

Individual, Family, and Peer Characteristics of Adolescent Sex Offenders and Assaultive Offenders

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This study examined the individual functioning, family relations, and peer relations of 60 male adolescents who were divided into 4 demographically matched groups (sex offenders, assaultive offenders, nonviolent offenders, and nondelinquent controls). Mothers and adolescents completed self-report inventories and a videorecorded interaction task, and teachers completed a rating measure. Results showed that assaultive offenders' family relations were characterized by rigidity and low cohesion and that their peer relations evidenced high levels of aggression. Nevertheless, assaultive offenders and their mothers reported little anxiety or interpersonal discomfort. In contrast, sex offenders and their mothers reported high rates of neurotic symptoms, and the peer relations of sex offenders showed relatively low levels of emotional bonding. Implications for research and emerging theories of delinquency are discussed.

Sexual assaults and other violent criminal acts perpetrated by male adolescents can have serious emotional, physical, and financial consequences for victims, victims' families, and the community. In 1986, males under the age of 19 years accounted for 18% of all arrests for violent crimes, including 19% of forcible rapes, 18% of other sexual offenses (not including prostitution), and 14% of aggravated assaults (Federal Bureau of Investigation, 1987). These arrest statistics are especially disturbing in light of Elliott, Huizinga, and Morse's (1985) finding that the offense/arrest ratios for male adolescents are approximately 25:1 for rape and 75:1 for aggravated assault. Moreover, when one considers that extreme antisocial behavior is highly stable over time (Loeber, 1982) and that a high percentage of adult sexual offenders commit their first sexual offense during adolescence (Groth, Longo, & McFadin, 1982), it seems imperative to develop an empirical base regarding the characteristics of violent adolescents and the systems in which they are embedded.

As discussed in recent reviews (Davis & Leitenberg, 1987; Henggeler, *in press*), however, very few controlled studies have been conducted with sexual offenders and violent offenders, and the vast majority of studies have included relatively serious methodological limitations. For example, there is almost a complete absence of studies that have used appropriate comparison

groups (e.g., nonviolent offenders with similar demographic characteristics). Without such control groups, it is difficult to determine whether observed results are linked with sexual or violent offending in particular or with delinquency in general. Furthermore, the data in many of the extant studies are derived from clinical impressions and unstandardized assessment instruments, and the self-reports of incarcerated adolescents are often the primary source of information (for a discussion of this issue, see Reppucci & Clingempeel, 1978). In light of these methodological difficulties, findings from research conducted to date should be viewed as quite tentative.

In developing an empirical base regarding sexual offenders and violent offenders, it seems most efficacious to examine variables that are consistent with emerging theories of delinquency. In the field of sociology, Elliott, Huizinga, and Ageton (1985) are in the process of validating an integrated theory of delinquency that combines elements of strain theory, control theory, and social learning theory. This integrated theory proposes that delinquency is largely the result of differential bonding to conventional groups. Elliott et al. contend that low bonding to family and school increases the likelihood that adolescents will associate with deviant peers, and association with such peers is viewed as the primary determinant of delinquent behavior. Similarly, developmentalists (e.g., Bronfenbrenner, 1979; Minuchin, 1985) and family systems theorists (cf. Hazelrigg, Cooper, & Borduin, 1987; Henggeler & Borduin, *in press*) have stressed that child behavior is linked with the reciprocal interplay between child characteristics and the key systems in which youths are embedded. However, in contrast to the unidirectional model proposed by integrated theory, the contextual/systemic perspective emphasizes the bidirectional fit between child behavior and systemic context (cf. Cohen & Siegel, *in press*). Nevertheless, both integrated theory and contextual/systemic approaches underscore the roles of child characteristics, family relations, and peer processes in the development of antisocial behavior.

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Integrated theory and contextual/systemic perspectives have stressed the importance of family bonding (i.e., affective ties) and family organization (i.e., adaptability, control) in the development of delinquency. In uncontrolled studies and studies with incarcerated samples, investigators have suggested that the families of adolescent sexual offenders are characterized by high rates of conflict, disorganization, and dysfunction (Deisher, Wenet, Paperny, Clark, & Fehrenbach, 1982; Fehrenbach, Smith, Monastersky, & Deisher, 1986; Lewis, Shankok, & Pincus, 1979; Longo, 1982). Similarly, investigators have concluded that the families of violent adolescents have high rates of abuse, neglect, aversive behavior, and parental deviance and low rates of positive communication (Fagan & Wexler, 1987; Henggeler, Hanson, Borduin, Watson, & Brunk, 1985; Loeber, Weissman, & Reid, 1983; McManus, Alessi, Grapentine, & Brickman, 1984; Walsh, Beyer, & Petee, 1987). These findings suggest that the family relations of both sexual offenders and violent offenders are generally low in positive affect and high in negative affect.

A central aspect of the integrated model is that delinquents associate more extensively with deviant peers. In contrast with control theory (e.g., Hirschi, 1969) and social learning theory (e.g., Snyder, Dishion, & Patterson, 1986), however, the integrated model does not suggest that the peer relations of delinquents are deficient in positive affect and social skills (Elliott, Huizinga, & Ageton, 1985). Although the evidence is sparse, there is a general consensus from uncontrolled studies that adolescent sexual offenders have difficulty maintaining close interpersonal relations and are isolated from peers (Davis & Leitenberg, 1987). In contrast, findings from survey studies suggest that violent offenders associate extensively with delinquent peers and that these peers have greater tolerance for delinquent behavior (Fagan & Wexler, 1987; White, Pandina, & LaGrange, 1987). However, little is known about qualitative aspects (e.g., emotional bonding) of violent offenders' peer relations.

From both integrated and contextual/systemic perspectives, individual adolescent characteristics are also important correlates of delinquent behavior. The extant research with sexual offenders and violent offenders has emphasized the assessment of psychiatric symptomatology rather than the study of cognitive and social developmental processes. This literature suggests that sexual offenders have high rates of emotional problems (Deisher et al., 1982; Groth, 1977; Shoor, Speed, & Bartlet, 1966; Van Ness, 1984) and that violent offenders evidence high rates of serious psychiatric symptoms (McManus et al., 1984; Lewis, Shankok, Pincus, & Glaser, 1979).

In summary, on the basis of the results of studies that often used incarcerated samples and that typically did not include appropriate control groups, standardized measures, or multiple perspectives, investigators have concluded that sexual offenders and violent offenders evidence emotional and interpersonal deficits that are generally consistent with emerging theories of delinquent behavior. The primary purpose of this study is to provide a more rigorous evaluation of the characteristics of sexual offenders and violent offenders and of the key systems in which they are embedded. As such, this study includes several relative strengths. First, because the present adolescents average more than three arrests per offender and arrest histories greatly underestimate rates of delinquent behavior (Dunford & Elliott,

1984), these adolescents reflect the serious end of the delinquent behavior continuum and represent the types of offenders about whom investigators should be most concerned. Second, comparison groups of demographically matched nonassaultive offenders and nondelinquent adolescents are included to help determine the unique correlates of sexual offending and assaultive offending. Third, the measurement methodology includes both standardized self-report measures that are obtained from multiple respondents and observational measures of mother-son interaction. As described subsequently, the measures were selected to reflect the central constructs used in the integrated and systemic theories regarding the causes of delinquent behavior. Finally, although sexual offenders and assaultive offenders were highly involved in delinquent behavior, they were not currently incarcerated.

Method

Subjects

Subjects were 60 father-absent adolescent boys (13 to 17 years of age) and their mothers. The subjects were divided into four equal-size groups: sex offenders (SO), assaultive offenders (AO), nonviolent offenders (NVO), and nondelinquent adolescents (ND). The three groups of juvenile offenders were a subset of a larger sample of adjudicated delinquents ($N = 212$; Borduin, Blaske, Mann, et al., 1989). For the larger sample, the mean age of the adolescents was 15.1 years, 79% were male, and 61% were father absent.

The subjects were selected from the larger sample in the following manner. First, in light of the fact that father-absent adolescents are overrepresented in delinquent and sex offender samples (Fehrenbach et al., 1986; Rutter & Giller, 1983) and constitute a majority of the adolescents in our larger sample, it seemed reasonable to focus our attention on this group of adolescents. Second, the adolescents' arrest records were examined, and 15 boys were identified who met our criteria for inclusion in the SO group. Next, each SO adolescent was matched with one of the 26 adolescents who met the criteria for inclusion in the AO group, and with one of the 34 adolescents who met the criteria for inclusion in the NVO group. The matching variables and the range used for these variables are as follows: adolescent age (within 1 year); mother age (within 3 years); race (identical); social class (within one class level); family size (within two members); number of arrests (within one arrest); age of first arrest (within 1.5 years); type of father absence (all parents were divorced and had not remarried); and length of father absence (within 3 years). Finally, 15 nondelinquent boys and their mothers, with similar demographic characteristics and from the same neighborhoods as the families in the offender groups, were selected with assistance from local social service agencies and schools. The ND boys and their families had no history of arrest or inpatient psychiatric treatment. Thus, the ND boys did not evidence serious problems yet were from similar socio-cultural backgrounds to those of the delinquents. In addition, the ND boys' scores on Quay and Peterson's (1987) Revised Behavior Problem Checklist (RBPC) were similar to the norms for nonclinic male adolescents. As seen in the presentation of group demographic characteristics in Table 1, 67% of the families were lower class (Class V or IV; Hollingshead, 1975), 53% were minority, and the delinquent adolescents averaged 3.53 arrests.

The selection criteria for the SO group included at least one arrest for a serious sexual offense (i.e., sexual assault [$n = 2$], attempted rape [$n = 4$], rape [$n = 9$]) and no arrests for aggressive or violent nonsexual crimes. The AO adolescents had at least one arrest for assault (i.e., aggravated assault [$n = 11$], assault/battery [$n = 4$]) and no history of sexual offenses. The NVO youths had at least one arrest for either theft

Table 1
Group Means and Standard Deviations for Subject Demographic Characteristics

Variable	Group				Analyses	
	ND	AO	SO	NVO	F	χ^2
Adolescent's age (years)						
M	15.56	15.79	14.26	14.89	2.19	
SD	1.52	1.20	2.27	2.03		
Mother's age (years)						
M	39.40	39.13	38.87	38.87	1.56	
SD	1.83	2.92	2.40	2.40		
Number of arrests						
M	—	3.33	3.80	3.47	0.54	
SD		1.50	1.15	1.13		
Age at first arrest						
M	—	11.52	10.61	11.35	1.77	
SD		1.45	1.48	1.31		
Family size						
M	4.07	4.07	3.93	5.00	1.53	
SD	1.10	1.75	1.16	1.96		
Length of father absence (years)						
M	6.13	6.07	7.53	6.60	1.13	
SD	2.36	2.15	3.00	2.26		
Social class ^a						
Class V (%)	40.0	40.0	40.0	40.0		1.16
Class IV (%)	20.0	33.3	26.7	26.7		
Class III (%)	26.7	13.3	20.0	20.0		
Class II (%)	13.3	13.3	13.3	13.3		
Race						
Black (%)	53.3	53.3	53.3	53.3		0.00
White (%)	46.7	46.7	46.7	46.7		

Note. ND = nondelinquent adolescents; AO = assaultive offenders; SO = sex offenders; NVO = nonviolent offenders. For all *F*s, *dfs* = 3, 56, and *ps* > .05; for social class, *df* = 9; for race, *df* = 3. For both χ^2 s, *ps* > .05.

^a Based on Hollingshead's (1975) Four-Factor Index of Social Status.

(*n* = 12) or burglary (*n* = 3) and no arrests for violent or sexual crimes. Admittedly, it is not possible to be certain of the homogeneity of each group. It is quite likely, for example, that some members of the NVO group had committed violent offenses and that some members of the AO group had committed sexual offenses. Decreased within-group homogeneity, however, reduces the probability of observing between-groups differences in the sample means when population differences do exist. Thus, our classification procedures may have resulted in a reduction of Type I error and a concomitant increase in Type II error.

Procedure

The interviewers were four graduate and advanced undergraduate students in psychology. Each interviewer received approximately 15 hr of training prior to the initial family contact in order to standardize testing and interview techniques.

All families were initially contacted by telephone or by a home visit and were asked to participate in a study of adolescent and parental coping styles and interpersonal relations. The adolescent offenders and their mothers were referred to the study through the local juvenile court after consenting to participate in treatment but before treatment had begun. These adolescents and their mothers were informed that participation in the study was voluntary and that refusal to participate would not

jeopardize the receipt of treatment services. They were also informed that participation would contribute to the identification of mental health needs of adolescent offenders in general and to the continued development of treatment programs for these youths. The adolescents remained under the jurisdiction of the court regardless of their decisions about participating in the study or in treatment. After the general nature of the study was explained to the mother and adolescent, their consent to participate was requested. Approximately 90% of the families that were contacted agreed to participate. Because the ND boys and their mothers had little incentive to participate, they were paid \$10 jointly for their participation.

The assessment session was scheduled at the family's convenience either in their home or in a youth center located in a lower-class neighborhood. The vast majority (87%) of families in each group completed the assessment in their home. At the outset of the session, the interviewer explained the general procedure, obtained written consent from the family members, and assured the confidentiality of all information. The mother first completed a demographic questionnaire, the RBPC (Quay & Peterson, 1987), and the Missouri Peer Relations Inventory (MPRI; Borduin, Blaske, Treloar, & Mann, 1989). Next, the mother and adolescent completed several self-report measures, including the Family Adaptability and Cohesion Evaluation Scales-II (FACES-II; Olson, Portner, & Bell, 1982), the Symptom Checklist-90-Revised (SCL-90-R;

Derogatis, 1983), and the Unrevealed Differences Questionnaire-Revised (URD-R; Borduin, Blaske, Mann, et al., 1989). Each of these measures was filled out privately and without discussion.

After collecting the completed forms, the interviewer asked the mother and adolescent to discuss and jointly complete the URD-R. The interviewer explained that, although each family member had individually completed the questionnaire, it was important that the members now arrive at a family solution for each of the various items. The mother-adolescent dyads were informed that they could work at their own pace and were encouraged not to omit any of the items. A pencil and a blank questionnaire were placed on the table, and a videocorder was started. The videotaping was explained as an efficient and accurate way of recording the mother-adolescent discussion in completing the questionnaire. The interviewer left the room until the discussion was completed (*M* discussion time = 10.57 min).

One of the adolescent's teachers also completed the MPRI. The teacher was randomly selected from a list of the adolescent's current teachers. The teacher was told that the adolescent was a participant in a study of adolescent socialization, and a copy of the consent form signed by the mother was sent to the teacher.

Individual Adjustment

As described earlier, both the integrated and the contextual/systemic perspectives have emphasized that individual characteristics of adolescents and their parents are important correlates of delinquent behavior. Consistent with extant research, individual characteristics were assessed in terms of psychiatric symptomatology (adolescent and mother) and behavior problems (adolescent only).

SCL-90-R. The SCL-90-R (Derogatis, 1983) is a well-validated 90-item inventory that assesses symptomatology on nine scales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. In view of previous research showing that several of these scales are highly intercorrelated (Cyr, McKenna-Foley, & Peacock, 1985; Gotlib, 1984), we used principal-components factor analyses to define the main dimensions that these scales tapped for both the adolescents and the mothers. The samples for these factor analyses consisted of 130 adolescents and 130 mothers from father-absent families who participated in the larger study. Only those factors with eigenvalues greater than 1 were retained, and only those scales that had factor loadings greater than .50 were considered to define a factor.

Two factors, accounting for 60% of the variance, emerged for the adolescents. The first factor, *ruminative-paranoid*, included the obsessive-compulsive, interpersonal sensitivity, and paranoid ideation scales and reflects ruminative thought patterns, discomfort and uneasiness about interpersonal transactions, and a tendency to blame others for personal failures. The second factor, *anxiety*, included the phobic anxiety and anxiety scales and assesses overt symptoms of social withdrawal, nervousness, and tension. Two factors, accounting for 66% of the variance, also emerged for the mothers. The first factor, *ruminative-internalizing*, included the obsessive-compulsive, interpersonal sensitivity, somatization, and anxiety scales and assesses ruminative patterns of thought, discomfort about interpersonal transactions, somatic complaints, and nervousness and tension. The second factor, *anxiety-withdrawal*, included the phobic anxiety and psychoticism scales and assesses overt symptoms of social withdrawal and persistent anxiety associated with social relationships.

Subsequent analyses are based on the factor scores of adolescents and mothers on the respective dimensions of symptomatology. Factor scores were derived by multiplying the standardized score for each of the variables of which the factor was comprised by the appropriate factor coefficient and then summing the resulting products.

RBPC. The RBPC (Quay & Peterson, 1987) is an 89-item checklist

that measures several dimensions of child/adolescent psychopathology derived from factor analysis: conduct disorder, socialized-aggression, anxiety-withdrawal, and attention problem. The subscales have strong psychometric properties and have been shown to discriminate clinic-referred from normal groups of children (Quay & Peterson, 1987) as well as delinquent from normal groups of adolescents (Henggeler et al., 1985).

Family Relations

In this study, we chose measures of cohesion, positive communication, and conflict-hostility to represent central aspects of family bonding. We used a measure of adaptability to assess the level of organization in the family. Family bonding (i.e., warmth, cohesion) and family organization (i.e., adaptability, control) represent important explanatory constructs in the contextual/systemic (e.g., Olson, 1986) and integrated theories of delinquent behavior. The use of both self-report and observational methods provided different vantage points on family transactional patterns (for a discussion of this issue, see Henggeler, Borduin, & Mann, 1987; Olson, 1977).

FACES-II. The 30-item FACES-II (Olson et al., 1982) is a reliable and well-validated measure of family relations that assesses the dimensions of *cohesion*, defined as the emotional bonding and individual autonomy of family members, and *adaptability*, which is the capacity of the family system to change its power structure, role relations, and relationship rules in response to situational and developmental stress. FACES-II has been useful in examining the family system characteristics of adolescents who have experienced problems such as delinquency (Rodick, Henggeler, & Hanson, 1986), drug use (Friedman, Utada, & Morrissey, 1987), and destructive parent-child relations (Garbarino, Sebes, & Schellenbach, 1984). However, there is some debate as to whether the association between cohesion/adaptability and adolescent psychosocial functioning is curvilinear or linear (see e.g., Olson, 1986).

Observational measures. Observational measures were based on the mother-son discussion on the URD-R (Borduin, Blaske, Mann, et al., 1989), which consists of nine items, each with three to six alternative choices. For each item, the family is instructed to rank the choices in order of preference. The following is a sample item:

A distant relative recently passed away and left our family \$500. What should be done with the money? (a) It should all be saved. (b) We should pay off some bills. (c) We should divide it equally among family members. (d) We should spend part on presents and save the rest.

The observational coding system included several measures that have been widely used by developmental and clinical researchers and that have discriminated delinquent adolescents from nondelinquent adolescents in our previous studies (Borduin & Henggeler, 1987; Borduin, Henggeler, Hanson, & Pruitt, 1985; Borduin, Pruitt, & Henggeler, 1986; Henggeler et al., 1985). It should be noted that in the present study, all measures involving frequency counts (i.e., supportive statements, explicit information units, aggressive statements, attempted and successful interruptions) were converted to rates by dividing by the corresponding family member's talking time (in minutes). This was done to control for differences arising from varying lengths of mother-son discussion (ranging from approximately 8 to 13 min). The rating scales, which provided global measures of affect and conflict, were completed after the observers had watched the entire videotaped discussion.

To define the main dimensions that were tapped by the observational measures, we used a principal-components factor analysis on the observational data of the 130 father-absent families who participated in the larger project. Only those factors with an eigenvalue greater than 1 were retained, and only those measures that had factor loadings greater than .50 were considered to define a factor.

Two factors, accounting for approximately 68% of the variance, emerged from these analyses. The first factor, *positive communication*, included rates of mother and adolescent supportive statements and explicit information units and a 7-point bipolar rating of dyadic affect. This factor reflects an active exchange of information that supports and facilitates intrafamily communication. The second factor, *conflict-hostility*, included rates of mother and adolescent aggressive statements, attempted interruptions, successful interruptions, simultaneous speech, and a 5-point bipolar rating of dyadic conflict. This factor reflects an aspect of family interaction that is emotionally negative in nature and that results from a clash of opposing interests and ideas. (The complete definitions and scoring procedures relevant to these observational measures are available from the second author and are described in the following studies: Alexander, 1973; Hetherington and Frankie, 1967; Hetherington, Stouwie, and Ridberg, 1971; and Zuckerman and Jacob, 1979.)

For subsequent analyses, factor scores were derived from the variables that made up each dimension of observed mother-son interaction. Each factor score was created by multiplying the standardized score for each variable by the appropriate factor coefficient and then summing the resulting products over all variables in the factor.

Raters included four graduate and advanced undergraduate students who received approximately 20 hr of training prior to the actual scoring of the family interactions. Interrater reliability was checked throughout the study and was determined on 30% of the families. Pearson product-moment correlation coefficients were calculated for raters' judgments of talking time and simultaneous speech. Cohen's kappa values were calculated for the other observational measures. Reliability coefficients ranged from .89 to .99 ($M = .97$) for talking time, from .83 to .89 ($M = .87$) for simultaneous speech, from .74 to .93 ($M = .83$) for the bipolar ratings of affect and conflict, from .82 to .89 ($M = .84$) for successful interruptions, from .74 to .81 ($M = .79$) for attempted interruptions, from .74 to .85 ($M = .82$) for explicit information units, from .78 to .88 ($M = .80$) for aggressive statements, and from .72 to .89 ($M = .85$) for supportive statements.

Peer Relations

Several aspects of adolescent peer relations that are pertinent to emerging theories of delinquent behavior were examined. Association with deviant peers, a central aspect of the integrated model, was assessed using the socialized-aggression subscale of the RBPC. In addition, emotional bonding to peers and acceptance by peers, both of which occupy a central role in control theory formulations of delinquent behavior, were measured using the MPRI. Moreover, family systems theory and developmental contextual approaches emphasize that adolescence is accompanied by increased autonomy from parents, stronger bonding to peers, and more susceptibility to antisocial peer influences (Steinberg & Silverberg, 1986).

We used the 39-item MPRI (Borduin, Blaske, Treloar et al., 1989) to assess central aspects of adolescent peer relations. (Because this inventory has not been used in previous research, we will describe it more extensively than the other measures.) The respondent provides ratings of the adolescent's social characteristics and behaviors (e.g., physical aggressiveness toward peers, popularity, and shyness) on 5-point Likert scales. We used principal-components factor analyses on the data provided by 130 mothers of juvenile offenders and 128 of the teachers of these adolescents who participated in the larger project. A three-factor solution produced loading patterns (items loading at a level greater than .50 on respective factors) that were consistent across the two groups of respondents and accounted for more than 65% of the variance. The first factor, *emotional bonding*, included items that reflect emotional warmth and closeness with peers. The second factor, *aggression*, included items that assess an aggressive, acting-out style of peer interac-

tion. The third factor, *acceptance*, included items that measure the adolescent's dependence on peers and the extent of acceptance by peers. For subsequent analyses, factor scores were derived from the mothers' and teachers' ratings on each dimension of peer relations. These scores were created using the same procedure as described for the SCL-90-R and observational measures.

The three subscales were tested for internal consistency and test-retest reliability over a 2-week period in the samples described above. Internal consistency coefficients (Cronbach's alphas) for the three subscales, respectively, were .82, .65, and .72 for mothers' ratings, and .83, .69, and .77, for teachers' ratings. Test-retest reliability coefficients (Pearson correlations) for the three subscales, respectively, were .84, .76, and .79 for mothers' ratings, and .83, .72, and .81, for teachers' ratings.

Results

We performed multivariate analyses of variance (MANOVAS) on each set of dependent measures (i.e., individual, family, peer) for each respondent. If a significant MANOVA emerged, we performed a one-way (offender type) univariate analysis of variance (ANOVA) on each of the dependent measures. When a significant ANOVA was revealed, Duncan's Multiple Range Test was used to determine the nature of the between-groups differences ($p < .05$).

Individual Adjustment

SCL-90-R. As shown in Table 2, significant multivariate effects emerged for both adolescents' and mothers' reports of individual symptomatology. Univariate analyses and post hoc comparisons revealed that SO boys reported more ruminative-paranoid symptoms than did AO boys and that SO boys reported more anxiety than did the boys in each of the other groups. Similarly, SO mothers reported more ruminative-inter-nalizing symptoms than did their counterparts in each of the other groups.

RBPC. A significant multivariate effect was observed for mothers' reports of adolescent behavior problems. Univariate analyses and post hoc comparisons revealed that AO mothers reported more socialized-aggression by their sons than did mothers in each of the other groups. In addition, both AO and NVO mothers reported that their sons showed more attention problems than did either SO or ND mothers.

Family Relations

FACES-II. Because Olson et al. (1982) proposed that family cohesion and adaptability have curvilinear relationships with measures of individual adjustment, we conducted multiple regression analyses to evaluate whether the associations between the FACES-II scores of each family member and measures of individual adjustment (i.e., RBPC and SCL-90-R scores) deviated from linearity. Each adjustment score was standardized, and its absolute value was entered into a stepwise multiple regression equation. If these standardized scores were significant predictors of the FACES-II scores, a curvilinear relationship would then be demonstrated. Results of the regression analyses showed that none of the adjustment measures was a significant predictor of the FACES-II scores. Because there were no deviations from linearity, MANOVAS were used to examine between-groups differences on the FACES-II scales.

Table 2
Group Means and Standard Deviations for Measures of Individual Adjustment

Measure	Group				Analyses	
	ND	AO	SO	NVO	Multivariate <i>F</i>	Univariate <i>F</i>
Adolescent SCL-90-R					2.20*	
Ruminative-paranoid						
<i>M</i>	-0.79 ^{ab}	-2.63 ^b	3.04 ^a	0.33 ^{a,b}		2.81*
<i>SD</i>	3.74	3.11	6.87	5.87		
Anxiety						
<i>M</i>	-0.40 ^b	-0.52 ^b	1.03 ^a	-0.04 ^b		4.12**
<i>SD</i>	0.93	0.61	2.09	1.01		
Mother SCL-90-R					2.91**	
Ruminative-internalizing						
<i>M</i>	-1.25 ^b	-0.92 ^b	2.79 ^a	-1.22 ^b		2.98*
<i>SD</i>	2.63	5.05	3.79	4.35		
Anxiety-withdrawal						
<i>M</i>	-0.29 ^a	0.31 ^a	0.46 ^a	-0.48 ^a		1.36
<i>SD</i>	0.71	1.63	2.07	1.26		
RBPC					1.98*	
Socialized-aggression						
<i>M</i>	1.93 ^b	8.53 ^a	4.00 ^b	4.80 ^b		7.08**
<i>SD</i>	2.69	5.42	3.68	3.73		
Attention problem						
<i>M</i>	4.07 ^b	8.80 ^a	5.57 ^b	7.80 ^a		2.88*
<i>SD</i>	4.67	5.13	4.93	4.75		
Anxious-withdrawal						
<i>M</i>	3.20 ^a	4.93 ^a	3.64 ^a	4.20 ^a		0.40
<i>SD</i>	3.41	3.53	3.32	2.46		
Conduct disorder						
<i>M</i>	6.07 ^a	12.27 ^a	9.57 ^a	9.80 ^a		2.17
<i>SD</i>	5.28	6.04	7.84	6.12		

Note. ND = nondelinquent adolescents; AO = assaultive offenders; SO = sex offenders; NVO = nonviolent offenders. SCL-90-R = Symptom Checklist-90-Revised; RBPC = Revised Behavior Problem Checklist. Means that do not share common superscripts across rows are significantly different at the .05 level. For the SCL-90-R variables, multivariate *d*'s = 6, 110, and univariate *d*'s = 3, 56; for the RBPC, the multivariate *d*'s = 12, 138, and univariate *d*'s = 3, 56.

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

As presented in Table 3, significant multivariate effects emerged for both mothers' and sons' reports of family cohesion and adaptability. Univariate analyses and post hoc comparisons revealed that AO mothers reported lower family adaptability than did mothers in each of the other groups and that AO and NVO adolescents reported lower family adaptability than did either SO or ND adolescents. In addition, AO mothers reported lower family cohesion than did mothers in each of the other groups. Similarly, AO adolescents reported lower family cohesion than did either SO or ND adolescents, and NVO boys reported lower cohesion than did ND boys.

Observational measures. A significant multivariate effect emerged on the observational measures. Univariate and post hoc analyses showed that ND mother-son dyads evidenced higher rates of positive communication than did the dyads in each of the other groups.

Peer Relations

As shown in Table 4, a significant multivariate effect emerged for mothers' ratings of adolescent peer relations. Significant or

near-significant univariate effects were found for mothers' ratings of adolescent aggression toward peers and emotional bonding with peers. AO mothers rated their sons as more aggressive toward peers than did mothers from each of the other groups. In addition, ND mothers rated their sons as higher in emotional bonding with peers than did SO mothers.

Teacher ratings of adolescent peer relations did not show any significant effects.

Discussion

The AO adolescents evidenced several disturbances in their family relations and peer relations that are consistent with integrated theory (Elliott, Huizinga, & Ageton, 1985) and support the role of differential affective ties to conventional and deviant socializing agents. Regarding family relations, mother and adolescent reports on the FACES-II suggest that the families of AO adolescents were emotionally "disengaged" and relatively "rigid" in their adaptability (as defined by Olson et al., 1982; see Table 3 note). In addition, results from the observational data showed that, similar to the other offender groups, AO fami-

Table 3
 Group Means and Standard Deviations for Self-Report Measures of Family Relations
 and Observational Measures of Mother-Son Relations

Measure	Group				Analyses	
	ND	AO	SO	NVO	Multivariate <i>F</i>	Univariate <i>F</i>
FACES-II						
Mother's report					2.50*	
Adaptability						
<i>M</i>	52.60 ^a	41.00 ^b	48.15 ^a	47.73 ^a		4.70**
<i>SD</i>	8.90	10.20	6.34	7.98		
Cohesion						
<i>M</i>	63.20 ^a	51.13 ^b	60.15 ^a	59.73 ^a		4.05**
<i>SD</i>	9.70	11.27	7.81	10.43		
Son's Report					3.64**	
Adaptability						
<i>M</i>	49.00 ^a	38.47 ^b	46.31 ^a	39.13 ^b		5.73**
<i>SD</i>	9.72	7.61	8.23	8.08		
Cohesion						
<i>M</i>	58.13 ^a	45.47 ^b	55.46 ^{a,c}	51.00 ^{b,c}		6.68**
<i>SD</i>	7.91	6.45	6.45	11.13		
Observational					2.75*	
Conflict-hostility						
<i>M</i>	-0.44 ^a	1.60 ^a	0.01 ^a	-0.71 ^a		1.49
<i>SD</i>	1.62	5.19	3.00	1.58		
Positive communication						
<i>M</i>	1.11 ^a	-0.72 ^b	-0.73 ^b	0.57 ^b		4.11**
<i>SD</i>	1.70	1.57	3.32	1.58		

Note. ND = nondelinquent adolescents; AO = assaultive offenders; SO = sex offenders; NVO = nonviolent offenders. Means that do not share common superscripts across rows are significantly different at the .05 level. For the FACES-II variables, multivariate *dfs* = 6, 110, and univariate *dfs* = 3, 56; for the observational measures, the multivariate *df* = 6, 110, and univariate *dfs* = 3, 56. On the basis of a national data set on families with adolescents, Olson, Portner, & Bell (1982) have reported the following cutting points for designating four levels of adaptability for parents: 43.9 and below (*rigid*), 44.0–50.0 (*structured*), 50.1–56.0 (*flexible*), 56.1 and above (*chaotic*). They report the following cutting points for four levels of cohesion: 56.9 and below (*disengaged*), 57.0–65.0 (*separated*), 65.1–73.0 (*connected*), 73.1 and above (*enmeshed*). For adolescents, the levels of adaptability are as follows: 37.9 and below (*rigid*), 38.0–45.0 (*structured*), 45.1–52.0 (*flexible*), 52.1 and above (*chaotic*). The levels of cohesion for adolescents are as follows: 47.9 and below (*disengaged*), 48.0–56.0 (*separated*), 56.1–64.0 (*connected*), 64.1 and above (*enmeshed*).

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

lies had lower rates of positive communication than ND families. Regarding peer relations, AO adolescents frequently associated with deviant peers (RBPC, socialized-aggression subscale), and the quality of this association was relatively aggressive in nature (MPRI, aggression factor). Thus, in general, AO adolescents had low bonding to family and high bonding to deviant peers.

Although the interpersonal relations of the AO adolescents seemed relatively dysfunctional, these adolescents felt neither estranged from others nor anxious (SCL-90-R, ruminative-paranoid and anxiety factors). The relative absence of neurotic symptomatology, in the context of violent criminal behavior, raises the possibility that the AO adolescents may have poorly developed moral reasoning, empathy, and social perspective-taking skills. Caution must be expressed about this suggestion, however, because these latter variables were not directly assessed in the present study. Nevertheless, such a possibility is supported by the association between authoritarian parenting (i.e., low cohesion in combination with high rigidity), which

seems to characterize the AO families, and low internalization of moral values (Radke-Yarrow, Zahn-Waxler, & Chapman, 1983). Research is needed to explore this possibility using samples similar to those in the present study.

The self-reported family relations and behavioral functioning of the SO adolescents were quite different from those of the AO adolescents and approximated the ND adolescents' family relations and behavioral functioning more closely than did those of the other offender groups. On the other hand, the emotional functioning and peer relations of the SO adolescents seemed relatively disturbed. In contrast to the adolescents in each of the other groups, the SO adolescents reported higher rates of anxiety and, relative to the AO adolescents, felt estranged in their relations with others. The finding of interpersonal isolation in the SO adolescents was supported by maternal reports that these adolescents evidenced less emotional bonding to peers than did ND adolescents. These results are consistent with the findings of uncontrolled studies (e.g., Becker & Abel, 1985; Fehrenbach et al., 1986) and could be construed to support control

Table 4
Group Means and Standard Deviations for Ratings of Adolescent Peer Relations

MPRI Measure	Group				Analyses	
	ND	AO	SO	NVO	Multivariate <i>F</i>	Univariate <i>F</i>
Mother's report					2.45**	
Emotional bonding						
<i>M</i>	0.94 ^a	-0.29 ^{a,b}	-0.55 ^b	-0.04 ^{a,b}		2.37*
<i>SD</i>	1.75	1.87	1.48	1.35		
Aggression						
<i>M</i>	-0.95 ^b	1.47 ^a	0.15 ^b	-0.31 ^b		4.90**
<i>SD</i>	1.77	1.67	2.13	1.40		
Acceptance						
<i>M</i>	0.09 ^a	-0.33 ^a	0.48 ^a	-0.22 ^a		1.53
<i>SD</i>	0.86	1.53	1.11	0.75		
Teacher's report					0.71	
Emotional bonding						
<i>M</i>	0.73 ^a	-0.82 ^a	-0.81 ^a	0.19 ^a		1.48
<i>SD</i>	2.11	1.73	2.19	1.60		
Aggression						
<i>M</i>	-0.27 ^a	0.33 ^a	-0.16 ^a	-0.28 ^a		0.26
<i>SD</i>	1.58	1.29	1.93	2.59		
Acceptance						
<i>M</i>	0.22 ^a	-0.12 ^a	-0.45 ^a	-0.08 ^a		0.32
<i>SD</i>	0.72	0.55	1.37	0.64		

Note. MPRI = Missouri Peer Relations Inventory; ND = nondelinquent offender; AO = assaultive offender; SO = sex offender; NVO = nonviolent offender. Means that do not share common superscripts across rows are significantly different at the .05 level. Multivariate *dfs* = 9, 126; univariate *dfs* = 3, 56.

* $p < .08$. ** $p < .01$.

theory (Hirschi, 1969). It should be noted, however, that the teachers' reports of SO adolescents' peer relations were not consistent with maternal perceptions. Perhaps the teachers provided a less valid report of the adolescents' peer relations because they were witness to a smaller sample of the adolescents' behavior. Alternatively, SO adolescents may have been equally adept at peer relations as their ND counterparts, but the mothers of SO adolescents may have been less accepting of their sons' close friendships (SCL-90-R, ruminative-internalizing factor).

Although the self-reports of mothers and sons suggest that SO families are relatively well adjusted, such a conclusion is mitigated by several other findings. First, observational measures showed that mother-son dyads in each of the offender groups evidenced lower rates of positive communication than did the ND mother-son dyads. Second, the mothers of SO adolescents reported very high rates of ruminative-internalizing symptoms (including discomfort about interpersonal relations). Third, our subsequent clinical experience with several of these families (Borduin, Henggeler, Blaske, & Stein, 1988) and the results of uncontrolled studies (Davis & Leitenberg, 1987) suggest that the families of adolescent sexual offenders are often very dysfunctional.

Overall, our findings have several implications for theoretical conceptualizations of delinquent behavior. In regard to sexual offending, it could be argued that the prevailing theoretical models of delinquent behavior are mistaken in their assumption of uniform causality (cf. Thornberry, 1987). For example, the integrated model suggests that delinquent behavior is linked with low bonding to family and high bonding to deviant peers.

In fact, most empirically based, multidimensional causal models of general delinquent behavior and of violent delinquent behavior have supported this perspective (Henggeler, in press). However, the integrated model does not seem to fit adolescent sexual offenders, who differ from assaultive offenders in several ways noted previously.

Finally, it must be emphasized that our data do not address the directionality of causation for either assaultive behavior or sexual offending. For example, although integrated theory suggests that low family cohesion is an indirect cause of delinquent behavior, the low cohesion reported in AO families certainly could have resulted from the repeated and serious behavior problems presented by AO adolescents. It is also quite possible, as posited by systems theorists, that low cohesion and adolescent aggression are mutually reinforcing components of recursive feedback loops (cf. Hoffman, 1981). Likewise, it is not possible to determine the causal nature of the association between sexual offending and high rates of symptom internalization in the SO adolescents. The high rates of anxiety and estrangement reported by these offenders might be the direct emotional and social product of their sexual transgressions. Alternatively, anxiety and social isolation might have played a causative role in their sexual offenses. Nevertheless, although it is difficult to make causal determinations, it should be emphasized that the findings are consistent with key aspects of both the integrated model and contextual/systemic views of child psychopathology. Specifically, adolescent behavior problems are best understood when the adolescent is examined within the context of the key systems in which he or she is embedded.

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