adolescents, may be problematic. It is noteworthy, however, that research has indicated that psychological maladjustment in early adulthood may stem from childhood sexual abuse. According to Finkelhor (1986), depression is the most commonly reported symptom in adult survivors. Other prominent symptoms found in adult survivors of childhood sexual abuse include chronic and acute anxiety, PTSD, substance abuse, binge eating and somatization, and hysterical symptoms (Briere & Runtz, 1988; Burnam, et al., 1988; Green, 1993; Polusny and Follette, 1995; Wind & Silvern, 1992). Problems with social and interpersonal functioning, sexual dissatisfaction, risky

sexual behavior and revictimization have also been noted in sexual abuse survivors (Briere & Runtz, 1993; Polusny & Follette, 1995).

Though limited in number, empirical research has documented numerous effects of abuse in the adolescent population. In this developmental stage, the presence of depression, low self-esteem and suicidal ideation or behavior is even more evident than in earlier years (Beitchman, et al., 1991). Researchers also have found that increased depressive and schizoid/psychotic symptoms, acting-out behaviors (i.e., running away, habitual truancy), alcohol/drug abuse and promiscuity are associated with a history of childhood sexual abuse (Beitchman, et al., 1991). Williamson, Borduin, and Howe (1991) revealed that adolescents with a sexual abuse history have more conduct problems, aggression, anxiety and attention difficulties than adolescents who have not been sexually abused. Additional research has documented that adolescents have lower self-esteem and lower perceived social competence (Hussey & Singer, 1993). In addition, a predisposition to homosexuality or gender identity disorder is more evident in adolescent boys who were sexually abused as children than those with no history of sexual abuse (Beitchman, et al., 1991).

Orr and Downes (1985) investigated the effects of childhood sexual abuse on acute and long-term functioning. Twenty females aged nine to 25 recruited from an outpatient clinic participated in the study. Results indicated that sexually abused subjects had lower self-concept, more psychopathology and more problems identifying long-term goals than females without a history of sexual abuse.

Wherry, et al. (1994) likewise employed a sample of adolescents and adults to examine the relationship between sexual abuse and subsequent symptomatology. Thirty-

seven inpatient adolescents ranging in age from 12-27 participated in the study. Results of this study indicated that adolescents who experienced extrafamilial sexual abuse report more family trauma and psychological dysfunction than intrafamilial victims and controls.

In order to assess the differential effects of childhood sexual abuse on adolescent functioning, Sansonnet-Hayden, Haley, Marriage, and Fine (1987) evaluated 54 male and female adolescents, with an average age of 14.6, who were being admitted to inpatient psychiatric hospitalization. The results of this investigation indicated that sexually abused adolescents experienced more severe depressive symptomatology, hallucinations, conduct problems, attempts at suicide, and were more likely to be admitted to inpatient care for a longer period of time.

Also using an inpatient population, Brand, King, Olson, Ghaziuddin, and Naylor (1996), identified 24 depressed adolescents with a history of sexual abuse and 24 depressed adolescents without such a history. Male and female adolescents ranging in age from 13 to 17 participated in this study. Results of chi square analyses indicated that adolescents with a sexual abuse history had a higher prevalence of comorbid posttraumatic stress disorder (PTSD) than nonabused adolescents. Results of the chi square analyses also indicated that the chronicity and duration of sexual abuse were significantly related to PTSD status. Further, results indicated that abused and nonabused adolescents reported no differences in conduct problems, suicidal behavior or severity of depression.

Consistent with the findings of Sansonnet-Hayden, et al. (1987), Garnefski and Diekstra (1997) found that sexually abused adolescents experienced more psychopathology and behavior problems than adolescents without such a history. The sample, consisting of 745 male and female adolescents, ranging in age from 12 to 19 years,

was sampled from public schools for this study. All adolescents were matched on the basis of sexual abuse status. Results of an analysis of variance indicated that sexually abused adolescents experienced more adjustment problems than nonabused adolescents. Specifically, sexually abused adolescents experienced more emotional problems such as low self-esteem, anxiety, loneliness and depressed mood, more aggressive and suicidal behavior, and drug abuse than individuals without a sexual abuse history. Further, results indicated that boys experienced more symptomatology in each of these problem areas than girls.

In a longitudinal study of the effects of sexual abuse, Tebbutt, Swanston, Oates and O'Toole (1997) revealed that the effects of abuse in childhood affect adjustment five years after disclosure of abuse. Participants were recruited from child protection services in 1988 and 1990 and all had experienced sexual abuse. A total of 68 male and female adolescents, ranging in age from 9 to 22, participated in the follow-up study. The authors revealed that five years after disclosure of abuse, depressive symptomatology, sadness, self-esteem and behavior problems did not improve. In addition, unwanted life events were significantly predictive of depression, self-esteem and behavior problems. Further, additional unwanted sexual experience was predictive of higher levels of depression.

Fergusson, Horwood, and Lynskey (1997) explored the relationship between childhood sexual abuse and sex-related risk-taking behavior and adolescent sexual assault in a sample 520 female adolescents. These participants were originally recruited in 1977 from a community sample for participation in a longitudinal study and were contacted at age 18 for this investigation. Results of this investigation indicated that childhood sexual abuse is a risk-factor for later sexual vulnerability. Specifically, sexually abused

adolescents reported earlier consensual sexual activity, teenage pregnancy and sexually transmitted diseases, more risky sexual behavior such as sex with multiple partners and unprotected sex, and a higher prevalence of sexual assault between the ages of 16 to 18 compared to females without a sexual abuse history. Results suggested that risk for later sexual assault was related to family instability (divorce, remarriage of parents and conflict within the 12 months prior to the investigation), strained parent-child relationships, social disadvantage (low socioeconomic status, low maternal education and maternal age), parent drug or alcohol use or adjustment problems, as well as a history of sexual abuse. Results suggest that a sexual abuse history may have particular impact on sexual behavior in adolescent females.

Another investigation of the same cohort of adolescents conducted by Fergusson, et al. (1996) revealed that a sexual abuse history was related to adjustment problems in adolescents. All participants were age 18 at the time of the study; 1,019 adolescents participated in this investigation. Results indicated that a history of sexual abuse was related to the development of a DSM-IV (APA, 1994) diagnoses of major depression, conduct disorder, and substance use disorder in addition to suicidal behavior during the ages of 16-18. Importantly, these results remained after controlling for aspects of the family (e.g., parental adjustment and drug use, socioeconomic status, life changes).

Additional investigations have identified a significant relationship between childhood sexual abuse and adolescent drug and alcohol use. Harrison, Hoffman, and Edwall (1989) indicated a higher rate of substance abuse in survivors of sexual abuse compared to adolescents without a sexual abuse history. This study employed a sample of 1,824 male and female adolescents in a chemical dependency treatment program.

Specifically, results revealed that both males and females used drugs more frequently for the purposes of self-medication. Further, results indicated that survivors of abuse reported more nervousness, sleep disturbances, suicidal ideation and attempts, arrests and sex-related difficulties than nonabused adolescents.

While the results of empirical investigations are fairly consistent in identifying psychological adjustment problems as a function of abuse history, a few investigations reveal contradictory findings. In a sample of 423 male and female adolescent inpatients, Hussey and Singer (1993) revealed no differences in self-esteem, depression or conduct problems between individuals with and without a sexual abuse history. However, results did reveal that adolescents with a sexual abuse history used more drugs, used drugs at an earlier age and perceived greater benefit from drug and alcohol use compared to nonabused adolescents. Consistent with these findings, DiPietro (1987) also revealed that victims and nonvictims did not differ with respect to personality adjustment and attitudes.

Investigations of the effects of sexual abuse in adolescents are fairly consistent with respect to the identification of psychological adjustment difficulties in relation to the abuse experience. Despite these findings, our understanding of the effects of sexual abuse during this stage of development is limited by the dearth of literature which explore the psychological concomitants of sexual abuse. Further limiting our knowledge in this area is the heavy reliance of inpatient and treatment samples. Additional investigations which utilize additional samples of adolescents will increase our understanding of the effects of abuse across development.

From the previous discussion, the range of psychological and behavioral sequelae associated with sexual abuse is apparent. Kendall-Tackett, Williams, and Finkelhor (1993)

have suggested that there seems to be neither a specific syndrome that identifies individuals who have been sexually abused nor a single pathogenic process. As such, developing a precise profile of a sexually abused child, adolescent or adult is extremely difficult. It is probable that our understanding of the effects of abuse may be expanded via the inclusion of additional variables.

Childhood Physical Abuse and Psychological Adjustment

Child physical abuse has been defined as the presence of a non-accidental injury resulting from acts of commission by an adult (Malinosky-Rummell & Hansen, 1993). Because numbers of victims of physical abuse are counted only when reported to child protection agencies, the actual number of cases of physical abuse, like sexual abuse, is undoubtedly underestimated. In 1986, the National Center on Child Abuse and Neglect reported that approximately 5.7 American children per 1,000 (a total 358,300 children) experienced physical abuse (Malinosky-Rummell & Hansen, 1993). According to the American Humane Association (1994), approximately 23% of the substantiated or indicated child victims of maltreatment in 1992 suffered from physical abuse.

Short-term consequences of childhood physical abuse may include perceptual-motor deficits, lower scores on measures of general intellectual functioning and academic achievement, negative social behavior and internalizing psychological problems such as hopelessness, depression, and low self-esteem (Malinosky-Rummell & Hansen, 1993). According to Malinosky-Rummell and Hansen (1993), childhood physical abuse also has been correlated with long-term consequences of adolescent and adult violence toward others, self-injurious and suicidal behaviors, and various psychological problems such as

anxiety, depression, hostility, paranoid ideation, psychosis, and dissociation. In addition, aggressive behavior, bullying, fighting, impulse control problems, and assaultive behavior is associated with a history of physical abuse (Green, 1988). Social skill deficits, limited attachment to caregivers, school-related problems, and poor peer relationships are also documented concomitants of physical abuse in children (Kolko, Moser, & Weldy, 1988).

Childhood physical abuse has also been associated with psychological adjustment difficulties, including depression and low self-esteem, in adult women (Wind & Silvern, 1994). Self-defined promiscuity, post-traumatic stress disorder symptoms, and more frequent occurrence of physical and sexual assaults after childhood have also been associated with childhood physical abuse (Wind & Silvern, 1994). Briere and Runtz (1988) have indicated that physical abuse is correlated with increased anger and aggressive behavior, academic problems, and interpersonal difficulties in adult women. These authors reported additional correlates, including lower self-esteem, increased likelihood of criminal acts, and greater numbers of psychological symptoms and sexual problems.

The available research on the effects of physical abuse in adolescents is limited to only a few investigations. Flisher, Kramer, Hoven, and Greenwald (1997) examined the relationship between a history of physical abuse and psychological adjustment in 665 9-17 year old children and adolescents. This study was part of a larger study of community samples of adolescents and their caretakers in New York State and Puerto Rico. Results revealed that a history of physical abuse was related to overall adjustment difficulties, poor social competence, decreased school performance, and language ability. In addition, children and adolescents who experienced physical abuse were more often diagnosed with major depression, conduct disorder, oppositional defiant disorder, agoraphobia,

overanxious disorder, and generalized anxiety disorder. Importantly, these results remained after controlling for sexual abuse, family income and family psychiatric history, physical health and prenatal problems.

Consistent with these findings, Kaplan, et al. (1998) revealed that adolescents who experienced physical abuse were more likely to be diagnosed with major depression, dysthymia, unipoloar depression, and conduct disorder, as well as more likely to abuse substances and smoke cigarettes. This study employed a sample of 99 adolescents aged 12-18 from the New York Department of Social Services following disclosure and documentation of abuse and 99 adolescents recruited from the community and matched on age, gender, race, and community income.

Unlike the research on sexual abuse, the influence of other variables related to the physical abuse experience have not yet been investigated. Furthermore, research on physical abuse is more scarce and, thus, limited. Existing research which directly compares the effects of childhood sexual abuse and physical abuse has indicated that the expression of symptoms for individuals who experience childhood sexual or physical abuse may be similar (Wind & Silvern, 1992), though some research has demonstrated disparate levels of functioning as a function of abuse type (Hart, Mader, Griffith, & de Mendonca, 1989). Because no one type of abuse is associated with a specific pattern of symptomology (Kendall-Tackett, Williams, & Finkelhor, 1993), the inability to distinguish the psychological symptom expression in victims of the two types of abuse necessitates that future research account for the occurrence of physical abuse when discussing the effects of sexual abuse. The following discussion will review the literature which has considered both types of abuse in evaluating its effects.

Childhood Sexual Abuse and Physical Abuse and Psychological Adjustment

The psychological and behavioral sequelae of childhood abuse have been documented to be both remarkably similar on one hand and remarkably dissimilar on the other. Elucidation of the effects of abuse is thus confounded by these disparate findings and suggests that a complete understanding of the relationship between abuse and psychopathology may not be adequately achieved via investigations which consider these types of abuse in isolation.

A report by Kolko, Moser, and Weldy (1988) supports this contention in their study of the effects of sexual abuse and physical abuse in a sample of 103 inpatient children ranging in age from 5-14. Information regarding psychological health was obtained from hospital record and parent interview for the purposes of this investigation. Results of a multivariate analysis of variance indicated that sexually abused children displayed more sexualized behavior, anxiety, withdrawal, fear and mistrust in the home and in the hospital compared to nonsexually abused children. Results for physical abuse indicated no differences between physically abused and nonabused children. The results of this study suggest that the effects of abuse may not be consistent across types.

The combined effects of sexual and physical abuse in adults have been examined in both clinical and community populations. A number of studies which have utilized inpatient samples have revealed that the experience of both sexual and physical abuse are related to increased general distress on the Symptom Checklist-90R (SCL-90R; Derogatis, Lipman, & Covi, 1973). Swett, Surrey, and Cohen (1990) demonstrated in a sample of

125 males, that greater distress was experienced by those who experienced sexual abuse only or combined sexual and physical abuse and that sexual abuse was the best predictor of general distress in a multiple regression analysis. Similarly, increased depression, substance abuse, diagnosis of Axis II disorders, anxiety, somatization, interpersonal difficulties, and general distress were reported in 38 female inpatients who experienced sexual abuse, physical abuse, or both types of abuse compared to women who did not experience any type of childhood maltreatment (Margo & McLees, 1991). Although this study did not compare the types of abuse when documenting effects it does suggest that there are similarities between the symptom expressions related to sexual and physical abuse.

A few investigations of community samples of women have attempted to differentiate effects of abuse on the basis of the type of abuse experienced. Mullen, Martin, Anderson, Romans and Herbison (1996) looked at the effects of emotional abuse, physical abuse and sexual abuse in a sample of 2,250 women aged 18-65 and have indicated that the effects of abuse are more similar than they are different. Specifically, these investigators revealed similarities on levels of psychopathology, depression and self-esteem. However, differences were revealed such that survivors of emotional abuse were more likely to experience a low self-esteem, survivors of sexual abuse were more likely to have sexual problems, and survivors of physical abuse were more likely to experience marital breakdown. Additional studies have also revealed that rates of PTSD are significantly higher in survivors of sexual abuse compared to survivors of physical abuse, though women with both types of abuse experienced more trauma symptomatology than nonabused women (Schaaf & McCanne, 1998). These authors suggest that the failure to

account for the occurrence of physical abuse in investigations of the effects of sexual abuse has the potential to confound the ability to identify relationships between sexual abuse and its effects.

DiLillo, Long, and Jackson (1994) also revealed significant differences in the effects of sexual abuse and physical abuse in sample of male and female college students. Analyses by gender revealed that for women, experiencing of both types of abuse (sexual and physical) and physical abuse alone are similar, but that combined abuse is related to greater adjustment problems in the areas of sexual satisfaction, self-esteem, depression and social adjustment. In addition, physical abuse was shown to be more highly associated with self-esteem while sexual and physical abuse in isolation were associated with higher levels of depression. Interestingly, sexual abuse was related to greater symptomatology in men. Results of this study indicate that different types of abuse may be related to different types of symptomatology and that these effects may also vary as a function of gender.

Finally, Roesler and McKenzie (1994) explored the relationship between childhood trauma and psychological functioning in a sample of 188 men and women sexually abused as children. Participants were either a part of a group therapy program or respondents to advertisements for participants. Roesler and McKenzie (1994) assessed for the presence of depression, posttraumatic stress disorder, self-esteem, dissociation and sexual dysfunction. Results indicated that sexual abuse accounted for a significant portion of the variance even after controlling for non-sexual childhood traumas such as physical abuse.

Investigators have also explored the impact of sexual abuse and physical abuse in samples of adolescents. In a sample of 105 inpatient adolescents, Cohen, et al. (1996) found neither sexual nor physical abuse to be predictive of suicidal behavior or

internalizing and externalizing symptoms on the Youth Self-Report (YSR; Achenbach, 1991). The authors concluded that abuse history does not appear to be an independent risk factor for psychopathology or suicidal behavior. It is possible, however, that the failure to detect relationships between abuse and adjustment may be due to the authors' operational definitions of abuse and due to the fact that they examined a clinical sample.

In contrast to these findings, other investigators have demonstrated differences in symptom expression on the basis of an abuse history with adolescent samples. Clark, Lesnick, and Hegedus (1997) revealed that adolescents, aged 14-18 years, with alcohol abuse or dependence were more likely to have a sexual abuse or physical abuse history. This relationship, however, was stronger for females. Males were more likely to experience violent victimization (defined as battery or violent attack). Importantly, results also revealed that 90% of the adolescents experienced physical abuse prior to the onset of drinking and 77% experienced sexual abuse prior to the onset of drinking. This may suggest a causal relationship between abuse and later drinking problems.

Harrison, Fulkerson, and Beebe (1997) also explored the relationship between sexual abuse, physical abuse and substance use among adolescents sampled from a public school. This study indicated that substance use was higher among those individuals with a history of either type of abuse compared to nonabused individuals. The occurrence of multiple substance abuse was highest among individuals who reported experiencing both sexual and physical abuse.

In an investigation of the relationship between abuse history and binge drinking behavior and suicidal ideation, 42,568 adolescents with a mean age of 14.9 were sampled from public schools in a Midwestern state (Luster & Small, 1997). Results indicated that

sexual abuse was significantly related to binge drinking behavior and suicidal ideation in both males and females. Males engaged in more maladaptive drinking patterns and females had more suicidal ideation. Both of these effects were diminished in the context of supportive relationships and success at school however. In addition, adolescents who experienced both sexual and physical abuse reported more binge drinking and suicidal ideation. The influence of physical abuse had a greater impact on binge drinking for females and a greater impact on suicidal ideation for males. These results highlight the similarities in symptom expression in adolescents who experience sexual or physical abuse. This is in direct contrast to a number of other studies which conclude that there are differences in the psychological sequelae of sexual abuse and physical abuse.

Hart, Mader, Griffith, and De Mendonca (1989) for example, also investigated the impact of sexual abuse and/or physical abuse on adolescent drug and alcohol use and self-reported problem behaviors such as conduct disorder, aggression and withdrawn behavior in an inpatient sample. Results of an analysis of variance revealed that the physical abuse group and sexual abuse group used more drugs and had more internalizing problems than adolescents without an abuse history. The sexual abuse group had higher levels of aggression than individuals who were not sexually abused; no differences were reported between individuals with and without a physical abuse history. Results of this investigation highlight the possible differences in the experiences of sexually abused and physically abused adolescents and, as such, the potential advantage of investigations which do not consider these groups as a homogeneous.

Gender differences and differences in symptom expression on the basis of exposure to sexual and physical abuse were also revealed in an investigation conducted by Chandy,

Blum, and Resnick (1996). Male and female adolescents sampled from public schools were recruited for participation in this study. The sample included 3,051 adolescents with a mean age of 15.32. Results indicated that male victims of sexual abuse experienced difficulties in school, marijuana use, delinquent behavior, and sexual risk taking than female survivors of abuse. Female survivors of sexual abuse however reported higher levels of disordered eating, suicidal ideation and behavior as well as greater frequency of alcohol use than male survivors. Results of this study also indicated that the experience of physical abuse, maternal alcohol consumption, and substance abuse at school exacerbated the symptomatology in females.

An additional study which explored the relationship between abuse history and adolescent functioning was conducted by Hibbard, Spence, Tzeng, Zollinger, and Orr (1992). The sample was inpatient and abuse was determined by case review. Results revealed that maltreated adolescents experienced more depression and lower self-esteem than non-maltreated adolescents. Results also indicated that physical abuse and sexual abuse were predictive of low self-esteem and that a history of sexual abuse was also related to depression, though it was not significantly predictive.

This examination of the literature on the combined effects of sexual abuse and physical abuse reveals a highly complex and uncertain picture. Results are not parallel across investigations. As Swett, Surrey, and Cohen (1990) indicate, the picture may be clarified with the inclusion of additional factors. Noted in previous sections of this review, a limitation of the research on the effects of physical and sexual abuse is the lack of attention to the adolescent population. Further, the majority of studies which do employ adolescent samples utilize inpatient samples, limiting the ability to generalize findings.

Given the significance of this developmental period, this is an unfortunate circumstance. Despite its brevity, a few conclusions regarding this portion of the research on childhood abuse can be drawn. First, given the findings of existing research, it appears that empirical investigations would benefit from the inclusion of both sexual and physical abuse. This approach would not only be the most comprehensive but also the most ecologically valid. Childhood abuse, like any other experience, does not occur in a vacuum. As such, childhood abuse should be considered within the macrosystem of the family in which it occurs. Family environment, which takes into account the context in which abuse occurs, has been shown to be independently related to psychological adjustment. Thus this variable warrants additional attention. The following section will review a body of literature that suggests that an individual's childhood family environment plays an important role in later psychological adjustment.

Childhood Family Environment and Childhood Abuse

The likely importance of family environment for survivors of abuse has been seen in three areas of research; 1) that which investigates the influence of family environment on functioning, 2) that which has documented the association between a history of sexual abuse and specific family environment characteristics, and 3) that which explores the joint effects of childhood abuse and family functioning on adjustment.

Family Environment and Psychological Adjustment

A number of studies have investigated the role of the family in the development of depression in adolescents. The two most consistently reported findings are that low levels

of family cohesion and a conflictual family environment are related to adolescent depression (Sheeber & Sorensen, 1998). Family cohesion is defined as the degree to which family members are concerned about and supportive of each other and the family (Moos & Moos, 1986). In a longitudinal investigation of family environment and depression in a sample of 550 adolescents recruited from a public school system, Garrison, Jackson, Marsteller, McKeown, and Addy (1990) revealed that family cohesion is the best predictor of depression, accounting for 19 to 24% of the variance over a three year time period. Similarly, family cohesion, satisfaction with the family, and adaptability within the family were the strongest predictors of depression in a sample of 93 adolescents recruited from an outpatient clinic (Cumsille & Epstein, 1994). When this analysis was conducted separately by gender, however, the relationship between cohesion and depression remained solely for males. These authors suggest that males may be more reactive to perceiving their families as unsupportive.

Similar conclusions have been made with regards to family conflict. Family conflict is defined as the amount of open aggression and anger which is expressed in the family (Moos & Moos, 1986). In a sample of 52 adolescent-mother dyads, in which half of the adolescents met criteria for unipolar affective disorder, Sheeber and Sorensen (1998) concluded that mother and adolescent perceptions of low levels of family cohesion and high levels of conflict were related to adolescent depression. Likewise, Sheeber, Hops, Alpert, Davis, and Andrews (1997) created structural equation models for family conflict and cohesion which revealed that adolescent depression is associated with more conflictual and less cohesive family environments. Via separate analysis by gender, the authors

concluded that girls and boys benefited equally from cohesive and non-conflictual family environments (Sheeber, et al., 1997).

Differences in the Family Environments of Abuse Survivors

Specific dimensions of family functioning have also been related to families in which abuse has occurred. In a review of the literature, Pelletier and Handy (1986) identified a number of characteristics frequently associated with families in which a child has been sexually abused. Marital discord, family disruption, not having known one's mother or father, poor parental marital relations, and living with a step or foster-parent were all significantly related to a higher risk for extrafamilial abuse encounters for children. Marital discord was also shown to be associated with psychological problems such as dependency, anxiety, and depression. Acting-out difficulties were related to the absence of a parent as well as being raised in a remarried or foster family.

In addition, the occurrence of sexual abuse has been associated with poor mother-father relationships and poor parent-child relationships (Romans, Martin, Anderson, O'Shea, & Mullen, 1995). Hulsey, Sexton, and Nash (1992) also expanded this list to include authoritarian style of family government, families lacking integration and involvement in social groups, disconnectedness, and emphasis on outside activities and interests.

Ray, Jackson, and Townsley (1991) examined the family environments of intrafamilial and extrafamilial childhood sexual abuse victims. Eighty female undergraduate students completed the Family Environment Scale (FES; Moos & Moos, 1986). Results of a MANOVA indicated that victims of sexual abuse differed significantly

from non-abused participants in family cohesion, active recreational orientation, moral-religious emphasis, independence, and organization. Further, results failed to reveal significant differences between those women who were victims of intrafamilial abuse and those women who were a victim of extrafamilial abuse.

In order to determine the relationship between specific family circumstances and five types of abuse, Martin and Walters (1982) reviewed the cases of 489 substantiated cases of child abuse and neglect. Results of a multiple regression indicated that specific family circumstances were predictive of type of abuse. The two most important variables for predicting sexual abuse were parent-child conflicts and promiscuity or alcoholism of the father.

Benedict and Zautra (1993) hypothesized that perceptions of family of origin would significantly differ between victims of child sexual abuse and nonvictims. One hundred and fifty-two undergraduate students and their siblings completed the Family Environment Scale as well as questionnaires regarding family history. Results of a multiple regression indicated that parental absence was the single best predictor of abuse. Also, the level of perceived family conflict was associated with greater sexual abuse risk. Results of this study failed to support the authors' hypothesis that childhood sexual abuse was related to decreased family expressiveness, moral-religious emphasis, independence, and higher levels of control.

Family functioning and child abuse potential was examined by Mollerstrom, Patchner, and Milner (1992) using 376 abusive parents and 148 non-abusive obtained from a variety of Air Force service programs. The abuse group consisted of physical abuse, sexual abuse and child neglect. Each participant completed the Family

Environment Scale and the Index of Marital Satisfaction (Hudson, 1982). Multiple regression analyses indicated that high levels of conflict, less family cohesion, less family expression and more marital problems characterized families in which abuse occurred.

In light of this research, the following discussion will consider the impact of family environment characteristics, including family conflict and cohesion on psychological functioning for survivors of sexual abuse. Notably, due to the dearth of research utilizing child and adolescent populations, the majority of the review will consist of investigations of adult samples. Further, previous investigations of physical abuse and family environment have not yet evaluated the impact of these variables on depression or distress in any sample.

Psychological Adjustment, Childhood Abuse
and Family Environment

As previously stated, numerous empirical investigations have shown that specific family environment characteristics impact the development of psychopathology independent of an abuse history (Hulsey, Sexton, & Nash, 1992). Interestingly, these specific family environment characteristics tend to be associated with families in which abuse has occurred and are implicated in the development of psychopathology in individuals who have been sexually abused (Martin & Walters, 1982; Yama, Tovey, & Fogas, 1993). Recently, investigators have begun to explore the specific relationships between childhood family environment, sexual abuse, and psychological functioning (Hulsey, et al., 1992). This is of particular relevance because of the intimate relationship between childhood abuse and family environment. It should be noted that to date, no

studies have investigated the relationship between physical abuse, family environment and psychological functioning. The following review of the literature will discuss the empirical research that has demonstrated the relevance of family conflict and family cohesion, two specific elements of family environment, to psychological adjustment in individuals with and without a history of sexual abuse.

Edwards and Alexander (1992) explored the relative effects of family background, and the occurrence and severity of sexual abuse, on adult adjustment of women sexually abused as children. Results comparing sexually abused and non-abused women indicated that the occurrence of sexual abuse, parental dominance, and parental conflict were significantly associated with psychosocial adjustment. In the abused sample, the severity of the sexual abuse experience and the quality of family relationships were both significantly related to adjustment. These results suggest that family characteristics may be uniquely related to adjustment following sexual abuse, beyond the effects of the experience of abuse itself.

In addition to exploring the relationship between abuse history and early adult adjustment, Jackson, Calhoun, Amick, Maddever, and Habif (1990) also examined family characteristics associated with childhood sexual abuse. Twenty-two women who experienced incestuous abuse and 18 women who reported no sexual abuse history completed numerous self-report assessments including the Beck Depression Inventory and the Family Environment Scale, Short Form. Results of a MANOVA revealed that young adult women who were victims of intrafamilial abuse reported more adjustment problems (i.e., more severe depression, lower self-esteem and poorer body images, less satisfaction with their sexual functioning, and poorer social and interpersonal adjustment) and

perceived their families as being less cohesive relative to nonvictims. In addition, results indicated that parents of children who were victims of incest were reported as being less involved and less interested in their children's upbringing. These parents were also perceived as more controlling relative to nonabused controls.

In order to explore the ways in which family functioning interacts with sexual abuse history to impact the development of psychopathology, Yama, Tovey, and Fogas (1993) compared 46 women who were victims of sexual abuse with 93 non-victimized women. Participants completed the Beck Depression Inventory, the IPAT Anxiety Scale Questionnaire and the Family Environment Scale. Multiple regression analyses indicated that higher levels of both anxiety and depression were related to sexual abuse when families were perceived as high in conflict. High levels of familial control were related to lower levels of depression only. In addition, sexual abuse was associated with more depression when the family was described as being more cohesive. These authors state that family environment appears to buffer the relationship between sexual abuse and subsequent psychopathology.

Harter, Alexander, and Neimeyer (1988) investigated familial and cognitive characteristics associated with a history of childhood sexual abuse in college women. The authors hypothesized that women who were abused would report less cohesive and less adaptable families of origin and more social isolation, which would be related to inadequate social adjustment. Eighty-five female volunteers, 29 of which were abused, completed the Family Adaptability and Cohesion Evaluation Scale-II (Olson, Russell, & Sprenkle, 1983), an adapted version of the Family Perception Grid (Kelly, 1955), and the Social Adjustment Scale (Weissman & Paykel, 1974). Correlational results indicated that

women who were abused in childhood described themselves as more socially isolated, and their families as less cohesive and less adaptable compared to college women who were not abused. Multiple regression analyses revealed that decreased adaptability and sexual abuse by a father figure were significantly predictive of social maladjustment. In addition, decreased cohesion and abuse involving penetration were predictive of perceived social isolation.

In contrast, Fromuth (1986) compared sexually abused female college students to nonabused students and found that a history of child sexual abuse alone was not uniquely related to subsequent adjustment. However, parental supportiveness was a significant predictor of later psychological adjustment as measured by the SCL-90 (Derogatis, Lipman & Covi, 1973).

In a recent meta-analytic investigation of the long-term effects of child sexual abuse, Rind, Tromovitch, and Bauserman (1998) indicated the relative importance of family environment in the development of psychopathology following childhood sexual abuse. Results of a meta-analysis including 59 studies of college women indicated that while college women with a sexual abuse history were slightly less well adjusted than controls, childhood sexual abuse accounted for only less than 1% of the variance when predicting adult adjustment. Further analyses indicated that relative to women with no child abuse history, women who were sexually abused in childhood reported more problematic childhood home environments. Multiple regression analyses revealed that family environment accounted for a significant portion of the variance in adjustment over and above the abuse experience itself. These results highlight the importance of family

environment compared with childhood sexual abuse in accounting for adjustment problems with survivors.

Investigations of family environment and sexual abuse with adolescents are limited in number. Feiring, Taska, and Lewis (1998) investigated psychological distress at the time of abuse discovery in a sample of 87 children and 67 adolescents. Results revealed that adolescent distress is related to less parental support. Likewise, maternal support was significantly related to depression in a sample of 50 treatment seeking adolescent female sexual abuse survivors (Morrison, & Clavenna-Valeroy, 1998).

Hussy and Singer (1993) investigated psychological adjustment and family environment related to the experience of sexual abuse among sexually abused adolescent inpatients. In contrast to the previously described findings, results indicated that abused adolescents were similar to non-abused adolescents with respect to levels of depression, self-esteem and social competence, as well as perceived cohesion and adaptability in the family. These authors reported a difference between groups in drug use, with individuals who had experienced childhood sexual abuse exhibiting a greater increase in use. Null findings with regards to psychological functioning and family environment may be an artifact of the nature of the inpatient sample.

The aforementioned studies support the contention that victims of childhood sexual abuse come from different family environments than non-abused individuals. Research also reveals that certain family characteristics serve as significant predictors of psychological adjustment in addition to sexual abuse experiences. There is some dispute, however, regarding the extent to which symptomatology is a result of the abuse itself or the effect of family background (Houck & King, 1989; Edwards & Alexander, 1992).

Martin (1979) has asserted that the pattern of aberrant parenting and family dysfunction may be as harmful or more harmful than the individual acts of abuse.

Stemming from numerous lines of research, the principal conclusions drawn from the previous literature review are twofold. First, it is evident that both sexual and physical abuse are related to poor psychological functioning. Second, the literature suggests that distinct dimensions of family environment are also related to poor psychological functioning. Despite what appears to be an abundance of literature indicating a relationship between family characteristics, the occurrence of childhood sexual abuse, and subsequent adjustment, few studies have demonstrated this relationship in the adolescent population. Nonetheless, it has been indicated by previous research that psychological functioning may be best accounted for by models which include variables other than the abuse event itself. Family environment, given its relationship to child sexual abuse and to psychological problems, lends itself to this endeavor.

Methodological Limitations

Arriving at a complete picture of the effects of childhood abuse is limited by a number of factors. Most studies of child abuse have not differentiated between trauma, physical abuse, sexual abuse, and neglect while discussing the effects of "abuse" (van der Kolk & Fisler, 1994; Williamson, Borduin, & Howe, 1991). Typically, abuse is discussed as a unitary risk factor, perhaps reflecting an unspoken assumption that symptom patterns do not correspond with specific types of abuse. It is possible that these definitional issues and associated research design issues also add to the confusing results of research on child abuse (Belsky, 1993). In addition, the literature provides little information that allows for

direct comparisons among the effects of different types of abuse (Ammerman, Cassisi, Hersen, & Van Hasselt, 1986; Kendall-Tackett, Williams & Finkelhor, 1993). Comparing the psychological sequelae of abuse is made more complex by the diversity in sampling (e.g., children versus retrospective studies of adults). Spaccarelli (1994) has stated that another problem with the existing literature lies in the different ways abuse-related variables have been measured.

In addition to the limitations previously discussed, existing literature has shown that many more girls than boys are reported victims of sexual abuse (Roesler & McKenzie, 1994). Thus, research that discusses the consequences of abuse includes data obtained primarily from child and adult females. Gender differences in response to abuse could be confounded with this type of abuse.

In addition to the research design issues, researchers must be sensitive to the fact that effects of abuse may be delayed and effects may assume a different form as the individual matures (Browne & Finkelhor, 1986). Rutter (1993) has stated that the processes involved in stress and coping may differ according to an individual's stage of development and that long-term outcome will be determined by how stress is dealt with at the time it occurs. It is essential then, in order to have a more complete understanding of the effects of abuse, to assess the effects of abuse in individuals at different developmental stages. At this time, the majority of information concerning the effects of abuse have been obtained primarily through studies of adult women and children. Little, if any, empirical attention has been given to adolescent victims of childhood abuse.

Statement of Purpose

It is largely undisputed that the experiences of childhood sexual and physical abuse are related to the subsequent development of a variety of behavioral and psychological sequelae in children and adults. Furthermore, existing research has identified the importance of family environment on the development of psychological and behavioral problems in the absence of childhood abuse experiences, as well as revealed the importance of understanding childhood victimization within the context of the family environment. In light of these findings, as well as the limitations of the existing research previously discussed, the purpose of the present study was to examine the influence of family environment and childhood victimization on the psychological functioning of adolescents. Specifically, the current study investigated the possible influence of family conflict and family cohesion on the self-reported depression and general distress among adolescents who had been sexually abused or physically abused in childhood.

Hypotheses

The hypotheses of this study were based on the premise that specific family environment characteristics, often related to childhood sexual abuse and physical abuse, would play a role in the development of psychological problems. The goal of the proposed study was to empirically examine the following hypotheses.

Hypothesis One – Adolescents who experienced childhood abuse, defined as either childhood sexual abuse or physical abuse, would report having family environments characterized by high conflict and low cohesion relative to non-abused adolescents.

Hypothesis Two – It was hypothesized that family environments characterized by low cohesion and high conflict would add significant unique variance in predicting adolescent depression in addition to the variance accounted for by childhood sexual abuse or physical abuse.

Hypothesis Three – It was hypothesized that a family environment characterized by high conflict and low cohesion would add significant unique variance in predicting adolescent distress in addition to the variance accounted for by childhood sexual abuse or physical abuse.

CHAPTER III

METHODOLOGY

Participants

Participants were recruited from the United States Department of Labor Job Corps facility in Guthrie, Oklahoma. One-hundred-thirty-one adolescents (72 female and 58 male) between the ages of 16 and 18 years ($\underline{M}$ = 16.9, $\underline{SD}$ = .73) participated in the study. The sample was composed of 42.0% African-American, 40.5% Caucasian, 8.4% Native American, 6.1% Hispanic adolescents and 3.0% of another unspecified ethnic background. The majority of the participants were single (96.9%), 2.3% were married and 0.8% of the participants were separated. A total of 42 participants (24 female and 18 male) were identified as having been physically abused based on their responses to the Assessing Environments-III (see definitional information below; Berger, Knutson, Mehm, & Perkins, 1988). A total of 39 participants (28 female and 11 male) were identified as having been sexually abused before the age of 12 based on their responses to the Sexual Experiences Questionnaire (see definitional information below). Of the adolescents identified as having been sexually or physically abused, 17 participants (13 female and 4 male) experienced both sexual and physical abuse.

Procedure

All individuals between the ages of 16-18 years receiving services at the Job Corps facility during a one year time period were removed from their regularly scheduled daily class activity to participate. Upon giving informed consent and assent to participate, participants completed the questionnaire packet which included, in random order, a demographics questionnaire, a measure of childhood sexual experiences, the Assessing Environments III (Berger, Knutson, Mehm, & Perkins, 1988), the Family Environment Scale (FES; Moos & Moos, 1986), the Brief Symptom Inventory (BSI; Derogatis, 1982), and the Beck Depression Inventory-II (BDI-II; Beck & Steer, & Brown, 1996). Written and verbal instructions were provided for each questionnaire. The researcher was also available to answer questions regarding instructions and item content. All data were collected in a group testing format and all information was kept confidential and anonymous. There was no time limit for completion.

Reward for participation was a certificate for an extra fifteen minutes on the telephone or a Positive Event Report which is equitable to privileges on the Job Corps campus. Each participant chose his or her reward upon completion of the packet. At that time, participants also received a debriefing form outlining the purpose of their participation and identifying numerous counseling services available on the Job Corps campus.

Measures

The Sexual Experiences Questionnaire (SEQ) is a self-administered childhood sexual abuse experiences questionnaire, adapted from Finkelhor (1979). This measure is different from Finkelhor (1979) in that it is appreciably shorter and only includes items necessary for determining whether abuse occurred. The measure is a 34 item multiple-choice and fill in the blank questionnaire. The questionnaire includes items regarding abuse specific factors such as the nature of the sexual victimization (severity), relationship to the perpetrator, age of onset, duration of abuse, age of the perpetrator, extent of force used, and disclosure of abuse.

For the purposes of this study, sexual abuse was defined as any nonconsensual sexual experience involving contact (i.e., fondling, penetration, kissing) occurring at age 12 or younger (Finkelhor, 1986). This age-cutoff was employed to avoid inclusion of adolescent sexual experiences and is consistent with a large body of previous empirical investigations of childhood sexual abuse (Rind, Tromovitch, & Bauserman, 1998). Specifically, childhood sexual abuse was defined as contact abuse only and must have met one of the following criteria: 1) perpetrated by a relative, 2) greater than five year age difference between victim and perpetrator, or 3) if less than five year age difference between the victim and perpetrator, threat or force was involved (Messman-Moore & Long, in press).

The Assessing Environments III (Berger, Knutson, Mehm, & Perkins, 1988) is a questionnaire designed to assess punitive and potentially abusive childhood experiences. The scale consists of 164 items forming six scales: Physical Punishment, Sibling Physical

Punishment, Perception of Discipline, Sibling Perception of Punishment, Deserving Punishment, and Sibling Deserving Punishment. Participants reported in a Yes-No format whether or not the item was descriptive of their family. The internal consistency of the scales was evaluated using two samples of university students (N = 347 and N = 1,182), and yielded KR-20 coefficients for the subscales ranging from .48 to .79, with the majority of the scales between .65 and .79 (Berger, et al., 1988). Test-retest reliability over 60 days yielded KR-20 coefficients ranging from .61 to .89 (Berger, et al., 1988).

Physical abuse was defined using the Physical Punishment Scale (based on 12 items) in which respondents indicated the occurrence of disciplinary events ranging from mild discipline (e.g., spanking) to potentially injurious physical punishment (e.g., "When my parents were angry, they sometimes grabbed me by the throat and started to choke me") and acts defined in the literature (e.g., hit with objects) as common forms of abusive parenting (Beger, Knutson, Mehm, & Perkins, 1988). As indicated by the authors of this instrument, participants who endorsed five or more items on the Physical Punishment Scale were considered to have been physically abused in childhood.

The Family Environment Scale (FES; Moos & Moos, 1986) is a 90-item, true-false self-report instrument in which participants described their family "as they were growing up" (Moos & Moos, 1986). The instrument contains ten subscales (each subscale is based on nine items) comprising three broad dimensions of family functioning. Dimension one describes interpersonal relationships among family members and consists of the Cohesion, Expressiveness, and Conflict subscales. The Cohesion subscale measures how much family members are concerned about and supportive of each other, and the degree to which members are committed to the family. The Expressiveness subscale assesses the

extent to which individual family members are encouraged to act and express their feelings openly. The Conflict subscale measures the amount of open aggression and anger which is typical of the family. The second dimension concerns the personal growth characteristics emphasized in the family and includes the Independence, Achievement Orientation, Intellectual, Active Recreational Orientation and the Moral-Religious Emphasis subscales. The Independence subscale indicates how much individual family members are encouraged to be self-sufficient and to make decisions for themselves, the Achievement Orientation subscale measures the achievement oriented or competitiveness framework within the family and the Intellectual subscale assess overall family interest in politics, intellectual, social and cultural activities. The Active Recreational Orientation subscale indicates the extent to which individual family members participate in various recreational activities. The Moral-Religious Emphasis subscale assesses the degree to which the family emphasizes religious and moral values. Finally, the third dimension includes the subscales Organization and Control and is concerned with the system organizational features of the family. Organization measures the emphasis in the family on order with regard to organizing family activities, planning finances, and clarity of responsibilities and rules. The Control subscale measures how much family members order each other around and the rigidity of the rules of and procedures of the family. For the purposes of this study, standard scores on the conflict and cohesion subscales were examined.

Moos and Moos (1986) have reported 8-week test-retest reliabilities for the 10 subscales and are all in acceptable range, from .68 to .86. Internal consistency coefficients are also satisfactory, ranging from .61 to .78 (Moos & Moos, 1986). Coefficient alphas computed within this sample ranged from .18 to .48.

The Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982) was used to measure psychological distress. Each of the 53 items of the BSI is rated on a 5-point Likert-type scale ranging from 0 ("not at all") to 4 ("extremely"). Participants were asked to rate their degree of distress for the past week. This measure has been used with both non-clinical and clinical populations, and it is reported to have good convergent and predictive validity (Derogatis & Spencer, 1982). Although three global indexes are available with the BSI, only the Global Severity Index (GSI) was chosen because it provides the most sensitive indicator of distress, combining information on both the total number of symptoms reported and the intensity of the distress experienced. Test-retest reliability for the GSI over a two week period has been reported to be .90 by Derogatis and Melisaratos (1983).

The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) is a 21-item, multiple choice questionnaire for measuring the severity of depression in adults and adolescents aged 13 years and older. The BDI-II is a revised version of the original BDI (Beck & Steer, 1986) and is used for the assessment of symptoms corresponding to criteria for diagnosing depressive disorders according to the DSM-IV (APA, 1994). It has been found to have good validity as a screening instrument for depression. The scale has been normed on several large samples and has acceptable reliability and validity (Beck, Steer & Brown, 1996). Test-test correlation, over a one week time period, for a subsample of outpatients was significant (.93) (Beck, et al., 1996).

CHAPTER IV

RESULTS

Preliminary analyses were performed to examine potential differences between individuals with an abuse history as compared to individuals without an abuse history on specific demographic variables. Results of a chi square analysis revealed that more girls than boys reported a history of child sexual abuse, χ^2 (1, 130) = 6.07, $p < .01$. Sexually abused adolescents and those without a history of sexual abuse were not found to differ with regards to ethnicity (χ^2 (1, 131) = .09, ns), marital status (χ^2 (1, 130) = 2.08, ns), or age (t (127) = -.51, ns). Physically abused adolescents and those without a history of physical abuse were not found to differ on any demographic variables: gender (χ^2 (1, 130) = .08, ns), ethnicity (χ^2 (1, 131) = .58, ns), marital status (χ^2 (1, 130) = .005, ns), or age (t (127) = .71, ns). One-way correlations for all variables are reported in Table I (See Appendix A).

To test the hypothesis that the families of abused adolescents would be characterized by more conflict and less cohesion than families of adolescents without an abuse history, 2 two-way analyses of variance (ANOVA) were conducted. Scores on the conflict and cohesion scales of the FES served as dependent variables. Physical abuse history (yes/no), sexual abuse history (yes/no) and the interaction of these two variables were examined in each ANOVA. Results of the ANOVA examining cohesion revealed a

significant main effect for physical abuse (F (1, 127) = 6.47, $p < .01$), but not for sexual abuse (F (1, 127) = .004, ns) or the interaction effect (F (1, 127) = .14, ns). Adolescents reporting physical abuse reported less cohesion (M = 39.31, SD = 11.30) than adolescents without an abuse history (M = 45.83, SD = 12.59). Results of the second ANOVA examining family conflict also revealed a significant main effect for physical abuse (F (1, 127) = 9.11, $p < .003$), but not for sexual abuse (F (1, 127) = 1.19, ns) or the interaction effect (F (1, 127) = .11, ns). Adolescents reporting physical abuse reported more conflict (M = 54.90, SD = 11.09) than adolescents without an abuse history (M = 46.52, SD = 13.39).

To examine the influence of childhood sexual abuse, physical abuse, family conflict and family cohesion on adolescent adjustment, as stated in Hypotheses Two and Three, two hierarchical regressions were performed. The first equation examined the influence of these variables on adolescent depression as measured by the BDI-II. On Step 1 of the equation, sexual abuse and physical abuse were entered as a block; family conflict and family cohesion were entered as a block on Step 2. Results (see Table II in Appendix A) revealed that both sexual abuse (t = 2.31, $p < .02$) and physical abuse (t = 2.57, $p < .01$) were significant predictors of adolescent depression. Family cohesion (t = -2.04, $p < .04$), but not conflict (t = .63, ns), contributed additional unique variance beyond that predicted by abuse histories in predicting depression scores. Follow-up analyses revealed that adolescents with a history of sexual abuse reported more depression (M = 20.72, SD = 13.35) than adolescents without a sexual abuse history (M = 14.29, SD = 12.03), t (128) = -2.70, $p < .008$. Adolescents with a physical abuse history also reported more depression (M = 20.90, SD = 12.66) than adolescents without a physical abuse history

(M = 14.06, SD = 12.25), t (128) = -2.93 , p < .004. Finally, lower levels of family cohesion were associated with greater levels of depression (r = -.28, p < .001).

A second hierarchical regression analysis was performed to examine the influence of childhood sexual abuse, physical abuse, family conflict and family cohesion on levels of general distress as measured by the BSI. Results revealed that both sexual abuse (t = 2.74, p < .007) and physical abuse (t = 2.95, p < .004) were significant predictors of adolescent distress. Family conflict (t = 3.51, p < .001), but not cohesion (t = -.09, ns), contributed additional unique variance in predicting levels of general distress above that predicted by abuse histories. Results of follow-up tests revealed that adolescents with sexual abuse reported more distress (M = 1.58, SD = .92) than adolescents without a history of sexual abuse (M = 1.03, SD = .92), t (128) = -3.17, p < .002. In addition, adolescents with a history of physical abuse reported more distress (M =1.58, SD = .95) than adolescents without a physical abuse history (M = 1.01, SD = .90), t (128) = -3.35, p < .001. Finally, greater levels of family conflict were associated with greater distress (r = .42, p < .001).

Given previously identified gender differences in sexual abuse with this sample and previous findings in the literature regarding gender differences in depression and distress, additional exploratory hierarchical regressions were conducted to examine Hypotheses Two and Three separately for males and females. Results of the analysis of depression for males (see Table III in Appendix A) revealed physical abuse (t = 2.27, p < .03) to be a significant predictor, but not sexual abuse (t = .54, ns). In addition, family cohesion showed a trend towards predicting depression, although this association was not significant (t = -1.78, p < .08); family conflict did not significantly predict depression in

males (t = -1.09, ns). Follow up analyses revealed that men with a physical abuse history reported higher levels of depression (M = 21.24, SD = 14.39) compared to men without a physical abuse history (M = 12.62, SD = 12.07), t (55) = 2.33, p < .03. In addition, family cohesion was somewhat related to greater levels of depression for males (r = -.22, p < .05). Results of the regression equation for males on levels of general distress also revealed physical abuse (t = 2.21, p < .03) to be a significant predictor, but not sexual abuse (t = .35, ns). In addition, family conflict was a significant predictor of general distress (t = 2.47, p < .02) while family cohesion was not (t = .09, ns). Follow-up analyses revealed that men with a physical abuse history reported higher levels of general distress (M = 1.42 , SD = 1.04) than males without a physical abuse history (M = .86, SD = .80), t (56) = 2.25, p < .03. Finally, for males greater family conflict was associated with general distress (r = .41, p < .001).

Unlike the results for males, results of the analysis on depression for females revealed sexual abuse (t = 2.39, p < .02) to be a significant predictor, but not physical abuse (see Table III in Appendix A) (t = 1.20, ns). In addition, family conflict (t = 1.86, p = .07) showed a trend towards predicting depression while family cohesion did not significantly predict depression in females (t = -1.17, ns). Follow up analyses indicated that females with a sexual abuse history reported higher levels of depression (M = 21.93, SD = 12.29) than females without a sexual abuse history (M = 14.18, SD = 11.49), t (70) = 2.71, p < .008. In addition, family conflict was somewhat associated with depression (r = .41, p < .001). The final regression for females, constructed to predict levels of general distress, also revealed sexual abuse (t = 2.75, p < .008) to be a significant predictor. In addition, physical abuse showed a trend towards predicting distress (t =

1.89, $p = .06$), although it was not significant. Finally, family conflict ($t = 2.19 =$, $p < .03$) contributed unique additional variance in predicting levels of general distress for females. Family cohesion did not significantly predict levels of general distress in females ($t = -.13$, ns). Follow-up analyses revealed that females with a sexual abuse history reported higher levels of general distress ($M = 1.76$, $SD = .86$) than females without a sexual abuse history ($M = 1.05$, $SD = .94$), $t(70) = 3.19$, $p < .002$. Finally, results indicated that family conflict was somewhat associated with general distress ($r = .40$, $p < .001$).

Given the disparate results for boys and girls, the lack of significance for some of the predictor variables, and the differences in predictability of the family environment characteristics, power analyses were computed to estimate the ability to detect true differences. Power was computed for each of the regression equations given four predictor variables and $\alpha = .05$. Results of the power analysis for depression and distress, including both boys and girls, were 0.99 and 0.99, respectively. Both analyses indicated sufficient power to detect true differences. Separate power analyses were then computed by gender. For females, more than adequate power was indicated for depression (0.96) and distress (0.98). The analysis for distress in males likewise yielded sufficient power (0.85). However, the analyses for depression in males indicated that power may have been insufficient to detect real differences (0.67)

CHAPTER V

DISCUSSION

Results of this study revealed that adolescents with a physical abuse history perceived their family environment as more conflictual and less cohesive relative to those without a physical abuse history. Differences in dimensions of family functioning however, were not found between adolescents with a sexual abuse history and adolescents without such a history. In addition to identifying patterns of family functioning that may distinguish some abuse survivors from others, results of this study provide evidence that specific family environment characteristics play a role in the development of depression and distress in adolescents with a history of sexual and physical abuse.

These results are interesting for a number of reasons. First, this study revealed that adolescents who experienced physical abuse perceived their family environment as more conflictual and less cohesive. A closer examination of items on the FES (Moos & Moos, 1986) pertaining to adolescents' exposure to the family conflict indicates that the families of individuals who were physically abused had more arguments (which were often accompanied by family members throwing objects), criticism, and a lack of attempt to resolve conflicts when they occurred. Adolescents who were physically abused also indicated that family members often try to out-do or one-up each other and believed that raising one's voice was needed to be heard. These adolescents also report that members

of their families are less likely to spend time at home, do not have time and attention for each other, do not help each other, and do not feel a sense of togetherness. Taken together, physically abused adolescents appear to experience families as both highly conflictual and unsupportive. Thus, it appears as though the adolescents in this sample experienced physical violence in an unnurturing environment characterized by an inordinate amount of hostile verbal exchanges. Moos and Moos (1986) define conflict as the amount of open aggression and anger which is typical of the family. As such, the construct, by definition, is suggestive of a degree of violent and aggressive behavior within the family. As physical abuse is an openly aggressive and violent act, these family characteristics may be more salient to victims of physical abuse.

The expected relationship between these family environment characteristics and a history of sexual abuse was not demonstrated in this study as it was for physical abuse. Previous investigations have revealed that individuals with a sexual abuse history perceive their families as less cohesive and more conflictual (e.g., Alexander & Lupfer, 1987; Benedict & Zautra, 1993; Ray, Jackson, & Townsley, 1991). These investigations however, have focused primarily on the retrospective reports of adult women. This study, on the other hand, employed a sample of high-risk adolescents from a residential facility who were not currently living with their families. While not a clinical sample, the adolescents in this study were residing at the facility due to juvenile court or Department of Human Services referral, or due to a recent discharge from inpatient psychiatric care. As such, it is conceivable that higher levels of psychiatric problems and exceptionally conflictual and unsupportive family environments are the norm rather than the exception. In fact, previous investigations of inpatient adolescents have revealed no differences on

levels of psychological adjustment or perceptions of family functioning on the basis of sexual abuse history (Cohen, et al., 1996; Hussey & Singer, 1993). Interestingly, a closer examination of the family conflict and cohesion subscales in this sample reveal that the majority of adolescents did perceive their families as more conflictual and less cohesive, regardless of abuse status. Failure to detect differences between child sexual abuse survivors and individuals without a sexual abuse history may therefore be due to a ceiling effect on these scales.

This investigation was also the first to explore the combined effects of childhood sexual abuse, physical abuse, family conflict, and family cohesion on psychological functioning. While previous studies have investigated the impact of sexual abuse and either family conflict or family cohesion on depression (e.g., Cumsille & Epstein, 1994; Sheeber & Sorenson, 1998), none to date have examined the unique influence of family conflict and family cohesion on distress and depression in the same investigation or examined these family variables with both types of abuse. Results of this study not only suggest that both sexual abuse and physical abuse are important factors in the development of adolescent depression and distress, but that family environment characteristics are also independently associated with psychological adjustment.

The mechanisms through which family environment characteristics affect the development of psychological functioning have received modest attention. Theories regarding the development and maintenance of adjustment problems in relation to family conflict stem from the body of literature that has examined these variables independent of abuse history. Previous researchers have hypothesized two ways in which conflict within the family may impact a child as well as potentially disrupt young adult functioning (Grych

& Fincham, 1990). The first way in which family conflict may affect the development or maintenance of psychological problems is through the modeling of aggression. Thus, children may be taught that verbal expression of anger is an acceptable way of dealing with interpersonal problems, or by increasing psychological distress due to exposure to a stressor (e.g., open hostility and verbal aggression). Second, family conflict may exert its effects indirectly by altering the nature of the parent-child relationship via loose or inconsistent discipline practices, or by overt expression of parent hostility toward the child or adolescent.

Researchers have also postulated two theories regarding the ways in which family cohesion may serve as a risk or protective factor for immediate and long-term psychological functioning. Family cohesion, as defined in this study, is the degree to which family members are concerned about and supportive of each other, and the degree to which members are committed to the family (Moos & Moos, 1986). Cohen and Willis (1985) have asserted that family cohesion may either serve a protective, or buffering, function under the influence of life stress. Alternately, family cohesion may function independent of life stress as a factor which generally fosters positive psychological adjustment. The results of this study appear to support the hypothesis by demonstrating the independent contribution of family cohesion to adolescent depression. Consistent with other reports (Ray & Jackson, 1997), this would indicate that family cohesion serves to foster psychological adjustment independent of significant life stress such as abuse.

Interestingly, though the results of this study reveal that sexual abuse, physical abuse and family environment characteristics are uniquely predictive of psychological adjustment, closer examination of these variables by gender suggests that different types of

abuse predict different types of adjustment for males and females. For males, physical abuse, along with family environment, was predictive of both depression and distress, while sexual abuse and family environment was predictive of outcome for females. For males, this may be a function of having experienced more severe physical abuse compared to sexual abuse. Upon closer examination of the severity of sexual and physical abuse experiences, it appears that males with a physical abuse history had a higher percentage of extreme scores (higher than the average score for males) on the physical abuse index (AE-III). On the other hand, fewer reported more severe sexual abuse experiences (as indicated by fewer males having an unwanted sexual experience with a family member or an experience accompanied by the use of force). Both of these abuse related variables have been associated with more adverse outcomes in female populations (Mennen, 1993; Mennen & Meadow, 1995).

Previous research on sexual abuse has consistently shown that the experience of sexual abuse often leads to a variety of psychological problems. The results of this study indicated that sexual abuse, along with family environment characteristics, was the best predictor of depression and distress in female adolescents. These findings may be better understood from a developmental perspective. As previously indicated, adolescence is a period of dramatic change. Windle (1992) has indicated that in this phase, individuals encounter biological, psychosocial and environmental changes which have a significant impact on the adolescent regardless of any "nonnormative life events" such as abuse. Within the context of such change, it may be expected that abuse takes on a different meaning during this unique stage of development. As such, the findings of this study may suggest that the impact of abuse changes throughout development.

During adolescence there is increasing attention and concern with sexuality and an increasing interest in intimate relationships with the opposite sex. The observed influence of sexual abuse in females may be a function of the importance of these emerging issues in adolescence. At the stage of development studied in this sample (16-18 years of age), boys are more likely to have already had their first age-appropriate sexual experience. Girls on the other hand, are more likely dealing with sex and sexuality issues at the present time. As such, sexual abuse experiences may be more salient to them. Additionally, closer examination of the sexual abuse experiences by gender revealed that females were more likely to have been forced into sexual activity than males. The use of force is one abuse-related variable indicated to be related to poorer outcome in sexual abuse survivors (e.g., Mennen, 1993).

An interesting finding of this study is the reversal of the family environment characteristics and their influence on the two indicators of adjustment, depression and distress. First, findings revealed the unique influence of family cohesion in predicting depression for boys but not for girls. The reason for this discrepancy is unclear and is inconsistent with previous studies that have investigated this construct. The relationship between family cohesion and depression has been widely documented and discussed in the literature. Kaslow, Deering and Racusin (1994), in a review of the literature of depression in children and adolescents, discuss the relationship between family cohesion and depression. These authors indicate that family cohesion serves to minimize the impact of stressful events and that high levels of cohesion are accompanied by high levels of positive reinforcement which mitigate the development of depression. Future research is needed to clarify the relationship between these variables.

Different than the results for depression, family conflict was consistently related to general distress for girls and boys. As described above, the family environment perceived by the sample was highly argumentative, critical, and verbally hostile. Conflict of this nature is likely to be unpredictable and lead to an environment which is generally unstable and chaotic. This is unlike the dimension of cohesion which may be more consistent and stable within the family unit. A conflictual family environment may therefore be more highly associated with a general sense of uneasiness and discomfort, rather than depression per se, due to its unpredictability.

Overall, results of this study point to the importance of considering both of the abuse experiences of adolescent survivors and the role of family characteristics in predicting adjustment. Findings of gender differences in these relationships are noteworthy. However, these findings should be interpreted with caution due to the relatively small, unique sample examined. As previously mentioned, this study employed a group of adolescents at a residential vocational training program who were there due to referral from the Department of Human Services or juvenile court or due to their recent discharge from inpatient care with no other alternative residence. As such, this sample of adolescents reflects a high-risk group and may not be representative of the general population of adolescents. An understanding of the psychological functioning of this subgroup of adolescents is particularly necessary due to their increased risk for future psychological problems and elevated potential to engage in maladaptive behavior. This study also employed retrospective self-report of childhood abuse experiences and family environment. As a result, it is impossible to determine the chronological order of events with regards to abuse experiences and the quality of the family environment. For example,

disclosure of abuse may lead to an environment that is conflictual and unsupportive, or alternately, a family that is conflictual and unsupportive may provide a context in which abuse is permitted to occur. Such methodology therefore prohibits conclusions regarding family environment and its role as a risk or protective factor for child abuse or, alternately, a consequence of child abuse. It is possible also that the retrospective nature of these reports influences their accuracy. Individuals with an abuse history may recall their families as more negative, or alternately, current distress may affect recall of abuse events and family functioning. Importantly, although significant relationships between family environment and adjustment were indicated by these findings, it is not possible, due to the retrospective report, to discern whether the perceived experiences of conflict and lack of cohesion lead to depression or whether the family environment characteristics have etiological significance for the development of depression and distress.

Despite these limitations, this study fills a number of gaps in the existing literature. First, this study is one of the first to explore the relationship between childhood abuse and family environment in a sample of adolescents. In addition, the inclusion of physical abuse, as well as sexual abuse, as variables of interest expands on the limited body of existing research on these issues. Most investigations of physical abuse and sexual abuse occur separately without considering the two factors together. Results here indicate that investigations should include both types of abuse. This study also adds to the current knowledge in that standardized instruments as well as operationalized definitions of abuse were employed. Though the results regarding gender should be considered tentative due to small samples, this is the first study to suggest differences in adjustment as a function of the type of abuse experienced and specific family characteristics. Finally, this is one of the

few studies which examined the psychological adjustment of adolescents in a sample that was not purely clinical.

Future research is encouraged to further investigate the importance of gender when examining the psychological sequelae associated with child abuse. This study suggests that the experience of abuse and the influence of family environment is not the same for males and females. As such, males and females should not be considered a homogeneous group and caution should be employed when generalizing findings of studies that include only females to the experiences of men. Further investigations could elucidate the exact nature of psychological adjustment and family features as a function of gender and explore the unique importance of family variables and abuse (sexual vs. physical) history. Examination of abuse-related characteristics (e.g., relationship to the perpetrator, use of force) could also be included in future investigations as previous research has indicated their potential impact on the development of psychopathology (e.g., Mennen & Meadow, 1995; Wolfe, Sas, & Wekerle, 1994). In addition, in order to fully understand the relationship between family environment and childhood abuse, prospective studies that examine psychological adjustment and family environment before and after abuse occurs are essential.

These findings also have significant treatment implications. Clinicians should be cognizant of family problems with regards to conflict and cohesion when working with adolescents with an abuse history. Exploration of these issues with clients is even more pertinent in light of these findings which indicate that family dysfunction is predictive of depression and distress in adolescents. It appears as though treatment of abused individuals should also consider intervention at the level of the family in addition to the

individual. Goals to decrease conflict and increase cohesion could substantially impact the adolescents mental health functioning. Along these lines, treatment should be gender sensitive. Different dimensions of family environment and different types of abuse appear important to consider when working with boys and girls who present with mental health problems. Clinicians should also be sensitive to the fact that different types of abuse may affect boys and girls differently. Thorough assessment of all types of abuse as well as related issues that may make adjustment worse should be conducted. The inclusion of information regarding childhood abuse and family dynamics, in a gender specific and sensitive manner, would help to create a more complete treatment plan.

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APPENDIXES

APPENDIX A

RESULTS OF STUDY TABLES

TABLE I

SIMPLE INTERCORRELATIONS OF ALL STUDY VARIABLES

Variable	1	2	3	4	5	6	7	8	9	10
1. Age	-	-.10 (129)	.03 (129)	.02 (128)	.05 (129)	-.06 (129)	-.12 (129)	.02 (129)	-.03 (128)	-.14 (129)
2 Gender		-	-.22* (130)	.14 (129)	.22* (130)	.02 (130)	.11 (130)	-.04 (130)	.08 (129)	.16 (130)
3 Race (a)			-	-.02 (130)	-.03 (131)	-.07 (131)	.08 (131)	-.05 (131)	-.01 (130)	-.02 (130)
4. Marital Status (b)				-	.13 (130)	.01 (130)	.05 (130)	.05 (130)	.11 (129)	.18* (129)
5. CSA					-	.16 (131)	.15 (131)	-.04 (131)	.23** (130)	.27** (130)
6. PA						-	.30*** (131)	-.24** (131)	.25** (130)	.28*** (130)
7. FES-Con.							-	.56*** (131)	.25** (130)	.42*** (130)
8. FES-Coh.								-	-.28*** (130)	-.24** (130)
9. BDI-II									-	.67*** (129)
10. BSI										-

Note: CSA=Childhood Sexual Abuse; PA=Physical Abuse; FES-Con.=Family Environment Scale-Conflict subscale; FES-Coh.=Family Environment Scale-Cohesion subscale; BDI-II=Beck Depression Inventory-II total score; BSI=Brief Sympton Inventory General Severity Index; (a)–0=not Caucasian, 1=Caucasian; (b)–0=not married, 1=married; *=$p<.05$; **=$p<.005$; ***=$p<.001$.

TABLE II

HIERARCHICAL MULTIPLE REGRESSION ANALYSES
OF DEPRESSION SCORES AND LEVELS
OF GENERAL DISTRESS

Step	Variable	Partial regression coefficients (B)	t for Partial regression coefficients	R^2 for set	F for set	df
			Equation 1: Depression			
1	CSA	5.47	2.31*	.10	7.11***	(2,127)
	PA	5.96	2.56**			
2	FES-Conflict	0.06	0.61	.16	5.75****	(4,125)
	FES-Cohesion	-0.21	-2.04*			
			Equation 2: Levels of General Distress			
1	CSA	0.48	2.4**	.13	9.66****	(2,127)
	PA	0.50	2.95**			
2	FES-Conflict	0.02	3.51***	.24	9.81****	(4,125)
	FES-Cohesion	-0.0007	-0.09			

Note: CSA=Childhood Sexual Abuse; PA=Physical Abuse; FES-Conflict=Family Environment Scale-Conflict subscale; FES-Cohesion=Family Environment Scale-Cohesion subscale; *=$p < 05$; **=$p < 01$; ***=$p < .001$; ****=$p < .0001$

TABLE III

HIERARCHICAL MULTIPLE REGRESSION ANALYSES OF DEPRESSION SCORES AND LEVELS OF GENERAL DISTRESS BY GENDER

Step	Variable	Partial regression coefficients (B)	t for Partial regression coefficients	R^2 for set	F for set	df
			Males Only			
Equation 1: Depression						
1	CSA	2.34	0.54	.10	2.82*	(2,54)
	PA	8.47	2.27**			
2	FES-Conflict	-0.17	-1 10	.15	2.25*	(4,52)
	FES-Cohesion	-0.30	-1.78*			
Equation 2: Levels of General Distress						
1	CSA	0.10	0.35	.09	2.55*	(2,55)
	PA	0.55	2.21**			
2	FES-Conflict	0.03	2.47**	.20	3.35**	(4,53)
	FES-Cohesion	0.001	0.09			
			Females Only			
Equation 1: Depression						
1	CSA	6.97	2.39**	.11	4.42**	(2,69)
	PA	3.61	1.20			
2	FES-Conflict	0.23	1 86*	.23	4.96***	(4,67)
	FES-Cohesion	-0 15	-1.17			
Equation 2: Levels of General Distress						
1	CSA	0.61	2.75**	.17	7.07***	(2,69)
	PA	0.43	1.89*			
2	FES-Conflict	0.02	2.19**	.25	5.58***	(4,67)
	FES-Cohesion	-0.001	-0 13			

Note: CSA=Childhood Sexual Abuse; PA=Physical Abuse; FES-Conflict=Family Environment Scale-Conflict subscale; FES-Cohesion=Family Environment Scale-Cohesion subscale; *=$p < .09$; **=$p < .05$; ***=$p < .002$.

APPENDIX B

INSTITUTIONAL REVIEW

BOARD FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

DATE: 02-24-99 **IRB #: AS-99-037**

Proposal Title: THE INFLUENCE OF CHILDHOOD SEXUAL ABUSE, PHYSICAL ABUSE AND FAMILY ENVIRONMENT ON THE PSYCHOLOGICAL ADJUSTMENT OF ADOLESCENTS

Principal Investigator(s): Brian P. Marx, Lori A. Meyerson

Reviewed and Processed as: Expedited w/Special Population

Approval Status Recommended by Reviewer(s): Approved

Signature: Carol Olson (sc) Date: February 24, 1999

Carol Olson, Director of University Research Compliance
cc: Lori A. Meyerson

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA

Lori A. Meyerson

Candidate for the Degree of

Master of Science

Thesis: THE INFLUENCE OF CHILDHOOD ABUSE AND FAMILY ENVIRONMENT ON THE PSYCHOLOGICAL ADJUSTMENT OF ADOLESCENTS

Major Field: Psychology

Biographical:

Personal Data: Born in Los Angeles, California on July 11, 1974, to Robert and Gloria Meyerson.

Education: Graduated from Agoura High School, Agoura, California in May 1992; received Bachelor of Arts degree in Psychology from the University of Colorado, Boulder, Colorado in May 1996. Completed the requirements for the Master of Science degree with a major in Psychology at Oklahoma State University in December 1999.

Experience: Mental Health Worker in Westminster, Colorado; employed by Oklahoma State University Department of Psychology as a teaching assistant and as an undergraduate instructor.

Professional Membership: Association for Advancement of Behavior Therapy, American Psychological Association, American Professional Society for the Abuse of Children.