

COMPARISON OF ABUSIVE AND NONABUSIVE FAMILIES WITH CONDUCT-DISORDERED CHILDREN

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This study set out to define the relative contribution of psychological, sociological, and parent-child interactional variables in 19 abusive and 21 nonabusive families with conduct disordered children. Low family income and mother's report of having been abused as a child were found to be the most potent variables discriminating abusive from nonabusive families. Implications of the study findings are considered.

A wide variety of models have been proposed to account for the etiology of child abuse. Early studies emphasized that causes of abuse were found in parents who possessed certain pathological personality characteristics. Researchers found that emotional difficulties such as frequent crying spells, depression, and disturbances in eating and sleeping occurred significantly more often among abusive mothers than nonabusive mothers.^{8, 13} A number of other characteristics which were found more commonly in abusive parents included alcoholism,^{4, 21, 42} a more rigid and domineering personality,²¹ impulsiveness and immaturity,²⁴ and low self-esteem.^{9, 40}

An alternative model proposed as a cause for child abuse was suggested by

researchers who felt that the focus should not be on the individual psychological characteristics of parents but rather on the demographic and social factors within the external environment that lead parents to abuse their children.^{16, 17, 28, 36} This sociological model has been supported by research which has documented that low socioeconomic status characterizes the largest proportion of abusive families.^{15, 17, 31, 40} Pelton³¹ also reported that child abuse is related to degrees of poverty, with the highest level of child maltreatment occurring in families living in the most extreme poverty. Other related social factors found associated with the incidence of child abuse were unemployment,¹⁷ low education,¹⁷ marital discord,^{18, 40, 42} single-parent house-

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holds,^{17, 26} and the accumulation of many life stressors.^{7, 35} Studies have also shown a relationship between negative life change or stress and child abuse.^{7, 14, 22} Finally, more abusive parents have been found to have a social history of being abused or deprived as children^{7, 10, 40} than have nonabusive parents.

A third explanatory model for child abuse has been designated the "social interactional" model.⁵ This approach emphasizes the importance of both the psychological and sociological variables and is concerned with how they interact and affect parent-child interactions. It is concerned with the lack of certain fundamental social and parenting skills in abusive parents as well as how the characteristics of the children themselves may be contributing to the punitive behavior of the parent. Research supporting this model has indicated that mothers in abusive families are lower in incidence of positive behavior and higher in negative behavior than control mothers^{5, 29, 30, 33, 41} and use ineffective parental discipline.^{13, 42} In addition, there is a growing body of evidence that the abused child may actually function to elicit abusive behavior from parents. Researchers have reported that abused children are more difficult to manage,²⁷ and more demanding, stubborn, negativistic and aggressive.^{19, 21, 23, 29} Moreover, abusive parents themselves perceive these children as more deviant and "difficult" to manage^{25, 32} than nonabusive parents. In sum, Johnson and Morse²¹ noted that

... the child most likely to be abused was one who was overly active or the one who was most difficult to supervise and care for. (p. 147)

However, only a few studies have included systematic observations of the

interactions of abusive families or adequate control groups. Moreover, very few studies have examined the relationship between background and sociological factors, psychological factors, and direct observations of parent-child interactions in abusive and nonabusive families.

The purpose of this study is to define a number of constellations of predictor variables which are related to abusive and nonabusive families with conduct disordered children. Since many parents who do not abuse their children have aggressive and difficult children, or are depressed, or experience high levels of stress, it is doubtful that any one variable will account for the occurrence of abusive behavior. Therefore, by understanding the relative contribution or combination of social, psychological, and parent-child behavioral characteristics we may be better able to predict families at risk for child abuse.

METHOD

Subjects

Subjects were recruited from a behavioral clinic in a local pediatric hospital which had a specialized program for the treatment and evaluation of children with conduct problems. Criteria for study entry were the following: the child was between three and eight years old; the child had no debilitating physical impairment, intellectual deficit, or history of psychosis; and the primary referral problem was child oppositional behavior (*e.g.*, refusal to follow requests, tantrums, aggression).

Forty families were admitted to the study and were divided into two groups, abusive families ($N=19$) and nonabusive families ($N=21$). In order to be classified as abusive, the family had to

have reported physical abuse serious enough to warrant involvement with Child Protective Services. The abusive families included 15 boys and 4 girls with a mean age of 55.9 months; the nonabusive families consisted of 14 boys and 7 girls with a mean age of 58.9 months. The mean socioeconomic status score for abusive families was 56.5 (± 14.9) and for nonabusive families it was 49.3 (± 10.8), indicating that both groups of families were lower-middle to lower class, as determined by Hollingshead and Redlich's Two Factor Index of Social Position.²⁰ The two groups did not differ on age, sex, number of children, or Hollingshead's social class score based on education and occupation. However, the two groups did differ on income and marital status. TABLE 1 presents the demographics for both groups.

PROCEDURES

Parent Report Measures

Achenbach Child Behavior Checklist (CBCL). The CBCL consists of 118 behavior problem items and has been shown to discriminate clinic-referred from nonreferred children. Intraclass correlations were 0.98 for interparent agreement, 0.84 for one-week test-retest reliability, and 0.95 for inter-interviewer reliability.¹

Parent Daily Telephone Reports (PDR). The PDR, developed by Chamberlaine,⁶ consists of a list of 19 negative and 19 prosocial items of behavior commonly engaged in by children. Parents were asked to select those negative and aggressive items they felt were major problems and those positive pieces of behavior that would be particularly pleasing to them if performed by their child. These shorter, individually tailored checklists were then used

Table 1
DEMOGRAPHIC VARIABLES FOR ABUSIVE (N=19) AND NONABUSIVE (N=21) FAMILIES

VARIABLE	ABUSIVE M(SD)	NON- ABUSIVE M(SD)
Child's Age (months)	55.9(19.0)	58.9(16.1)
Number of Children	1.9 (0.99)	1.9 (0.59)
Mother's Age	28.9 (6.0)	31.0 (5.2)
	N	N
Child's Sex		
Male	15	14
Female	4	7
Income*		
Under \$5000	10	3
\$5-14,999	3	2
\$15-20,999	3	5
\$21,000+	3	11
Education		
Some high school	6	2
High school completed	6	9
Some college	4	7
College completed	2	3
Graduate school	1	0
Social Class		
II	1	0
III	4	7
IV	5	10
V	9	4
Mean social position score	56.5(14.9)	49.3(10.8)
Marital Status*		
Single/divorced	15	9
Married	4	12

* Significant, $p < .05$.

as the basis for the phone calls conducted bi-weekly for four weeks. During phone calls the checklist was read to the mothers, who were then asked to report on the occurrence or nonoccurrence of specific behavioral items during the previous 24 hours. After asking about positive and negative behavior on the PDR, the interviewer then asked about the occurrence of spanking. All telephone calls were made by the same interviewer throughout the course of the study. Previous studies^{6, 30} have reported test-retest reliability of the PDR from 0.60 to 0.82.

Discipline interview. The in-person discipline interview developed by Alvy

*et al*² consists of a series of open-ended questions about actual child rearing practices. Parents were questioned about two common situations: what they actually do when their child disobeys them and what they do when their child is involved in fighting. The reported parental methods were then combined to constitute the following three major categories: Physical Force (such as hitting with a belt or object, throwing an object at child, slapping or spanking); Verbal Force (such as yelling, screaming, swearing, or criticizing); and Non-Forceful Methods (such as ignore, time out, or withdrawal of a privilege).

Parent Psychological Measures

Beck Depression Inventory (BDI).³ The BDI has been shown to correlate significantly with clinicians' ratings of depression and with objective behavioral measures of depression. Split-half reliability achieved a Spearman-Brown reliability coefficient of .93.

State-Trait Anxiety Inventory.³⁹ The State-Trait Anxiety Inventory is designed to measure the extent of the mother's transitory and ongoing anxiety. It consists of 20 statements describing a variety of feelings. Test-retest correlates were from .73 to .86, but only .16 to .54 for the anxiety-state. The alpha coefficients as measures of internal consistency were high for both forms, ranging from .83 to .92.

Shipley-Hartford Verbal and Extrac-tion Test.³⁸ The Shipley Institute of Living Scale measures mild degrees of intellectual impairment in individuals of normal intelligence. The scale consists of a vocabulary test and an abstract-thinking test; impairment is measured by the extent to which the individual's

abstract thinking falls short of his or her vocabulary. Reliability coefficients obtained from 322 adults were .87 for the vocabulary test, .89 for the abstraction test, and .92 for the two combined.

Environmental Measures

Family history of abuse, alcoholism, and drug usage. Parents were asked whether they had been abused by their parents when they were children and whether they had experienced any spouse abuse by their current or former partners. In addition, they were asked about the occurrence of alcoholism or drug abuse in relation to themselves, their partners or their parents.

Life Experience Survey (LES).³⁷ The LES is a 57-item measure that permits the respondent to assess positive and negative life experiences over the previous year. A score is obtained for the number of negative events and the number of positive events as perceived by the subject. The measure also yields a score for the extent of the impact that each item had on the subject as rated by the subject.

Home Observations

All families were observed according to the Dyadic Parent-Child Interaction Coding System (DPICS).³⁴ The DPICS consists of 29 separate categories of parent and child behavior that are coded as present or absent for each five-minute segment. Because many of these families had only one parent living at home and only one child, only mother/problem child dyadic interactions were analyzed. From the 29 behavior categories, six separate variables were formed for mother's behavior: Total Praise (labeled and unlabeled praise); Total Critical Statements; Total Com-

mands (direct and indirect commands); Physical Negative Behavior; Physical Positive Behavior, and Descriptive/Reflective Commands. For the target child there were two variables: Total Child Deviancy (whine + cry + physical negative + smart talk + yell + destructive) and Noncompliance Behavior (defined as failure to respond to a command within five seconds after a command was issued).

These behavior observations were obtained by making two home visits for 30 minutes between 4:30–7:30 p.m. with all family members present. Mothers were instructed to maintain their daily routine as much as possible except that they were requested to remain in two rooms, to ignore the observer, to avoid having visitors or telephone calls, and to refrain from watching television. Home observations were made by extensively trained observers who were blind to the hypotheses and group membership of the subjects. To maintain accuracy, observers had weekly training sessions and practiced on videotaped interactions. To assess reliability, two observers were used on approximately 50% of all observations. Reliability was calculated in two ways: agreements/ (agreements + disagreements) and Pearson product-moment correlations between raters for each behavioral dimension. Mean overall interrater agreement was 78.6% and the product-moment correlations calculated between observers for each behavioral dimension ranged from .78 to .97.

Home Observations Checklist

In addition to observing particular items of mother-child behavior, the observers also filled out a checklist con-

cerning their overall impressions of the home visit. The checklist, developed by DuHamel¹¹ as a child abuse screening inventory, consists of 25 items such as parental attitude toward their children, willingness to be observed, level of control, self-esteem, and developmental appropriateness of parents' interactions with their child. In addition, the checklist covers child observations such as language ability, apprehensiveness toward parents, likability, need for attention and reassurance, and need to take care of parent. On 30% of the home visits two observers independently filled out this checklist. The interrater reliability correlation based on the total score was .94. Reliability on individual items ranged from 63% to 100%. Overall average interrater reliability was 88.2% (based on agreements divided by agreements plus disagreements). The alpha coefficient as a measure of internal consistency was .88. Evidence of concurrent and construct validity is provided by this study.

RESULTS

Analysis of data consisted of *t*-tests and chi-square analysis to compare the two groups on the attitudinal and behavioral measures. For each dependent variable the Dunn-Bonferonni Tables were used to determine the critical values in order to correct for the number of individual comparisons. TABLES 2, 3, and 4 present the mean scores, standard deviations, and percentages for each of the dependent variables for the abusive and nonabusive families.

For the parent report measures, there were no significant differences between the two groups in terms of mothers' perceptions of child behavior problems on the CBCL, telephone reports, and

Table 2
COMPARISON OF ABUSIVE (N=19) AND NONABUSIVE (N=21) MOTHER REPORTS
AND INTERVIEWS

MOTHER REPORTS	ABUSIVE		NONABUSIVE		t VALUES*
	M	(SD)	M	(SD)	
Achenbach					
Total problem score	70.63	(23.9)	62.19	(26.7)	-1.05
Internalizing score	28.58	(13.8)	23.43	(12.2)	-1.24
Externalizing score	35.68	(8.10)	31.67	(13.1)	-1.18
Telephone Reports					
Spanking	4.6	(4.3)	3.1	(4.8)	-1.00
Negative behavior	6.88	(3.0)	6.85	(3.4)	-.03
Prosocial behavior	8.63	(12.9)	6.82	(4.7)	-.58
Low rate negative behavior ¹	2.37	(6.8)	.42	(0.98)	-1.23
DISCIPLINE INTERVIEW²					CHI SQUARE*
Physical Force Fight	4		3		0.53
Physical Force Disobey	10		12		0.01
Verbal Force Fight	11		9		1.8
Verbal Force Disobey	5		5		0.15
Nonforceful Method Fight	2		2		0.05
Nonforceful Method Disobey	0		3		2.6

¹ Behavior such as firesetting, destructiveness, and running away.

² Numbers reflect positive use of technique.

* No significant group differences.

mother reports of forceful and non-forceful methods of discipline. However, it is of interest to note that both groups of children were clearly in the deviant range according to Achenbach,¹ who reported a total problem score of 42

as the cutoff between normalcy and deviancy (90th percentile). Moreover, both groups of parents reported using forceful methods of discipline and reported spanking their children on the average of four times each day.

Table 3
COMPARISON OF ABUSIVE (N=19) AND NONABUSIVE (N=21) PSYCHOLOGICAL, SOCIAL
AND ENVIRONMENTAL MEASURES

MOTHER PSYCHOLOGICAL MEASURES	ABUSIVE		NONABUSIVE		t VALUES ¹
	M	(SD)	M	(SD)	
Depression	16.32	(10.4)	7.19	(5.1)	-3.45**
Anxiety	46.55	(17.7)	38.05	(8.7)	-1.90
IQ	15.78	(2.7)	17.35	(1.3)	1.94
SOCIAL AND ENVIRONMENTAL MEASURES²					CHI SQUARE
Mother Abused as Child	46.2%		5.6%		4.98**
Partner Abused	61.5		16.7		4.82**
Drug, Alcohol Use	47.4		23.8		1.51
	M	(SD)	M	(SD)	t VALUE
Negative Life Change	9.3	(7.8)	4.7	(5.4)	1.82

¹ Critical values from Dunn's multiple comparison tests: * $p < .05$; ** $p < .01$.

² For income and marital status differences, see Table 1.

Table 4
COMPARISON OF ABUSIVE ($N=19$) AND NONABUSIVE ($N=21$) MOTHER AND CHILD INTERACTIONS

DPICS HOME OBSERVATIONS	ABUSIVE		NONABUSIVE		t VALUES ²
	M	(SD)	M	(SD)	
Mother Behavior ¹					
Praise	3.00	(2.8)	2.12	(2.6)	-1.02
Descriptive and reflective comments	41.71	(21.4)	31.29	(19.3)	-1.61
Physical positive	20.18	(43.4)	8.88	(14.9)	-1.08
Physical negative	3.24	(3.7)	.71	(0.97)	-2.85*
Total commands	38.31	(23.4)	24.02	(14.8)	-2.29*
Criticisms	17.92	(16.8)	7.76	(5.5)	-2.52*
Child Behavior					
Noncompliance	9.45	(8.2)	5.48	(4.1)	-1.89
Deviancy	15.18	(19.6)	13.55	(13.3)	-.31
Observer Report on Home Visit					
Total abuse score	7.58	(6.2)	3.24	(2.6)	-2.85*

¹ Mean rate per 30 minutes of observation.

² Critical values from Dunn's multiple comparisons tests: * $p < .05$.

On the parent psychological measures, the abusive mothers did show significantly higher scores on the depression inventory than the nonabusive mothers, $t(39) = -3.45$, $p < .002$. Although the mother anxiety score was somewhat higher and IQ was somewhat lower for the abusive families, these did not quite reach significant levels, $t(39) = -1.90$, $p < .07$ and $t(39) = 1.94$, $p < .07$.

In terms of environmental and background measures, chi-square analysis indicated that 46% of the abusive families reported they had been abused as children, versus 6% of the nonabusive families. This difference was significant, $\chi^2(1,39) = 4.98$, $p < .02$. Moreover, 61% of the abusive families reported partner abuse, versus 17% of the nonabusive families. This difference was also significant, $\chi^2(1,39) = 4.82$, $p < .02$. In terms of alcohol and drug abuse, 48% of the abusive families reported a family history, versus 24% of nonabusive families. This difference did not reach significant levels. Finally, al-

though the abusive families did report more negative life changes over the previous year, this did not quite reach significant levels, $t(39) = -1.82$, $p < .08$.

From the mother behavior observations, there were significantly more instances of physical negative behavior, $t(39) = -2.85$, $p < .01$, total commands, $t(39) = -2.29$, $p < .03$, and criticisms, $t(39) = -2.52$, $p < .02$ for abusive mothers than for nonabusive mothers. There were no significant differences between the abusive and nonabusive families in terms of child misbehavior. In fact, both groups of children showed very high rates of non-compliance and deviancy which corroborated the mother report data. Finally, on the home observer checklist, the observers reported significantly higher scores on the abuse checklist among abusive families than among nonabusive families, $t(39) = -2.85$, $p < .009$.

Measures of association among all the significant variables of the abusive and nonabusive groups were obtained by calculating product-moment correlation

coefficients for each pair of variables. These results are presented in TABLE 5. Stepwise discriminant function analysis was performed on the significant variables in order to determine which variables were the best predictors of the abusive and nonabusive families. Only those variables that formed a significant function (at $p < .05$) were tested, in order of their entry into the function. One note of caution is that these classification results were undoubtedly inflated by sampling error since they were based on the sample used to generate the equation, not a cross validation sample.

First, the four significant demographic and sociological variables were entered into a discriminant function analysis in order of their reduction of Wilk's lambda. These were marital status, income, parent abused as child, and spouse abuse. The discriminant function based on two predictors was significant. $F(2,28) = 10.2$, $p < .0005$. These were 1) income and 2) parent abused as a child. The abusive families had lower income and reported more parents abused as children. This model

accounted for 42% of the variance, with the income variable contributing 28% of the variance and parent reports of abuse as a child providing an additional 14% of unique variance. The model consisting of these two predictors correctly classified 31 out of 40 families (77.5%). Of the nine families misclassified, four were false negatives and five were false positives.

Of the psychological variables, only one, mother depression, significantly discriminated the two groups, $F(1,38) = 12.7$, $p < .001$. The abusive mothers were significantly more depressed. This accounted for 25% of the variance and correctly classified 29 out of 40 families (72.5%). Of the 11 families misclassified, three were false negatives and eight were false positives.

For the three observation variables—physical negative, total commands, and critical statements—only mothers' physical negative behavior significantly discriminated the two groups, $F(1,38) = 8.88$, $p < .005$. The abusive mothers exhibited significantly more physical negative behavior when

Table 5

CORRELATION COEFFICIENTS BETWEEN THE NINE SIGNIFICANT VARIABLES AND ABUSIVE FAMILIES

	1	2	3	4	5	6	7	8	9	10
1. Child Abuse		-.37**	-.47***	.48***	.46***	.50***	.44**	.35**	.39**	.43**
2. Marital Status ¹			.64***	.01	-.36*	-.38**	-.23	-.25	-.29	-.34*
3. Income				-.21	-.27	-.34*	-.27*	-.39**	-.39**	-.39**
4. Parents Abused ¹					.24	.17	.32*	.35*	.44**	.29
5. Partner Abuse ¹						.22	.15	.17	.29	.21
6. Depression							.18	.16	.16	.20
7. Mother Physical Negative								.40**	.71***	.51***
8. Mother Total Commands									.76***	.38**
9. Mother Critical Statements										.54**
10. Abuse Checklist										

¹ 2 point scale.

* $p < .05$; ** $p < .01$; *** $p < .001$.

interacting with their children at home. This variable accounted for 19% of the variance and correctly classified 29 out of 40 families (72.5%). Of the 11 families misclassified, one was a false negative and ten were false positives. In addition, the observer child abuse checklist significantly discriminated the two groups, $F(1,38)=8.7, p<.005$. This variable accounted for 19% of the variance and correctly classified 26 out of 40 families (65%). None of the parent report measures discriminated between the two groups.

Finally, all nine predictors were entered into a forward stepwise discriminant function analysis. The discriminant function based on the two sociological predictors—income and parent abuse as a child—were highly significant, $F(2,28)=10.2, p<.0005$, and the remaining variables did not add substantially to the model.

DISCUSSION

The search for causes of child abuse is a complex and intriguing task. This study seems to support the thesis of the social-interactional model that there is no single variable that will accurately discriminate abusive and nonabusive families. Rather, it is the unique combination or interaction of sociological, psychological, and parent-child interactional factors that lead to abusive situations.

In this study there were no significant differences between abusive and nonabusive families in terms of parent reports and perceptions of their children's behavior. Indeed, both groups of mothers felt their children were highly deviant, which was corroborated by independent observer reports of the children's behavior during home visits.

Similarly, both groups of mothers reported they primarily used spanking and physical force methods to control such behavior. The question then arises that, given parents who have equally difficult children, what contributes to physical abuse in one group of parents and not in another? Results of this study indicated that the two sociological variables of low income and family history of abuse as a child accounted for most of the variance and discriminated most strongly between the abusive and nonabusive families.

Family history of parent abuse as a child was also highly correlated with more negative and controlling interactions with children, which was correlated with the abusive families. This finding seems to support the social learning model that parents learn abusive parenting techniques from their own parents and then carry them out with their children, thus continuing the "coercive cycle" across generations. Family income seemed to be one of the most potent variables, contributing the largest amount of variance to the model. Although all these families were at quite low levels of income, the abusive families were most likely to be at extreme poverty levels. It is perhaps surprising that, since mother's depression had the highest correlation with the child abuse group, this variable did not emerge more strongly in the discriminant function analysis. However, depression was correlated highly with low income and single parent status and once these predictors were entered there may have been little variance left to explain.

In summary, this study suggests that the families of conduct disordered children most likely to abuse their children

are those who lack financial and marital support, who were abused themselves as children, and who are depressed. These families were also observed during home visits to engage in significantly more physical negative and critical interactions with their children than their counterparts in nonabusive families. These data suggest that while therapeutic endeavors should be aimed at teaching parents nonphysical child management skills, such intervention programs for abusive families may be of limited value unless integrated with programs that deal with a wide range of problems such as social isolation and single parenthood, spouse abuse, economic deprivation, and depression.

Several limitations of the study should be noted. First, the division of families into abusive and nonabusive was based on CPS involvement. It is possible that some families in the nonabusive group were, in fact, abusive but had not been detected or referred previously. The second limitation is the lack of a control group of nonclinic parents who did not have conduct disordered children. It would be helpful to determine how these variables differ across clinic and nonclinic populations. Nonetheless, since there is evidence that significantly more abusive families have aggressive and difficult children it is perhaps more likely that abusive families will turn up in a clinic population. Another limitation is the relatively small sample size and number of predictors employed. Classification results were undoubtedly inflated since they were based on the sample used to generate an equation and not a cross-validation sample. However, this type of research is scarce and still in the hypothesis-generating stage. Little is

known about the interplay of psychological, sociological, and parent-child interactional characteristics. The next stage of this research is to use these models prospectively to attempt to predict the occurrence of child abuse. The hope is that if we can arrive at a reliable prediction model we will be able to intervene with preventive programs before abuse actually occurs.

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