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Competence and Responsiveness in Mothers of Late Preterm Infants Versus Term Infants

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Abstract

Objective—To compare maternal competence and responsiveness in mothers of late preterm infants (LPIs) with mothers of full-term infants.

Design—A nonexperimental repeated-measures design was used to compare maternal competence and responsiveness in two groups of postpartum mothers and the relationship of the theoretical antecedents to these outcomes.

Setting—Urban academic medical center.

Participants—Mothers of late preterm infants (34–36, 6/7-weeks gestation) and mothers of term infants (37-weeks gestation), including primiparas and multiparas. Data were collected after delivery during the postpartum hospital stay and again at 6-weeks postpartum.

Methods—Descriptive and inferential analysis.

Results—A total of 70 mothers completed both data collection periods: 49 term mothers and 21 LPI mothers. There were no differences between the two groups related to their perception of competence or responsiveness at delivery or 6-weeks postpartum. At 6-weeks postpartum, none of the assessed factors in the model was significantly related to competence or responsiveness.

Conclusions—The results, which may have been limited by small sample size, demonstrated no difference in the perceptions of LPI and term mothers related to competence or responsiveness. Maternal stress and support were significantly related to other factors in the model of maternal competence and responsiveness.

Keywords

late preterm infant; maternal competence; maternal responsiveness

Late preterm infants (LPIs) are a unique group of infants identified within the preterm population, accounting for 70% of preterm births and 9% of all births (Engle, Tomaschek, & Wallman, 2007). Born between 34 and 36 6/7-weeks gestation, LPIs experience a number of physiologic challenges in the early days of life related to limited compensatory resources including hypoglycemia, hyperbilirubinemia, temperature instability, erratic sleep–wake states, poor interactional skills, and feeding difficulties resulting in poor weight gain (Engle et al.; Medoff Cooper et al., 2012). Early physiologic challenges generally resolve within the first 3 to 5 days of life, and the LPI is discharged home and scheduled for early follow-up with the primary care provider. Although medical issues resolve in the early neonatal period, late preterm birth is associated with longer lengths of stay, increased hospital readmissions, and long lasting developmental effects (Chyi, Lee, Hintz, Gould, & Sutcliffe, 2008; Engle et al.; Kinney, 2006; Nepomnyaschy, Hegyi, Ostfeld, & Reichman, 2012; Samra, McGrath, & Wehbe, 2011).

Increased awareness of the needs of the LPI has improved caregiving practices related to thermoregulation, glucose monitoring and management, and feeding difficulties in the early neonatal period, however neurological immaturity persists. During the last weeks of gestation, critical periods of growth and development occur in the human brain. At 34-weeks gestation the human brain has achieved only 65% of its term weight and myelination of white matter will continue to increase fivefold by term gestation (Kinney, 2006; Samra et al., 2011). The immature brain of the LPI affects the infant's ability to organize behavioral responses to stimuli in the environment and interact with caregivers (Voegtline & Stifter, 2010). Longitudinal studies of LPIs suggest that instability of the autonomic motor and state system increases the LPI's risk for behavioral disorganization that is manifested as a lower threshold for stimulation, increased perception of negativity by mothers, less rhythmic and adaptable behavior, and a more "difficult" temperament (Hughes, Shults, McGrath, & Medoff-Cooper, 2002; Voegtline & Stifter). Mothers of preterm infants experience more stress and depression, difficulties with sleep, and decreased sense of competence, all of which lead to difficulty interacting with their infants and influence long-term infant growth and development (Holditch-Davis, Schwartz, Black, & Scher, 2007; Younger, Kendell, & Pickler, 1997). However, little is known about the experience of mothers of LPIs and their adjustment to the mothering role.

Theoretical Model of Maternal Competence and Responsiveness

The work of Rubin (1984) and Mercer (2004) provided the theoretical framework for this research. Rubin conceptualized the work of pregnancy as four broad, interdependent tasks worked on concurrently and equally throughout the pregnancy: seeking safe passage for self and child through pregnancy, labor, and delivery; ensuring the acceptance of the child by significant persons in the family; binding-in to the unknown child; and learning to give of self (1984). The tasks of pregnancy establish the qualitative matrix of maternal behavior that evolves as the age, condition, and situation of the child changes (Mercer).

Becoming a mother is the psychosocial transitional process that begins during pregnancy, becomes increasingly complicated as pregnancy progresses, and continues after birth as the needs of the infant and child develop (Mercer, 2004). Mothers, with their infants, create a dynamic and complex relationship that benefits the mother and the child that involves moving from a known, current reality to an unknown, new reality. The mother experiences

satisfaction in her role as she gains confidence and competence in responding and providing care to her infant. The infant benefits from the development of the maternal role as basic needs for nutrition, comfort, safety, and attachment are met (Mercer).

Finally competence in the role as mother is about the mother knowing how, what, when, and why she does something for her infant. A major component in the role of mothering is the ability to provide skillful, sensitive care that fosters the infant's development (Mercer & Ferketich, 1995). Knowing when and how to respond by reading the infant's cues is the essence of maternal competence. The interactional behavior between infant and mother that occurs during care giving is a continuous, reciprocal interaction whereby the infant influences and is influenced by the environment (Holditch-Davis et al., 2007; Secco, Ateah, Woodgate, & Moffatt, 2002). The same concept of reciprocal interaction applies to the development of maternal responsiveness. Mother and infant learn to read each other's cues, respond to each other, grow, and develop.

Maternal competence is defined as maternal intelligence that influences infant development and includes elements of sensitivity, responsiveness, and synchrony. Maternal competence continually changes as the infant grows and is based on verbal and nonverbal feedback from the infant (Mercer & Ferketich, 1995; Rubin, 1984). *Maternal responsiveness* is defined as the mother's ability to be warm and soothing with her infant, leading to a synchronous relationship where the mother reads her infant's cues and responds to the infant's needs (Amankwaa, Pickler, & Boonmee, 2007; Baker & McGrath, 2011; Drake, Humenick, Amankwaa, Younger, & Roux, 2007; Reyna & Pickler, 2009).

Maternal Competence and Responsiveness Conceptual Model

The model for maternal competence and responsiveness (Figure 1) was developed from a review of 32 studies that examined factors influencing competence and responsiveness in mothers of newborns and children up to age 2. Factors influencing development of maternal competence and responsiveness were identified and included support from others, maternal well-being, stress and coping, and previous experience, as well as infant well-being and infant temperament. These factors were used to guide development of the model.

Support from others is important to managing life stress and adaptation to new situations (Logsdon, Ziegler, Hertweck, & Pinto-Foltz, 2008). Types of support important to development of maternal competence include relational (e.g., comfort), informational (e.g., advice), physical (e.g., maternal), and ideological (Haslam, Parkenham, & Smith, 2006). Support from others mediates the stress of a difficult infant, provides positive feedback when a mother is learning to care for the infant, and guides decision making (McComish & Visger, 2009; Ngai, Wai-Chi Chan, & Ip, 2010; Teti & Gelfand, 1991).

Maternal well-being includes states of depression, stress, and anxiety. Mothers who experience depression have been noted to be less interactive with their infants and demonstrated limited ability to read and interpret infant cues (Paris, Bolton, & Spielman, 2011). Infants of depressed and anxious mothers also demonstrate fewer facial expressions and vocalizations, were fussier, and had fewer easy-to-read cues (Paris et al.; Stiles, 2010). In addition a study of first time mothers at 8 months postpartum, mother's stress index was the most significant factor for predicting maternal competence ($p < 0.0001$) when controlling for other demographic factors (Tarkku, 2003).

Women who have children are often considered at an advantage in that they have experience in the role as mother. However Rubin (1984) contended that experienced mothers form a new maternal identity with each child requiring the woman to reorder her life space and self-system to accommodate the new child and the child's individual characteristics. In a study

by Mercer and Ferketich (1995) experienced and inexperienced mothers were compared to understand differences in their self-reported maternal competence and variables predicting competence postpartum. The two groups did not differ in maternal competence over time. Self-esteem was a consistent predictor of competence in experienced and inexperienced mothers (Mercer & Ferketich).

Mothers of late preterm infants experienced significantly more situational anxiety, more depressive symptoms, posttraumatic symptoms following childbirth, and worry than mothers of term infants (Brandon et al., 2011). The findings of this study were related to fear for infant well-being, concern related to infant survival, and extended hospitalization of the infant. Infants who are described as “easy” provide clear positive signals to the mother that their needs are met thereby validating the mothers’ actions as mother (Flagler, 1988; Tarkku, 2003; Teti & Gelfand, 1991). Mothers, who described their infant as difficult demonstrated significantly, lower scores for maternal competence, and higher scores for maternal anxiety and depression (Flagler; Voegtline & Stifter, 2010). As demonstrated in these studies, infant behavior influences the development of a synchronous relationship between mother and infant and thereby influences the development of maternal competence.

Although numerous studies have examined the development of maternal competence and responsiveness in mothers of term and preterm infants, development in mothers of late preterm infants has yet to be examined. The specific aim of this study was to examine the perception of maternal competence and responsiveness to the infant in mothers of late preterm infants compared to mothers of full-term infants. Factors including support from others, maternal well-being (satisfaction with life, self-esteem, and mood), stress and coping, and previous experience as a mother, as well as infant well-being (gestation) and infant temperament were also measured to examine their relationship to competence and responsiveness.

Methods

In this study we used a nonexperimental repeated-measures design to compare maternal competence and responsiveness in two groups of postpartum mothers at postpartum and 6-weeks postpartum as well as factors that may be related to competence and responsiveness. The study was conducted at a southeastern United States urban academic medical center. Following Institutional Review Board approval mothers were recruited from the postpartum unit over a 6-month period.

Participants

A convenience sample of mothers was recruited following initial recovery from childbirth. One group consisted of mothers of full-term infants greater than 37-weeks gestation, and the second group was mothers of late preterm infants 34–36 6/7-weeks gestation as documented in the maternal medical record. Primiparas and multiparas were recruited. Eligibility to participate in the study included English speaking, singleton birth with no known congenital anomalies, and appropriate weight for gestational age. Mothers were age 18 or older and without postpartum complications including eclampsia, postpartum hemorrhage, or other conditions that interfered with postpartum transition.

Data Collection Procedures

Data were collected through two postpartum surveys, one after delivery during the postpartum hospital stay and again at 6-weeks postpartum. Mothers were approached and offered the opportunity to participate after transfer to the postpartum unit. Survey packets were left with mothers and collected on the following day prior to discharge to allow time to

complete without feeling rushed or interfering with postpartum recovery or baby care. Mothers who were unable to complete surveys prior to discharge were given addressed, postage-paid envelopes before discharge to facilitate return of time one surveys. At 5-weeks postpartum participants were contacted by phone to remind mothers the survey packet would be arriving by mail and answer any questions related to completing and returning the survey. A packet of questionnaires and a self-addressed, postage-paid envelope was included to facilitate return of surveys. If surveys were not returned within 2 weeks of mailing, one follow-up reminder phone call was made.

Model Variable and Measures

Demographic and descriptive data of the participants were collected from the medical record during the postpartum hospital stay. Data included maternal age, ethnicity, race, marital status, gravida/para history, history of depression, and treatment for depression. Infant gestational age, Ballard score, birth weight, APGARs, method of feeding, discharge weight, newborn complications, and length of stay were collected from the newborn medical record. A description of the instruments used to measure the model constructs is found in Table 1. Maternal competence was measured by the Parenting Sense of Competence Scale (PSOC), which has been used in numerous studies of new mothers to measure perception of competence (Gibaud-Wallston & Wandersman, 1978). Maternal infant responsiveness was measured by the Maternal Infant Responsiveness Instrument (MIRI) that measures a mother's recognition of her own responsiveness, of infant responsiveness to mother, and difficulties in responsiveness. The MIRI has been used in studies of mothers of term (Drake et al., 2007) and preterm infants (Amankwaa et al., 2007).

Statistical Analysis

Statistical analysis was performed using JMP software, version 10. Descriptive statistics were calculated to describe the sample including mean, median, and standard deviation for continuous variables and frequency distribution for categorical and nominal variables. Differences between the two groups on competence and responsiveness were examined using paired *t* tests from data collected at two time points. Relationships between competence and responsiveness and factors that are potentially related to these outcomes and relationships among these factors were examined with Pearson *r* correlations.

Results

Over a 6-month period 734 mothers were screened: 289 were non-English speaking, 15 declined, 87 were not available at the time of recruitment, and 20 did not meet criteria for the study. At time one data collection during the postpartum hospital stay, *n* = 116 mothers were recruited; *n* = 105 completed surveys at Time 1 (*n* = 77 term and *n* = 28 LPI mothers). At Time 2, 6-weeks postpartum, 70 mothers, 49 term and 21 LPI, completed data collection questionnaires. Using data available from Birth Certificate records as a comparison, mothers who participated in this study were representative of the population of mothers who gave birth during the same 6 months of data collection of this study in terms of age, race, ethnicity, marital status, and obstetric history. Mothers who completed both sets of questionnaires were not significantly different on demographic variables from mothers who completed only the first set of questionnaires. Characteristics of the sample who completed measures at both time points are shown in Table 2. No statistically significant differences between the term and LPI groups were identified when comparing marital status, multigravida or primigravida, history of depression, or history of treatment for depression. With the exception of one outlier in the LPI group who developed neonatal complications after enrollment in the study and was hospitalized for 58 days, the mean LPI length of stay was 5.69 days (*SD* = 6.07 days) compared to the term infant mean length of stay of 2.32 days (*SD* = 0.71), (*p* = 0.02). The most frequent medical reason for extended length of stay

in the LPI group was hypothermia ($n = 7$) followed by respiratory instability ($n = 6$), hyperbilirubinemia ($n = 5$), and hypoglycemia ($n = 2$). Seven infants underwent sepsis evaluations, and of that group three were treated with antibiotics.

Table 3 shows the descriptive values for variables identified in the model of maternal competence and responsiveness as measured in the sample who completed the delivery and 6-weeks postpartum measures. Mothers of LPIs reported significantly higher stress at delivery ($F = 6.5$, $p = 0.01$) and at 6-weeks postpartum ($F = 12.5$, $p = .001$) than did mothers of term infants. There were no other differences at either time points in any of the other factors that were considered potentially related to competence and responsiveness. There were no differences in mothers of LPIs versus term mothers in regard to perceptions of competence or responsiveness at delivery (competence: $F = 1.6$, $p = .2$; responsiveness: $F = 0.0$, $p = .9$) or 6-weeks postpartum (competence: $F = .09$, $p = .7$; responsiveness: $F = 1.6$, $p = .2$). However, mothers of term infants reported higher levels of competence ($t = 5.2$, $p = .001$) and lower levels of responsiveness ($t = -2.1$, $p = .04$) at the 6 week measurement than they did at the delivery measurement.

Relationships among maternal and infants factors were examined at delivery and 6-weeks postpartum. Because of the small sample size and the lack of significant differences between mothers of LPIs and mothers of term infants, the relationships were examined for the entire sample, as seen in Table 4. At delivery, support from others was directly related to stress and to perceptions of the infant's temperament. Satisfaction with life showed inverse relationships with stress and maternal responsiveness. Mood was directly related to stress, which was inversely related to infant well-being. Perception of infant temperament was directly related to maternal responsiveness. At 6-weeks postpartum, Support from others was directly related to mood, whereas satisfaction with life showed inverse relationships with mood and stress. Stress was inversely related to infant well-being and infant well-being was inversely related to infant temperament.

Discussion

Although there were no significant differences in maternal competence or responsiveness between the two groups of mothers or between the measurement times in this study, significant relationships between factors contributing to competence and responsiveness were identified. Using gestational age as a measure for infant well-being, mothers of LPIs reported higher stress at time of delivery and 6-weeks postpartum validating previous studies that prematurity influences maternal stress levels. Maternal stress was significantly related to most factors in the model. At the postpartum measurement mothers who felt supported reported less stress and perceived their infant as less difficult; mothers who were more satisfied with life reported less stress; and mothers with higher depression scores reported more stress and concerns about their infant's well-being. At 6-weeks postpartum stress again was related to satisfaction with life, mood, and infant well-being. Another significant relationship in factors of the model at 6-weeks postpartum was found between infant well-being and infant temperament.

Mothers in this study reported relatively high levels of life satisfaction, self-esteem, and support and low levels of depression and stress. These findings correlate with findings of other studies that examined similar factors of maternal competence and responsiveness. For example, Haslam et al. (2006) reported an association between higher support and self-efficacy and lower levels of postpartum depression; Porter and Hsu (2003) demonstrated the relationship between maternal well-being, support, and infant temperament in the development of maternal competence; Tarkku (2003) found factors significant to the development of maternal competence in first time mothers including infant temperament,

breastfeeding, and social support; and Zayas, Jankowaski, and McKee (2005) reported self-efficacy and satisfaction increased whereas depression decreased in a sample of urban minority mothers. The findings of this study validate the importance of support and well-being in the development of maternal competence and responsiveness.

In a study of maternal responsiveness with mothers of preterm infants conducted by Amankwaa et al. (2007), no significant differences were found over a 3-month postpartum period in measures of maternal responsiveness. In a similar study, predictors of maternal responsiveness included satisfaction with life, self-esteem, and number of children (Drake et al., 2007). Perception of infant temperament and report of less stress significantly influenced maternal responsiveness in this study further suggesting that the unique synchrony that occurs between infant and mother may be influenced by maternal well-being. Mothers who perceived their infants as more difficult with higher temperament scores had lower scores for maternal responsiveness (Drake et al.).

Limitations

Limitations include self-report, attrition of participants, the possibility of socially desirable answers versus true feelings, reading level, participant burden, and English language-only survey tools (Waltz, Strickland, & Lenz, 2005). At 6-weeks postpartum many mothers are adjusting to the demands of returning to work, daycare, and separation from their infant; the time to participate in research at 6 weeks may be limited for many women. Criteria to participate in the study limited the available LPI sample, as one fifth of the accessible population were non-English speaking. The total number of survey questions was 160 items possibly creating participant burden. Mothers were allowed as much time as necessary to complete survey tools and were compensated with gift cards to local department stores each time they completed questionnaires to mediate survey burden. Additionally this study experienced limitations identified in other studies of LPIs including minimal gestational age difference between LPI (36 6/7 weeks) and term (37 weeks) gestation and adjusted age versus actual age (Brandon et al., 2011; Voegtline & Stiffler, 2010). In this study many LPIs were developmentally only 40-weeks gestation at the 6-week follow-up data point and may have lagged behind developmentally. Additionally, no data on maternal education level or socioeconomic status were collected. This information could have added to the overall description of the participants.

The hospital environment where this study was conducted may have influenced outcomes. The proportion of LPI births in this sample population was approximately 5%, less than the national rate of 8.28% in 2011 (Hamilton, Martin, & Ventura, 2010). This finding may reflect the focused attention of care providers at this hospital to change practices related to elective births prior to 39-weeks gestation. Prevention of LPI births became a priority for the obstetric services approximately a year prior to data collection for this study. This effort significantly decreased the rate of LPIs from 20 per month in 2010 to approximately 10 LPIs per month in 2011.

During data collection a second initiative related to LPI care focusing on transition care was initiated. A protocol was developed and adopted that 34- and 35-week gestation infants would routinely be admitted to the neonatal intensive care unit (NICU) with the goal of preventing depletion of limited reserves and development of hypothermia, hypoglycemia, and respiratory instability. As soon as the LPI demonstrates the ability to maintain temperature, stable respiratory status, and feeding patterns established the LPI is transferred to the postpartum unit where mother/baby care is the routine. Although improving outcomes for the LPI, the single-room NICU model of care where mothers were allowed to stay with and participate in care may have influenced the mothers' experience of support.

Implications for Practice

Identification of late preterm infants as a unique group has increased the focus on care to prevent preterm birth, avoid iatrogenic preterm birth and the resulting complications among infants who previously were considered “just a little premature” (Engle et al., 2007). Providing an environment where mothers of LPIs can learn to care for their infant and be supported in the transition to motherhood and lessen the effects of stress when the infant is born prematurely appears to be the most significant implication of this study. Care providers have the optimal opportunity to model supportive care in preparation for discharge. Identification of support systems and stressors within the family or community prior to discharge should be part of the discharge planning for mothers of LPI’s.

Conclusions

Findings of this study contribute to the science of maternal psychosocial health and advance our understanding of the maternal experience specifically for mothers of LPIs. This study further validates findings from other studies related to maternal competence and responsiveness. Care providers have the unique opportunity to provide support, model supportive care to a mother’s support system, and address stressors a new mother may be facing as they prepare for discharge. Future research should explore outcomes related to types of support, how to better prepare mothers for discharge with their LPI, and health care providers’ role in supporting the LPI mother on her journey to motherhood.

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Figure 1.
Conceptual Model of Factors Contributing to Maternal Competence and Responsiveness.

Table 1**Model Constructs and Data Collection Instruments**

Construct	Instrument
Maternal Competence	Parenting Sense of Competence (PSOC) 17-item Likert-type response format with two subscales, efficacy and satisfaction. Responses range from 1 (<i>strongly disagree</i>) to 7 (<i>strongly agree</i>) with higher scores indicating increased perception of competence in the role as mother (Gibaud-Wallston & Wandersman, 1978). Cronbach's alpha = .78 for this study.
Maternal Responsiveness	Maternal Infant Responsiveness Instrument (MIRI) 22-item Likert-type response format. Responses range from 1 (<i>strongly agree</i>) to 5 (<i>strongly disagree</i>). Scores range from 22–110 (Amankwaa, Pickler, & Boonmee, 2007). Cronbach's alpha = .89 for this study.
Support from Others	Postpartum Support Questionnaire (PSQ) 34-item Likert-type response format. Responses range from <i>not important</i> to <i>very important</i> and from <i>no support</i> to <i>a lot of support</i> . Scores can range from 0–238, with higher scores indicating greater perceived support and greater support received (Logsdon, Usui, Birkimer, & McBride, 1996). Cronbach's alpha = .86 for this study.
Maternal Well-being	Satisfaction with Life (SWL) 5-item Likert-type response format. Responses range from 1 (<i>strongly disagree</i>) to 7 (<i>strongly agree</i>) (Pavot & Diener, 1993). Cronbach's alpha = .85 for this study. Edinburgh Postnatal Depression Scale (EPDS) 10-item Likert-type response format. Scores greater than 10 indicate possible depression and scores of 13 or greater indicate a depressive illness (Cox, Holden, & Sagovsky, 1987). Cronbach's alpha = .79 for this study. Rosenberg Self-Esteem Scale (RSES) 10-item Likert-type response format. Each item has four response choices ranging from 4 (<i>strongly agree</i>) to 1 (<i>strongly disagree</i>) (Hatcher & Hall, 2009). Cronbach's alpha = .81 for this study.
Stress and Coping	Everyday Stressor Index (ESI) 10-item Likert-type response format. Responses range from 1 (<i>not bothered</i>) at all to 4 (<i>bothered a great deal</i>). Scores range from 0–60 with higher scores indicating more stress. Cronbach's alpha = .91 for this study.
Previous Experience	Classification as primipara (first-time live infant) or multipara (one or more previous live infants).
Infant Well-Being	Classification as late preterm (<37 weeks) or term (≥ 37 weeks)
Infant Temperament	Pictorial Assessment of Infant Temperament (PAT) Ten vignettes demonstrating infant responses to everyday care and events as easy, average, or difficult (1–3). The instrument has been shown to have convergent validity with more widely utilized temperament questionnaires and has been validated with at-risk infants. Higher scores indicate that the infant's temperament is perceived as more difficult (Clark-Stewart, Fitzpatrick, Allhussen, & Goldbert, 2000). Cronbach's alpha = .75 for this study.

Table 2

Demographic Characteristics of Mothers Who Completed Both Data Collection Periods

Characteristic	Category	Total Sample (N = 70)	Term (n = 49)	LPI (n = 21)	Total Births for same 6-month time period (n = 1516)
Maternal Age (Mean)		28.2	28.5	27.57	26.9
Race	Black	29	20	9	927 (61%)
	White	35	24	11	542 (36%)
	Asian	4	4	0	44 (3%)
	American Indian/Alaskan	2	1	1	3 (<1%)
Ethnicity	Non-Hispanic or Latino	61	48	20	1056 (70%)
	Hispanic	1		1	460 (30%)
	Missing	8	2		
	Married	25	17	8	554 (37%)
Marital Status	Single	35	24	11	962 (63%)
	Missing	10	8	2	
	Primigravida	23	17	6	
	Multigravida	46	31	15	
Obstetric History	Missing	1	1		
	Vaginal delivery	50	38	12	
	Cesarean section	18	10	8	
	Missing	2	1	1	
History of Depression	Yes	9	7	2	
	No	59	40	19	
	Missing	2	2		
	Yes	8	6	2	
History of Treatment for Depression	No	60	41	19	
	Missing	2			
	3 days (SD = 3.1)		2.4 days (SD = .67)	4.8 days (SD = 5.6)	
	38.2 weeks		39.5 weeks	35.3 weeks	
Birth Weight (Mean; Standard Deviation)	38.3 weeks		39.7 weeks	35.4 weeks	
	3003 gms (SD = 648)		3287 (SD = 430)	2334 (SD = 583)	

Table 3Descriptive Results for Measures of Factors and Outcomes at Delivery and 6 Weeks Postpartum¹

Factors and Outcomes	Delivery		6 Weeks Postpartum	
	Term (n = 49)	Late Preterm Infant (n = 21)	Term (n = 49)	LPI (n = 21)
Support from Others	30–82 61.9 (12.2)	21–82 66.7 (13.2)	43–81 67 (8.9)	49–94 71.9 (11.8)
Maternal Well-Being				
Satisfaction	13–39 29 (5.1)	10–35 26.3 (6.7)	9–35 28.5 (4.7)	13–35 28.7 (5.6)
Self-esteem	5–31 24.7 (5.1)	22–29 25.8 (1.5)	14–40 31.4 (5.3)	15–40 30.8 (8.4)
Mood	0–12 4.9 (3.6)	0–13 5.9 (4)	0–16 5.9 (3.6)	1–14 5.7 (3.5)
Stress	18–51 31.8 (7.6)	20–62 36.8 (9.7)	20–58 33 (8.7)	26–58 38.8 (9.30)
Infant Temperament	5–24 12.6 (8.1)	10–25 15.3 (8.6)	11–24 17.6 (2.8)	14–25 19.1 (3.2)
Maternal Competence	4–92 56.9 (13.9)	45–85 62.1 (28.1)	51–74 64.5 (4.3)	57–73 66 (4.9)
Maternal Responsiveness	9–67 48.5 (9.5)	37–80 49.9 (15.2)	23–70 42.4 (9.3)	26–63 47.5 (9.6)

Note.

¹ Minimum – maximum scores, mean (Standard Deviation).

Table 4

Relationships among Factors and Outcomes at Delivery

	Satisfaction	Self-Esteem	Mood	Stress	Experience	Infant Well-Being	Temperament	Competence	Responsiveness
Support	-0.31 *	0.14	0.16	0.33 *	-0.06	-0.09	0.26 *	0.03	0.08
Satisfaction		-0.11	-0.32 *	-0.40 *	-0.06	0.17	-0.18	0.09	-0.21 *
Self-esteem			0.07	0.00	-0.02	-0.09	0.17	-0.10	-0.02
Mood				0.44 *	-0.13	-0.10	0.14	0.10	-0.03
Stress					-0.01	-0.22 *	0.14	0.10	0.09
Experience						-0.08	0.05	-0.18	-0.08
Infant Well-being							-0.10	-0.11	-0.00
Temperament								0.14	0.21 *
Competence									0.18

Note.

* $p < 0.05$.