Single Mother's Self-Efficacy, Parenting in the Home Environment, and Children's Development in a Two-Wave Study

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ABSTRACT

Using interview data from a sample of 178 single black mothers and their young children who were 3 to 5 years old at time 1 and 5 to 8 years old at time 2, this study examined the links between and among low-wage employment, mothers' self-efficacy beliefs, depressive symptoms, and a constellation of parenting behaviors (including maternal parenting in the home environment, the quality of the mother-nonresident father relationship, and the intensity of the nonresident father's contact with the child) in the preschool years to children's cognitive and behavioral functioning in the early-elementary school years. In general, the results support a model whereby the influence of mothers' employment on maternal parenting and child outcomes is largely indirect and mediated by perceived self-efficacy. Employment was related directly to higher self-efficacy, which in turn was associated with decreased depressive symptoms. Depressive symptoms were associated directly with the quality of the mother-nonresident father relationship and indirectly through the latter with the frequency of nonresident fathers' contacts with their children. More contact between nonresident fathers and their children predicted more warmth and stimulation for children in the home environment (i.e., more adequate maternal parenting), which in turn was associated directly with the children's subsequent behavioral and cognitive functioning in early elementary school. These results are discussed in the context of social cognitive theory and the 1996 welfare reform law.

INTRODUCTION

Social cognitive theory posits that people are self-organizing, proactive, and self-regulatory agents in the production of their desired outcomes (Bandura, 1999, 2001). Perceived self-efficacy—the belief that one has the power to produce effects by one's actions—influences aspirations and the strength of commitments to them, level of perseverance in the face of difficulties and setbacks, and vulnerability to stress and depression (Bandura, 1997; Latham, 1990). While there is a rapidly growing body of research on the role of perceived self-efficacy in parenting and on the negative influence of economic hardship on efficacious parenting (Ardelt & Eccles, 2001; Elder, Eccles, Ardelt, & Lord, 1995; Gross, Conrad, Fogg, & Wothke, 1994; Jackson, 2000; Jackson & Huang, 2000), little is known about the mediational roles that maternal self-efficacy beliefs and parenting in the home environment play in linking low-wage employment among single black mothers with preschoolers to their children's subsequent behavioral and cognitive development.

Given the 1996 welfare reform law which places strict time limits on welfare receipt and demands that the poor go to work (even mothers with very young children, low skills, and low wages), many single mothers have left welfare for work but still do not earn enough to raise their families out of poverty (Ellwood, 2000). Income plays an especially potent role in American family life, because the resources necessary for sustaining the health and well-being of family members and furthering the development of children are dependent on the family's financial resources (Bronfenbrenner, 1988). In this study, we focus on single black mothers because they are disproportionately represented among the very poor and the welfare-dependent (Duncan, 1991; Wilson, 1987, 1996).

Some argue that children develop more optimally when there is both a primary caregiver (most often the mother) who is committed to the well-being of the child and another adult (most often the father) who gives support to the primary caregiver (see, for example, Bronfenbrenner, 1986). Little is known about how single black mothers and nonresident black fathers co-parent in poor and near-poor black families, and how their separate (but often conjoint) parenting behaviors influence the development of young black children, because most of the research on nonresident fathers' contacts with their children is based on samples of middle-class, divorced, mostly white fathers (Amato & Gilbreth, 1999; Seltzer, 1991; Shapiro & Lambert, 1999). We examine the determinative impact on preschool children's subsequent behavioral and cognitive development of mothers' perceived self-efficacy, parenting practices involving the relationship between single mothers and nonresident fathers, and the level of contact between these fathers and their children. We present longitudinal data from a sample of single black mothers living in New York City, all of whom were current and former welfare recipients with a child who was 3 to 5 years old at time 1 (1996-1997) and 5 to 8 years old at time 2 (1998-1999).

Background

The present study is part of a research program that involves a sample of single black mothers with a preschooler—current and former welfare recipients in 1995 before the passing of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). The mothers live in three low-income communities in New York City. This research focuses on the associations among low-wage maternal employment, financial strain, psychological well-being, parenting, and children's development over a 3-year period (Jackson, 1998, 1999, 2000, in press; Jackson, Brooks-Gunn, Huang, & Glassman, 2000;

Jackson, Gyamfi, Brooks-Gunn, & Blake, 1998; Jackson & Huang, 1998, 2000). The results to date reveal that employment—even low-wage employment—is associated with less depressive symptoms and greater self-efficacy among the mothers. Less depressive symptoms are associated with better parenting practices and fewer behavior problems among the preschoolers. More contact between the children and their nonresident fathers also is associated with fewer behavior problems in the preschool years which, in turn, are associated with better cognitive functioning in the early school years. Much of this evidence, except the last, comes from the cross-sectional (Time 1) data. The mechanisms that mediate these relations are largely unclear.

These results were used to inform the conceptual model, presented in Figure 1, that links low-wage maternal employment, mothers' self-efficacy beliefs, depressive symptoms, and a constellation of parenting behaviors (including maternal parenting in the home environment, the quality of the mother-nonresident father relationship, and the intensity of the nonresident father's contact with the child) in the preschool years (Time 1) to children's cognitive and behavioral functioning in the early-elementary school years (Time 2). In this conceptual model, the influence of mothers' employment status on maternal parenting and child outcomes is largely indirect and mediated by perceived self-efficacy. In social cognitive theory, perceived self-efficacy is a focal mechanism in human agency (Bandura, 1999, 2001). Unless people believe they can produce desired outcomes by their actions, they have little incentive to act or to persevere in the face of difficulties. Perceived self-efficacy is posited as a pivotal factor in parenting. Research on parenting lends support to this view (Ardelt & Eccles, 2001; Elder et al., 1995; Gross et al., 1994; Jackson, 2000; Jackson & Huang, 2000). The higher mothers' perceived efficacy, the less stress and depression they

experience, and the more they tend to engage in family strategies that promote their children's developmental opportunities.

The first link in the conceptual model concerns the association between maternal employment and perceived self-efficacy in the children's preschool years. In social cognitive theory, socioeconomic factors affect children's development through their impact on familial and self processes (Bandura, 1997, 2001). Unemployment and welfare receipt can weaken mothers' self-assurance, persuading them that they cannot influence or control important aspects of their lives. This feeling of vulnerability has been shown to extend into the parenting domain, undermining mothers' beliefs that they can influence their children's development (see, for example, Brody, Flor, & Gibson, 1999; Luster & Kain, 1987; Mirowsky & Ross, 1989). Elder and his colleagues (1995; Elder et al., 1995) have shown that economic hardship affects the course of children's development through its influence on familial processes (rather than directly) by undermining parents' sense of efficacy to promote their children's competencies and to protect them from environments that can compromise successful development. Others similarly have found that economic stresses and unemployment were associated with a diminished sense of childrearing efficacy among white families who experienced the farm crisis in Iowa in the 1980s and single-parent black families who experienced unemployment and work interruption in Michigan, also in the 1980s (McLoyd, Jayarantne, Ceballo, & Borquez, 1994; Simons, Whitbeck, Conger, & Melby, 1990). Thus, the proposed conceptual model specifies a direct link between mothers' employment status and perceived self-efficacy.

While a substantial body of research has related maternal depressive symptoms and the quality of the mother-father relationship to the quality of maternal parenting, less is

known about the mechanisms that mediate these relations. For example, studies have demonstrated that maternal depression is associated with diminished nurturance, less sensitivity, and increased negativity toward children (Colletta & Lee, 1983; Crnic & Greenberg, 1987); that mothers with poor relations with their child's father behave less optimally in the parenting role (Belsky, 1990; Cox, Owen, Lewis, & Henderson, 1989; Simons, Beaman, Conger, & Chao, 1993); and that fathers can have a positive effect on children's development (King, 1994a, 1994b; Parke, 1981; Patterson, Kupersmidt, & Vaden, 1990; Radin, 1981). Concerning the latter, however, much of the theorizing on nonresident black fathers and their relationship with their children has centered on financial child support (McLanahan, 1997; Teachman, 1990; for an exception, see Jackson, 1999).

The second phase in the proposed conceptual model concerns the associations among perceived self-efficacy, depressive symptoms, a constellation of parenting behaviors at time 1 (in the child's preschool years), and the influence of these on child outcomes at time 2 (in the early school years). Theoretically, people with high self-efficacy are likely to experience less stress and depression because they act in ways that make the environment more manageable and less threatening (Bandura, 1997). Thus, the paths from self-efficacy to depressive symptoms, to the quality of the mother-father relationship, to the frequency of the fathers' contacts with their children, to the mothers' parenting adequacy hypothesize that mothers higher in self-efficacy beliefs would be persistent in pursuing family strategies that promote their children's developmental opportunities, such as providing more warmth, support, and cognitive stimulation in the home environment. These mothers would be expected to expend greater effort in the face of reversals or setbacks and this would be associated with fewer depressive symptoms. The further prediction was that elevated levels

of mothers' depressive symptoms would interfere with the quality of the mother-nonresident father relationship that, in turn, would influence the amount of contact between nonresident fathers and their children. The literature provides considerable support for these hypothesized processes. In addition to studies already cited demonstrating a positive link between self-efficacy and more adequate parenting (Ardelt & Eccles, 2001; Elder et al., 1995; Gross et al., 1994; Jackson, 2000; Jackson & Huang, 2000), a number of studies have shown that depressed mood is associated positively with hostile, conflictual, uncommunicative relations with significant others (for example, Berkowitz, 1989; Brody et al., 1994; Conger et al., 1992; Downey & Coyne, 1990; Gotlib & McCabe, 1990). While much of this evidence comes from studies involving two-parent families and the effects of marital conflict on parenting behaviors and thereby child outcomes, it is not known whether similar relationships would emerge among other groups, inasmuch as none of these investigations have documented the links between maternal depressive symptoms and the co-parenting relationship between single black mothers and nonresident black fathers. McLoyd (1990) has shown on the basis of her review of the evidence on family processes affecting the functioning of children living in poor families that the frequency of contact between nonresident fathers and their children depends more on their relationships with the mothers of the children than on their relationships with the children themselves. The proposed conceptual model specifies the paths through which maternal depressive symptoms, the quality of the mother-nonresident father relationship, and the nonresident father's contacts with the child in the preschool years are linked with poor and near-poor black children's behavioral and cognitive functioning in the early school years through their mothers' parenting in the home environment in the preschool years.

This study extends research on the linkages among low-wage employment, family processes, and child outcomes in single-parent families. It focuses on individual differences by examining the mediational pathways through which low-wage employment and mothers' efficacy beliefs are associated with parenting; and how mothers' depressive symptoms, and the respective relations between and among single mothers, nonresident fathers, and their children serve as links to variation in young black children's development over time. The following analyses present an empirical evaluation of the conceptual model.

METHOD

Participants and Procedure

First interviewed between February 1996 and January 1997, participants in this study consisted of 188 current and former single-mother welfare recipients (93 employed, 95 nonemployed) and their preschool children at time 1. The mothers resided in three communities in New York City—Bedford-Stuyvesant in Brooklyn, Harlem in Manhattan, and Jamaica in Queens—with large numbers of low-income black families. Recruited through the Office of Employment Services of the New York City Human Resources Administration (HRA), the sample consisted of 266 randomly selected mothers with a 3- or 4-year-old child. For the initial interview, a 71% response rate was achieved (see, for example, Jackson, 1998, 2000; Jackson et al., 2000; Jackson et al., 1998). For the final interview (between July 1998 and December 1999), the sample consisted of 178 mothers (130 employed, 48 nonemployed) and their early school-age children; 95% of those first interviewed. One child died before the second interview.

For each of the two interviews, mothers and the focal children were visited in their homes for 1½ to 2 hours. During each visit, mothers completed a questionnaire focusing upon individual and family characteristics. At time 2, 158 teachers (89% of those sent a mailed questionnaire) completed an assessment of the children's adaptive language abilities in early elementary school. Mothers received $50 in total for their time; teachers received $25.

Measures

Corresponding to the model delineated in Figure 1, description of the measures proceeds across constructs from left to right. Except for single-item measures, all variables included in the analyses are scales whose values represent the mean. When calculating the mean value on scales, items were reversed as necessary so that a higher score indicates more of the attribute named in the label. Alpha coefficients were obtained for scales with multiple items.

Employment status. At each interview, mothers were asked whether they were employed and, if so, how many hours they worked on average each week. In the present analyses, employment status is a dichotomous variable indicating whether the mother was currently employed 10 or more hours a week at time 1 (coded: 0 = no, 1 = yes).

Perceived self-efficacy. The Mastery Scale (7 items, alpha = .70) was used to measure perceived self-efficacy (Pearlin & Schooler, 1978). This 4-point scale (1 = strongly agree to 4 = strongly disagree) measures the degree to which people feel that they have control over the things that happen to them. Sample items include the following: "I have little control over the things that happen to me," "There is little I can do to change many of

the important things in my life," and "I can do just about anything I really set my mind to do."

Depressive symptoms. The Center for Epidemiological Studies Depression (CES-D) scale (20 items, alpha = .88) was used to measure depressive symptoms. Mothers were asked to indicate on a 4-point scale (0 = less than once a day to 3 = most or all of the time) how often during the past week they felt depressed, lonely, sad, unusually bothered by things, or that they could not get going. The CES-D is not intended as a measure of clinical depression, but groups with scores of 16 or above are considered to be at risk for depression (Radloff, 1977).

Parenting. The quality of the mother-father relationship (10 items, alpha = .90) was assessed by asking mothers to indicate on a 5-point scale (1 = positive emotion to 5 = negative emotion) the extent to which words such as the following described their relationship with the focal child's father over the past two to three months: "enjoyable" to "miserable," "hopeful" to "discouraging," "rewarding" to "disappointing." The frequency of the nonresident fathers' contact with the focal children was indicated by mothers' responses to a single-item, 8-point scale (1 = child has never seen father to 8 = sees father almost every day) that asked how often the child sees the father. The Home Observation for Measurement of the Environment (HOME) measured maternal parenting. Designed to assess whether the child's home is an environment that enhances intellectual and emotional development and helps to prepare him/her for the challenges of school, the HOME is a well validated and widely used instrument (Bradley, 1989; Bradley & Caldwell, 1984; Caldwell & Bradley, 1984). The version used in this study (18 items, alpha = .67) includes maternal report items and interviewer observations that tap the regularity and structure of the family's daily

routine, the amount of intellectual stimulation available to the child, and the degree of emotional support and warmth provided by the parents.

Child outcomes. Child behavior problems at time 2 (30 items, alpha = .94) were assessed by asking mothers to indicate on a 3-point scale (1 = very much like my child to 3 = not at all like my child) the extent to which statements such as the following described their child's behavior during the last three months: "has sudden changes in mood or feeling," "is rather high strung, tense, and nervous," "feels others are out to get him/her," "hangs around with kids who get into trouble" (Peterson & Zill, 1986). Although answers reflect mothers' reports of their child's behavior, studies have found that mothers' reports reflect children's behaviors reported by teachers and assessed by observation (Conrad & Hammen, 1989; Richters & Pellegrini, 1989; Schaughency & Lahey, 1985). To measure cognitive development at time 2, the focal children's elementary school teachers completed the Adaptive Language Inventory (8 items, alpha = .95). This 5-point scale (1 = well below average to 5 = well above average) asked teachers to indicate the extent to which statements such as the following describe the child's verbal ability: "recalls and communicates personal experiences to peers in a logical way," "recalls and communicates the essence of a story or other sequential material which has been heard or read in school," "responds to questions asked in a thoughtful and logical way," "is easily understood when talking to teachers" (Hogan, Scott, & Bauer, 1992).

RESULTS

Description of the Sample

The final sample consists of 178 mothers and children (99 boys, 79 girls). On average, the mothers were 31.7 years of age at time 2; the focal children were 6.6 years old (range was 5 to 8). Close to a third of the mothers (31.5 percent) had completed high school and about half (52.8%) had some education beyond high school. Although we considered any education or training after high school education beyond, about 4 percent of the sample had a bachelor's degree. At time 1, the average employed mother (n = 90) worked 34.8 hours a week (SD = 12.8) and earned $4.34 an hour (SD = 4.83).

Nonresident fathers were 32.9 years of age. According to the mothers, 41 percent of these men had completed high school and 24% had some education beyond high school. We have no data on the fathers' employment statuses at time 1, but if we can make assumptions based on the time 2 data, almost half (47.2) were employed full time. The rest were employed either part time (8.4%), not at all (22.5%), or the mothers did not know (20.8%).

Descriptive Analysis

Table 1 presents the means, standard deviations, and correlations between the variables. In general, these results are in accord with our expectations. Specifically, being employed is significantly positively correlated with perceived self-efficacy, which is correlated negatively with depressive symptoms. The associations between mothers' depressive symptoms and the nonresident-father-mother-child variables are negative, as is that between depressive symptoms and parenting in the home environment. The latter, in turn, is associated with each child outcome in the expected direction. These relationships suggest promise for the test of the theoretical model and are elucidated in the path results that

follow. It is worthy of note, moreover, that the average mother in this study was at some risk for depression at time 1 with a mean score on the CES-D of 15.51; i.e., about 16.

Model Estimation

Path analytic models were constructed to test the hypothesized model (Bollen, 1989). Maximum likelihood estimates of the model parameters were computed using LISREL and EQS (Bentler & Wu, 1995; Joreskog & Sorbom, 1996). In a path analytic model, the total effect of one variable on another is the sum of the effects produced through each separate mechanism, or path, in the model. For example, in Figure 1, the total effect of mothers' depressive symptoms on maternal parenting (HOME score) is posited to be the sum of two paths, one direct (depressive symptoms → parenting) and the other, indirect (depressive symptoms → mother/father relationship → father/child contact → parenting). The contribution from each path is the product of the edge coefficients on that path. Each edge coefficient in the estimated model quantifies the size of the direct effect of one variable on another as the "change" in the expectation of the effect, given that we intervened to produce a one-unit change in the causal variable while holding all other variables constant. Mediated effects are understood in the following sense: Does a variable serving as an intervening variable transmit some of the "causal" effects of prior variables onto subsequent ones? For example, an effect constitutes mediation in our analyses if the product of the paths from *A* to *B* and *B* to *C* is significantly different from 0. If so, then *B* is considered to be a mediator of the effect of *A* on *C* (see, for example, Jackson et al., 2000). In addition, if *all* of the paths from one variable (*A*) to another variable (*C*) go through a third variable (*B*), and their product is significantly different from 0, then the association between *A* and *C* is considered to be *totally* mediated by *B*.

In addition to computing the chi-square for the difference between estimated and achieved values, the fit between the structural model and the data was evaluated by means of two standard indices: the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI). The GIF estimates the amount of variance explained by the model, and the AGFI adjusts this estimate by taking into account the degrees of freedom (Bollen, 1989). The model produced a nonsignificant chi-square ($p = .32$), a goodness-of-fit coefficient of .97, and an adjusted goodness-of-fit coefficient of .95 (see Fig. 2). In light of these criteria, the fit for the proposed model is excellent.

Inspection of the structural parameters shows that the path between mothers' employment status and perceived self-efficacy is consistent with the hypothesized effect, indicating that being employed is associated with higher perceived self-efficacy (beta = .22, $p < .01$), which in turn exhibits the expected negative relationship to depressive symptoms (beta = -.47, $p < .05$). Figure 2 shows, moreover, that depressive symptoms have the expected negative relationship to the quality of the mother-father relationship (beta = -.18, $p < .05$), indicating that mothers with fewer depressive symptoms had a better relationship with the nonresident fathers of their children, which in turn shows the expected positive relationship to the frequency of nonresident fathers' contact with their preschool children (beta = .41, $p < .01$). The path between father-child contact and mothers' parenting in the home environment is consistent with the hypothesized effect, indicating that contact between nonresident fathers and their children is associated with more adequate maternal parenting (beta = .15, $p < .05$). It should be noted that depressive symptoms also have a direct and negative relationship to mothers' parenting (beta = -.17, $p < .05$). Hence, as hypothesized, depressive symptoms are related negatively to mothers' parenting in the home environment

through two different mechanisms: one direct; the other, indirect, via the quality of the mother-father relationship and the frequency of the nonresident fathers' contact with the children.

Recall that all of the variables in the model antecedent to the child outcomes at time 2 (in early-elementary school) were measured at time 1 (when the children were preschoolers). We turn now to child outcomes at time 2. The association between maternal parenting in the preschool years and the children's subsequent cognitive development in early-elementary school (beta = .17, $p < .05$) and that between maternal parenting and behavior problems, also in early-elementary school (beta = -.29, $p < .01$), are as predicted. More explicitly, children whose mothers provided more warmth, support, and cognitive stimulation in the home environment in the preschool years appear to have significantly better adaptive language abilities and fewer behavior problems in early elementary school. In addition, the significant paths from maternal depressive symptoms, to the mother-father-child-relationship variables, to mothers' parenting in the home environment and, in turn, from the latter to both child developmental outcomes suggests that the influence of the antecedent variables in the model on the children's behavioral and cognitive development are mediated totally by the quality of the child's home environment (i.e., the mothers' parenting practices), as expected.

Turning to indirect effects, Table 2 shows that perceived self-efficacy is related significantly and indirectly to all of the parenting variables—mother-father relationship (indirect effect = .09, $p < .05$), father-child contacts (indirect effect = .04, $p < .05$), and mothers' parenting in the home environment (indirect effect = .08. $p < .05$)—and the directions of these associations are consistent with the theoretical expectation; that is, in all three cases, the relations to self-efficacy are positive. It should be noted that perceived self-

efficacy also displays a statistically significant indirect association with behavior problems (indirect effect = -.02, $p < .05$) transmitted through parenting. While the children's cognitive development is related indirectly neither to self-efficacy nor depressive symptoms at $p < .05$, the directions of these associations (both marginally significant at $p < .10$) are consistent with the theoretical expectation; that is, positive in the case of self-efficacy and negative in that of depressive symptoms.

Looking at the effect of the mother-father relationship (i.e., its direct and indirect effects taken together), this variable does not exhibit a relationship to either child outcome at $p < .05$, but it is clearly associated with father-child contact (total effect = .41, $p < .01$; see Table 2) and with mothers' parenting (indirect effect = .06 $p < .05$; see Table 2). The relation of father-child contact to mothers' parenting, moreover, is as expected. That is, mothers of children whose fathers maintained more frequent contact provided more warmth and stimulation in the home environment (direct effect = .15, $p < .05$).

The standard approach to estimating the strength of the relationships between variables like those in our model is first to specify a statistical model and then to calculate p-values relevant to the existence of particular relationships. This sort of statistical inference, however, is conditional on the model specification, a fact that is appreciated in theory but widely ignored in practice (Bollen, 1989; Spirtes et al., 2000). Put another way, given that coefficient estimates and standard errors can vary considerably with the model specification, even if one has high confidence in the theoretical model, the statistics can be illusory. Further, since we are dealing with complicated social relationships and a scientific setting in which the precise measurement of these relationships is difficult at best, it is unlikely that the

model that we conceptualized and estimated (even though well fitting) is the only plausible alternative.

To examine whether other models exist that also fit the data well but lead to very different scientific conclusions, we used two procedures available in TETRAD 4 (www.phil.cmu.edu/projects/tetrad/) to search for alternative well-fitting path models consistent with our background knowledge: PC algorithm (Spirtes, Glymour, & Scheines, 2000) and a more recent genetic-algorithm search (Harwood & Scheines, 2000). We imposed background knowledge by specifying three tiers of variables, such that no variable from a later tier could predict (i.e., have a path to) a variable from an earlier tier, although all other relationships were possible: *Tier 1:* employment status (time 1); *Tier 2:* mothers' self-efficacy and depressive symptoms, mother/father relationship quality, frequency of father/child contact, mother's parenting in the home environment (all at time 1); *Tier 3:* child's behavior problems and adaptive language ability (both at time 2). Over 22 million models are consistent with these theoretical constraints. Even so, TETRAD found only a few models that fit the data well, and the best fitting of these (Fig. 3) matches our theoretically-derived model (Fig. 2) quite closely. As noted in Figure 3, the best fitting computer-searched model has a small chi-square relative to degrees of freedom ($p = .47$), a goodness-of-fit coefficient of .97, and an adjusted goodness-of-fit coefficient of .95.

In both the theoretically-derived model and computer-searched (TETRAD) model, the effects of employment status on all of the other variables are mediated entirely by the mother's feelings of self-efficacy. In both models, the influence of every variable measured at time 1 on the children's behavioral and cognitive development is mediated entirely by the quality of the mothers' parenting in the home environment. In addition, both models show a

significant (and positive) path from the amount of contact between nonresident fathers and their children to the quality of the home environment (i.e., maternal parenting). Although the computer-searched model also shows direct paths from mothers' depressive symptoms to children's behavior problems (beta = .16, $p < .05$) and from mothers' perceived self-efficacy to parenting in the home environment (beta = .18, $p < .05$), the only important point of disagreement between our theoretically-derived model and the one discovered by computer search is the direction of the relationships between mothers' depressive symptoms, the quality of the mother-father relationship, and the frequency of contact between nonresident fathers and their children. More explicitly, in the theoretically-derived model, mothers' depressive symptoms predict both parenting in the home environment and the quality of the mother-father relationship; the latter, in turn, predicts the amount of contact between fathers and their children (see Fig. 2 and Table 2). In the model discovered by TETRAD, it is the amount of contact between fathers and children that predicts the quality of the mother-father relationship (see Fig. 3 and Table 3); i.e., greater frequency of contact between nonresident fathers and their children predicts better relations between these fathers and the children's mothers (beta = .41, $p < .01$) which, in turn, predicts fewer maternal depressive symptoms (beta = -.13, $p < .05$). Both mechanisms are plausible, and from these analyses we conclude that the data support neither to the exclusion of the other.

DISCUSSION

This study examined the links between and among low-wage maternal employment, perceived self-efficacy beliefs, depressive symptoms, and a constellation of parenting behaviors (including parenting in the home environment, the quality of the mother-

nonresident father relationship, and the intensity of the nonresident father's contact with the child) in the preschool years to children's cognitive and behavioral functioning in the early-elementary school years among a sample of single-parent black families living in New York City just before and subsequent to the passing of the 1996 welfare reform law.

The findings are generally supportive of the theoretical model (Fig. 1). Mothers' employment was related directly to higher self-efficacy, which in turn was associated with decreased depressive symptoms. However, although employment was not related indirectly to mothers' parenting or the child outcomes at $p < .05$, its indirect association with depressive symptoms transmitted through self-efficacy was as predicted and significant at $p < .01$. Decreased depressive symptomatology in mothers, moreover, was associated directly with a more positive relationship between mothers and nonresident fathers and indirectly through the latter with increased contact between nonresident fathers and their child, as expected. The more contact nonresident fathers had with their child, the more adequate was the mother's parenting in the home environment, which in turn predicted better child outcomes in early elementary school. These findings confirm those of others (Conger et al., 1992; Elder, 1995; Elder et al., 1995; McLoyd et al., 1994) who have found that economic stresses and unemployment influence children's development through their effect on parents' sense of efficacy and psychological functioning. In addition, our findings linking mothers' relations with their child's father, to fathers' relations with their children, to mothers' parenting in the home environment extend the evidence on nonresident fathers' relations with their children to poor and near-poor black families (see, for example, Amato & Gilbreth, 1999; Seltzer, 1991; Shapiro & Lambert, 1999). Recall, however, that the computer-searched model (TETRAD) links nonresident fathers' contact with their children to the

quality of the mother-father relationship and through the latter to mothers' depressive symptoms. All the same, both models seem to suggest that the frequency of fathers' contacts with their children predicts better or more adequate maternal parenting in the home environment. This is consistent with the notion, stated early on, that children develop more optimally when there is both a primary caregiver who is committed to the well-being of the child and another adult who gives support to the primary caregiver. When nonresident fathers spend more time with their children, this certainly relieves the children's mothers in their primary caregiving role.

As social cognitive theory (Bandura, 1997) suggests, in the test of the theoretical model, mothers' perceived self-efficacy was related indirectly and positively both to the quality of the mother-father relationship and the frequency of fathers' contacts with their children. Those mothers who believed that they could produce effects by their actions were more likely to have a positive relationship with their child's father, who in turn spent more time with the child. Consistent with the findings of others who report a positive association between the quality of the mother-father relationship and maternal parenting (Belsky, 1990; Cox et al., 1989; Simons et al., 1993), these same mothers also provided more warmth, support, and cognitive stimulation in the home environment. Still, future research should provide more information that can be used to determine the processes whereby nonresident fathers' involvement with their children is linked with warm and supportive maternal parenting in the home environment in single-parent families headed by poor and near-poor black mothers.

Although the results from the tests of the hypothesized model and the model found by computer search were suggestive of differences in the direction of the associations between

the father-mother-child constructs and depressive symptoms, both models agree that the effect of mothers' employment status on the other constructs in the model was mediated entirely by self-efficacy and that the effects of the other constructs in the model on the child developmental outcomes were mediated totally by the mothers' parenting in the home environment. With respect to welfare reform and employment-first policies, these results suggest that the effect of low-wage maternal employment on young children depends on the mothers' self-efficacy and the quality of their parenting in the home environment, both of which might be responsive to policy and programmatic interventions focused on economic pressure, mothers' psychological functioning, and parenting that includes the involvement of nonresident fathers and their relations both with their children and the mothers of their children (see, for example, King, 1994a, 1994b; Seltzer, 1991; Teachman, 1990). For example, from a policy perspective, economic pressure represents a key psychological link between low-wage employment and daily family experience (Conger et al., 1994). The present findings suggest that a way of reducing economic pressure and its adverse influences on single mothers and their young children is to increase family economic well-being. This might be through policies improving access to educational opportunities (beyond high school) that increase both employability and income and policies that increase the minimum wage so that mothers who work full time will not be poor (see, for example, Jackson et al., 2000; McLoyd, 1998). We expect, as well, that psychoeducation programs that "teach" self-efficacy skills (including problem solving in the face of difficulties) and relationship skills (that reduce hostile behaviors between mothers and nonresident fathers when stress is high) can result in more warmth and stimulation for children in the home environment and more support for single mothers who often are attempting to manage job and family

responsibilities while parenting essentially alone (see, for example, McLoyd, 1990; Patterson et al., 1990).

Finally, several limitations in the research should be noted. First, despite our consideration of children's development across time, a two-wave longitudinal study of this type does not match an experiment in terms of causal inference; therefore, the data provide no basis for inferences about causality with respect to employment status and self-efficacy. It is possible that more efficacious mothers might be more likely to be employed and, when so, more likely to earn higher wages. It also is plausible that the relations between self-efficacy, depressive symptoms, nonresident fathers' contacts with their children and their children's mothers, and parenting in the home environment are bi-directional. These are issues that future research should explore over a longer period of time. Second, our measure of self-efficacy assesses this construct generally rather than specifically, as Bandura (1997) suggests. Since these data do not include a specific measure of parenting self-efficacy, we do not know whether such a measure would change the present results. However, if the present findings prove robust upon further examination, they provide a basis for understanding and maximizing the processes through which low-wage maternal employment in poor and near-poor single-parent families is associated with better developmental outcomes for young children.

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Table 1: Means, Standard Deviations, and Correlations between Variables

Variable	Mean	SD	1	2	3	4	5	6	7	8
1.Employment status	---	---	--							
2. Self-efficacy	3.22	.49	.22*	--						
3. Depressive symptoms	15.51	10.31	-.16*	-.47**	--					
4. Mother/father relationship	2.74	1.00	.03	.12	-.18*	--				
5. Father/child contact	5.00	2.36	.11	.08	-.16*	.41**	--			
6. Parenting (HOME)	13.90	2.48	.10	.20**	-.19**	.12	.18*	--		
7. Behavior problems	1.45	.34	.07	-.17*	.21**	-.08	-.05	-.29**	--	
8. Cognitive develop.	3.06	.77	.04	-.04	-.04	.03	-.06	.17*	-.15	--

Note. Dummy codes for employment status: 1 = employed, 0 = nonemployed.

* $p < .05$. ** $p < .01$.

Table 2: Decomposition of Effects in Theoretically-Derived Path Model

Predictor	Dependent Variable	Total Effect	Direct Effect	Indirect Effect
Employment status	Self-efficacy	.21**	.21**	--
	Depressive symptoms	-.10**	--	-.10**
	Mother/father relationship	.02^{+}	--	.02^{+}
	Father/child contact	.01^{+}	--	.01^{+}
	Parenting (HOME)	.02^{+}	--	.02^{+}
	Behavior problems	-.01	--	-.01
	Cognitive development	.01	--	.01
Self-efficacy	Depressive symptoms	-.47**	-.47**	--
	Mother/father relationship	.09*	--	.09*
	Father/child contact	.04*	--	.04*
	Parenting (HOME)	.08*	--	.08*
	Behavior problems	-.02*	--	-.02*
	Cognitive development	.01^{+}	--	.01^{+}
Depressive symptoms	Mother/father relationship	-.18*	-.18*	--
	Father/child contact	-.07*	--	-.07*
	Parenting (HOME)	-.18*	-.17*	-.01
	Behavior problems	.05*	--	.05*
	Cognitive development	-.03^{+}	--	-.03^{+}
Mother/father relationship	Father/child contact	.41**	.41**	--
	Parenting (HOME)	.06*	--	.06*
	Behavior problems	-.02^{+}	--	-.02^{+}
	Cognitive development	.02^{+}	--	.02^{+}
Father/child contact	Parenting (HOME)	.15*	.15*	--
	Behavior problems	-.04^{+}	--	-.04^{+}
	Cognitive development	.01	--	.01
Parenting (HOME)	Behavior problems	-.29**	-.29**	--
	Cognitive development	.17*	.17*	--

Note. -- = Parameter constrained to be 0.

$^{+}$ $p < .10$. * $p < .05$. ** $p < .01$.

Table 3: Decomposition of Effects in TETRAD Path Model

Predictor	Dependent Variable	Total Effect	Direct Effect	Indirect Effect
Employment status	Self-efficacy	.21**	.21**	--
	Depressive symptoms	-.10**	--	-.10**
	Parenting (HOME)	.04^{+}	--	.04^{+}
	Behavior problems	-.03*	--	-.03*
	Cognitive development	.01	--	.01
Self-efficacy	Depressive symptoms	-.47**	-.47**	--
	Parenting (HOME)	.18*	.18*	--
	Behavior problems	-.12**	--	-.12**
	Cognitive development	.03^{+}	--	.03^{+}
Depressive symptoms	Behavior problems	.16*	.16*	--
Mother/father relationship	Depressive symptoms	-.13*	-.13*	--
	Behavior problems	-.02^{+}	--	-.02^{+}
Father/child contact	Depressive symptoms	-.05^{+}	--	-.05^{+}
	Mother/father relationship	.41**	.41**	--
	Parenting (HOME)	.16*	.16*	--
	Behavior problems	-.05*	--	-.05*
	Cognitive development	.03	--	.03
Parenting (HOME)	Behavior problems	-.26**	-.29**	--
	Cognitive development	.17*	.17*	--

Note. -- = Parameter constrained to be 0.

$^{+}$ $p < .10$. * $p < .05$. ** $p < .01$.

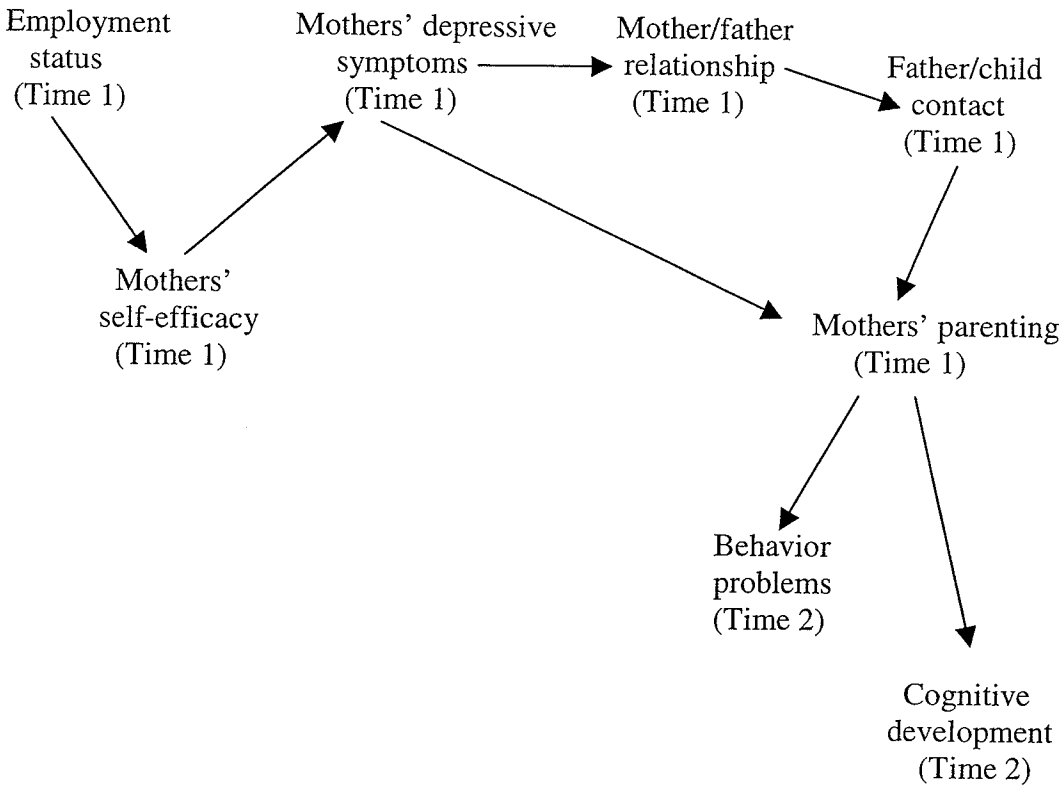
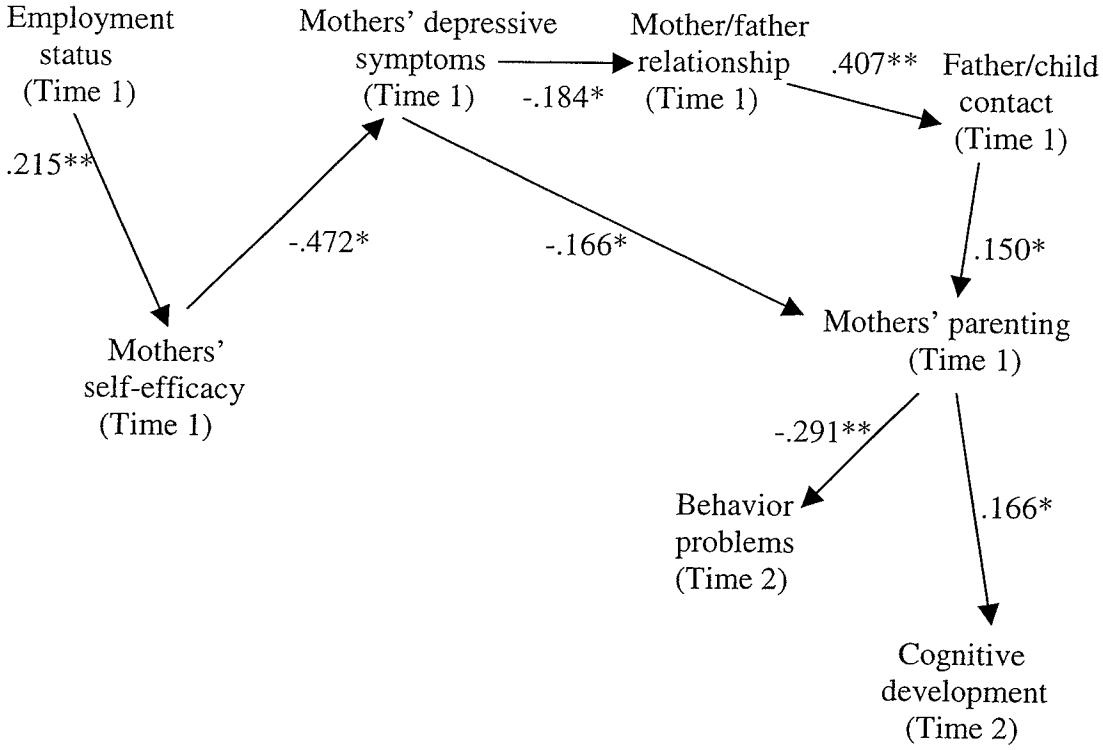
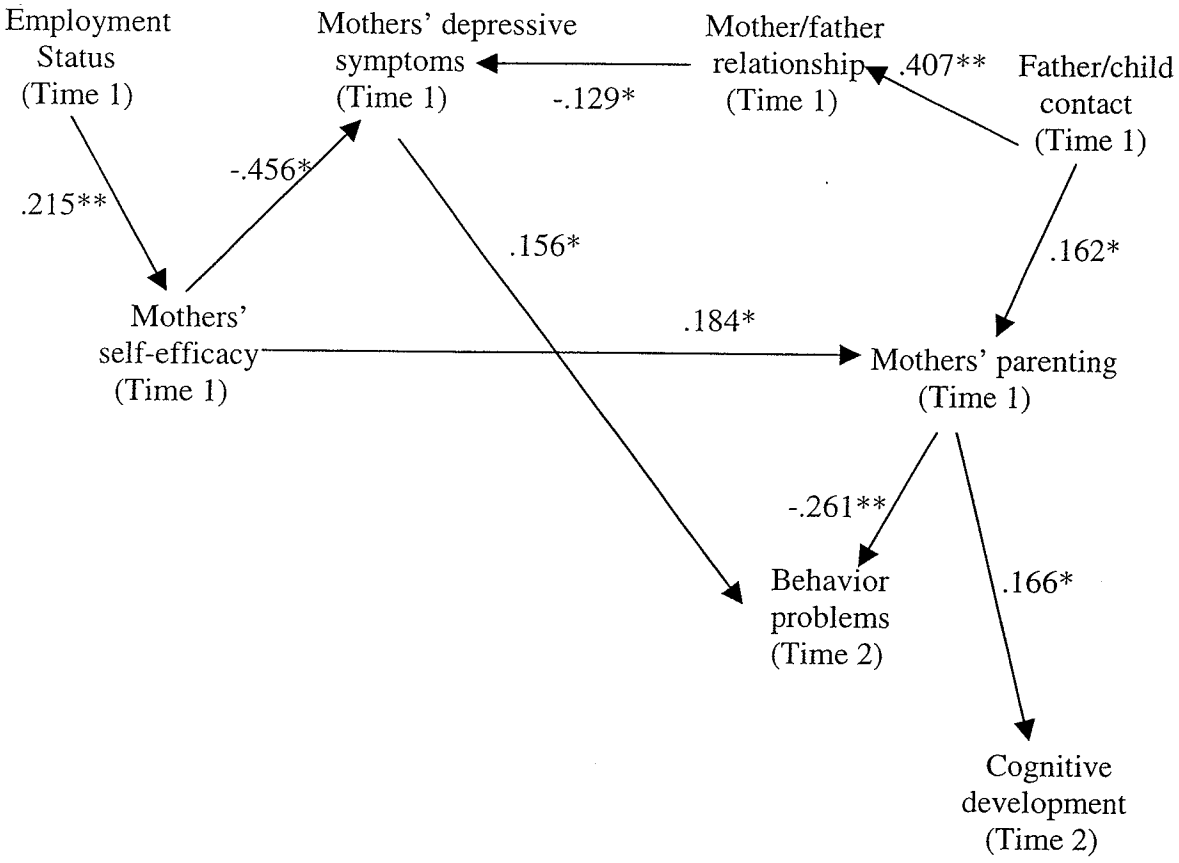


Figure 1 Path diagram of theoretical model



$X^2_{(20)} = 22.3$ P = .32 GFI = .97 AGFI = .95

Figure 2 Path results of theoretically-derived model (* p < .05; ** p < .01)



$X^2_{(19)} = 18.87$ P = .46 GFI = .97 AGFI = .95

Figure 3 Path results of model found by TETRAD (* $p < .05$; **$p < .01$)