Effects of Poverty on Home Environment:
An Analysis of Three-Year Outcome Data for Low Birth Weight Premature Infants

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Investigated the relationship between poverty and parenting in a sample of low birth weight (≤ 2,500 grams) premature (LBWPT) infants (gestation ≤ 37 weeks) who were control subjects in the Infant Health and Development Program. When classified using federal poverty levels, poor families scored lower on the HOME inventory (used to measure the caregiving environment) than nonpoor families. A regression model including poverty, race, site, and representative environmental, maternal, and child variables accounted for 60% of variance in total HOME scores. Poverty and maternal IQ had significant and independent effects on HOME scores, whereas maternal distress accounted for little of the variance. In a LBWPT sample, our results find a strong relationship between parenting and poverty, suggest a modest role for maternal psychological distress in this relationship, and indicate that the influence of poverty likely extends beyond commonly measured environmental, maternal, and child factors.

KEY WORDS: poverty; parenting; home environment; low birth weight; premature; infants

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Infants and children growing up in poverty are more likely to have health problems, cognitive delays, and behavioral problems when compared with children not living in poverty (Duncan, 1993; Klerman, 1991; Mcloyd, 1990; Ramey & Campbell, 1991; Werner, 1989; Wise & Meyers, 1988). The term “double jeopardy” has been applied to these children because they are not only exposed more frequently to risk factors, but experience more serious consequences from these risks (Bradley, Whiteside, et al., 1994a; Parker, Greer, & Zuckerman, 1988).

It is well known that children with the biological risk factors of low birth weight and prematurity (LBWPT) are more likely to manifest developmental delay (Aylward, Pfeiffer, Wright, & Verhulst, 1989). These delays can affect academic and cognitive performance in elementary school (Brandt, Magyary, Hammond, & Barnard, 1992), and cognitive and behavioral development in adolescence (Levy-Shiff, Einat, Mogilner, Lerman, & Krikler, 1994). Infants exposed to both biological and environmental risk factors have an increased likelihood of developmental problems (Aylward, 1992). Infants at biological risk may be more susceptible to adverse environmental influence than are normal babies. For example, in a sample of 114 medically fragile infants born to poor urban families, a severe decline in cognitive status noted at 28 months was associated with social class (Escalona, 1982).

Since approximately 20% of children in the United States live in poverty (Hernandez, 1993), and increasing numbers of infants at biological risk are surviving the neonatal period, more research aimed at understanding the processes by which poverty contributes to developmental problems in medically compromised children is warranted. For example, if income per se is the problem then interventions directed at providing a minimum income are indicated. However, if psychological and social factors associated with poverty are critical, then interventions addressing these conditions are required (Huston, 1991).

Until recently little attention was paid to the processes by which poverty influences developmental outcome (Huston, 1991; Mcloyd, 1990). Although researchers have described several mechanisms that may account for these effects (e.g., lack of adequate food and goods secondary to low income and inadequate access to health care services), the low levels of stimulation and support which characterize the home environments for poor children are thought to play the largest role in developmental outcome (Boyce & Jemerin, 1990; U.S. Department of Health and Human Services, 1985). The need for consistent, stimulating, and responsive parenting is thought to be even more important in the case of LBWPT infants living in poverty as these infants also have to overcome the effects of biological risk factors.

Several authors have discussed ways in which poverty may influence parenting. McAdoo (1988) proposed that poverty creates stresses and frustrations which constrain parents from providing adequate care and disrupts the formation of emotional bonds normally present in marriage and extrafamily networks. It
has also been suggested that adults living in poverty have often experienced adversity during their own childhood, which may leave them unprepared to, and unable to, meet the needs of their own children (Egeland, Jacobvitz, & Sroufe, 1988).

Psychological distress resulting from economic hardship has been proposed as a mediator in the relationship between poverty and parenting behaviors (Lempers, Clark-Lempers, & Simons, 1989; McLoyd, 1990). Psychological distress resulting from an excess of negative life events, undesirable chronic conditions, and the absence and disruption of marital bonds can precipitate parenting behaviors such as punitiveness, inconsistency, and unresponsiveness.

Although the quality of parenting and the home environment probably differs between poor and nonpoor families, poverty is not synonymous with inadequate parenting or environmental conditions. First, many children growing up in poverty do not demonstrate deficits in cognition or emotional adjustment, and have been called “resilient” (Bradley, Whiteside, et al., 1994a, 1994b; Rutter, 1987). Second, the quality of parenting that children receive is only moderately correlated with socioeconomic status (Belsky, 1984; Bradley & Caldwell, 1984). Some authors argue that poverty may have little direct and independent effect on parenting, but instead increases the likelihood of poor outcomes through other more proximal factors such as increased maternal stress, crowded living conditions, and a higher proportion of single-parent households (Halpern, 1993).

Since parenting is itself a complex, multidimensional set of processes and conditions, it is likely that poverty influences parenting via multiple pathways. For the purposes of this study we conceptualized three ways poverty can influence parenting. The first is a direct effect on caregiving resulting from restricted access to resources that parents need in order to provide optimal care. Parents may not have enough money to provide an adequate physical environment resulting in unsafe, unhygienic, and crowded living conditions. Further, parents may be unable to provide play materials for their children or take them on outings and provide them with a variety of social learning experiences. The second way poverty can influence parenting is through parental and child cofactors. These cofactors are characteristics of parents and children whose likelihood may be increased by poverty. Children living in poverty are more likely to have poor health, developmental problems, and poor social functioning; factors that influence the nature of parenting. Poverty cofactors at the parental level include stress caused by economic hardship which decreases parents’ coping responses and can lead to psychological distress. Third, other parental and child characteristics may be important in shaping the caregiving environment. Low parental IQ, limited education, and young maternal age often co-occur with poverty and exacerbate its effects. Such factors also increase the likelihood that a family will live in poverty.

The aim of the present study is to evaluate data from a follow-up study of
LBWPT infants and investigate the relationship between poverty and the quality of the caregiving environment in this population. Specifically, we examined the extent to which the family environment (HOME scores) was related to lack of resources (poverty itself), poverty cofactors (i.e., conditions that are associated with poverty, such as maternal distress and child health status), and a second group of cofactors of poverty that are more distally related to low income per se (maternal education, maternal cognitive competence, child temperament). We also hypothesized that maternal psychological distress would contribute significantly to the nature of parenting, given the postulated mediational role of psychological distress in determining the nature of parenting in conditions of poverty in the non-LBWPT population (McLoyd, 1990).

METHOD

Subjects

The subjects in this study were low birth weight (≤ 2,500 grams), preterm (≤ 37 weeks gestational age) infants enrolled from hospitals in eight cities (Little Rock, AR; Bronx, NY; Boston, MA; Miami, FL; Philadelphia, PA; Dallas, TX; Seattle, WA; New Haven, CT). Subjects were participants in the Infant Health and Development Program (IHDP); a randomized clinical trial assessing the effects of intervention on the developmental outcome of LBWPT infants in the first 3 years of life, which studied a total of 985 infants and their families. The IHDP sample, study design, enrollment criteria, measures, and primary outcomes have been described elsewhere (Infant Health and Development Program, 1990).

In the present study, infants receiving the intervention were excluded, to avoid any confounding effects that the intervention may have had on parenting and the family environment. The sample, therefore, comprised the 608 control group infants in the original IHDP sample. Poverty thresholds were based on household income (e.g., $7,500 for families of 2, $15,000 for families of 4, 5, or 6, $25,000 for families of 8 or more; Bradley et al., 1994a,b). Families were considered to be living in poverty if they were below these thresholds at the 12, 24, and 36 month assessments. This chronically poor group, n = 159 (poor), was compared with all other families in the control sample, n = 437 (nonpoor).

Procedures

All infants and their families were assessed at 40 weeks postconceptional age, and at 4, 8, 12, 18, 24, 30, and 36 months gestation-corrected age. Infant
and family data were collected at these visits. Cognitive assessments were performed at 12, 24, and 36 months of age and behavioral data were collected at 24 and 36 months of age. Home visits were made at 12 and 36 months to assess the quality of parenting and the home environment.

**Measures**

*Parenting/Caregiving Environment.* The dependent variable used in this study was the Home Observation for Measurement of the Environment (HOME) Inventory (Caldwell & Bradley, 1984). The HOME Inventory is designed to assess the quality and quantity of cognitive, social, and emotional support available to a child. The HOME utilizes an observation/unstructured interview format to measure specific interactions between caregiver and child, various objects and events that might stimulate the child, and a variety of experiences provided in the home or by family members that offer opportunity for growth and development. There have been many studies documenting the technical merit of the HOME and revealing a significant relationship between HOME Inventory scores and children’s language development, intellectual performance, and academic achievement (e.g., Bradley & Rock, 1985; Caldwell & Bradley, 1984). Bradley (1989) reported moderate correlations between specific aspects of the home environment (e.g., parental responsivity) in infancy and IQ in the preschool years.

The Early Childhood version of the HOME was completed during a home visit when the child was age 36 months. Both the child and primary caregiver were present. This version of the HOME consists of 55 items clustered into eight subscales: learning materials, stimulation of communicative competence, physical environment, parental nurturance and responsivity, academic stimulation, modeling and encouragement of social maturity, variety in experience, and acceptance of the child. Items are scored in a binary (yes/no) manner and can be summed to obtain subscale scores or across the subscales to obtain a total HOME score.

*Environmental Variables.* Because previous analyses have shown differences between the communities within which the IHDP data collection sites were located (IHDP, 1990), we included site as an environmental variable. Race was categorized into white, black, and Hispanic using dummy-coded variables for black and Hispanic. Only 2.8% of the sample were not white, black, or Hispanic, and these subjects were excluded from the regression analysis. Other environmental features used as independent variables were density (the number of people in the house divided by the number of rooms) and living situation (whether the mother was living alone with her children or with other adults in the house). This information was collected using direct reports from the child’s primary caregiver. We used 36-month measures of both density and living situation to reflect current environmental conditions.
Maternal Variables. The maternal factors were education, intellectual functioning, mental health, and understanding of concepts of child development. Level of education was treated as a dichotomous variable (less than high school graduation vs. high school graduation or higher education) because we were interested in any differences due to the completion of high school, rather than differences attributable to a smaller unit of educational attainment. Maternal intellectual functioning was estimated using the Peabody Picture Vocabulary Test--Revised (PPVT-R). The PPVT-R provides an estimate of maternal IQ using a language based multiple-choice format (Dunn, 1981). A 12-item version of the General Health Questionnaire (GHQ; Goldberg, 1972; Goldberg & Huxley, 1980) was used to provide an estimate of maternal distress. Mothers reported any changes in various dimensions over the past few weeks (e.g., concentration, mood, decision making, self-confidence, self-esteem, and changes in sleep patterns). The mother’s understanding of the factors and processes that influence children’s development was assessed using the Concepts of Development Questionnaire (CODQT) which asks parents to indicate whether they agree or disagree with statements related to parenting that are based on developmental concepts (Sameroff & Feil, 1985). A total score on the CODQT was used in this analysis. Maternal measures taken at 12 months were used in this analysis for all variables except maternal distress. We were interested in how these variables, along with poverty, would influence 36-month HOME scores. Variables for which we used data collected at the 12-month period would not be expected to change significantly between 12 and 36 months. However, because of the cyclic nature of maternal psychological distress, we chose to include the GHQ measure taken at the 36-month visit.

Child Variables. Three child characteristics were included as independent variables. Child temperament at 12 months was assessed using a modified version of the Bates Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979). The ICQ is a parent-report measure that assesses difficultness, sociability, adaptability, and persistence. The total ICQ score was used in this analysis. Intellectual functioning at 12 months was estimated using the mental development index from the Bayley Scales of Infant Development (Bayley, 1969). Infant health status was assessed using the neonatal health index (NHI), which describes the overall severity of illness in the perinatal period. The NHI was calculated as the length of stay (LOS) in the hospital corrected for birth weight, since LOS is codetermined by degrees of illness and by degree of immaturity; very immature infants may stay in the hospital longer than more mature infants who are relatively sicker (Scott, Bauer, Kraemer, & Tyson, 1989).

All the assessment instruments chosen for inclusion in the IHDP study were selected after an extensive review of instruments available to assess a particular domain. The rationale for inclusion of a particular instrument is detailed in the IHDP Research Plan (1988).
RESULTS

Table I presents results from comparisons made between poor and nonpoor samples. As expected, there was a higher percentage of African American families (73%) in the poor as compared to the nonpoor (44%) group. Despite the study criteria providing some control for both gestational age and birth weight of the infants, by restricting the range of these parameters, infants in the poor group had a lower mean birth weight than infants in the nonpoor group. Maternal education levels also differed between the two groups. Almost 70% of mothers in the nonpoor group had graduated from high school compared to 43% in the poor group. Mothers in the poor group had lower mean ages and levels of intellectual functioning. In the poor group 55.5% of the mothers received a PPVT-R score less than 70, compared to 26.1% in the nonpoor group.

Mean subscale scores and total HOME scores for the poor and nonpoor groups are shown in Table II. Total HOME scores differed significantly between the groups with the total score for the poor group being approximately 1 standard deviation lower than that for the nonpoor group. There were also significant differences between all subscale scores except for the acceptance scale, indicating that poor children were being reared in less stimulating and responsive environments. For comparative purposes, normative data for the HOME inventory (Caldwell & Bradley, 1984) are also presented in Table II. Mean scores for the nonpoor group were similar to the normative data, with scores for the poor group being lower.

A regression equation was estimated with the total HOME score as the dependent variable. The relationships of environmental, maternal, and child

Table I. Demographic Characteristics of the Poor and Nonpoor Samples*

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th>Poor</th>
<th>Nonpoor</th>
<th>Test statistic, p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 159)</td>
<td>(n = 437)</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (%)</td>
<td>13</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>African American (%)</td>
<td>73</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Hispanic (%)</td>
<td>12</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Birth weight (grams)</td>
<td>1762.4</td>
<td>1791.4</td>
<td></td>
</tr>
<tr>
<td>Gestational age (months)</td>
<td>33.2</td>
<td>32.9</td>
<td></td>
</tr>
<tr>
<td>Mental Development Index</td>
<td>105.9</td>
<td>108.9</td>
<td></td>
</tr>
<tr>
<td>Maternal age (years)</td>
<td>23.1</td>
<td>25.6</td>
<td></td>
</tr>
<tr>
<td>Maternal IQ</td>
<td>68.4</td>
<td>86.0</td>
<td></td>
</tr>
<tr>
<td>Maternal education</td>
<td>42.8</td>
<td>69.8</td>
<td></td>
</tr>
</tbody>
</table>

*Exact numbers in each analysis varied because of missing data; range = 549 to 608.

*Difference significant after Bonferroni correction.
Watson, Kirby, Kelleher, and Bradley

Table II. HOME Scores at 36 Months

<table>
<thead>
<tr>
<th></th>
<th>Poor (n = 142)</th>
<th>Nonpoor (n = 349)</th>
<th>Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Academic stimulation</td>
<td>3.3</td>
<td>1.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Language stimulation</td>
<td>5.7</td>
<td>1.4</td>
<td>6.3</td>
</tr>
<tr>
<td>Learning stimulation</td>
<td>3.7</td>
<td>2.6</td>
<td>6.1</td>
</tr>
<tr>
<td>Modeling</td>
<td>2.1</td>
<td>1.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Physical environment</td>
<td>4.4</td>
<td>1.8</td>
<td>5.8</td>
</tr>
<tr>
<td>Variety of experience</td>
<td>4.6</td>
<td>1.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Naturance and responsivity</td>
<td>4.5</td>
<td>1.8</td>
<td>5.4</td>
</tr>
<tr>
<td>Acceptance</td>
<td>2.9</td>
<td>1.1</td>
<td>3.1</td>
</tr>
<tr>
<td>HOME Total</td>
<td>31.3</td>
<td>8.1</td>
<td>39.4</td>
</tr>
</tbody>
</table>

variables that are cofactors with poverty were examined. The role of maternal psychological distress in the relationship between poverty and parenting was also tested using this regression model. A multiple linear regression model was fitted using forward stepwise inclusion of the variables. The model is presented in Table III. Poverty was found to have a significant independent main effect in the regression model. Race and site were also statistically significant variables in the

Table III. Multiple Regression Model with HOME Scores as the Outcome Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized b estimate</th>
<th>Partial R²</th>
<th>F</th>
<th>Cumulative R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>.16</td>
<td>.16</td>
<td>12.67*</td>
<td>.413</td>
</tr>
<tr>
<td>Maternal IQ</td>
<td>.18</td>
<td>.23</td>
<td>42.96*</td>
<td>.467</td>
</tr>
<tr>
<td>Density</td>
<td>-.23</td>
<td>.05</td>
<td>13.13*</td>
<td>.521</td>
</tr>
<tr>
<td>Poor</td>
<td>-.12</td>
<td>.01</td>
<td>13.93*</td>
<td>.559</td>
</tr>
<tr>
<td>Concepts of development</td>
<td>.01</td>
<td>.01</td>
<td>23.67*</td>
<td>.570</td>
</tr>
<tr>
<td>Child IQ</td>
<td>.17</td>
<td>.02</td>
<td>14.29*</td>
<td>.586</td>
</tr>
<tr>
<td>Child temperament</td>
<td>-.12</td>
<td>.01</td>
<td>13.93*</td>
<td>.559</td>
</tr>
<tr>
<td>Black</td>
<td>-.04</td>
<td>.01</td>
<td>14.29*</td>
<td>.599</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.05</td>
<td>.06</td>
<td>4.96*</td>
<td>.664</td>
</tr>
<tr>
<td>GHQ</td>
<td>-.08</td>
<td>.01</td>
<td>4.96*</td>
<td>.664</td>
</tr>
<tr>
<td>Neonatal health</td>
<td>.05</td>
<td>.00</td>
<td>1.72*</td>
<td>.660</td>
</tr>
</tbody>
</table>

*N = 436; overall model F(19, 416) = 33.68, p < .001.

*p < .05.

*p < .001.

*Not significant.
regression model. In this analysis both black and Hispanics were found to have significantly lower HOME scores than whites when all other variables were controlled for. As hypothesized, maternal psychological distress also was significant in the estimation of HOME scores. However, the impact after controlling for other factors was minimal. The variance in total HOME scores accounted for by the regression model was 60% and the standardized coefficients were all in the expected direction. For example, increasing household density and increased maternal distress had a negative effect on total HOME scores, while increasing maternal IQ and increased knowledge of concepts of child development made a positive contribution to the HOME scores.

DISCUSSION

This study used data collected from a large sample of infants, enrolled in a well-controlled longitudinal study of the development of LBWPT infants, to investigate the relationship between poverty and parenting. The sample of families we identified as living in chronic poverty had similar characteristics to those reported in the literature, that is, low maternal education and IQ and lower infant birth weight. Although over half the women in the poor sample scored below 70 on the PPVT-R (2 SD below the mean), it is unlikely that many of these women were actually mentally retarded. The PPVT-R gives only an estimate of maternal IQ and may underestimate actual intelligence in this population as it is a language-based assessment. Further a significant delay in adaptive functioning is required to make the diagnosis of mental retardation, and since most of these mothers were functioning independently in the community they would probably not have shown significant delays in adaptive functioning.

Our results confirm previous research that has documented generally lower HOME scores in low SES or impoverished samples (Bradley & Caldwell, 1984). Of interest was the finding that scores for all but one of the HOME subscales were significantly lower for the chronically poor sample. This indicates that poverty was not just affecting one aspect of parenting but was influencing many of the components of the caregiving environment. HOME subscales assessing both the parent's ability to provide an adequate physical surroundings and components of an appropriate learning environment (physical environment and academic, language, and learning stimulation) and the parent's ability to support their child's development at an emotional level (nurturing and responsivity) were all significantly lower in the chronically poor group.

Although not surprising, these results provide support for the notion that chronically poor children live in less stimulating and supportive environments and experience less than optimal parenting. The resultant milieu is less than ideal for many poor children, and is likely a major factor in the increased risk for
developmental problems seen in this population. With regard to the process by which poverty influences parenting and the nature of the home environment, we propose that poor families are less able to provide stimulating environments and adequate nurturance because of both the direct and indirect effects of poverty. For example, a lack of resources to support parenting activities would be a direct effect and excess energy requirements needed to obtain basic necessities or a lack of hope for the future would be an indirect effect of living in chronic poverty.

The proposed multipathway process by which poverty influences parenting is supported by the regression model developed to account for variance in HOME scores. We found that poverty exerted an effect on HOME scores that was independent of other factors known to influence parenting; and we also found that a number of cofactors, which were more prevalent in the poor group, made independent contributions to the prediction of HOME scores.

Our analysis of the relationship between poverty and parenting was restricted because of the use of an existing data set. When considering the HOME inventory as a measure of the caregiving environment, it is important to acknowledge that factors related to parenting are not the only contributor to HOME scores. It is also known that HOME scores differ as a function of culture and family structure (Bradley, 1993; Bradley & Caldwell, 1984; Bradley, Mundfrom, Whiteside, Casey, & Barrett, 1994). Parental and child characteristics that are relatively independent of poverty also contribute to variability in HOME scores. For example, the presence of a disability in either the child or parent may be important, but was not included in this model. Further, we were not able to study all of the poverty cofactors that likely influence the relationship between poverty and parenting, such as social support, neighborhood characteristics, the cultural milieu, or marital satisfaction.

In addition to these limitations, the external validity of the study may be restricted by the sample chosen and the method selected for identifying the poor group. With regards to the former, the sample consists of exclusively inborn preterm low birth weight infants. Such infants are more vulnerable biologically and are more likely to be from low-income households. Nevertheless, this is the largest sample of LBWPT infants studied this intensively. The definition of the impoverished group may also present a bias in the study. Only families that were consistently impoverished for 3 years were included in the poor group. This left many families with low incomes in the nonpoor group. It is likely that our conclusions would be strengthened by greater income disparity between the groups. The results of this study suggest that poverty is longitudinally related to many aspects of parenting and may act through both direct and indirect processes.

Our results provide little support for previous models that have proposed psychological distress as a major mediator in the relationship between economic hardship and parenting behavior. McLoyd (1990) proposed that the source of this
psychological distress was an excess of negative life events, undesirable chronic conditions, and the absence and disruption of marital bonds. Belsky (1984) also suggested that parental psychological well-being was more important than either social support or child characteristics in terms of its relation to competent parental functioning. In this present study, increased concurrent maternal psychological distress was statistically associated with lower total HOME scores. However, only a small proportion of the variance was accounted for by maternal distress after controlling for other factors. In contrast, maternal IQ may be more central to caregiving among impoverished families. This finding is independent of maternal knowledge of child development. If maternal cognitive competence is more central to the quality of parenting and the caregiving environment, the potential for simple interventions to be successful seems remote.

This study of the relationship between poverty and the caregiving environment is unique in that it investigated the relationship in a population of LBWPT infants who were facing additional developmental risks due to biological risk factors associated with low birth weight and prematurity. In addition we chose to include in our “poverty group” only those families that were living in chronic poverty. In this group of infants with high biological and social risk factors, the caregiving environment was affected directly and indirectly by poverty. These results need replication, and if supported by other efforts, interventions designed to ameliorate the effects of poverty on parenting in this population will need to address a variety of issues. For example, the provision of adequate living conditions and resources to support parenting may be necessary. Poor parents may need to be provided with developmentally appropriate toys for their children. However, since maternal knowledge of child development was associated with better scores on the HOME, educational interventions would be needed to improve parental knowledge of child growth and development. Income support also seems relevant in that crowding in the home and poverty were both independent predictors of lower scores on the HOME. We also need to continue the search for other measurable poverty cofactors that will account for the influence of poverty on parenting. Children and families participating in the IHDP project have been followed up at further intervals beyond 3 years and this longitudinal data set will allow us to track the long-term effects of poverty. In addition, it may be that participation in the home and school-based intervention program that was evaluated in the IHDP study changed the nature of the influences of parenting in the poverty sample. These issues await further analysis.

REFERENCES


