

Temperament and Parenting: An Exploration of Heterogeneity of Outcomes in Maltreated Children

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Introduction

Child maltreatment directly impacts approximately 679,000 children each year in the United States. Previous studies reveal increased risk for mental health problems (U.S. DHHS, 2015; Burns et al, 2004), internalizing and externalizing behavior problems, as well as poor developmental and educational outcomes (Casey Family Programs, 2005). While elevated rates of adverse outcomes are seen for these children, outcomes for children who have experienced maltreatment vary greatly with some children demonstrating great resilience (Rind, Tromovitch & Bauserman, 1998; Zielinski & Bradshaw, 2006).

This heterogeneity of outcomes suggests that there are factors influencing development other than the maltreatment itself. The current work is a longitudinal study using data collected on four occasions, to explore the relationships between infant temperament at wave one and quality of caregiving and environment across time as they relate to the emotional and behavioral problems of maltreated children as they develop.

It was hypothesized that:

- higher difficult temperament scores would predict higher externalizing behavior problem scores
- higher scores in parenting measures of cognitive stimulation would predict lower externalizing behavior problem scores
- higher scores in parenting measures of emotional support would predict lower externalizing behavior problem scores.



Method

This study utilized data from the National Survey on Child and Adolescent Well-being (NSCAW), a national study conducted with children and families who have come into contact with the child welfare system. Participants included 4,472 children with abuse/neglect cases investigated by the child welfare system who were less than one year old at baseline.

Parents/caregivers completed a modified National Longitudinal Survey of Youth (NLSY) temperament scale at baseline. When the children were approximately 2,3, and 7 years of age, a measure of child emotional and behavioral problems (Achenbach's (1991) Child Behavior Checklist) was completed by the parents/caregivers. At the same ages, a measure of the quality of caregiving environment (Home Observation Measure of the Environment: Short Form) was completed by the parents/caregivers and a research assistant (observer).



Results

In order to most accurately explore the relationships between the variables over time, general linear mixed models (i.e., multilevel models in which occasions are modeled as nested within persons) were used to examine predictors of change in emotional and behavioral problems across time, in which three waves of assessments were collected from children's parent/caregivers. All models were estimated using SAS PROC MIXED software, restricted maximum likelihood (REML) estimator, and the Satterthwaite denominator degrees of freedom method.

- Higher difficult temperament scores predicted higher externalizing behavior problem scores ($p=.0002$).
- Higher cognitive stimulation scores predicted both between ($p=.0374$) and within persons effects ($p=.0310$) of decreased externalizing behavior problem scores.
- Higher emotional support scores predicted between ($p=.0155$), but not within ($p=.8073$) persons effects of decreased externalizing behavior problem scores.
- An interaction between difficult temperament and parenting measures was not predictive of externalizing behavior problem scores ($p=.7042$).

Conditional Model parameters, estimates, standard errors, and p-values				
Fixed Quadratic Random Linear Model With Fixed Effects of Temperament and Quality of Parenting				
		Estimate	SE	p-value
PARAMETER				
Fixed Effects:				
Intercept		50.6437	0.7611	<.0001***
Linear time		1.1580	0.3620	0.0014**
Difficult Temperament		0.3923	0.1052	0.0002**
Difficult Temperament * time		-0.1155	0.0423	0.0066*
Between Persons Parenting – cognitive stimulation				
		-0.5402	0.2592	0.0374*
Within Persons Parenting – cognitive stimulation				
		-0.2628	0.1216	0.0310*
Between Persons Parenting – emotional support				
		-0.6769	0.2793	0.0155*
Within Persons Parenting – emotional support				
		0.04281	0.1755	0.8073
Model Fit:				
REML Deviance		12288.0		
AIC		12296.0		
BIC		12316.0		
Number of Parameters		8		

Take Away Points

- **A child's temperament is an important part of their experience and behaviors.** Having a more difficult temperament in infancy predicts more emotional and behavioral problems at ages 2,3, & 7.
- **Better than average caregiving is important.** Emotional and behavioral difficulties in children who have experienced maltreatment are fewer in children who experience more cognitive stimulation and emotional support from their caregivers than the average child.
- **Improving cognitive stimulation at all is important.** An increase in the amount of cognitive stimulation received (regardless if it is more or less than what the average child receives) predicts fewer emotional and behavioral difficulties.

Advancing Early Childhood Practices and Policies

- Information and training on temperament and goodness of fit with environment should be made available to parents and caregivers.
- Particular attention should be paid to training and supporting parents and caregivers in interactions that provide a high level of cognitive stimulation and emotional support to the maltreated children in their care.
- Funding allocated to facilitate training, support, and intervention studies regarding temperament, cognitive stimulation, and emotional support.

Next Steps

- More detailed research evaluating which particular aspects of cognitive stimulation and emotional support may be most important
- More refined differentiation of parent/caregiver as it relates to possible interactions with temperament and quality of parenting/caregiving.