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Maternal Employment, Family Functioning, and Preterm Infant Development at 9 and 12 Months

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Abstract

The purpose of this study was to investigate the effects of maternal employment on child development and family functioning for families with preterm infants. Data were collected in the family's home ($N=67$) when the infant was 3, 9, and 12 months of age. Maternal employment at 3 months had little effect on 9- and 12-month child mental or psychomotor development or on family cohesion, adaptability, or satisfaction. Maternal employment attitude/behavior consistency was a significant predictor of psychomotor development. Choice in the employment decision at 3 months was positively related to both mental and psychomotor development at 9 and 12 months for nonemployed mothers.

The decade of the 1980s witnessed a dramatic increase in the number of employed mothers with young children. Indeed, nearly 50% of married women with children under 3 years old are employed (Shank, 1988). Although some researchers believe that maternal employment is a stressful situation for children (Barglow, Vaughn, & Molitor, 1987; Belsky & Eggebeen, 1991), the effects of this potential stressor with children born prematurely have not been studied. Research with healthy children may not be applicable to prematurely born children for several reasons. First, preterm infants are at increased risk for developmental delay and may be more sensitive to stressful environmental conditions than healthy children (Tobey & Schraeder, 1990). Second, family environments for preterm infants may be different than those for full-term infants because of increased caretaking demands and stressors. The purpose of this study was to investigate the effects of maternal employment on the family and on the mental and motor development of preterm infants at 9 and 12 months of age.

Because of concern for the development and wellbeing of the child with an employed mother, a significant amount of research regarding the impact of maternal employment for healthy children has been conducted; however, the results are conflicting. Some investigators report negative effects of maternal employment on attachment (Barglow et al., 1987; Belsky & Rovine, 1988; Schwarz, 1983), mother-child interaction (Cohen, 1978; Field, Stoller, Vega-Lahr, Scafidi, & Goldstein, 1986), and cognitive development (Cohen, 1978; Schacter, 1981). Others report either no effects or positive effects on attachment (Easterbrooks & Goldberg, 1985; Hock, 1980; Owen, Easterbrooks, Chase-Lansdale, & Goldberg, 1984), mother-child interaction (Schubert, Bradley-Johnson, & Nuttal, 1980), and

cognitive development (Doyle, 1975; Hock, 1980; Stith & Davis, 1984). These conflicting results suggest that the mechanism by which maternal employment may affect the child is complex, and may be influenced by other variables.

Two factors that may affect the relationship between maternal employment and child outcomes have been identified: timing of the mother's return to employment (Benn, 1986) and attitudes of the mother that conflict with her employment status (Hock, DeMeis, & McBride, 1987). Popular belief places importance on the mother's staying home with the infant during the first 6 months. However, Benn (1986) believes that maternal employment begun during the second 6 months is more harmful, since the child's attachment to the mother is thought to occur during this time (Bowlby, 1969/1982).

Congruency between the mother's employment status and her attitudes toward employment may play a part in child outcomes. In a series of studies, Hock found an interaction effect for employment status and attitudes toward separation from the infant (Hock, 1980, 1984; Hock & Clinger, 1980). For the most part, infants in these studies fared better when the mother's employment status and her attitudes toward separation from the infant were consistent. Benn (1986) reported that insecure attachment of sons to their mothers was associated with lower integration of the employee and mother roles. Mothers who were employed by choice held more positive perceptions of their children than mothers who were employed due to financial need; however, education may blunt the effect of both employment for financial reasons and role conflict for employed mothers (Alvarez, 1985). Kindergarten children whose mothers were not employed but who felt that employment would be good for the child scored lower on measures which reflect preschool achievement and social competence (Farel, 1980). While these findings support the importance of attitude/behavior consistency for healthy children, the effects of this consistency for children at risk has not been reported.

Since children are raised in a family context, Hoffman (1989) advocates identifying family process variables that could mediate the effects of maternal employment on the child. Three family variables—cohesion, adaptability, and satisfaction with family relationships—were selected for this study based on results from dyadic research.

Cohesion, the emotional bond among family members, is a family concept that is closely related to attachment. Quality of the marital relationship, one aspect of family cohesion, has been related to the quality of parent-child attachment (Belsky & Rovine, 1988; Goldberg & Easterbrooks, 1984) and, in turn, has been shown to be important for the child's social-emotional development (Bowlby, 1969/1982). Research regarding the effects of women's employment on family cohesion, specifically the marital relationship, is sparse and conflicting. Some researchers find no relationship between women's employment and husband's wellbeing (Fendrich, 1984), depression (Ross, Mirowsky, & Huber, 1983), or marital satisfaction (Locksley, 1980; Staines, Pleck, Shepard, & O'Connor, 1978), while others find greater depression and lower self-esteem for husbands with employed wives (Kessler & McRae, 1982).

Adaptability has been defined as "the ability of a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress" (Olson & McCubbin, 1982, p. 51). Olson (1989) includes in this definition changes that parents make in their parenting styles in response to changing developmental needs of the child. While the example Olson gives is with autonomy and adolescents, the same may be true for infants around their first birthday. Thus, adaptability is a family concept that is akin to parents' responsiveness to their child's needs. Responsivity of the mother has been positively related to cognitive development of preterm infants (Meisels & Plunkett, 1988).

Satisfaction with family relationships refers to the degree of agreement between “real” and “ideal” family relationships, including relationships between the family and the individual, dyadic and higher order relationships within the family, and relationships between the family and others (Roberts & Feetham, 1982). While this concept may appear to overlap with cohesion, it is different because of the reference point. Scales that measure cohesion imply that the parent compare his/her family to other families on each of the items, whereas satisfaction uses the family members’ perceptions of their “ideal” family against which to compare their real family situation. In addition, satisfaction with family relationships includes relationships between the family and outside individuals and systems.

Thus, maternal employment could have a negative indirect effect on the child through effects on family functioning. However, there have been few studies relating maternal employment to measures of family as opposed to dyadic functioning. Cohen (1978) reported negative effects of maternal employment on development and mother–child interaction for toddlers who were born prematurely. However, these findings were confounded by the number of parents in the home and, when Cohen excluded children from single parent families, the negative effects were no longer seen. Youngblut, Loveland-Cherry, and Horan (1991) studied correlates of maternal employment in a sample of two-parent families with preterm infants. Employment status was not related to developmental progress for infants at 3 months of age; however, the number of hours the mother was employed was positively related to the infant’s motor development. Family functioning measures (cohesion, adaptability, and satisfaction with family) were not related to employment status or number of hours employed. However, the mother’s degree of choice regarding her employment decision and her satisfaction with that decision were positively related to both child and family outcomes.

To summarize, many gaps in the literature are apparent. Conceptualization of maternal employment as a simple dichotomy (employed versus not employed) does not adequately represent the complexities of the phenomenon, and only one study (Youngblut et al., 1991) has been reported that included measures of family. In addition, very few studies of maternal employment with preterm infants have been reported, despite the concern that families with preterm infants have a different childrearing experience than families with full-term infants. The secondary analysis reported here was conducted to address these gaps and, more specifically, to investigate whether there are long-term effects on family functioning and on child development when maternal employment is begun by the time the infant is 3 months old.

The aims of this study were to describe: (1) differences in parents’ perceptions of family functioning and preterm infant developmental outcomes at 9 and 12 months of age by employment status at 3 months postpartum; (2) differences in family functioning and developmental outcomes at 9 and 12 months between families with mothers whose employment attitudes and behavior were consistent at 3 months postpartum and families with mothers whose attitudes and behavior were inconsistent; (3) relationships between employment-related variables measured at 3 months postpartum and family functioning and developmental outcomes at 9 and 12 months; and (4) within-family change in family functioning and developmental outcomes in each employment status group across time.

METHOD

Sample

A convenient sample of 125 families who experienced preterm birth of an infant were recruited from two Level III Neonatal Intensive Care Units (NICU) for a longitudinal study of parental reactions to the birth of a high risk infant. Employment status groups were

constituted when the infant was 3 months of age (T1). Families were included in this analysis only if the mother's reported employment status was the same at both T1 and T2 (9 months), resulting in a sample size of 67 families.

Inclusion criteria for the infant were: gestational age less than 37 weeks at birth, weight appropriate for gestational age, absence of congenital anomalies that would preclude developmental progress, and hospitalized in a Level III NICU for more than 1 week but less than 3 months. In addition, the mother had to be living with a male partner in the father role, whether or not he was the biological father. Families meeting study criteria were referred by the neonatologist at each of two Level III NICUs in the midwest. None of the families approached by the neonatologist refused to be referred. If the parents were not living together at subsequent data collection time points, the family was dropped from the study. Attrition rate from 3 to 12 months was 6.7% for the total sample.

Most of the parents were married (95.5%). Average time together was 6.1 years ($SD = 4.59$). Parents' ages ranged from 18 to 40 ($M = 28.4$, $SD = 4.94$) for mothers and from 19 to 47 ($M = 30.93$, $SD = 5.99$) for fathers. Most of the parents were white (93% mothers and 94% fathers). Sixty-five mothers and 66 fathers had completed high school. At 3 months, 66 fathers were employed, 64 full time. Twenty-nine mothers (43%) were employed, 23 full time; 38 were not employed. The majority of the mothers (88%) and fathers (76%) were in unskilled, semiskilled, or technical positions. Approximately 19% of families reported incomes of less than \$20,000; 49% between \$20,000 and \$40,000; and 31% of \$40,000 or higher.

Thirty-six (54%) of the 67 infants were male. Gestational age at birth ranged from 27 to 36.5 weeks ($M = 32.55$, $SD = 2.51$). Birthweight averaged 1,768.5 g ($SD = 545.3$, range 975 to 3990 g). Two (3%) infants weighed less than 1,000 g at birth, 19 (28%) were between 1,000 and 1,500 g and 42 (63%), between 1,500 and 2,500 g. Four infants (6%) were preterm by gestational age, but were not low birth weight. Weight at 9 months ranged from 5.23 to 10.78 kg ($M = 7.95$, $SD = 1.09$); at 1 year, from 7.3 to 12.0 kg ($M = 9.02$, $SD = 1.07$). Average length of stay in the NICU was 32.4 days ($SD = 17.1$, range 9 to 72 days).

Instruments

Attitudes about maternal employment were measured at T1 with the Home/Employment Orientation Scale (HEO) (Youngblut, Loveland-Cherry, & Horan, 1990). The HEO is a summative, eight-item Likert scale that mothers rated from *strongly agree* (1) to *strongly disagree* (8). The other numerical points were not identified with word anchors. Items were chosen to tap the mother's perception of how her own employment would affect her husband/partner, her children, and herself. Higher scores represent stronger employment orientations. Factor analysis supported the extraction of one factor and all items loaded strongly on that factor. Construct validity is supported by analyses with a previous wave that found higher HEO scores for employed mothers compared to nonemployed mothers and a positive correlation between hours employed per week and HEO scores (Youngblut et al., 1990). Coefficient alpha was .80. At T1, mothers also were asked to rate how much choice they had regarding their employment status and how satisfied they were with their decision on 10-point scales ranging from *no choice or not at all satisfied* (1) to *totally my choice or very satisfied* (10). Construct validity of these two single item measures is supported by findings from an earlier wave of significantly greater choice and satisfaction for mothers whose HEO attitudes and employment status were congruent than for mothers whose attitudes and employment status were incongruent (Youngblut et al., 1991).

Employment status was measured at T1 and T2. Mothers reported the number of hours they were currently employed outside the home and identified their employment status as

employed or not employed. Employment status groups were constituted based on the mother's reported employment status. Data regarding the mother's employment status at 12 months are not available.

Mothers' **employment attitude/behavior consistency** classification was created from T1 HEO scores and T1 employment status. HEO scores ≤ 36 were categorized as home oriented and scores >36 as employment oriented. The 15 employed mothers with employment oriented scores and the 34 nonemployed mothers with home oriented scores were classified as consistent, while the 12 employed mothers with home oriented scores and the two nonemployed mothers with employment oriented scores were classified as inconsistent. Four women had incomplete data on the HEO and were not classified.

Family functioning was measured with two instruments at 3, 9, and 12 months of age (T3). FACES III (Olson, Portner, & Lavee, 1985) was used to measure parents' perceptions of family cohesion and family adaptability. The two summative scales consist of 10 items each. Mothers and fathers rated each item on a 5-point scale from *almost never* (1) to *almost always* (5). Higher scores indicate greater cohesion or adaptability. The validity of the scales is supported by their ability to distinguish between clinical and nonclinical families (Olson, 1986) and by the significant correlations between the FACES dimensions and other measures of family functioning (Thomas & Barnard, 1986). Olson, Sprenkle, and Russell (1979) originally posited a curvilinear relationship of cohesion and adaptability to family functioning. While this relationship holds in problem families, a linear relationship has been found for normal families (Olson, 1989). In addition, scatterplots between these two measures and variables of interest in this study did not support the curvilinear hypothesis. Therefore, simple summative scores for cohesion and adaptability were used. Olson et al. (1985) report internal consistencies of .77 for cohesion and .62 for adaptability. For mothers, internal consistency was .80 for cohesion and .58 for adaptability at T1; .79 and .74, respectively, at T2; .78 and .74, respectively, at T3. For fathers, it was .80 for cohesion and .67 for adaptability at T1; .75 and .65, respectively, at T2; .82 and .73, respectively, at T3. While internal consistency was low for mothers' T1 adaptability and fathers' T1 and T2 adaptability, our alphas are similar to those obtained by Olson et al. (1985).

The Feetham Family Functioning Survey (FFFS) (Roberts & Feetham, 1982) was used to measure parents' satisfaction with dyadic and higher order relationships within the family and between the family and others (friends, neighbors, schools, health care professionals). The FFFS consists of 25 items, with three questions for each: (a) how much is there? (b) how much should there be? and (c) how important is this to you? Respondents rate each on a 7-point scale ranging from *little* (1) to *much* (7). A discrepancy score is obtained by subtracting responses to (a) from (b) and adding the absolute values. Responses to (c) are not used. Lower scores indicate greater satisfaction with family functioning. Construct validity is supported by a strong correlation ($r = -.68$) between the FFFS and Pless and Satter-white's Family Functioning Index (Thomas & Barnard, 1986). Roberts and Feetham (1982) report an internal consistency of .81. Coefficient alpha was .80 (T1), .80 (T2), and .84 (T3) for mothers and .80 (T1), .82 (T2), and .84 (T3) for fathers.

Child developmental outcomes were measured with the Bayley Scales of Infant Development (Bayley, 1969). The instrument contains two scales: the Mental Developmental Index (MDI) and the Psychomotor Developmental Index (PDI). The MDI assesses sensory-perceptual, verbal communication, and early cognitive development while the PDI assesses the development of gross and fine motor control. Raw scores were converted to standardized scores using the child's post-conceptual (corrected) age according to Bayley's recommendations. Standardized scores range from 50 to 150 with a mean of 100. Bayley reports split-half reliabilities of .81 to .93 for the MDI and .68 to .92

for the PDI. In this study, interrater reliabilities ranged from 76% to 86% for T1 and from 71% to 74% for T3. Data from the Bayley scales were used in two ways in the analyses reported here. Corrected age scores were used in the *t* test, correlation, and multiple regression analyses. In addition, corrected age MDI and PDI scores at each time point were categorized as delayed (<80) or not delayed (≥ 80) (Meisels, Plunkett, Pasick, Stiefel, & Roloff, 1987). Less than 20% of infants were classified as delayed on either the MDI or PDI at any time point, 12.1%, 3%, and 4.5% for MDI scores and 16.7%, 9%, and 12.1% for PDI scores at T1, T2, and T3, respectively.

Procedure

Families were seen in their homes when their infant was 3 (T1), 9 (T2), and 12 (T3) months of age. Informed consent was obtained from both parents. Interviewers administered self-report measures, conducted structured interviews, and performed infant developmental assessments during the home visit. Research assistants at each site abstracted data from the infant's NICU chart.

RESULTS

Means and standard deviations for employment-related variables are in Table 1; family and child outcome variables by employment status and by time point are shown in Table 2. Differences in T1, T2, and T3 family functioning for mothers and fathers and child development between employment status groups were examined with two-sample *t* tests. Pooled variance estimates were used when variances were equal; separate variance estimates, when variances were significantly different. Two significant differences were obtained. At both T1 and T3, employed mothers report higher FFFS scores than nonemployed mothers, $t(58) = 2.05, p = .05$ and $t(36.45) = 2.13, p = .04$, respectively. The independence of employment status and developmental status (delayed or not delayed) for each time point and for MDI and PDI scores was tested; none of the chi-square tests was significant.

Families in the consistent group were compared with families in the inconsistent group using two-sample *t* tests on T1, T2, and T3 family and developmental outcomes and on indicators of neonatal morbidity. Differences on family measures were not significant for T1, T2, or T3. Infants in the two groups were not significantly different in birthweight, gestational age, or length of NICU stay. Corrected age MDI and PDI scores were not statistically different across groups at T1; however, children in the consistent group scored higher on T2 corrected age PDI than those in the inconsistent group ($M = 113.9, SD = 20.18$ vs. $M = 98.4, SD = 20.06$), $t(61) = 2.53, p = .01$. In addition, children in the consistent group scored higher on T3 corrected age PDI than children in the inconsistent group ($M = 107.2, SD = 18.82$ vs. $M = 89.8, SD = 22.44$), $t(61) = 2.84, p = .006$. Independence of consistency groups and developmental groups was tested with chi-square tests; none was significant.

Hierarchical multiple regression analysis was used to identify significant predictors of family functioning (cohesion, adaptability, and FFFS) and child development (MDI and PDI). Two sets of regressions were performed. The first set regressed T2 and T3 family and corrected age child variables on T1 hours employed and T1 attitudes toward employment. The second set used the same variables except that employment attitude/behavior consistency replaced the attitudes toward employment variables.

Gestational age was controlled in all regressions, either by entering it first when a family measure was the dependent variable or by using corrected age MDI and PDI scores when a child development measure was the dependent variable. Mother's education was entered first into the child development regressions as a control variable, since Alvarez (1985) found

a moderating effect for mother's education and since education is frequently found to be related to child development (Hoffman, 1989). The number of hours employed at T1 was entered next, followed by attitudes toward employment at T1 or T1 consistency. Significant regression analyses are in Table 3. None of the regression analyses of T2 and T3 family measures on employment-related variables, controlling for gestational age, was significant. Employment-related variables did not significantly predict MDI scores at T2 or T3. Choice at T1 was a significant predictor for T3 PDI scores. Although T1 choice was a significant predictor of T2 PDI scores, the overall equation was not significant. Consistency between employment attitudes and behavior was a significant predictor of T2 and T3 PDI scores. Thus, employment itself had no effect on either family functioning or child development; however, choice and consistency did have a significant effect when gestational age and employment were controlled.

Although there were few differences between employment status groups on child and family outcomes, differences may be more apparent when employment status is controlled, that is, when analysis is conducted within rather than between groups. Therefore, change in family and child outcomes across time was investigated with paired *t* tests for employed and non-employed mother families (Table 2). Correlations between T1 employment-related variables and T2 and T3 child and family outcomes were calculated (Table 4).

For the employed mothers group ($n = 29$), changes in means from T1 to T2 and T3 for family functioning and child development were not significant. Higher T2 and T3 adaptability ratings by fathers were correlated with higher numbers of hours that the mothers were employed. Fathers FFFS scores at T2 were negatively related to T1 choice, satisfaction, and mothers' employment attitudes. Fathers' T3 FFFS scores were related to T1 satisfaction only. Corrected MDI and PDI scores were not related to choice, satisfaction, or HEO scores. However, T2 MDI scores were positively related to number of hours employed at T1.

For the nonemployed mothers group ($n = 38$), mothers rated their family's adaptability significantly lower at T2 compared to T1. Changes in mothers' T2 cohesion and FFFS scores and in fathers' family measures were not significant. However, both mothers and fathers rated their families as less cohesive and less adaptable at T3 compared with T1. Changes in FFFS scores from T1 to T3 were not significant. As was noted for the employed mothers group, PDI scores for the nonemployed mothers group did not change significantly. However, T2, but not T3, corrected age MDI scores were significantly higher than T1 corrected age MDI scores.

Choice was related to three family variables and to T2 and T3 MDI and PDI scores. Greater choice was related to lower T3 cohesion for fathers and to lower FFFS scores for mothers at T2 and T3. Choice was positively associated with corrected age MDI and PDI scores at T2 and T3. Greater employment satisfaction was related to greater cohesion and lower FFFS scores for mothers at T2. Greater maternal home orientation (lower HEO scores) at T1 was related to lower T3 cohesion for fathers and higher corrected age PDI scores at T2.

DISCUSSION

These findings support Hoffman's (1989) assertion that maternal employment has little effect on the child's mental and psychomotor development without the methodologic weaknesses noted in other studies (McCartney & Rosenthal, 1991; Scarr, 1991; Vandell, 1991). Children of employed and nonemployed mothers did not differ in their developmental scores for either time point, although children of nonemployed mothers showed a significant increase in mental scores from 3 to 9 months. For employed mothers, a

significant *positive* correlation was obtained between hours employed and mental development. Thus, for the employed group, as number of hours employed at 3 months increased, the child's mental development scores at 9 months also increased. The lack of significant results for 12 month scores is not clear from this study, but may be due to the influence of changes in the mother-child relationship that occur as the child matures. The finding of a positive correlation between hours employed and mental development is consistent with findings of positive effects of maternal employment for the child (Hock 1980; Hoffman, 1989; Stith & Davis, 1984).

The results suggest that employment status alone has little effect on parents' perceptions of family functioning. This is consistent with findings of dyadic research on effects of wives' employment on their husbands' marital satisfaction (Locksley, 1980; Staines et al., 1978) and on the parent-child relationship (Schubert et al., 1980). The two employment groups differed on only one of 12 measures of family functioning (three measures each for mothers and fathers at each of two time points). Employed mothers reported being less satisfied with their families at 12 months than nonemployed mothers. While the longitudinal nature of the data could lead one to infer that employment "caused" women to be less satisfied with their families, within-subject changes in this measure from 3 to 12 months were not significant. Thus, this finding may be due to measurement error or minor fluctuations in the data, or it may be spurious.

The positive, moderately strong relationship between number of hours employed at 3 months and father's perception of family adaptability at both 9 and 12 months suggests that early employment of the mother may enhance the father's flexibility regarding family duties. Perhaps when women spend more time outside the home due to employment, fathers are called upon to increase their flexibility and responsibility for family decisions and tasks (Barnett & Baruch, 1987; Gottfried, Gottfried, & Bathurst, 1988).

The hypothesis that consistency between maternal employment behaviors and attitudes has a greater impact on the child and the family than maternal employment alone (Benn, 1986; Farel, 1980; Hock, 1984; MacEwen & Barling, 1991; Walker, Ortiz-Valdes, & Newbrough, 1989) is partially supported by our findings. Controlling for gestational age and number of hours employed, choice was a significant predictor of motor development at 12 months. There were no differences between consistent versus inconsistent groups on 9- and 12-month family outcomes. However, infants in the consistent group scored significantly higher on the motor development scale at both 9 and 12 months and consistency was a significant predictor of 9- and 12-month motor development, controlling for gestational age and number of hours employed. Reasons for lack of significant findings for mental development are not clear from our study, but may be related to why the women's attitudes and employment status are inconsistent.

When study questions were examined within employment groups, effects of consistency again emerged. For employed mothers, attitudes about employment were not related to infant outcomes. Thus, children of employed mothers who preferred not to be employed were not negatively affected by this inconsistency, a finding that is congruent with Farel's work (1980). For non-employed mothers, greater choice in their employment decision was associated with better mental and motor development performance at both 9 and 12 months. In addition, the more home oriented these mothers were, the better their children did on the motor scale at 9 months. Thus, especially for nonemployed mother families, when employment attitudes and employment behavior are consistent, children benefit (Alvarez, 1985; Farel, 1980; MacEwen & Barling, 1991).

Fathers with employed partners perceived greater satisfaction with family at 9 months as the mother's choice, employment satisfaction, and employment orientation increased. In families with nonemployed mothers, greater satisfaction with family for mothers at 9 months was related to greater choice and satisfaction with the employment decision, whereas greater cohesion for mothers at 9 months was associated with greater satisfaction with the employment decision. These findings also support the hypothesis that consistency between the mother's employment attitudes and behavior has a positive relationship with family outcomes.

Several unexpected findings were obtained for family measures in nonemployed-mother families. First, both mothers and fathers in these families perceived less cohesion and adaptability at 12 months than they had at 3 months. According to the Circumplex Model (Olson et al., 1979), a move in scores towards the center represents a move toward a more functional, or "balanced," family. If so, this decrease in cohesion and adaptability would be a positive change, signaling resolution of the crisis of premature birth. However, since cohesion and adaptability are linearly related to family functioning in nonclinical families (Olson, 1989), this drop represents lower family function. Since Thomas and Barnard (1986) found a correlation between negative mood and lower cohesion and adaptability scores, perhaps the changes noted are related to the timing of data collection. While the first birthday is usually a happy time for parents with healthy children, it can be a reminder of missed developmental milestones for parents whose children are not "normal" (Young, 1977). Although few children in our sample were classified as developmentally delayed based on corrected age scores, many were not performing at the level of their chronologic ages. If parents compare their child's development to chronologic ages rather than to postconceptional ages, the child will appear to be delayed and parents may experience a more negative mood at this time. Since cohesion and adaptability ratings did not change from 3 to 9 months, except for mothers' adaptability, it is likely that our finding reflects this temporary, negative shift in mood rather than a true change in family functioning. Perhaps employed-mother families did not experience this shift because the mother's employment provides outside sources of support or cues for self-esteem other than the child's developmental progress, alleviating some of the mother's, and father's, distress.

Second, higher cohesion scores for fathers were related to greater employment orientation and less choice for nonemployed mothers. While we could have predicted lower cohesion scores for these families, this finding may be related to the father's beliefs about maternal employment (Spitze & Waite, 1981). The father's sense of family cohesion may be enhanced because of consistency between his employment attitudes and the mother's behavior, even though the mother perceives less choice because she acts on the father's preference rather than on her own. On the other hand, if the employment decision is based on her own choice rather than on his preference, this inconsistency would lower his perception of family cohesion. Unfortunately, we did not ask fathers whether they preferred the mother to be employed or to stay home with the child, so, our explanation of these relationships must be viewed with caution.

The results from this study, in concert with other studies with full-term infants, indicate that consistency between employment status and attitudes appears to be more important than employment status alone. Therefore, nurses can support mothers of healthy preterms by assessing inconsistencies between a mother's attitudes about employment and her preferred employment status and identifying issues that seem to affect consistency, such as advice from relatives or friends and availability of child care. Because inconsistency has been associated with depression (Ross et al., 1983; Walker et al., 1989), intervention can also be aimed at assisting the mother to deal with her negative affect.

In summary, the findings suggest that for families of healthy preterm infants employment status itself does not negatively affect either the family or the child, and support previous research showing the importance of consistency between employment status and attitudes regarding employment and mothering. Further research is necessary to determine whether these relationships between maternal employment and child outcomes are similar for more severely affected preterm infants and for children with other chronic illnesses.

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Table 1

Means and Standard Deviations for Employment-Related Variables by Employment Status Group

Employment-Related Variables		Employed Mothers (<i>n</i> = 29)	Nonemployed Mothers (<i>n</i> = 38)	<i>t</i> value (<i>df</i>)
Degree of choice (T1)	<i>M</i> (<i>SD</i>)	4.52 (3.64)	9.08 (2.06)	6.05 *
Degree of satisfaction (T1)	<i>M</i> (<i>SD</i>)	6.76 (2.49)	9.13 (1.65)	4.45 *
Home/employment orientation (T1)	<i>M</i> (<i>SD</i>)	36.37 (12.51)	20.42 (10.43)	5.52 *
Hours employed (T1)	<i>M</i> (<i>SD</i>)	35.45 (9.86)	0.0	NA
Hours employed (T2)	<i>M</i> (<i>SD</i>)	36.21 (10.63)	0.0	NA

Note. T1 = 3 months; T2 = 9 months.

* $p < .001$.

Table 2
Comparison Across Time of Child Development and Family Functioning by Mother's Employment Status

	3 Month	9 Month	T1-T2	12 Month	T2-T3
	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
Employed Mother Families (<i>n</i> = 29)					
Mother's cohesion	40.96 (4.72)	41.25 (4.57)	1.06	40.46 (5.57)	0.54
Father's cohesion	38.68 (5.79)	39.32 (4.48)	0.81	38.20 (5.1)	0.38
Mother's adaptability	31.20 (4.55)	31.50 (6.23)	1.10	30.44 (4.50)	0.74
Father's adaptability	30.44 (4.88)	30.81 (4.13)	0.76	29.76 (4.43)	0.84
Mother's satisfaction (FFFS)	28.33 (13.29)	26.38 (11.02)	1.40	28.83 (16.36)	0.24
Father's satisfaction (FFFS)	23.71 (11.65)	23.32 (11.46)	0.52	24.19 (9.70)	0.28
Corrected MDI	113.04 (24.41)	121.72 (23.69)	0.70	113.82 (21.30)	0.15
Corrected PDI	112.11 (29.57)	109.72 (20.52)	1.07	102.11 (23.27)	1.38
Nonemployed Mother Families (<i>n</i> = 37)					
Mother's cohesion	42.77 (3.95)	41.92 (4.88)	1.17	40.94 (4.68)	2.40 *
Father's cohesion	40.24 (4.70)	39.92 (5.08)	0.13	38.97 (4.51)	2.11 *
Mother's adaptability	31.67 (4.75)	28.91 (4.42)	3.1 **	27.82 (4.41)	4.63 **
Father's adaptability	31.48 (5.35)	31.35 (4.86)	0.24	28.91 (4.45)	3.94 **
Mother's satisfaction (FFFS)	20.79 (10.98)	21.59 (13.03)	0.72	19.90 (10.84)	0.63
Father's satisfaction (FFFS)	23.29 (13.05)	21.00 (12.41)	0.65	24.42 (11.62)	0.52
Corrected MDI	109.78 (25.56)	123.53 (19.21)	3.08 **	115.13 (19.35)	1.09
Corrected PDI	110.81 (32.12)	110.79 (21.14)	0.19	104.97 (18.10)	0.90

Note. MDI = Mental Developmental Index; PDI = Psychomotor Developmental Index.

* $p < .05$.

** $p < .01$.

Table 3

Time 1 Predictors of 9- and 12-Month Child Outcomes

Dependent Variables	Independent Variables	9 Month			12 Month		
		Beta	R ²	F	Beta	R ²	F
Corrected PDI	Mother's education	-0.11	0.01	0.40	-0.27*	0.06	3.85*
	Hours employed	0.33	0.01	0.24	0.17	0.06	1.89
	Satisfaction	-0.02			-0.06		
	Choice	0.44*			0.46**		
	HEO	-0.10	0.14	1.87	0.11	0.19	2.71*
Corrected PDI	Mother's education	-0.12	0.01	0.40	-0.28*	0.06	3.85*
	Hours employed	0.33	0.01	0.24	0.17	0.06	1.89
	Consistency	0.42**	0.15	3.43*	0.44**	0.22	5.41**

Note. PDI – Psychomotor Developmental Index.

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

Table 4
Significant Relationships Between Employment-Related Variables and Family and Child Outcomes

Outcome Variables	Employed Mothers (<i>n</i> = 29)				Nonemployed Mothers (<i>n</i> = 38)		
	Hours Employed	Choice	Satisfaction	HEO	Choice	Satisfaction	HEO
Mother T2	Cohesion					.33*	
	FFFS				-.37*	-.33*	
Mother T3	FFFS				-.43**		
Father T2	Adaptability	.44**					
	FFFS	-.60**	-.49**	-.38*			
Father T3	Cohesion				-.33*		.31*
	Adaptability	.48**					
T2 Scores	FFFS		-.35*				
	MDI	.49**			.27*		
T3 Scores	PDI				.55**		-.36*
	MDI				.42**		
	PDI				.38*		

Note. T1 = 3 months; T2 = 9 months; T3 = 12 months. FFFS = Feetham Family Functioning Survey; MDI = Mental Developmental Index; PDI = Psychomotor Developmental Index.