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The influence of childhood sexual abuse, physical abuse, family environment, and gender on the psychological adjustment of adolescents

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Abstract

Objective: The primary aim of the current study was to examine the contributions of sexual abuse, physical abuse, family cohesion, and conflict in predicting the psychological functioning of adolescents. Additional analyses were conducted to determine whether adolescent victims of child sexual abuse and physical abuse perceive their family environments as more conflictual and less cohesive than nonabused adolescents.

Method: Participants were 131 male and female adolescents, ages 16 years to 18 years, receiving services at a residential vocational training program. Participants completed well established psychological assessment tools to assess abuse history, family environment characteristics, and current adjustment.

Results: Physically abused adolescent females perceived their family environments as more conflictual and less cohesive than females without physical abuse, and sexually abused females perceived their family environments as more conflictual and less cohesive than females without sexual abuse. Physically abused adolescent males reported more conflict than males without physical abuse, but did not differ with regard to cohesion. Adolescent males with and without a sexual abuse history did not differ on the family dimensions. Multiple regression analyses revealed that both conflict and cohesion, in addition to a history of sexual and physical abuse, predicted depression and distress. Separate

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analyses by gender revealed these variables differentially impact adjustment in male and female adolescents. Results of a power analysis indicated sufficient power to detect these differences.
Conclusions: Findings indicate that in addition to child sexual abuse and physical abuse, family conflict and cohesion are risk factors for the development of psychological distress and depression in adolescence. Implications for treatment and directions for future research are discussed.

Keywords: Adolescents; Family environment; Physical abuse; Sexual abuse

Introduction

With nearly three million cases of child abuse and neglect reported in the US each year, child maltreatment has emerged as an urgent national problem (American Humane Association, 1994). Results of investigations conducted in recent decades point to a number of immediate and long-term problems associated with child abuse (e.g., Briere & Runtz, 1988; Browne & Finkelhor, 1986; Polusny & Follette, 1995). To date, however, relatively few studies have examined the effects of child sexual and/or physical abuse within the adolescent population. The unique emotional, social, and physical development occurring during this period suggest that child abuse may differentially affect the psychological functioning of this age cohort as compared to others (Hussey & Singer, 1993; Williamson, Borduin, & Howe, 1991).

Existing research documenting abuse-related sequelae within the adolescent population has focused primarily on child sexual abuse. Findings have generally demonstrated that adolescents with a sexual abuse history exhibit a wide range of emotional and behavioral problems (Briere & Runtz, 1988). Most notably, investigators have consistently found that adolescent survivors of child sexual abuse report greater depression and general psychological distress, more conduct problems and aggression, lower self-esteem, and more substance abuse problems (Brown, Cohen, Johnson, & Smailes, 1999; Fergusson, Horwood, & Lynskey, 1996; Garnefski & Arends, 1998; Garnefski & Diekstra, 1997; Harrison, Hoffman, & Edwall, 1989; Kendall-Tackett, Williams, & Finkelhor, 1993; Luster & Small, 1997). While the results of such investigations are largely consistent, the heavy reliance on inpatient and treatment samples within this literature limits the generalizability of findings (e.g., Cohen et al., 1996; Harrison et al., 1989; Hart, Madder, Griffith, & De Mendonca, 1989).

In comparison to child sexual abuse, fewer studies have examined the effects of childhood physical abuse on adolescent functioning. Those studies available have indicated that adolescents physically abused in childhood show greater overall adjustment difficulties, poorer social competence, decreased language ability, and poorer overall school performance than nonabused adolescents (Flisher, Kramer, Hoven, & Greenwald, 1997). Physically abused adolescents are also more likely to have a variety of psychiatric conditions, including major depression, conduct disorder, and generalized anxiety disorder as compared to nonphysically abused individuals (Briere & Runtz, 1988; Flisher et al., 1997; Kaplan & Pelcovitz, 1982; Kolko, Moser, & Weldy, 1988; Malinosky-Rummell & Hansen, 1993).

It is apparent that survivors of physical and sexual abuse often display a wide range of

psychological and behavioral problems. Despite these findings, no one type of abuse is associated with a specific pattern of symptomatology. Some studies from the adult literature indicate that sexual and physical abuse result in similar psychological outcomes (Margo & McLees, 1991; Mullen, Martin, Anderson, Romans, & Herbison, 1996; Wind & Silvern, 1992). Other work, however, highlights the differences in symptom expression on the basis of exposure to sexual or physical abuse (Cohen et al., 1996; Hart et al., 1989; Luster & Small, 1997; Schaff & McCanne, 1998). Given the conflicting findings, it is unclear what the unique contribution of physical and sexual abuse may be in predicting later adjustment. A complete understanding of the relationship between abuse and psychopathology may not be adequately achieved until types of abuse are considered together.

To further clarify the relationship between the occurrence of abuse and subsequent psychological symptomatology, researchers have expanded their analyses to include contextual variables that may influence psychological functioning. Specifically, numerous investigators have examined the influence of family environment on the development of psychopathology (for review see Draucker, 1996; Hulsey, Sexton, & Nash, 1992). While investigators have only recently begun to unravel the specific relationships between childhood family environment, sexual abuse, and psychological functioning (Hulsey et al., 1992), results of this line of inquiry have consistently shown that survivors of sexual abuse often perceive their family as having high levels of conflict and low levels of cohesion (Benedict & Zautra, 1993; Jackson, Calhoun, Amick, Maddever, & Habif, 1990; Ray, Jackson, & Townsley, 1991). Moreover, it has been demonstrated that these dimensions of family environment are robust predictors of psychological functioning among individuals with a sexual abuse history. Specifically, it has been shown that family conflict is uniquely predictive of psychosocial adjustment (Edwards & Alexander, 1992), anxiety (Yama, Tovey, & Fogas, 1993), and depression (Yama, Tovey, & Fogas, 1993). In addition, family cohesion is predictive of social isolation (Harter, Alexander, & Neimeyer, 1988), depression, self-esteem, social adjustment (Ray & Jackson, 1997), and general psychological adjustment (Fromuth, 1986) independent of a sexual abuse history. These relationships, however, are predominantly based on investigations that have utilized child and adult samples of women.

Only a few studies have examined the relationship between family functioning and adjustment with adolescent populations. Feiring, Taska, and Lewis (1998) investigated psychological distress at the time of abuse discovery in a sample of 87 children and 67 adolescents, and indicated that low levels of parental support were significantly related to elevated psychological distress. Likewise, maternal support was significantly related to depression in a sample of 50 treatment-seeking adolescent female sexual abuse survivors (Morrison & Clavenna-Valleroy, 1998) and to binge drinking among a large community sample of male and female adolescents with a sexual abuse history (Luster & Small, 1997). In contrast to these findings, Hussy and Singer (1993) revealed that depression and self-esteem, and perceived family cohesion and adaptability, did not differ as a function of sexual abuse status in psychiatrically hospitalized adolescents. It is likely, however, that these null findings may be an artifact of the nature of the inpatient sample. Finally, one longitudinal investigation has shown that child sexual abuse and family environment increase the likelihood that an adolescent will experience depression as well as other psychiatric disorders (Fergusson et al., 1996). Notably, family environment was operationalized as a composite

score of family stability, parent-child relationships, and parental adjustment in this investigation. In light of the evidence linking family environment to families in which sexual abuse has occurred, it seems likely that this relationship may extend to other forms of maltreatment, specifically physical abuse. However, investigations of the relationship between physical abuse in childhood and family environment have not yet been conducted.

Examinations of the effects of abuse has also included gender as a factor that may influence outcome. Gender differences in symptom expression on the basis of exposure to sexual and physical abuse were revealed in an investigation conducted by Chandy, Blum, and Resnick (1996). Results indicated that male adolescent victims of sexual abuse experienced more difficulties in school, marijuana use, delinquent behavior, and sexual risk taking behavior as compared to female victims who reported higher levels of disordered eating, suicidal ideation and behavior, and a greater frequency of alcohol consumption. Conversely, Garnefski and Arends (1998) revealed that sexual abuse was equally related to emotional and behavioral problems and suicidal ideation in adolescent males and females, but that aggressive and delinquent behavior was more prevalent in males. These conflicting findings hinder our understanding of possible gender-related effects on the sequelae of sexual abuse. It is likewise possible that the findings of existing research-based samples on both male and female participants may be confounded by the influence of gender.

Thus far, studies examining the impact of child abuse on the psychological adjustment of adolescents are limited. 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. Notably, no investigators have explored the relationship between a history of physical abuse and specific family environment characteristics. As such, no studies have yet concurrently examined the effects the different types of abuse, as well as family functioning, on adolescent adjustment, nor considered these factors in conjunction with gender issues. As indicated by the literature review, it appears as though psychological functioning in adolescents may be best accounted for by models that include both contextual variables and multiple types of abuse.

The purpose of the current study was to examine the influence of family environment, gender, and childhood victimization (sexual and physical) on the psychological adjustment of adolescents. 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. Specifically, it was hypothesized that family environments characterized by low cohesion and high conflict would add significant unique variance in predicting adolescent depression and distress, in addition to the variance accounted for by child sexual abuse and physical abuse. Given previous findings in the literature regarding gender differences in depression and distress, exploratory hierarchical regressions were also planned to consider these relationships separately for males and females. In addition, preliminary analyses were conducted to examine the family functioning of sexually and physically abused adolescents. It was hypothesized that adolescents who experienced childhood abuse, defined as either sexual abuse or physical abuse, would report having family environments characterized by high conflict and low

cohesion relative to nonabused adolescents. Gender differences in these relationships were also examined.

Method

Participants and procedures

Participants were recruited from a US Department of Labor Job Corps facility. One hundred-thirty-one adolescents (72 female and 58 male) between the ages of 16 years and 18 years ($M = 16.9$, $SD = .73$) participated in the study. Adolescents at the Job Corps facility are referred from the Department of Human Services or juvenile court or because of their recent discharge from inpatient care with no other alternative residence. The largest proportion of the sample was African American (42.0%); 40.5% of the participants identified their race as Caucasian, 6.1% indicated Hispanic, 8.4% Native American, and 3.1% indicated that they were of some other race. The majority of participants were never married (96.9%). 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 based on their responses to the Sexual Experiences Questionnaire (see definitional information below; Finkelhor, 1979). Of the adolescents identified as having been sexually or physically abused, 17 participants (13 female and 4 male) experienced both sexual and physical abuse.

All individuals between the ages of 16 years to 18 years receiving services at the Job Corps facility during a 1 year time period were removed from their regularly scheduled daily class activity to participate. Participants were informed that the information they provided would be used for a research study on childhood experiences among adolescents. After informed consent was provided by the legal guardians of the adolescents and assent to participate in the study was received from the adolescents themselves, participants completed a packet of self-report questionnaires in a group testing format; all information was kept confidential and anonymous. For their participation, participants earned certificates exchangeable for privileges on the Job Corps campus. No fatigue or any other complaint was reported by participants.

Measures

The Sexual Experiences Questionnaire (SEQ) is a 34-item self-administered childhood sexual abuse experiences questionnaire, adapted from Finkelhor (1979). The SEQ was used to assess for a history of child sexual 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 years 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. 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 5 year age difference between victim and perpetrator, or (3) if less than 5 year age difference between the victim and perpetrator, threat or force was involved (Messman-Moore & Long, 2000).

The Assessing Environments III (Berger et al., 1988) is a questionnaire designed to assess punitive and potentially physically abusive childhood experiences. The instrument 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 each item was descriptive of their family. The internal consistency of the scales has been evaluated using two samples of university students ($N = 347$ and $N = 1182$), and yielded KR-20 coeffecients 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). Participants who endorsed five or more items on the Physical Punishment Scale were considered physically abused in childhood for the purposes of this study (Berger et al., 1988).

The Family Environment Scale (FES; Moos & Moos, 1986) is a 90-item, true-false self-report instrument assessing the individuals' perception of their family environment as they were growing up (Moos & Moos, 1986). The instrument contains 10 subscales comprising three broad dimensions of family functioning. For the purposes of this study, standard scores on the conflict and cohesion subscales were examined. According to Moos and Moos (1986), family conflict is defined as the amount of open aggression and anger which is typical of the family; family cohesion reflects the degree to which family members are concerned about and supportive of each other. Moos and Moos (1986) have reported 8-week test-retest reliabilities for each of the subscales and all are in acceptable range, from .68 to .86. Internal consistency coefficients are also satisfactory, ranging from .61 to .78 (Moos & Moos, 1986).

The Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982) was used to measure the degree of psychological distress experienced by the participant within the previous week. The BSI contains 53 items, each of which is rated on a 5-point Likert scale ranging from 0 ("not at all") to 4 ("extremely"). A global index of distress, the Global Severity Index (GSI), is calculated by averaging the 53 item scores. The GSI has been shown to be a sensitive index of psychological distress as it combines information on both the total number of symptoms reported and the intensity of the distress experienced. The BSI has been used with both nonclinical and clinical populations, and it is reported to have good convergent and predictive validity (Derogatis & Spencer, 1982). Test-retest reliability for the GSI over a 2-week period has been reported to be .90 (Derogatis & 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 adolescents and adults aged 13 years and older. Items on the BDI-II are summed to provide a continuous measure of depressive symptoms with higher scores reflecting greater levels of depression. The BDI-II has been found to have good validity and reliability as a screening instrument for depression (Beck et al., 1996). The instrument has been normed on several large samples and has acceptable reliability and validity (Beck et al., 1996). Test-retest correlations, over a 1 week time period, for a sample of outpatients were strong (.93; Beck et al., 1996).

Results

Descriptive analyses

Preliminary analyses were performed to examine potential differences between individuals with an abuse history as compared to individuals without an abuse history on demographic variables. Results of a χ^2 analysis revealed that more girls than boys reported a history of child sexual abuse [χ^2 (1, $N = 130$) = 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, $N = 131$) = .09, *ns*], marital status [χ^2 (1, $N = 130$) = 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, $N = 130$) = .08, *ns*], ethnicity [χ^2 (1, $N = 131$) = .58, *ns*], marital status [χ^2 (1, $N = 130$) = .005, *ns*], or age [t (127) = .71, *ns*].

Given the nature of the sample, preliminary inspection of the levels of distress and depression reported by the sample of adolescents was also conducted. The male adolescents reported an average general distress score of 1.03 ($SD = .91$), whereas the female adolescents reported an average general distress score of 1.33 ($SD = .97$; as measured by the GSI). Normative data (Derogatis, 1992) indicates that the average GSI for adolescent male nonpatients is .86 ($SD = .61$), whereas it is .79 ($SD = .55$) for adolescent nonpatient females. Thus, it appears as if the adolescents in this sample are somewhat more distressed than a typical nonpatient sample (approximately one to one-half standard deviation above the normative mean).

The average level of depression reported by the males in this sample was 15.19 ($SD = 13.28$) while the level reported by females was 17.19 ($SD = 12.32$). Normative data suggests an average depression level of 14.55 ($SD = 10.74$) for female college students, 10.04 ($SD = 8.23$) for college males, 23.61 ($SD = 12.31$) for outpatient females, and 20.44 ($SD = 13.28$) for outpatient males (the outpatient normative sample including individuals ranging in age from 13 years to 86 years, with an average age of 37.20 years). Again, this information suggests that this sample was, on average, experiencing somewhat more depression than a nonpatient sample. Cutoffs recommended by the developers of the BDI-II (Beck, Steer, & Brown, 1996), however, would suggest that the sample as a whole could be represented as displaying mild depression (scores between 14 and 19).

Finally, the reports of family functioning were examined. Mean scores on the cohesion scale of the FES for the adolescent males and females in this sample were 45.16 ($SD = 11.52$) and 43.92 ($SD = 12.82$), respectively. Mean scores on the conflict scale of the FES for the adolescent males and females were 48.12 ($SD = 12.46$) and 50.43 ($SD = 13.27$), respectively. Scores on the FES are standardized with a mean of 50 ($SD = 10$) (Moos & Moos, 1986), suggesting that our sample is reporting average levels of conflict and slightly lower levels of cohesion.

Correlations for study variables are reported in Table 1.

Analyses of family functioning and abuse

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, four

Table 1
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 Symptom Inventory General Severity Index; [a] 0 = not Caucasian, 1 = Caucasian; [b] 0 = not married, 1 = married; * = $p < .05$; ** = $p < .005$; *** = $p < .001$.

independent sample *t*-tests were conducted. Scores on the conflict and cohesion scales of the FES served as dependent variables. Physical abuse history (yes/no) and sexual abuse history (yes/no) served as the independent variables. Adolescents reporting physical abuse reported less cohesion ($M = 39.31$, $SD = 11.30$) than adolescents without such abuse [$M = 45.83$, $SD = 12.59$; $t\ (129) = 2.86$, $p < .005$]. Adolescents reporting physical abuse also reported more conflict ($M = 54.90$, $SD = 11.09$) than adolescents without such abuse [$M = 46.52$, $SD = 13.39$; $t\ (129) = 3.53$, $p < .001$]. Adolescents reporting sexual abuse reported somewhat more conflict ($M = 52.21$, $SD = 13.25$) than adolescents without such abuse [$M = 47.93$, $SD = 13.12$; $t\ (129) = 1.70$, $p < .09$], although this did not reach conventional levels of significance. No difference was seen between adolescents reporting sexual abuse ($M = 42.95$, $SD = 11.70$) and adolescents without such abuse ($M = 44.08$, $SD = 12.91$) with regards to cohesion [$t\ (129) = .47$, *ns*].

Analyses of family functioning and abuse by gender

To explore the role of gender in these differences between abused and nonabused adolescents on family conflict and cohesion, the same four independent sample *t*-tests were repeated separately by gender. Adolescent males reporting physical abuse reported more conflict ($M = 54.33$, $SD = 11.09$) than adolescent males without such abuse [$M = 45.33$,

SD = 12.15; *t* (56) = 2.68, $p < .01$]. Adolescent males reporting physical abuse failed to report less cohesion (*M* = 42.94, *SD* = 9.78) than adolescent males without such abuse [*M* = 46.15, *SD* = 12.20; *t* (56) = .98, *ns*]. Adolescent males reporting sexual abuse did not report more conflict (*M* = 48.55, *SD* = 11.12) than adolescent males without such abuse [*M* = 48.02, *SD* = 12.86; *t* (56) = .12, *ns*], nor did adolescent males reporting sexual abuse report less cohesion (*M* = 48.36, *SD* = 8.35) than adolescent males without such abuse [*M* = 44.40, *SD* = 12.09; *t* (56) = 1.03, *ns*].

Adolescent females reporting physical abuse reported more conflict (*M* = 55.33, *SD* = 11.31) than adolescent females without such abuse [*M* = 47.98, *SD* = 13.60; *t* (70) = 2.28, $p < .03$]. Adolescent females reporting physical abuse also reported less cohesion (*M* = 38.29, *SD* = 11.95) than adolescent females without such abuse [*M* = 46.73, *SD* = 12.42; *t* (70) = 2.75, $p < .008$]. Adolescent females reporting sexual abuse reported more conflict (*M* = 54.82, *SD* = 11.66) than adolescent females without such abuse [*M* = 47.63, *SD* = 13.60; *t* (70) = 2.31, $p < .02$]. Adolescent females reporting sexual abuse reported only somewhat less cohesion (*M* = 40.82, *SD* = 12.26) than adolescent females without such abuse [*M* = 45.89, *SD* = 12.92; *t* (70) = 1.65, $p < .10$], but this did not reach conventional levels of significance.

Analyses of depression and general distress

To examine the influence of childhood sexual abuse, physical abuse, family conflict, and family cohesion on adolescent adjustment, two hierarchical regressions were performed. The first equation examined the influence of these variables on adolescent depression as measured by the BDI-II, whereas the second equation examined general distress as measured by the BSI. On Step 1 of each 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 of the first regression equation (see Table 2) revealed that both sexual abuse [*t* (1) = 2.31, $p < .02$] and physical abuse [*t* (1) = 2.57, $p < .01$] were significant predictors of adolescent depression. Family cohesion [*t* (1) = 2.04, $p < .04$], but not conflict [*t* (1) = .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* (1) = 2.74, $p < .007$] and physical abuse [*t* (1) = 2.95, $p < .004$] were significant predictors of adolescent distress. Family conflict [*t* (1) = 3.51, $p < .001$], but not cohesion [*t* (1) = .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

Table 2
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; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; **** = $p < .0001$.

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 ($r = .42$, $p < .001$).

Analyses of depression and general distress by gender

Given previously identified gender differences in the prevalence of sexual abuse within this sample and previous findings in the literature regarding gender differences in depression and distress, additional exploratory hierarchical regressions were conducted separately for males and females. Identical predictor and criterion variables as described previously were employed.

Results of the analysis of depression for males (see Table 3) revealed physical abuse [$t\,(1) = 2.27$, $p < .03$] to be a significant predictor, but not sexual abuse [$t\,(1) = .54$, *ns*]. In addition, family cohesion showed a trend towards predicting depression, although this association was not significant [$t\,(1) = 1.78$, $p < .08$]; family conflict did not enter into the model at a significant level [$t\,(1) = 1.09$, *ns*]. Follow-up analyses revealed that males with a physical abuse history reported higher levels of depression ($M = 21.24$, $SD = 14.39$) compared to males without a physical abuse history ($M = 12.62$, $SD = 12.07$), $t\,(55) = 2.33$, $p < .03$. In addition, lower family cohesion was 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 [$t\,(1) = 2.21$, $p < .03$] to be a significant predictor but not sexual abuse [$t\,(1) = .35$, *ns*]. In addition, family conflict was a significant predictor of general distress [$t\,(1) = 2.47$, $p < .02$] while family cohesion was not [$t\,(1) = .09$, *ns*]. Follow-up analyses

Table 3
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; * = $p < .09$; ** = $p < .05$; *** = $p < .002$.

revealed that males 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 (see Table 3) revealed sexual abuse [$t\,(1) = 2.39$, $p < .02$] to be a significant predictor but not physical abuse [$t\,(1) = 1.20$, *ns*]. In addition, family conflict [$t\,(1) = 1.86$, $p < .07$] showed a trend towards predicting depression while family cohesion did not significantly predict depression in females [$t\,(1) = 1.17$, *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, greater family conflict was associated with greater depression ($r = .41$, $p < .001$).

The final regression for females, constructed to predict levels of general distress, also revealed sexual abuse [$t\,(1) = 2.75$, $p < .008$] to be a significant predictor. In addition, physical abuse showed a trend towards predicting distress [$t\,(1) = 1.89$, $p < .06$], although it was not significant. Finally, family conflict [$t\,(1) = 2.19$, $p < .03$] 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 (1) = .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 greater family conflict was associated with greater general distress ($r = .40$, $p < .001$).

Power analyses

Given the disparate results for males and females, 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 effects in the prediction of adjustment. 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 .99 and .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 (.96) and distress (.98). The analysis for distress in males likewise yielded sufficient power (.85). However, the analyses for depression in males indicated that power might have been insufficient to detect real differences (.67).

Discussion

Several important findings are evident from this study. First, results of this study point to important differences in the family functioning of nonabused and either sexually abused or physically abused adolescents. Results further suggest, however, that there are important gender differences in these family characteristics. Not only does abuse history appear related to the level of family problems reported, but these family environment characteristics, in addition to the presence of both sexual abuse and physical abuse history, are important factors in the development of adolescent depression and distress. Again, however, results point to meaningful differences between male and female adolescents in the relationship between family functioning and adjustment.

Preliminary analyses not considering gender suggest that adolescents who experienced physical abuse, but not those experiencing sexual abuse, perceived their family environment as more conflictual and less cohesive than nonphysically abused adolescents did. Closer examination of these differences by gender suggests that this picture is somewhat different for males and females however. Male survivors of physical abuse reported more conflict in their family or origin than did nonvictims, but did not report lower levels of cohesion. No differences were seen between male sexual abuse survivors and nonvictims on either family dimension. Consistent with the overall findings, female survivors of physical abuse reported greater conflict and less cohesion than nonvictims. In contrast however, female survivors of sexual abuse reported greater conflict than nonvictims, and there was some evidence that this group also experienced less cohesion.

Taken together, these results suggest that for females more dysfunctional family charac-

teristics are seen regardless of the type of abuse experienced. Greater conflict and less cohesion are reported in the families of abuse survivors. For males, however, only physically abused and nonabused adolescents differ, and only on the dimension of conflict. No differences in cohesion are reported between abused and nonabused males, and males with and without sexual abuse do not report different levels of family conflict.

Findings with the female survivors are consistent with previous work demonstrating that greater conflict and less cohesion is often present in the families of sexually abused girls (e.g., Alexander & Lupfer, 1987; Benedict & Zautra, 1993; Ray, Jackson, & Townsley, 1991). Prior investigations documenting these characteristics have focused primarily on the retrospective reports of adult women. Results here extend these conclusions to an adolescent sample. Results also point to similar family dysfunction in the families of physically abused girls.

Examination of items on the FES (Moos & Moos, 1986) indicates that the conflict scale reflects the presence of more arguments (which were often accompanied by family members throwing objects), criticism, and a lack of attempt to resolve conflicts when they occurred. A lack of cohesion would suggest that members of the family were less likely to care for and attend to one another and did not feel as sense of togetherness. Taken together, it appears as though the physically abused and the sexually abused adolescent girls in this sample experienced their victimization in a nonnurturing environment characterized by an inordinate amount of hostile verbal exchanges.

Interestingly, male adolescents experiencing physical and sexual abuse reported relatively few areas of family dysfunction as compared to nonvictims. For males, conflict was the only factor distinguishing groups and was only associated with the presence of physical abuse, not sexual abuse. The presence of greater conflict within the families of physically abused males is intuitively sensible. Physical violence would be expected to co-occur with verbally coercive exchanges and hostility. The failure to find differences between physically abused and nonabused males on cohesion and between sexually abused and nonabused males on both family factors was unexpected however. Such findings may be a function of the severity of the physical abuse and sexual abuse experienced by the adolescents in this study.

Inspection of the abuse experiences of this sample suggests males may have experienced more severe physical abuse than sexual abuse, whereas females may have experienced more severe sexual abuse than physical abuse. Males in this sample with a physical abuse history had a higher percentage of extreme scores on the physical abuse index (AE-III; higher than average scores for males). Females, however, reported more severe sexual abuse experiences, as indicated by an unwanted sexual experience with a family member or an experience accompanied by the use of force, than males. If the male sexual abuse experiences represented here are in fact less severe, family dysfunction might not be expected to be so strongly associated with abuse status. In addition, it is possible that differences between males and females may, in part, be because of differences in perception of the same environment. Before family factors are labeled as unrelated to victimization for males, however, additional research is needed.

Not only do results show important relationships between victimization and family dysfunction, findings also point to the importance of sexual abuse, physical abuse, and family factors in predicting distress and depression. Regardless of the adjustment dimension exam-

ined, both sexual abuse and physical abuse independently predicted adolescent functioning. In addition to this, at least one family functioning dimension predicted distress and depression for these adolescents. The mechanisms through which family environment characteristics disrupt young adult functioning, independent of abuse history, have received modest attention. Grych and Fincham (1990) hypothesized that family conflict may affect the development or maintenance of psychological problems through the modeling of aggression. Thus, children may be taught that verbal expression of anger is an acceptable way of dealing with interpersonal problems. Alternately, family conflict may function as an uncontrollable stressor that increases psychological distress. In addition, 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.

Cohen and Willis (1985) have postulated ways in which family cohesion may serve as a risk or protective factor for immediate and long-term psychological functioning. These authors have asserted that family cohesion may either serve a protective or buffering function under the influence of life stress or, alternately, that family cohesion may function independent of life stress as a factor which generally fosters positive psychological adjustment. In support of these hypotheses, the findings of this study provide additional evidence that family environment may play a direct role in the development of psychological problems.

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. Such findings, again, may be a function of the fact that males may have experienced more severe physical abuse than sexual abuse, whereas females may have experienced more severe sexual abuse than physical abuse in this sample. The severity of abuse has been previously associated with more adverse outcomes in female populations (Mennen, 1993; Mennen & Meadow, 1995) and may be related to the gender differences seen here.

An interesting finding of this study is the differential effects of the family environment characteristics on the two indicators of adjustment for males and females, and the possible reversal of the influence of each of these for the genders. Cohesion shows little ability to predict either depression or distress above what is accounted for by physical and sexual abuse. It is only with the prediction of depression in males that any limited support is found (although here the findings do not reach conventional levels of significance). In contrast, family conflict was more consistently related to both measures of adjustment for males and females. Conflict was an important predictor of distress for both genders. It appears, however, that conflict may only play some role in the prediction of depression for the female adolescents and does not appear related for males, once the effects of abuse are accounted for. Thus, while the support is limited, there is some indication that cohesion may serve as a better predictor of depression for males, whereas conflict is a better predictor for females. Conflict is the better predictor of distress for both genders.

Such findings are inconsistent with those from previous studies. It has been suggested that family cohesion universally 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 (Kaslow, Deering, & Racusin, 1994). Here cohesion appears to play a limited role in explaining the adolescents' adjustment. Further clarification of this issue as it relates is needed, especially as it relates to the prediction of depression in males.

Unlike the dimension of cohesion, conflict within a family was consistently associated with distress and was a good predictor of depression for females. The relationship of this variable with distress may relate to its consistency and stability within the family unit. Conflict of the nature measured here is likely to be unpredictable and may lead to an environment that is generally unstable and chaotic. A conflictual family environment may therefore be more highly associated with a general sense of uneasiness and discomfort (general distress), rather than depression per se, because of its unpredictability.

Overall, results of this study point to the importance of considering both types of abuse experiences of adolescent survivors as well as 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 because of the relatively small, unique sample examined. As previously mentioned, this study employed a group of adolescents at a residential facility because of referral from the Department of Human Services or juvenile court or because of 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. However, an understanding of the psychological functioning of this subgroup of adolescents is particularly necessary because of their increased risk for future psychological problems.

This study is also somewhat limited by the fact that it 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. Further, retrospective data are limited by the fact that 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, because of retrospective reporting, it is not possible to discern whether family environment or abuse 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. 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 clearly specified definitions of abuse, were employed. Though the results regarding gender should be considered tentative because of 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 that have examined the psychological adjustment of abused adolescents and family factors in a sample that was not purely clinical.

Future research is encouraged to further investigate the importance of gender when examining the psychological problems associated with child abuse. Based on these findings, 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 males. Further research should continue to explore the unique importance of family variables and abuse (sexual vs. physical) history, and include abuse-related characteristics (e.g., relationship to the perpetrator, use of force) that have been related to the development of psychopathology (e.g., Mennen & Meadow, 1995; Wolfe, Sas, & Wekerle, 1994). Prospective studies that examine psychological adjustment and family environment before and after abuse occurs are also encouraged.

These findings also have significant treatment implications. Exploration of family environment issues with clients and consideration of interventions that include the family are warranted in light of these findings that indicate that family dysfunction is predictive of depression and distress in adolescents. Goals to decrease conflict and increase cohesion could substantially impact the adolescent's mental health functioning. Along these lines, treatment should be gender sensitive given the disparate effect of family environment and types of abuse for males and females with mental health problems. 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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Résumé

Objectif: Le but principal de cette étude fut d'examiner comment les agressions sexuelles, les mauvais traitements physiques, la cohésion familiale et les conflits prédisent le fonctionnement

psychologique des adolescents. D'autres analyses ont été faites pour déterminer si l'adolescent victime d'agressions sexuelles et physiques perçoit son milieu familial comme étant rempli de conflit et moins cohésif, comparé à la perception qu'ont les adolescents non victimes.
Méthode: Cent trente-et-un adolescents et adolescentes âgés de 16 à 18 ans inscrits dans un programme résidentiel de formation les préparant à un métier ont participé à l'étude. Leur anamnèse, les caractéristiques de leur milieu familial et leur adaptation courante ont fait l'objet d'une évaluation au moyen de tests psychologiques fiables.
Résultats: Les adolescentes victimes de mauvais traitements physiques considèrent davantage que leur milieu familial est rempli de conflits et moins cohésif comparé aux adolescentes non victimes. De même pour les adolescentes victimes d'agressions sexuelles. Les adolescents victimes de mauvais traitements physiques rapportent un plus grand nombre de conflits familiaux que les adolescents non victimes, cependant, au niveau de la cohésion familiale, on note aucune différence entre les deux groupes, ni aucune différence au niveau des divers aspects du milieu familial. Des analyses de régression multiple indiquent que le conflit et la cohésion, en plus des abus physiques et sexuels, prédisent la dépression et la détresse. Des analyses différenciées selon le sexe indiquent que ces variables ont des conséquences différentes sur l'adaptation des garçons et des filles. Une analyse de la compétence des tests rassure qu'ils ont été capables de capter ces différences.
Conclusions: Les constats indiquent que non seulement les mauvais traitements physiques et sexuels sont des facteurs de risque par rapport à la détresse psychologique et la dépression chez les adolescents des deux sexes, mais aussi les conflits familiaux et la cohésion.

Resumen

Objetivo: El principal objetivo del presente estudio fue examinar las contribuciones del abuso sexual, abuso físico, cohesión familiar, y conflicto para predecir el funcionamiento psicológico en adolescentes. Se realizaron análisis adicionales para determinar si las víctimas adolescentes de abuso sexual en la niñez y abuso físico percibían sus ambientes familiares como más conflictivos y con menos cohesión que los adolescentes no abusados.
Método: Los participantes fueron 131 varones y hembras adolescentes, edades 16–18 años, que eran atendidos en un programa de entrenamiento residencial vocacional. Los participantes completaron instrumentos de evaluación psicológica reconocidos para evaluar la historia de abuso, las características del ambiente familiar y su ajuste actual.
Resultados: Las adolescentes físicamente abusadas hembras percibían sus ambientes familiares como más conflictivos y con menos cohesión que las hembras sin abuso físico, y las hembras sexualmente abusadas percibían sus ambientes familiares como más conflictivos y con menos cohesión que las hembras sin abuso sexual. Los varones adolescentes físicamente abusados reportaron más conflicto que los varones sin abuso físico, pero no diferían en relación a la cohesión. Los adolescentes varones con y sin una historia de abuso sexual no diferían sobre las dimensiones familiares. Los análisis de regresión múltiple revelaron que tanto el conflicto y la cohesión, además de la historia de abuso sexual y físico predecían depresión y tensión. Análisis separados por género revelaron que estas variables influían diferencialmente el ajuste en los adolescentes varones y hembras. Los resultados de un análisis de poder indicaron suficiente poder para detectar estas diferencias.
Conclusiones: Los resultados indicaron que además del abuso sexual en la niñez y el abuso físico, el conflicto familiar y la cohesión son factores de riesgo para el desarrollo de tensión psicológica y depresión en la adolescencia. Se discuten las implicaciones para el tratamiento y las direcciones para investigaciones futuras.