

## **Parent-Child Relationship and Family Variables as Predictors of Child Abuse Potential: Implications for Assessment and Early Intervention**

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### **Introduction**

Child physical abuse continues to be a prevalent concern in the United States. The U.S. Bureau of the Census (1994) concluded that more than 200,000 children are physically abused each year, with over a thousand of these children dying as a consequence of the abuse. According to reports from the states to the National Center on Child Abuse and Neglect, physical abuse accounted for 24% of all maltreatment reports (U.S. Department of Health and Human Services, 2000).

Extensive research has demonstrated the deleterious short-term and long-term effects of physical abuse on children (e.g., Malinosky-Rummell & Hansen, 1993; Aber, Allen, Carlson, & Cicchetti, 1989). Physically abused children tend to exhibit deficits in problem-solving skills (Haskett, 1990), social-cognitive skills (Dodge & Pettit, 1990) and social competence (Conway & Hansen, 1989). Research also indicates heightened aggression and externalizing behaviors (Wolfe & McEachran, 1997), higher levels of depression and hopelessness (Fantuzzo, delGaudio, Atkins, Meyers, & Noone, 1998), and a more negative attribution style (Brown & Kolko, 1999) in children who have been physically abused compared to non-abused children.

An improved understanding of factors associated with high child abuse potential is needed to increase knowledge about the etiology of physical child abuse and is crucial for the design and implementation of effective prevention and intervention programs. Overwhelmingly, research has concluded that no single factor or characteristic leads a parent to maltreat their child, but rather a complex interaction of determinants contribute to the potential to abuse (e.g., Black, Heyman, & Smith-Slep, 2001; Belsky, 1993).

The purpose of the present study was to examine the contribution of parent-child relationship and family variables to physically abusive parenting. The current study investigated different aspects of the parent-child relationship (e.g., parents' level of involvement with their child, satisfaction with parenting, degree of anger evoked in parent-child interactions, degree to which the child meets parental expectations) and their relationship to the parent's potential to abuse. Researchers (e.g., Luster & Okagaki, 1993; Klebanov, Brooks-Gunn, & Duncan, 1994) have demonstrated that the parent's immediate environment is influential on their parenting strategies. Therefore, this study assessed how family contextual variables (i.e., age of caregiver, number of children in the home, and level of parent education) and parent-child relationship variables contribute to the parent's potential to abuse. Additionally, a secondary aim was to determine if the relative influences of these variables would change depending upon the use of child abuse potential as a continuous or a dichotomous variable.

## Method

### *Participants*

Participants included 60 primary caregivers of children in Early Head Start or Head Start programs. The mean age of the caregivers was 28.78 (SD = 7.53; range 20 to 47). The vast majority of the sample was female (96.7%) and the biological parent of the child (95.0%). Forty-nine (81.7%) of the caregivers in the sample identified themselves as Caucasian and nine (15%) identified as African American. The sample was predominately low income with 68% earning less than \$20,000 per year. The children had a mean age of 47.07 months (SD = 9.68; range 30 to 63) and thirty-three (55%) of the children were male.

This community-based sample of low-income families presented an especially good opportunity to investigate factors related to child physical abuse because poverty significantly increases the risk for dysfunctional parenting behaviors. In addition, few studies have focused on young children and have instead been more likely to include school-aged children.

### *Measures*

Child Abuse Potential Inventory (CAP; Milner, 1986): A 160-item questionnaire designed to assess parents at risk for physically abusing their children. Scores on the CAP range from 0 to 486 with a critical cut-off score of 166 (Milner, 1986). A valid, elevated score indicates that the examinee has characteristics similar to known, active physical abusers (Milner, 1986). Several studies suggest that the CAP is an invaluable screening tool for abusive parents, correctly classifying 89.2% of confirmed child abusers and 96.3% of control subjects (Milner, Gold, & Wimberley, 1986).

Parent-Relationship Inventory (PCRI; Gerard, 1994): A 78-item questionnaire that assesses parents' attitudes toward parenting and toward their child. Scores were obtained for five content scales (i.e., Parental Support, Satisfaction with Parenting, Involvement, Limit Setting, and Autonomy).

Parenting Stress Index (PSI; Abidin, 1986): Questionnaire consisting of 101 items in which subjects indicate the degree of stress they experience in their role as a parent. Scales included in the study were Reinforces Parent, Parental Competence, and Parental Attachment.

## Results

### *Correlational Analyses*

Prior to conducting the regression analyses, a correlation matrix of the selected variables for the entire sample (N = 60) was constructed (Table 1). Results indicated that the CAP Abuse Scale was not significantly correlated to any of the family contextual variables but moderate to strong correlations were observed between the CAP and each of the parent-child relationship variables. Overall, the family contextual variables had very few correlations between each other and the parent-child relationship variables, while multiple correlations occurred among the parent-child relationship variables.

### *Hierarchical Multiple Regression Analysis*

A hierarchical (nested) multiple regression analysis was conducted to determine the relative contributions of family context and parent-child relationship variables to abuse potential. Using the CAP Abuse Scale (M = 109.05, SD = 80.84) as the criterion variable, the following subsets of variables were entered into the regression in two blocks: first, all family contextual variables (i.e., caregiver's age, number of children in the home, and caregiver's level of education [less than high school vs. high school or above]); second, all the parent-child relationship variables. Results of the regressions and the summary table are presented in Table

2. Standardized beta weights are shown at each step ( $\beta$  In) and for the final model ( $\beta$  Final). The final regression model was statistically significant,  $F(11,47) = 9.83, p < .001$ , with significant contributions by the caregiver's level of education, Parental Support Scale, Satisfaction with Parenting Scale, Autonomy Scale, and Parental Competence Scale. As expected, the parent-child relationship variables contributed significantly to the full model over and above the contribution of family contextual variables ( $F$ -change  $(8,47) = 12.07, p < .001$ ). These results support the unique importance of characteristics of the parent-child relationship in predicting child abuse potential.

#### *Hierarchical Logistic Regression Analysis*

A similar hierarchical logistic regression model was constructed using abuse potential as a dichotomous variable based upon the critical cut-off of 166. Fourteen of the sixty caregivers scored above the 166 cut-off. This type of analysis allowed for the assessment of the relative contribution of family context and parent-child relationship variables to the prediction of those caregivers who possess characteristics similar to known, active child abusers. Results of the regression are presented in Table 3. As before, the final regression model was statistically significant,  $X^2(11) = 42.51, p < .001$  and the parent-child relationship variables contributed significantly over and above the family environment variables,  $X^2$ -change  $(8) = 37.71, p < .001$ . Results suggest that the only variable that was predictive of abuse potential in the full model was the Satisfaction with Parenting Scale (Wald = 3.94,  $p < .05$ ). Although only one of the variables contributed significantly to the full model, 89.8% of the sample was still correctly classified.

### **Discussion**

The primary goal of this study was to examine the contribution of family environment and parent-child relationship variables to child abuse potential. The aim was to explore how these influences may change depending upon the use of child abuse potential as a continuous vs. a dichotomous variable. To this end, hierarchical multiple and logistic regression analyses were conducted.

Results from the analyses suggest that family contextual and parent-child relationship variables differentially predict child abuse potential depending upon the use of the CAP Abuse Scale as a continuous or a dichotomous variable. Those parents who have not obtained a high school diploma, have little emotional support and practical help in their role as a parent, derive little satisfaction from parenting, have difficulty accepting their child's expression of independence, and view themselves as lacking competence in their parental role are at greater risk of potentially abusing their child. In contrast, when abuse potential is assessed as a dichotomous variable using the critical cut-off of 166, only the degree of satisfaction derived from the role as a parent is predictive of those parents who possess characteristics similar to known, active child abusers.

Results of this study should provide clinicians, researchers, and community agencies with information to aid in the early detection of risk factors for child abuse potential and for developing effective intervention strategies. However, the results suggest that intervention programs should be aimed at different aspects of the parent-child relationship depending on the type of population being served. A program geared more generally toward parents at high risk for child physical abuse should focus on multiple aspects of the parent-child relationship, including parental satisfaction, competence, support, and child autonomy. Whereas an intervention that targets suspected or confirmed child abusers may benefit from placing high priority on improving the parent's level of satisfaction with their parental role, in addition to

focusing on other factors of the parent-child relationship. Moreover, interventions targeted toward the parent-child relationship may be more successful than attempting to target other risk factors (e.g., poverty, parental abuse history, social support) because parent-child interaction processes can be directly assessed and may be more amenable to change.

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Table 1  
Correlation Matrix of Selected Family Contextual and Parent-Child Relationship Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. CAPI Abuse Scale	1.00											
2. Caregiver's Age	-.235	1.00										
3. # of Children in the Home	.032	.178	1.00									
4. Caregiver's Education Level	.086	.127	-.002	1.00								
5. Parental Support (PCRI)	.629**	-.341**	.010	.077	1.00							
6. Satisfaction w/ Parenting (PCRI)	.588**	-.222	-.019	-.026	.394**	1.00						
7. Involvement (PCRI)	.326*	.033	.033	.009	.295*	.410**	1.00					
8. Limit Setting (PCRI)	.423**	-.138	.047	-.082	.462**	.385**	.554**	1.00				
9. Autonomy (PCRI)	.398**	-.147	-.047	-.021	.155	.104	.175	.152	1.00			
10. Reinforces Parent (PCRI)	.458**	-.072	-.125	.048	.379**	.621**	.358**	.373**	.035	1.00		
11. Competence (PCRI)	.654**	-.364**	-.117	-.257*	.560**	.521**	.250	.441**	.156	.549**	1.00	
12. Attachment (PCRI)	.453**	-.156	.104	.074	.308*	.672**	.474**	.357**	.092	.633**	.462**	1.00

\* p < .05.

\*\* p < .01.

Table 2  
Summary of Hierarchical Multiple Regressions with CAP as the Criterion Variable

Step and Variable	In	Final	R <sup>2</sup>	Adjusted Δ R <sup>2</sup>
1				
Caregiver's Age	-.261	.075	.074	.024
# of Children in the Home	.052	.079		
Level of Education	.129	.190		
2				
Parental Support	—	.262*	.697	.626**
Satisfaction w/ Parenting	—	.314*		
Involvement	—	-.013		
Limit Setting	—	.012		
Autonomy	—	.282**		
Competence	—	.430**		
Reinforces Parent	—	-.050		
Attachment	—	-.043		

\* p < .05

\*\* p < .001



Table 3  
Summary of Logistic Regression with CAP Cut-off Score of 166 as the Criterion Variable