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Understanding the Risks of Child Neglect: An Exploration of Poverty and Parenting Characteristics

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A strong association between poverty and child neglect has been established, but the mechanisms that explain this relationship have not been clearly articulated. This research takes advantage of survey and child maltreatment administrative data about families with young children and assesses the influence of poverty and parenting characteristics on subsequent child neglect. The authors find that indicators of poverty, such as perceived material hardship and infrequent employment, and parenting characteristics, such as low parental warmth, use of physical discipline, and allowing a child to engage in frequent television viewing, are predictive of child neglect. Parenting characteristics do not appear to mediate the link between perceived hardship and neglect, although they suppress the link between employment and neglect. Results from this study provide information that is highly relevant to the approach and design of child maltreatment prevention and intervention strategies.

Keywords: *neglect; poverty; parenting*

The association between poverty and Child Protective Services (CPS) intervention has been extensively documented in the research literature (Bath & Haapala, 1993; Gil, 1970; Jones & McCurdy, 1992; Pelton, 1981; Russell & Trainor, 1984; 1994; Trickett, Aber, Carlson, & Cicchetti, 1991). Several indicators of poverty have been linked to CPS intervention, including unemployment (Courtney, Piliavin, Dworsky, & Zinn, 2001; Jones, 1990), material hardships (Courtney et al., 2001; Geen, Kortenkamp, & Stagner, 2001; Shook, 1999), and various characteristics of welfare receipt, such as current status, duration of receipt, and lower state benefit levels (Goerge & Lee, 2000; Paxson & Waldfogel, 2002; Slack, Holl, Lee, et al., 2003). In addition, an inverse relationship has been found between income level and virtually every form of child abuse and neglect, regardless of whether it is reported to CPS (Sedlak & Broadhurst, 1996).

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Yet there are many unanswered questions about why and how poverty matters in the etiology of child neglect. For instance, what aspects of poverty are most strongly associated with neglect (e.g., income level, duration of poverty, perceived hardship)? Does poverty have a direct or indirect relationship with neglect? The majority of poor parents do not neglect their children, which suggests that we need to understand better why some low-income parents are able to adequately care for their children whereas others are unable to do so (Black & Dubowitz, 1999). Understanding the within-group variation of child neglect among low-income families is critical for more targeted and effective prevention efforts.

Despite strong correlations between poverty and child neglect, low-income status alone does not fully explain this outcome. The nature and quality of caregiving provided to a child are also important factors to consider. Among low-income families, research has demonstrated that abused and neglected children receive poorer quality parenting than non-maltreated children (Azar, 2002; Koenig, Cicchetti, & Rogosch, 2000; Shahar, 2001). Parents reported for maltreatment tend to employ harsher discipline, spank and punish their children more often, reason less with them (Koenig et al., 2000), become more easily frustrated, and have more difficulty managing parenting stress (Azar, 2002) compared to unreported parents. However, many of these studies compared caregivers who already had CPS involvement with sociodemographically similar parents with no CPS involvement (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Gershater-Molko, Lutzker, & Wesch, 2002; Koenig et al., 2000). Less is known about the quality of parenting prior to child protection involvement and how parenting behaviors influence specific forms of maltreatment, such as neglect.

In this analysis, we explore different aspects of poverty and parenting in predicting one form of child maltreatment—physical neglect. Using data from a survey of current and former welfare recipients, we model various indicators of poverty and parenting characteristics in relation to subsequent neglect-related CPS reports.

BACKGROUND

Definitions of Child Abuse and Neglect

No single definition of child abuse and neglect has been accepted by researchers, state legislatures, and child welfare agencies alike (Goldman, Salus, Wolcott, & Kennedy, 2003; National Research Council, 1993). One of the most commonly cited defini-

tions is that offered by the 1974 federal Child Abuse Prevention and Treatment Act (CAPTA), amended and reauthorized in 1978, 1984, 1988, and 1996. With each reauthorization, amendments were made to CAPTA that have expanded and refined the scope of the law. CAPTA was most recently reauthorized on June 25, 2003, by the Keeping Children and Families Safe Act of 2003. CAPTA defines child abuse and neglect as

at a minimum, any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation, or an act or failure to act which presents an imminent risk of serious harm.

CAPTA further defines four forms of maltreatment: emotional abuse, neglect (physical, educational, emotional), physical abuse, and sexual abuse. State definitions vary, with some omitting various forms of maltreatment and others covering additional situations not included in this definition.

In this study, we concentrate specifically on child physical neglect. The Third National Incidence Survey of Child Abuse and Neglect (NIS-3) defines physical child neglect to include refusal of health care, delay in health care, abandonment, expulsion, inadequate supervision, or other physical neglect (inadequate nutrition, clothing, and/or hygiene; inattention to hazards; disregard for the child's safety and welfare) (Sedlak & Broadhurst, 1996). In the NIS-1, a single, objective set of definitions, termed the "Harm Standard," was developed and applied. For the NIS-2 and NIS-3, a second set of definitions, termed the "Endangerment Standard," was also used and applied (Sedlak, Hantman, Schultz, Broadhurst, & Thomas, 1997). The second standard was intended to capture situations of high risk for maltreatment as well as harm already incurred from maltreatment.

It is important to consider that definitions such as these do not always imply intentional neglect by a parent or caregiver. Other factors, such as social and economic inequalities, may be linked to a family's need for child welfare intervention. It is only when available resources are unused by a family that protective intervention for a child at risk may be necessary (National Clearinghouse on Child Abuse and Neglect Information and the National Adoption Information Clearinghouse, 2004).

Relationship Between Poverty and Child Neglect

Child neglect is the most common form of child maltreatment in the United States (Sedlak & Broadhurst, 1996; U.S. Department of Health and Human Services, 2002) and is more strongly associ-

ated with poverty and low income than other types of maltreatment (Sedlak & Broadhurst, 1996). Jones and McCurdy (1992) analyzed the demographic factors that distinguished physical neglect from other forms of maltreatment and found that children from lower income families were more likely to be neglected than children from families with higher incomes. Their findings are corroborated by Korbin, Coulton, Chard, Platt-Houston, and Su (1998); Drake and Pandey (1996); and Coulton, Korbin, and Su (1999), who similarly concluded that families in the most impoverished communities are at highest risk of neglecting their children.

Employment and welfare receipt have also been associated with child maltreatment, although this body of research does not typically distinguish among different forms of maltreatment. Stress and economic hardship resulting from unemployment have been linked to child maltreatment (Fryer & Miyoshi, 1996). A study in rural Colorado also revealed that events affecting local economies, such as crop failures and plant closings, increased the risk of child abuse and neglect in families (Fryer & Miyoshi, 1995). Other researchers have shown that employment appears to operate as a protective influence on child maltreatment reports (Courtney et al., 2001; Slack, Holl, Lee, et al., 2003). Welfare reform, through work requirements and time limits on cash assistance, has affected the incomes of many poor families through fluctuations in employment and welfare use. Paxson and Waldfogel (2003) found that states with stricter welfare policies (e.g., work requirements and sanctions) have greater rates of substantiated child maltreatment reports. A recent experimental evaluation found a relationship between stricter work requirements and shorter time limits on cash assistance and subsequent child neglect (Fein & Lee, 2003), further supporting the notion that increased financial pressure is associated with child neglect.

Relationship Between Parenting and Child Neglect

Parenting characteristics (i.e., aspects of the interaction between parent and child) potentially mediate the relationship between poverty and child neglect. Past research on poverty and parenting suggests that economic stress is linked to more hostile parenting practices (Conger, Ge, Elder, Lorenz, & Simons, 1994; Paxson, Berger, & Waldfogel, 2002; Smith & Brooks-Gunn, 1997), lower levels of parental locus of control (Hilton & Desrochers, 2000), and more physical discipline (McLoyd & Smith, 2002). Neighborhood poverty is associated with less maternal warmth and a poorer quality physical home environment

(Klebanov, Brooks-Gunn, & Duncan, 1994). Parents receiving welfare tend to have more authoritarian parenting styles (Smith, Brooks-Gunn, Kohen, & McCarton, 2001), and parents living below the poverty line are less physically affectionate toward and more likely to spank their children than parents with incomes above the poverty line (Bradley, Corwyn, McAdoo, & Coll, 2001). Furthermore, these differences are persistent across multiple racial and ethnic groups (Bradley et al., 2001).

Comparatively few studies concentrate on the relationship between parenting characteristics and child neglect. Those that have find that neglectful parents exhibit less empathy toward their children (Shahar, 2001), have less proficient caretaking skills (e.g., preparing food, keeping a clean home), have poorer stress management, and know less about child development than do nonneglectful parents (Burke, Chandy, Dannerbeck, & Watt, 1998). Similarly, parents reported for poor supervision show less maternal motivation than comparison caregivers (Coohy, 1998). Several studies that do not distinguish between abuse and neglect find that maltreating parents have less frequent and lower quality interactions with their children (Azar, 2002), respond inconsistently to their needs (Howe, Dooley, & Hinings, 2000), know less about child development and consequently expect more from their young infants and children (Azar, 2002; Dore & Lee, 1999), attribute negative intent to their children's behavior (Dore & Lee, 1999), spank and punish more, and reason with them less (Koenig et al., 2000) compared to nonmaltreating parents.

Research evaluations of parenting programs for maltreating parents have demonstrated improved parent-child interactions (Berry, Charlson, & Dawson, 2003; Dore & Lee, 1999; Gershater-Molko et al., 2002), lower CPS recidivism (Gershater-Molko et al., 2002; Howe et al., 2000), higher parent goal attainment, and less stress and depression (Dore & Lee, 1999) following program participation. Parenting-related program features included activities to increase stimulation and bonding (Berry et al., 2003; Gershater-Molko et al., 2002) and to improve parents' attitudes about themselves and their children (Berry et al., 2003). Results from home-visiting program evaluations also suggest that early interventions with new parents reduce the incidence of child abuse and neglect (Olds et al., 1999), enhance parental efficacy, decrease parenting stress, increase use of nonviolent discipline, and decrease injuries due to partner violence in the home (Duggan et al., 1999). Despite the reported benefits of parenting interventions and training, some researchers have questioned the effectiveness of such programs when they do not simulta-

neously address a parent's income and educational needs (Burke et al., 1998; Dore & Lee, 1999; Greene & Kilili, 1998), suggesting that there is a critical need for more concurrent examination of the effects of parenting and poverty characteristics on the risk of child neglect.

RESEARCH QUESTIONS

Using prospective data, we explore several poverty and parenting factors in relation to official CPS data on child neglect.

The specific research questions that we address include the following:

Research Question 1: Within an economically disadvantaged population, are particular aspects of poverty (e.g., employment, welfare receipt, income, perceived hardship, and material hardship indicators) more strongly associated with physical child neglect than others?

Research Question 2: Are particular aspects of parenting (e.g., parenting stress, parental warmth, physical discipline, and allowing frequent television viewing by young children) more strongly associated with physical child neglect than others?

Research Question 3: Does poverty have a direct effect on the risk of physical child neglect controlling for parenting, or is the effect partially mediated by parenting?

METHOD

This research attempts to overcome many of the previous methodological and conceptual problems related to the study of risk factors for child neglect (see Slack, Holl, Altenbernd, McDaniel, & Stevens, 2003, for a review). We use a prospective lens to assess the effects of multiple indicators of both poverty and parenting in predicting CPS intervention for neglect-related reasons.

Our study sample is derived from the Illinois Families Study (IFS), a 6-year longitudinal panel study of families who were receiving welfare in late 1998. Respondents for the annual in-person surveys were selected from the 1998 welfare enrollment files of nine Illinois counties, which together represented greater than 75% of the Illinois Temporary Assistance for Needy Families (TANF) caseload. The sample was stratified by region to ensure sufficient numbers of respondents from smaller, less urban counties. The response rate in Year 1 of the main IFS survey (i.e., 1999-2000) was 72% (Lewis et al., 2000; Slack, Holl, Altenbernd, et al., 2003). In the following sections, we describe the characteristics of the sample of IFS families who are the focus of this analysis.

Sample

Our sample, selected for a substudy of the IFS called the Illinois Families Study: Child Well-Being (IFS-CWB) supplement, includes all respondents from the Year 1 IFS survey who had at least one child 3 years of age or younger at the point of this initial interview ($n = 583$). This child is henceforth referred to as the "target child." For this subsample of respondents, we administered a supplemental survey in Year 2 of the IFS (i.e., 2001) that specifically assessed the target child. The response rate for IFS-CWB subsample was 95% ($n = 554$). We focus on respondents with younger children for two primary reasons: (a1) Child neglect reports are most prevalent among young children (U.S. Department of Health and Human Services, 2002); and (b) because the mechanisms leading to neglect may differ significantly depending on a child's age and developmental stage (Black & Dubowitz, 1999), we limited the age range of the target children in order to have a more developmentally homogeneous cohort.

Weights were developed to adjust for differences between the composition of the sample and the population of 1998 Illinois TANF grantees from which the IFS sample was originally derived. The base weight is the reciprocal of the selection probability specific to the sampling stratum. The base weights for the IFS-CWB subsample are further adjusted to compensate for the effects of nonresponse in Years 1 and 2 of the IFS.

Measures

The majority of our independent variables were derived from the initial IFS-CWB survey supplement administered to respondents in 2001, whereas our dependent variable, neglect-related CPS reports, was measured on or after the IFS-CWB interview date. Below is a description of the key measures.

Dependent Variable

CPS reports for reasons of neglect. Administrative data from the Illinois Department of Children and Family Services (IDCFS) were linked to our survey data using a probabilistic linking process, whereby identifying information on survey respondents and their children was matched against the IDCFS administrative databases (Jaro, 1989; Newcombe, 1988). Permission to access these data was obtained from respondents during their initial IFS-CWB interview as part of the informed consent process.¹ We used data on CPS reports to identify respondents with child neglect reports pertaining to all children in their care. Neglect allegations included physical neglect (e.g., inadequate

supervision, food, clothing, shelter, or medical care) and risk of harm from neglect.² No allegations of emotional or educational neglect were identified in the administrative data for the IFS-CWB subsample.

All allegations of neglect of the IFS-CWB target child, regardless of the identity of the alleged perpetrator, and all allegations of neglect perpetrated by the IFS-CWB respondent (the primary caregiver), regardless of whether it was associated with the IFS-CWB target child, were included in the dependent variable. In most cases (88%), the allegations appeared in both the child and the caregiver allegation databases. For the remaining cases, approximately half of the allegations involved neglect of the target child by another relative, and half involved alleged neglect perpetrated by the IFS-CWB respondent against older children in the household.³ These allegations were also included in the dependent variable because we believe that both of these situations are likely to represent some level of neglect risk for the IFS-CWB target children. Furthermore, past research has documented similar results with respect to predicting maltreatment recidivism, regardless of whether perpetrator or victim-based allegations are used (Drake, Jonson-Reid, Way, & Chung, 2003; Jonson-Reid, Drake, Chung, & Way, 2003).

CPS reports involving neglect allegations occurring between each respondent's initial IFS-CWB interview⁴ and March 2003 (the last available month for which CPS administrative data were available for this analysis) were used to create a dummy variable for our neglect outcome variable. Of the IFS-CWB respondents, 11% were reported for CPS neglect during this time period. The first allegation of neglect subsequent to the IFS-CWB interview was selected for the analysis.

It is important to recognize that the processes leading to child neglect do not necessarily overlap with processes that lead to the detection of neglect by child protection systems. In general, it is assumed that child neglect is underreported in child protection databases due to errors in reporting, individual and administrative variation in definitions of neglect, and underreporting by mandated reporters (Waldfogel, 1998). Accordingly, the present study assesses the roles of poverty and parenting characteristics only as they relate to reports of neglect that are investigated by CPS agencies. We do not further limit our analyses to reports of neglect that are indicated⁵; rather, we include both indicated and nonindicated reports in our dependent variable. Past research has demonstrated that families with CPS reports deemed unfounded by a CPS investigation are at high risk for being rereported and, in many cases, just as likely to

have subsequent CPS reports as families with founded reports (Drake et al., 2003; English, Marshall, Brummell, & Orme, 1999). These researchers also found that among families initially reported for reasons of neglect, neglect is the most common form of maltreatment to recur (Jonson-Reid et al., 2003). Furthermore, Illinois has a relatively stringent threshold for investigating alleged incidents of reports; less than one quarter of reports made to CPS are "screened in" for further investigation compared to a median of 64% among states with available data (Tumlin & Geen, 2000). This finding suggests that screened-in reports reflect situations in which some problematic degree of maltreatment risk or harm to children exists.

Independent Variables

Table 1 shows the means or proportions and the standard deviations for each of the variables described below.

Indicators of income and poverty. Administrative data from the Illinois Department of Employment Security and the Illinois Department of Human Services were used to construct measures of employment and TANF use. The first is a continuous variable for the proportion of quarters employed for each IFS-CWB respondent between July 1, 1997 (when Illinois' TANF policies took effect; Illinois Public Aid Code of 1997) and March 31, 2003; the second is a continuous variable for the proportion of months for which each respondent received cash TANF benefits during the same time period.

An ordinal variable was created for total household income from work and other sources in the year prior to the IFS-CWB survey. This measure incorporated 15 income level categories ranging from "less than \$2,500" to "\$50,000 or more."

A dichotomous variable for material hardship was assigned a 1 if respondents reported experiencing difficulty paying rent, were evicted, or experienced any utility shutoffs in the year preceding their IFS-CWB interview. In addition, a measure of perceived economic hardship was developed using four items from the Minnesota Family Investment Program Survey.⁶ Positive items were reverse-coded, and all four items were then summed (Cronbach's alpha = .64). Higher scores reflect greater levels of perceived hardship.

In the present study, this scale was averaged across two survey waves (Years 1 and 2 of the IFS) because correlational analyses revealed stronger correlations between the Year 1 Perceived Hardship Scale and CPS neglect reports following the IFS-CWB interview (which coincided with Year 2 of the IFS) than between

TABLE 1: Sample Characteristics (N = 554)

Variable	Mean/ Proportion	Standard Deviation	Range
CPS intervention			
Prior CPS involvement	.34	.47	
Post-CPS neglect	.11	.31	
Demographic and other controls			
Teen parent (first birth)	.66	.47	
Age (years)	29.1	6.5	19-57
High school degree/graduate equivalency degree	.64	.48	
Number of children	2.9	1.4	1-8
Age of youngest child (months)	28.8	16.6	0-68
Gender of youngest child (female)	.55	.50	
Social support scale	10.5	2.1	4-12
Poor health	.16	.37	
Domestic violence victim	.25	.43	
Alcohol/drug use	.11	.31	
Learning disability	.05	.22	
Depressive symptoms	16.9	7.2	12-48
Married	.11	.31	
Unmarried, living with partner	.08	.27	
Non-Hispanic Black	.82	.38	
Hispanic	.10	.30	
Non-Hispanic White	.08	.26	
Cook County (Chicago) resident	.78	.41	
Income and poverty			
Proportion of quarters with earnings (July 1997-March 2003)	.42	.32	
Proportion of months with Temporary Assistance for Needy Families (July 1997- March 2003)	.66	.26	
Household income range (thousands)	5.1	3.1	1-15
Missing data on household income	.06	.23	
Material hardships	.45	.50	
Perceived Hardship Scale	11.3	2.0	4-16
Parenting			
Parenting stress	15.6	3.6	8-28
Parental warmth	17.8	1.9	11-20
Spank youngest child	.23	.42	
Frequent television viewing	.19	.39	

NOTE: CPS = Child Protective Services.

the IFS Year 2 Perceived Hardship Scale and subsequent CPS neglect reports. These findings suggested that there may be a delayed or persisting effect of perceived hardship that would not be captured if our models relied on only the most recent assessment of this measure.

Parenting. Parenting stress was assessed using a modified version of the Parenting Stress Index (Abidin, 1983), developed by Ariel Kalil for the Women's Employment Study (Danziger et al., 2000). Respondents were asked to rate feelings they had as a

parent or primary caregiver for the children who lived with them in the past 12 months. Example items include respondents' feelings about their responsibilities as parents or caregivers, their children's demands on them, and their feelings of being tired, worn out, or exhausted from raising a family. The sum of eight items composes the parenting stress score, for which higher scores indicate greater degrees of stress (Cronbach's alpha = .75). In addition, parental warmth was assessed using a 5-item scale, developed by Kalil, and based on items from the New Chance Study and Block's Child Rearing Practices Report (Block, 1965; Quint, Bos, & Polit, 1997). The scale includes items such as the degree to which mothers praise their children, do something special with them, and play games, hobbies, or sports with them (Cronbach's alpha = .79). The parenting stress and parental warmth scales were averaged across Years 1 and 2 of the IFS, using the same rationale as described for the perceived hardship measure.

Two additional dichotomous variables representing parenting characteristics were created: physical discipline used for the target child and frequent television viewing by the target child. Responses that indicated that the target child was spanked by an adult in the household within the past week were coded as 1 for the physical discipline variable. Responses indicating that the target child typically watches more than 4 hours of television per day during the week (or that the television is on more than 8 hours per day and the target child is less than 1 year of age) were coded as 1 for frequent television viewing. All other responses were coded as 0 for these variables.

Although frequent television viewing is not typically characterized as a parenting characteristic, we view this measure as a proxy for the quality and frequency of parent-child interactions in the home. Parents who permit their young children to view television for a relatively high number of hours each weekday are presumably less likely to be interacting with their children in other ways (e.g., reading to them, playing with them, talking with them, etc.). The limitations of this assumption are addressed in the discussion.

Other control variables. Demographic control variables include information about each respondent or the IFS-CWB target child as of the IFS-CWB interview. They include respondent's age (in years), target child's age (in months), target child's gender (female was coded as 1), respondent's high school or GED completion status (a dichotomous variable indicating completion of either was assigned a 1), number of minor-aged children in the home for whom respondent

is the primary caregiver (continuous variable), respondent's race/ethnicity (non-Hispanic Black was coded as 1; all other racial and ethnic categories were coded as 0), family structure (respondents were assigned a 1 if married, and a second dichotomous variable was assigned a 1 if the respondent was living with an unmarried partner; all other family structures were assigned a 0), and respondent's age at birth of first child (a dichotomous variable was assigned a 1 if respondent gave birth to her first child as a teenager). A dichotomous variable capturing region of residence (Cook County, which includes Chicago, vs. all other study regions) was also constructed.

Other control variables include history of CPS intervention (reports of maltreatment associated with the primary caregiver or the target child between January 1980 and the IFS-CWB interview month), social support (a six-item scale assessing the availability of material and emotional support adapted from Orthner & Neenan, 1996, and Winston et al., 1999), poor health (a dichotomous variable assigned a 1 if the respondent rated her health as poor or very poor), alcohol or drug use (assigned a 1 if the respondent reported sometimes or often drinking alcohol or getting high when faced with a stressful life event), and learning disability (a dichotomous variable indicating whether the respondent had ever been told by a doctor, teacher, or counselor that she may have a learning disability). A measure of domestic violence victimization captured severe violence ever perpetrated against the respondent by a spouse or partner. This dichotomous measure received a 1 if the respondent experienced any of the following forms of violence: being hit, slapped, or kicked; pushed, grabbed, or shoved; hit with a fist; hit with an object that could hurt; or forced into sexual activity. These items were adapted from a Massachusetts study of women on welfare (Allard, Albelda, Colten, & Cosenza, 1997), and the Conflict Tactics Scale (CTS; Straus, Gelles, & Steinmetz, 1980). The 12-item version of the Center for Epidemiological Studies–Depression Scale (CES-D) was used to assess respondents' depressive symptoms (Ross, Mirowsky, & Huber, 1983).

Analytic Techniques

Correlational analyses were performed to assess the strength and direction of the bivariate relationships between our neglect outcomes and our poverty and parenting indicators. Multivariate analyses for predicting CPS neglect reports (dichotomous variable) were conducted using discrete-time event history analysis (Allison, 1996). We constructed a dataset of person-month records; the number of person-months for each respondent varied depending on the

number of months between a respondent's IFS-CWB interview and the first neglect report associated with that family or March 2003 (the last month of available CPS data), whichever date occurred first. We model the hazard rate of being reported for neglect or the odds of being reported given that a respondent has not been previously reported for neglect during the defined risk period.

We adhere to Baron and Kenney's (1986) approach for testing the mediating effect of parenting characteristics in our models. We use hierarchical regression to first model the risk of a child neglect report controlling for measures of poverty and other key correlates of neglect. In a subsequent step, we add in our set of parenting indicators. This strategy allows us to assess whether any observed effects of poverty on neglect reports are explained by the inclusion of our parenting controls, given that bivariate relationships were found between poverty and parenting variables and between each of these variables and child neglect reports.

RESULTS

Table 2 presents the results of the correlational analyses for associations between CPS neglect reports and poverty and parenting characteristics. CPS neglect reports are inversely associated with the proportion of quarters during which the respondent was employed and positively associated with the proportion of months with TANF receipt as well as with perceived hardship. CPS neglect reports are not statistically correlated with household income range or material hardships, although respondents with more work activity have higher household incomes and less material hardship, and respondents with higher levels of welfare receipt have lower household incomes and more material hardship.

CPS neglect reports are positively associated with parental stress, spanking of the target child, and frequent television viewing by the youngest child. CPS neglect is inversely associated with parental warmth; the higher a respondent's score on warmth, the lower her risk for reported CPS neglect. Parental stress and parental warmth are inversely associated, but no other parenting variables are statistically correlated.

Several poverty indicators are related to parenting characteristics. Work is inversely associated with spanking, and TANF receipt and perceived hardship are both positively associated with parental stress and spanking and inversely associated with warmth. Material hardship is positively associated with parental stress.

TABLE 2: Correlations Between Neglect Outcomes and Poverty and Parenting Indicators (N = 554)

	CPS Neglect	Earnings	TANF	Income Range	Perceived Hardship	Material Hardship	Parenting Stress	Parental Warmth	Spank	Frequent TV
Post-CPS neglect	1.00									
Quarters with earnings	-.17**	1.00								
Months with TANF	.18**	-.27**	1.00							
Household income range	-.07	.25**	-.33**	1.00						
Perceived hardship	.17**	-.20**	.22**	-.22**	1.00					
Material hardship	.03	-.12**	.18**	-.23**	.20**	1.00				
Parenting stress	.10*	-.06	.15**	-.06	.21**	.19*	1.00			
Parental warmth	-.14**	.05	.10*	.05	-.14**	-.05	-.27**	1.00		
Spank	.11**	-.09*	.12**	.06	.09*	.05	.04	-.01	1.00	
Frequent TV	.09*	.00	-.00	-.07	-.07	.06	.01	.03	-.03	1.00

NOTE: CPS = Child Protective Services; TANF = Temporary Assistance for Needy Families.

TABLE 3: Discrete-Time Event History Analysis: Predicting CPS Neglect Reports (N = 13,563 person-months for 523 respondents)

Variable	Model 1		Model 2		Model 3	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
Prior CPS involvement	12.26**	.39	11.97**	.41	18.84**	.46
Teen parent (first birth)	.36**	.36	.49*	.41	.57	.45
Age (years)	1.00	.03	.99	.03	.95	.04
High school degree/general equivalency diploma	.59*	.31	.58*	.33	.56	.36
Number of children	1.25**	.09	1.21	.10	1.14	.11
Age of youngest child (months)	.96**	.01	.96**	.01	.96**	.01
Gender of youngest child female	1.64	.31	1.54	.33	2.19**	.34
Social support scale	1.01	.07	1.06	.075	1.07	.08
Poor health	1.00	.44	.69	.47	.79	.52
Domestic violence victim	.94	.35	1.30	.38	.96	.43
Alcohol/drug use	.66	.44	.54	.45	.46	.47
Learning disability	7.78**	.48	5.45**	.52	10.26**	(.55)
Depressive symptoms	1.03	.02	1.03	.02	1.02	.03
Married	.40	.65	.37	.70	.48	.72
Unmarried, living with partner	.82	.52	1.69	.57	3.28*	.61
Non-Hispanic Black (reference: non-Hispanic White or Hispanic)	.74	.43	.78	.43	.74	.44
Cook County (Chicago) resident	2.02	.45	1.88	.50	1.92	.48
Proportion of quarters with earnings (July 1997-March 2003)			.38	.63	.30*	.64
Proportion of months with Temporary Assistance for Needy Families (July 1997-March 2003)			2.05	.88	1.61	.91
Household income range (thousands)			1.02	.06	1.02	.06
Missing data on household income ^a			1.62	.66	1.81	.69
Material hardships			.73	.34	.64	.33
Perceived Hardship Scale			1.35**	.09	1.46**	(.10)
Parenting stress					.98	.05
Parental warmth					.83**	.09
Spank					2.99**	.36
Frequent TV viewing					4.41**	.42
Constant	-6.93**	1.44	-10.87**	2.02	-7.62**	2.85
-2 log likelihood			608.31		585.88	
					560.29	

NOTE: CPS = Child Protective Services.

a. A dummy variable indicating missing information on the household income measure was included in the model, and income range values were set to the median value in the original income measure.

* $p < .10$. ** $p < .05$.

Table 3 shows the results of multivariate analyses predicting CPS neglect reports. Model 1 shows the results for demographic and other control variables, excluding our key indicators of poverty and

parenting. Results indicate that having a history of CPS involvement is strongly associated with neglect reports subsequent to the IFS-CWB interview. The older the age of a respondent's youngest child, the

lower the risk of CPS neglect reports; and the greater the number of children in the care of a respondent, the higher the risk of this outcome. Respondents who report having a learning disability are more likely to be associated with neglect reports. Interestingly, respondents who were parents as teenagers have a lower risk of neglect reports.

Including poverty indicators in Model 2 significantly improves the fit of the model ($\chi^2 = 22.4$, $df = 6$, $p < .005$). However, the only poverty indicator associated with an increased risk of CPS reports of neglect is perceived hardship, when controlling for demographics and other correlates of neglect. The inclusion of the parenting controls in Model 3 does not explain this effect, although the employment variable reaches marginal statistical significance ($p < .06$) in this model, suggesting a suppression effect related to spanking. Because spanking is positively associated with CPS neglect reports and negatively associated with employment, its exclusion from Model 2 suppresses the effect of employment on CPS neglect reports. TANF receipt, household income, and material hardship remain statistically insignificant in the final model.

The inclusion of the parenting indicators in Model 3 significantly improves the overall fit of the model ($\chi^2 = 25.6$, $df = 4$, $p < .001$). Parental warmth (inversely related to CPS neglect reports), spanking, and frequent television viewing by the target child are all significant predictors of neglect reports. Respondents who report that the target child was spanked in the past week are 3 times more likely to have a neglect report associated with this child (as the alleged victim) or themselves (as the alleged perpetrator) than respondents whose child was not spanked. Respondents with a target child who watches television frequently (e.g., more than 4 hours per weekday) are more than 4 times more likely to have a CPS neglect report associated with the target child or the respondent than those whose children watch less television.

Other significant predictors in the final model include prior CPS involvement and learning disabilities associated with the respondent (both positively and strongly associated with CPS neglect reports subsequent to the IFS-CWB interview). Cohabiting with a nonmarital partner and having a youngest child who is female are both positively and moderately associated with CPS neglect reports. The target child's age is inversely associated with neglect reports. The effects of teenage parenthood and education level of the respondent, observed in Model 1, disappear in the full model.

DISCUSSION

Results from our analyses show that within an economically disadvantaged sample, particular aspects of poverty and parenting are more strongly associated with physical child neglect reports than others. In predicting the likelihood of CPS reports for reasons of neglect, statistically significant poverty-related effects were found for perceived hardship (positively associated with CPS neglect) and proportion of quarters with employment (inversely related to CPS neglect). The employment effect did not emerge until parenting characteristics were controlled, indicating a suppression effect associated with spanking as a discipline strategy. Although it is not possible from this analysis to identify the causal direction of the inverse relationship between employment and spanking, it seems more plausible that employment (or any unmeasured characteristics associated with employment) leads to less reliance on spanking than spanking to less employment. More frequent work is also associated with higher household incomes, suggesting that work may help relieve financial stress, which could indirectly affect a parenting technique such as spanking. These findings illustrate the importance of assessing the roles of poverty and parenting simultaneously in studies that seek to understand the links between poverty and child maltreatment.

Our analyses also reveal the importance of assessing the role of several aspects of poverty and parenting rather than relying on a single measure to capture these important correlates of child neglect. Many studies use single indicators such as household income or welfare status. These particular poverty indicators were insignificant in our analysis, despite finding strong effects for welfare receipt on subsequent CPS reports in an earlier analysis using the complete IFS sample (Slack, Holl, Lee, et al., 2003). Differences in the samples (e.g., the present study involves a subset of IFS families with young children), the relative timing of the analyses (e.g., the earlier analysis involved a risk period ending in 2001), and the focus on CPS reports for only neglect in the present study may explain the different results. Variations in household income and welfare receipt in the IFS-CWB subsample may not have been great enough to generate significant effects. However, we find that one's perception of economic hardship is a robust predictor of future neglect reports, suggesting that self-reports of hardship could be an important signal for interventions with families to prevent subsequent neglect.

Several parenting indicators were also related to neglect reports. Parents who received higher scores

for parental warmth were less likely to be associated with subsequent CPS intervention for reasons of neglect. Parents who used spanking as a discipline strategy were more likely to be associated with CPS neglect reports than those who did not use spanking as a discipline strategy. To the extent that spanking is associated with other problematic parenting practices, such as ignoring a child's material or emotional needs, this finding seems reasonable, although we did not find that spanking was associated with other potentially problematic parenting characteristics in the present analysis (see Table 2). The existing research on corporal punishment is inconclusive about whether any corporal punishment, rather than more severe or culturally inappropriate forms of physical discipline, leads to poor child outcomes (Baumrind, Larzelere, & Cowan, 2002; Gershoff, 2002). We also explored the possibility that the effect of spanking was being driven by the cooccurrence of neglect with other forms of maltreatment, including physical abuse. However, fewer than 10% of the children in our sample experienced a report of physical abuse in addition to neglect. Results of our analyses persisted even when these families were removed from the analysis. In light of these results, more research is needed to understand the nature of the observed link between spanking and neglect.

Parents who allowed their young children to watch television frequently are also more likely to be associated with future CPS reports for neglect. There are several possible explanations for this finding. One is that frequent television viewing is an indication of less frequent and lower quality interactions between a parent and child. Frequent television viewing has been associated with other adverse outcomes for children, including obesity (Saelens et al., 2002), lower academic achievement (Anuradha & Bharathi, 2002), aggressive behaviors (Johnson, Cohen, Smailes, Kasen, & Brook, 2002), and attention deficit hyperactivity disorder (Christakis, Zimmerman, DiGiuseppe, & McCarty, 2004), demonstrating that it is a correlate of other childhood problems that may also be associated with neglect. A second possibility is that some parents use television as a substitute for adequate supervision and may leave a young child alone or unmonitored, increasing the risk of accidents or injuries to the child. Third, some children may possess characteristics that make them more difficult to manage, and their parents may allow their child to engage in frequent television viewing because it offers a respite from a stressful, demanding caregiving routine. These same child characteristics, however, may also be related to an increased risk of neglect. In our analysis, the association between frequent television

viewing and subsequent neglect reports was relatively strong (odds ratio 4.41, $p < .001$). This finding warrants future research to understand the underlying mechanisms of this association.

Our mediation tests suggest that certain indicators of poverty may be associated with the risk of physical child neglect. In particular, respondents who perceive that their financial situations are less adequate have a greater risk of being associated with a subsequent CPS neglect report than respondents who report more adequate economic resources. This relationship was not explained by the inclusion of parenting controls or other controls typically correlated with neglect. Employment was also inversely (albeit marginally) associated with neglect reports, controlling for parenting characteristics.

Our analyses have several important limitations. Although we relied on several different measures of poverty and parenting, our selection of measures is not exhaustive, nor does it necessarily represent the most critical elements of poverty or parenting in terms of their associations with child neglect. We did explore other measures, including actual earnings and TANF grant amounts, various transformations of household income, and food insecurity. These measures did not predict neglect reports in any of our models, and they did not improve the fit of the models reported here. It is important to reiterate, however, that our sample is drawn from an economically disadvantaged population (i.e., current and former welfare recipients). Future research with more economically diverse populations should continue to explore these and other aspects of poverty as they relate to multiple forms of maltreatment. Other parenting measures that were explored included various disciplinary techniques, such as verbal abuse, nonviolent discipline, and reasoning with a child; however, these discipline tactics were not selected for inclusion in our models because they were measured at the family level rather than associated with the target child. Nonetheless, there are other aspects of both poverty and parenting that are potentially important to explore. With additional data from subsequent IFS-CWB survey years, we will be able to incorporate additional measures in our models.

Another limitation to our study is the various assumptions made about our measures. For example, we make the assumption that frequent television viewing by young children is a proxy for poor parenting practices. However, some parents may only allow their young children to view age-appropriate programs or view television with their children while engaging in other activities (e.g., playing or talking with the child). There may also be other correlates of televi-

sion viewing and neglect reports not included in our models that introduce bias in our results. Also important to recognize is that although we find that several aspects of parenting are related to CPS neglect reports, we cannot in the context of this analysis determine the extent to which these parenting characteristics are influenced by social stressors in the environment, which may be partially responsible for neglect outcomes.

As stated earlier, we rely on reports of neglect to CPS agencies rather than on a broader measure of neglect that includes families in which neglect or risk of neglect is present but undetected by CPS. It may be that reported neglect represents the more serious situations of neglect, but it is also likely that some unreported neglect is highly problematic for children. Given the very young ages of the target children in the study, they may be engaged in fewer contexts outside of the home (e.g., school) and thus be less likely to be noticed by mandated and voluntary reporters.

Finally, it is important to state that our study design does not permit us to draw conclusions about causality from the analyses. Although the longitudinal design and our ability to adjust for nonresponse in our analyses add strength to our conclusions, these strategies do not overcome key potential biases inherent to quasi-experimental studies. For this reason, our findings should be viewed as correlational.

CONCLUSION

In this analysis, we attempt to explore the well-documented association between poverty and child neglect by attending to the many complexities of this relationship, including whether different dimensions of poverty have a direct or indirect (through parenting characteristics) effect on this outcome. We take advantage of a longitudinal study of low-income families to assess within-group variation of CPS neglect reports, using multiple indicators of poverty and parenting to predict the outcome—that is, CPS neglect reports.

Our results show that specific aspects of poverty and parenting are more predictive of CPS neglect reports than others, that it is important to simultaneously analyze the effects of poverty and parenting characteristics, and that several aspects of poverty appear to have a persisting effect on physical neglect when controlling for parenting characteristics and other key correlates of child maltreatment.

The finding that lower employment and perceived material hardship were associated with CPS neglect reports even after controlling for parenting characteristics suggests that the conceptualization and

design of child neglect prevention strategies must include efforts to address the material needs of families. If poverty and economic strains lead to child neglect irrespective of parenting quality, interventions to prevent neglect, such as parenting classes, are unlikely to be highly successful if the material needs of families are not simultaneously addressed.

With respect to parenting characteristics, our findings suggest that various indicators of parenting might be important to assess in child neglect prevention efforts, including parental warmth, use of physical discipline strategies, and amount of television viewing by young children. Although these indicators should not be viewed as markers of neglect per se, they may help service providers gain a broader understanding of the parenting context in the home, which in turn could be used to develop an intervention strategy that is effectively tailored to the specific family.

Further research will explore additional indicators of poverty and parenting, including the use of emergency assistance and community-based resources, aspects of parent-child attachment, and father involvement. Interactions between poverty and parenting and their effects on child neglect outcomes will also be explored, as will interactions between both poverty and parenting and various demographic characteristics (e.g., family structure, age of caregiver, and race and ethnicity of caregiver). In addition, we are currently validating a neglect risk scale that will be used as an outcome measure to further explore the relative and interactive effects of poverty and parenting. Given that many situations of neglect go unreported to CPS, such information should greatly inform prevention and intervention efforts with families at risk for this form of maltreatment.

NOTES

1. Permission to access administrative data on family members was a criterion for participating in the Illinois Families Study: Child Well-Being (IFS-CWB) survey supplement; therefore, 100% of the IFS-CWB respondents agreed to this request.

2. Risk of neglect is an allegation that can be considered as grounds for intervention in Illinois. It is distinct from other allegations of neglect in that neglect need not have already occurred.

3. For the latter scenario, neglect allegations were included in the dependent variable only if they occurred after the birth date of the youngest child.

4. The field period for the initial IFS-CWB interviews was February to September 2001.

5. Illinois used the term *indicated* to denote allegations of abuse or neglect that are supported by an investigation, as

opposed to the more widely applied term *substantiated*, used in many states.

6. These items include the following: "My financial situation is better than it's been in a long time," "I worry about not having enough money in the future," "These days I can generally afford to buy the things we need," and "There never seems to be enough money to buy something or go somewhere just for fun."

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