



# A shorter breastfeeding duration in late preterm infants than term infants during the first year

Rakel B. Jonsdottir<sup>1,2</sup>  | Helga Jonsdottir<sup>2</sup> | Brynja Orlygsdottir<sup>2</sup> | Renée Flacking<sup>3</sup> 

<sup>1</sup>Neonatal Intensive Care Unit, Landspítali – The National University Hospital of Iceland, Reykjavik, Iceland

<sup>2</sup>Faculty of Nursing, School of Health Sciences, University of Iceland, Reykjavik, Iceland

<sup>3</sup>School of Education, Health and Social Studies, Dalarna University, Falun, Sweden

## Correspondence

Rakel B. Jonsdottir, Faculty of Nursing, School of Health Sciences, University of Iceland, Reykjavik, Iceland.  
Email: rakelbjo@lsh.is

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## Abstract

**Aim:** Little attention has been paid to breastfeeding late preterm (LPT) infants. This study compared breastfeeding, worries, depression and stress in mothers of LPT and term-born infants throughout the first year. We also described factors associated with shorter breastfeeding duration of LPT infants.

**Methods:** This longitudinal cohort study of the mothers of singleton infants—129 born LPT and 277 born at term—was conducted at Landspítali—The National University Hospital of Iceland, which has the country's only neonatal intensive care unit. The mothers answered questionnaires when their infants were 1, 4, 8 and 12 months of age.

**Results:** Mothers breastfed LPT infants for a significantly shorter time than term infants: a median of 7 months (95% confidence interval 5.53–8.48) vs 9 months (95% confidence interval 8.39–9.61) ( $P < .05$ ). Starting solids at up to 4 months was the strongest risk factor for LPT breastfeeding cessation during the first year, after adjusting for confounders ( $P < .001$ ). Their mothers reported more worries about their infants' health and behaviour during the first year and were more likely to experience depression at 4 months.

**Conclusion:** Mothers with LPT infants are vulnerable and need greater practical breastfeeding and emotional support in hospital and at home.

## KEYWORDS

depression, exclusive breastfeeding, gestational age, late preterm, well-being

## 1 | BACKGROUND

Breastfeeding is one of the most effective ways to ensure a child's health and survival, and the World Health Organization recommends exclusive breastfeeding for the first 6 months and some breastfeeding up to 2 years of age.<sup>1</sup> The nutritional, immunological and neurological advantages of breast milk are particularly important

for preterm infants.<sup>2</sup> Much research has focused on the initiation, duration and management of breastfeeding in very preterm infants born at <32 weeks, but less attention has been paid to the largest subgroup of preterm infants, which is late preterm (LPT) infants from 34 to 36 weeks. Studies of mothers with LPT infants have showed that they are less likely to initiate, and sustain, breastfeeding compared with mothers of term infants<sup>3–5</sup> and even the mothers of more

**Abbreviations:** LPT, late preterm; NICU, neonatal intensive care unit; EPDS, Edinburgh Postnatal Depression Scale.

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preterm infants.<sup>6</sup> Thus, there is a need for better lactation support for LPT infant-mother dyads.<sup>7</sup>

Breastfeeding is a complex phenomenon that involves physical and emotional aspects and is influenced by societal and cultural support and the expectations of both breastfeeding and motherhood. Becoming a mother is stressful for many and learning new parenting skills, such as understanding infants' signals, is challenging, frequently causes concern and has been shown to lead to contact with health services.<sup>8</sup> Depressive symptoms are common, and one study reported that about 10%-15% of the mothers of term infants were affected during the first year.<sup>9</sup> The first year of parenting is exceptionally important for developing the mother-infant relationship and experiences of parenting. These include infants' feeding behaviours, especially breastfeeding.<sup>10,11</sup> But is it right to assume that the mothers of LPT infants experience parenting in the same way as the mothers of term infants, as the infant's physical appearance is similar to that of term infants? LPT infants have fewer medical problems than infants born at a lower gestational age and are less likely to need neonatal care. However, studies have stated that the mothers of LPT infants experienced more emotional distress at 1 month after the birth and had more symptoms of depression and anxiety than the mothers of term infants.<sup>12,13</sup> These symptoms have also been associated with less optimal infant feeding outcomes.<sup>14</sup>

In a previous study, we described the differences in breastfeeding during the first month in LPT infants in the NICU, LPT infants from the maternity unit and term infants.<sup>4</sup> The aim of this study was to describe, and compare, the experiences of mothers of LPT and term-born infants during the first year, with regard to breastfeeding duration, feeding, worries, depression and stress. A further aim was to identify factors associated with shorter breastfeeding duration of LPT infants.

## 2 | MATERIALS AND METHODS

### 2.1 | Design and setting

This was a longitudinal cohort study that focused on the mothers of LPT and healthy term singleton infants. It was conducted at Landspítali—The National University Hospital of Iceland, which has the only neonatal intensive care unit (NICU) in Iceland. The NICU was open to parents 24 hours a day, but only had two single family rooms for rooming-in, the other 20 cots were located in open-bay areas. All mothers in the NICU were provided with a breast pump and preterm infants who were born <32 weeks received donor milk if the mother was not able to provide breast milk. In Iceland, about 98% of all mothers initiate breastfeeding.<sup>15</sup> At the time of the study, healthy mothers with term infants were usually discharged with their infant within 48 hours of delivery and received five to seven home visits from a midwife during the first 10 days after birth. Most LPT infants did not receive this midwife service because they stayed in the birth facility during that period. The primary healthcare nurse visited the families of all the infants two to four times a week from about 7

### Key notes

- We compared the emotional well-being and breastfeeding duration of mothers of 129 late preterm (LPT) infants and 277 full-term babies.
- Icelandic mothers stopped breastfeeding their LPT infants a median of 2 months earlier than the mothers of term infants and experienced more depression at 4 months.
- Mothers with LPT infants needed greater practical breastfeeding and emotional support in hospital and at home.

to 10 days after they came home until the infant was 9 weeks old. Parental leave in Iceland is 9 months, namely 3 months for mothers, 3 months for fathers and 3 months that the parents can share between them. The Icelandic Directorate of Health recommends that all infants are exclusively breastfed until 6 months of age, with some degree of breastfeeding until they reach the age of 1 year. It also recommended that infants start solids at 6 months, unless the breastfed infant is not growing appropriately. Then, the advice is to start solids and/or formula at 4-6 months of age.<sup>16</sup>

### 2.2 | Participants

All mothers of singleton LPT infants who gave birth at the hospital from 15th of March 2015 to 31st of May 2017 were invited to take part in the study. The exclusion criteria were newborn infants with a major congenital abnormality, an Apgar score of  $\leq 6$  at five minutes or a clinical definition of an injury to the central nervous system, and mothers under the age of 18. Mothers who were not able to speak or read Icelandic were also excluded. Each LPT infant-mother dyad was matched with two mothers of term singletons who were not admitted to the NICU. These infants met the same inclusion criteria, together with the matched infant's birth month and the mother's age. The mothers were invited to participate by a mailed letter 2 weeks after the birth and they responded by email or phone if they agreed to take part. Data from the mothers were collected and managed using REDCap electronic data capture tools (Vanderbilt University, Tennessee, USA) hosted at the University of Iceland.<sup>17</sup> Two weeks after the mother provided consent, the software automatically sent out an email with the questionnaire, around the time when the infant was 1 month of postnatal age. It did the same when the infants were 4, 8 and 12 months of postnatal age. Answering the questionnaire provided informed consent. If the questionnaire was not filled out within 5 days of the mother receiving the initial email at each age, the software automatically sent out a reminder and again after another 5 days if no response was recorded.

During the study period, 6341 singletons were born at the hospital and 259 of these were LPT infants. Of the 210 singleton

LPT infant-mother dyads who met the criteria for the study, and were invited to participate, 129 (61%) of the mothers filled in at least one questionnaire and 82 (39%) participated at all time points. Of the 405 term-born infant-mother dyads who met the study criteria and who were invited to participate, 277 (68%) filled in at least one questionnaire and 193 (48%) participated at all time points. There were no statistical differences in the number of postnatal days between the mothers of the LPT and term infants when the mothers' answered the questionnaires at 1, 4, 8 and 12 months.

The study was approved by the National Bioethics Committee of Iceland, which is the country's data protection authority, and the Medical Director of Landspítali—The National University Hospital of Iceland (14-051-V1, 2014030541AT, 16 LSH 45-14).

### 2.3 | Measures

Data on gestational age, birth weight, mode of delivery, Apgar score, parity and maternal age were obtained from the electronic medical and hospital records.

An interdisciplinary team of clinical experts developed the self-reported questionnaire, called health and well-being, based on the literature. The questionnaire was pretested at all age points with mothers of LPT infants and term-born infants of that age by interviewing them, as described by Drennan.<sup>18</sup> The total number of mothers involved in these pilot tests was 4 at each age point. The main changes that were made as a result of these interviews were to adjust the way the items and response options were worded. The questionnaire included questions on feeding at all four ages and maternal well-being when the infants were 1, 4 and 12 months. Feeding covered what the infant was fed, the feeding method and frequency, the infant's behaviour and potential difficulties. Breastfeeding was defined as exclusive when the mother fed only breast milk directly from the breast but could include medications and vitamins. All mothers who exclusively fed their breast milk did so directly from the breast. Any breastfeeding was defined as providing breast milk directly from the breast or by bottle in combination with formula and/ or solids. The infant's age in months when breastfeeding ceased was measured. Maternal well-being comprised questions on anxiety, depression and trauma 12 months before the birth. This did not need to be based on a clinical diagnosis. Worries were defined as concerns about the infants' nutrition, health, sleep, crying, weight and development at one, four and 12 months. Mothers who experienced few, some and many worries were compared to those with no worries. In addition to our questionnaire on health and well-being, we used validated instruments to assess post-partum depressive symptoms and parenting stress. Depressive symptoms were measured by the Edinburgh Postnatal Depressive Scale (EPDS) at one and four months. The scale includes 10 items, with a total score of 0-30, and a higher score indicates more depressive symptoms. We used a cut-off point of  $\geq 13$ , as recommended by Cox et al<sup>19</sup>

Parenting stress was measured at 12 months using the Parenting Stress Index 4th Edition Short Form. It consists of 36 questions with three subscales, each with 12 items. The subscales measure parent's distress, impaired interaction with the child and difficulties with the infant's behaviour.<sup>20</sup> A score of  $\geq 30$  on any subscale, or a score of  $\geq 90$  for total parenting stress, indicates risks to the well-being of the parent and the child.<sup>21</sup>

### 2.4 | Statistical analyses

Descriptive statistics are given as means with standard deviations and medians with interquartile ranges or percentages, according to the type and distribution of the data. The two groups of LPT and term-born infants were compared by two-sample *t* tests or Pearson's chi-square tests, with a two-sided 5% level of significance. McNemar's test was used to assess the differences in the proportions of breastfeeding from 1 to 12 months within the groups. To analyse breastfeeding duration, survival curves were constructed using the Kaplan-Meier method to represent the cumulative probability of ceasing breastfeeding by each month of age up to 12 months. The association of the covariates with breastfeeding cessation before 12 months was estimated by Cox regression and presented as hazard ratios (HR) with 95% confidence intervals (CI). The first step was to analyse the individual association between each of the independent variables on the cessation of any direct breastfeeding in the unadjusted analyses. There was a medium correlation between the EPDS scores and worries, but multicollinearity could have been a problem. Thus, we used the EPDS scores rather than the worries that were expressed, because the EPDS is a validated and commonly used instrument. In the second step of the Cox proportional hazards regression model, all variables that were individually statistically associated with ceased breastfeeding in LPT infants up until 12 months were included. A *P* value of  $< .05$  was considered statistically significant. The statistical analysis was performed using SPSS software, version 24.0 (IBM Corp).

## 3 | RESULTS

The total sample consisted of 129 LPT infants and 277 infants born at term. The characteristics of the sample by those two groups are reported in Table 1.

### 3.1 | Feeding

The proportions of exclusive and any breastfeeding by the mothers of LPT infants and term infants are presented in Figure 1. There was a significant difference in exclusive breastfeeding at 1 month ( $P < .001$ ). The decline in exclusive breastfeeding from 1 to 4 months was 15% for LPT infants (chi-square 5.37,  $P < .05$ ) and

**TABLE 1** Characteristics of participating mothers and their LPT and term infants

	LPT (n = 129)		Term (n = 275)		P value
	n	%	n	%	
<b>Mother</b>					
Maternal age, years mean (SD)	29.6 (6.2)		30.1 (5.7)		ns
Multipara	46	39%	159	59%	***
Have breastfed before	41	89%	150	94%	ns
Married/living with partner	110	92%	249	94%	ns
Single or not living with partner	9	8%	17	6%	ns
Highest educational level					ns
University	66	55%	179	67%	
High school	35	29%	56	21%	
Elementary	17	14%	23	8%	
Household income/mo (ISK)					*
<400 000	31	26%	53	20%	
4-800 000	66	55%	121	46%	
>800 000	23	19%	89	34%	
Mental illness during the year before birth					
Depression <sup>a</sup>	25	19%	43	16%	ns
Anxiety <sup>a</sup>	42	33%	71	26%	ns
Traumatic event during the year before birth	39	33%	66	25%	ns
Vaginal birth	85	66%	241	88%	***
<b>Infants</b>					
Admitted to the NICU	60	46%	0	0%	***
Hospital stay					
Less than 24 h	5	4%	150	56%	***
1-6 d	78	67%	115	43%	***
7-13 d	32	27%	2	1%	***
>14 d	2	2%	0	0%	*
Gestational age, days mean (SD)	250.0 (6.2)		282.5 (6.4)		***
APGAR at 5 min, mean (SD)	9.2 (0.9)		9.6 (0.6)		***
Girl	60	47%	141	51%	ns
Birth weight, grams, mean (sd)	2715 (532)		3734 (480)		***
Admitted to hospital after discharge					
before 4 mo	12	11%	12	5%	*
4 to 8 mo	4	4%	6	3%	ns
8 to 12 mo	7	7%	8	4%	ns

Abbreviations: ISK, Icelandic Króna (1.0 ISK = 0.01 Euro at the time of writing); LPT, late preterm; NICU, neonatal intensive care unit; ns, not significant; SD, standard deviation.

<sup>a</sup>Self-rated, diagnosed or not.

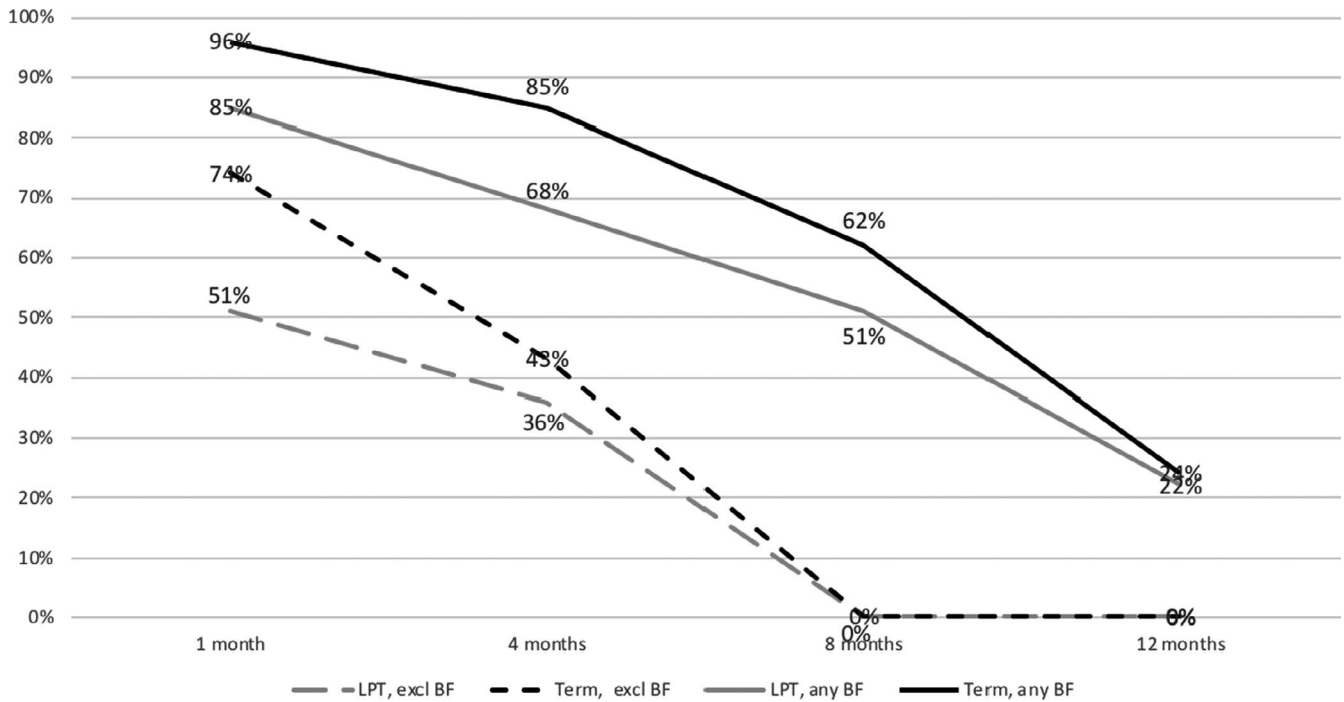
\* $P < .05$ ,

\*\* $P < .01$ ;

\*\*\* $P < .001$ .

for term infants the decline was 31% (chi-square 49.84,  $P < .001$ ). Significantly fewer LPT infants were breastfed to some extent, namely any breastfeeding, at 1 month ( $P < .001$ ) and 4 months ( $P < .001$ ).

The median estimated breastfeeding time was significantly shorter for LPT infants than term infants at 7 months (95% CI 5.53-8.48) vs 9 months (95% CI 8.39-9.61) (Log-rank test, chi-square = 4.66,  $P = .03$ ).



**FIGURE 1** Exclusive and any breastfeeding in late preterm (n = 129) and term (n = 277) infants throughout the first year

Solids were introduced by 4 months by 40% of LPT mothers compared with 49% of the mothers of term infants ( $P > .05$ ) and the mothers stated similar reasons for introducing solids. Those reasons included: the infant was old enough to start solids and the infant was always hungry and advice from healthcare staff. At 8 months, term infants were more likely than LPT infants to finger feed themselves (89% vs 64%,  $P < .001$ ) and to like bits in their food (78% vs 62%,  $P < .01$ ).

### 3.2 | Maternal well-being

The mothers of LPT infants worried more about their infants' nutrition, crying, health, development and sleep, at one, four and 12 months, compared with mothers of term infants (Table 2). At 1 month, 27% of the LPT mothers worried about all of those areas, compared with 11% of term mothers ( $P < .001$ ). At 4 months, the corresponding percentages were 18% and 8% ( $P < .01$ ). There was no statistical difference at 12 months (9% vs 8%,  $P > .05$ ).

When the infants were 1 month of age, 12% of the mothers with LPT infants and 9% of the mothers with term infants had an EPDS score of  $\geq 13$  ( $P > .05$ ). By 4 months of age, the gap had widened and was significantly higher in the mothers of LPT infants than term infants (18% vs 8%,  $P < .01$ ).

There were no statistical differences between the two groups' total Parenting Stress Index scores or the scores for the subscales. None of the mothers in the LPT group scored  $\geq 90$  on the Index at 12 months but two (1%) term mothers did. The percentage of

**TABLE 2** Mothers' worries about her infant

	1 mo <sup>a</sup>	P	4 mo <sup>a</sup>	P	12 mo <sup>a</sup>	P
<b>Nutrition</b>						
LPT, n (%)	63 (53)	***	50 (44)	.07	41 (44)	ns
Term, n (%)	88 (33)		79 (34)		85 (39)	
<b>Crying</b>						
LPT, n (%)	62 (52)	ns	50 (44)	**	25 (27)	ns
Term, n (%)	129 (49)		67 (29)		54 (25)	
<b>Health</b>						
LPT, n (%)	83 (69)	**	61 (54)	**	49 (52)	*
Term, n (%)	137 (52)		81 (52)		87 (52)	
<b>Weight</b>						
LPT, n (%)	56 (47)	***	39 (34)	ns	40 (43)	ns
Term, n (%)	69 (26)		66 (28)		70 (32)	
<b>Development</b>						
LPT, n (%)	63 (53)	***	55 (48)	***	28 (30)	ns
Term, n (%)	67 (25)		42 (18)		47 (22)	
<b>Sleep</b>						
LPT, n (%)	71 (59)	**	49 (43)	ns	52 (55)	**
Term, n (%)	111 (42)		105 (45)		84 (39)	

Abbreviations: LPT, late preterm infant; ns, not significant.

<sup>a</sup>postnatal age.

\* $P < .05$ ,

\*\* $P < .01$ ;

\*\*\* $P < .001$ ;

mothers scoring  $\geq 30$  on the parent distress, interaction and difficult child subscales were 11%, 0% and 0% for the LPT mothers and 11%, 0% and 1% for the term mothers.

### 3.3 | Factors associated with breastfeeding duration in late preterm infants

Table 3 shows the Cox model estimates for associations between factors and time of breastfeeding cessation in the first year for LPT infants. A number of factors were significantly associated with breastfeeding duration in the unadjusted analyses. These were being single, a weak suck at 1 week, an abundance of milk at 1 week, insufficient milk at 1 month, an EPDS of  $\geq 13$  at 1 month and starting solids before 4 months. In the adjusted model, only starting solids before 4 months remained significant.

## 4 | DISCUSSION

To our knowledge, this was the first comparative study to investigate infants' feeding, maternal well-being and breastfeeding duration in LPT and term-born mother-infant dyads. Furthermore, we investigated influential factors associated with breastfeeding duration in LPT dyads during the first year of the infant's life. We find that the exclusive breastfeeding progression differed between LPT and term infants. Although LPT infants were breastfed exclusively to a lesser extent than term infants at 1 month, a more positive trend was seen in the following months. In a previous study,<sup>4</sup> we showed that LPT mothers reported an increase in exclusive breastfeeding during the first month after birth, which did not occur in term mothers. Hence, these studies taken together show that LPT mother-infant dyads have the capacity and resources to transition from any to exclusive breastfeeding in the first 4 months. These positive findings are similar to those presented by Crippa et al,<sup>22</sup> but different to Nagulesapillai et al<sup>23</sup> One potential reason for this positive trend in Iceland could be the positive breastfeeding culture and the mothers' determination to exclusively breastfeed. Although we found a positive pattern in exclusive breastfeeding, LPT infants were breastfed on average for 2 months less than term infants. The findings in this study do not explain the shorter breastfeeding duration, as influential factors such as the early introduction of solids were similar for both groups.

Our findings on how many mothers experienced anxiety and depression 12 months before birth was unexpectedly high. Thus, more attention needs to be paid to identifying women with anxiety and depression during pregnancy and to find strategies to support these women before they give birth. Depressive symptoms were more prominent in the mothers of LPT infants in our study, and this finding has been supported by others.<sup>12</sup> Worries and depressive symptoms could, potentially, be a major influence on breastfeeding and may prove to be statistically significant in a

larger sample of mothers. However, the findings on the association between depressive symptoms and breastfeeding have been inconclusive.<sup>24</sup> Despite that, maternal well-being is of the utmost importance per se and for the developing the mother-infant bond. Our findings on the postnatal depressive symptoms and worries reported by the mothers of LPT infants are cause for concern. Further research is needed on the unique postnatal worries and concerns about parenting LPT infants. The support provided to mothers of LPT infants at home needs to include, and acknowledge, mothers' emotional well-being.

The most prominent factor associated with a shorter breastfeeding duration in LPT infants was the early introduction of solids. At 4 months of age, 40% of LPT infants had started solids. The impact of the early introduction of solids on breastfeeding has received little attention but Lessa et al<sup>25</sup> showed that it was associated with a shorter duration of breastfeeding, with a dose-response relationship that was not explained by background social characteristics. The debate on the best time to introduce solids in exclusively breastfed infants is ongoing. The European Food Safety Authority has concluded that the majority of infants do not benefit nutritionally from starting solids before 6 months.<sup>26</sup> The most common reasons for introducing solids mentioned by the mothers who participated in our study were that the infant was old enough to start solids, they were always hungry and because of healthcare professionals' advice. These reasons emphasise that advice and support need to be evidence-based. It is essential that primary care healthcare professionals consider the LPT infants' development, their vulnerable status and their feeding pattern. Primary healthcare nurses are key to this process as they deliver home visits, which have been shown to improve breastfeeding rates.<sup>27</sup> However, some studies<sup>28,29</sup> have shown that most primary healthcare professionals follow the standards of care for term infants when delivering LPT infant care. This highlights the need for policies and evidence-based guidelines when caring for these vulnerable, but somehow invisible, LPT infants.

The main strength of this study was the population-based, prospective, longitudinal design. The sample was homogeneous, as it was recruited from a single hospital in a country with high breastfeeding rates. This limits the generalizability of the findings. However, we still found significant differences in breastfeeding duration between LPT and term infants. The response rate was rather low for those responding at all time points, but this is common in survey-based studies. Thus, the lack of consistency in answering the questionnaires influenced the validity of the findings. A major limitation is the lack of data on LPT health characteristics including hyperbilirubinemia, which may impact on initiation of breastfeeding and maternal depression.<sup>7,14</sup> Considering the levels of worries and stress reported by LPT mothers, it is interesting that the results did not show differences in parenting stress measures. Potential explanations could be the time period when stress was measured or the choice of instrument. An additional limitation is that the data on breastfeeding might reflect some degree of the Hawthorne effect, whereby study subjects alter their behaviour because they are being observed. In this case, the mothers may

**TABLE 3** Hazard ratios (HR) in Cox regression analysis for ceasing breastfeeding during the first year in LPT infants

	Unadjusted		Adjusted	
	HR	(95% CI)	HR	(95% CI)
<b>Mother</b>				
Caesarean section	1.30	(0.84-2.02)		
No partner/single	2.39 <sup>*</sup>	(1.09-5.23)	2.41	(1.00-5.81)
Maternal age				
<24 y	1.41	(0.73-2.75)		
25-29 y	1.21	(0.67-2.18)		
30-34 y	0.93	(0.49-1.74)		
>35 y	1			
Income				
<400 000 ISK	1.70	(0.91-3.15)		
4-800 000 ISK	1.14	(0.65-2.00)		
>800 000 ISK	1			
Education,				
Elementary	1.73	(0.87-3.43)		
High school	1.00	(0.62-1.64)		
University	1			
Anxiety <sup>a</sup>	(0.77-1.87)			
Depression <sup>a</sup>	(0.56-1.72)			
Had not breastfed before	1.14	(0.72-1.80)		
<b>Infant</b>				
Admitted to NICU	1.08	(0.71-1.64)		
Gestational age				
34 wk	0.69	(0.39-1.22)		
35 wk	0.88	(0.53-1.45)		
36 wk	1			
Boy	1.07	(0.70-1.63)		
APGAR score at 5 min	0.83	(0.65-1.06)		
Infant hospitalised before 4 mo	1.72	(0.89-3.35)		
<b>Feeding</b>				
Infant first time at breast				
>24 h	1.52	(0.84-2.76)		
6-24 h	1.27	(0.71-2.27)		
<6 h	1			
Used nipple shield 1st week home	1.25	(0.81-1.92)		
Used nipple shield at 1 mo	1.14	(0.68-1.89)		
How easy/difficult to feed at 1 mo				
Different/unpredictable	1.06	(0.39-2.90)		
Very/rather difficult	2.22	(0.69-7.16)		
Very/rather easy	1			
How easy/difficult to feed at 4 mo				
Different/unpredictable	2.19	(0.53-9.03)		
Very/rather difficult	1.10	(0.27-4.47)		
Very/rather easy	1			
Week suck during 1st week home				

(Continues)

TABLE 3 (Continued)

	Unadjusted		Adjusted	
	HR	(95% CI)	HR	(95% CI)
Often/Always	2.08**	(1.21-3.56)	1.24	(0.81-2.26)
Sometimes	1.79 <sup>†</sup>	(1.05-3.04)	0.69	(0.38-1.26)
Never	1			
Week suck at 1 mo				
Often/Always	1.71	(0.62-4.70)		
Sometimes	1.22	(0.63-2.37)		
Never	1			
Insufficient milk supply 1st week home	1.39	(0.85-2.27)		
Insufficient milk supply at 1 mo	1.77 <sup>†</sup>	(1.12-2.81)	1.35	(0.81-2.26)
Abundance of milk 1st week home	0.64 <sup>†</sup>	(0.42-1.00)	0.62	(0.39-1.00)
Abundance of milk at 1 mo	0.66	(0.37-1.18)		
Infant feeds ≤ 9 times/d at 1 mo	1.61	(0.91-2.87)		
Had started solids at 4 mo	2.27***	(1.48-3.48)	2.49***	(1.57-3.65)
<b>EPDS score ≥ 13</b>				
1 mo	2.14 <sup>†</sup>	(1.10-4.19)	1.78	(0.87-3.65)
4 mo	1.24	(0.70-2.21)		
<b>Parent Stress Index</b>				
Total parenting stress	0.98	(0.96-1.00)		
Parental distress	0.98	(0.95-1.02)		
Impaired interaction with child	0.96	(0.90-1.02)		
Difficult child	0.96	(0.91-1.01)		

Abbreviations: EPDS, Edinburgh Postnatal Depressive Scale; ISK, Icelandic krona; NICU, neonatal intensive care unit.

<sup>†</sup>Self-rated, diagnosed or not.

\* $P < .05$ ;

\*\* $P < .01$ ;

\*\*\* $P < .001$ .

have wanted to conform to the normative goal of breastfeeding, although they had already weaned their baby. However, the breastfeeding rates of term infants were comparable to population-based breastfeeding data.<sup>30</sup>

## 5 | CONCLUSION

Our study showed that the LPT mother-infant dyad was vulnerable and in need of improved support at hospital and at home. This support needs to address both their emotional state and the practical aspects of breastfeeding. By ensuring a seamless continuum of healthcare, trustful staff-mother relationships can be built to support maternal well-being as well as breastfeeding. Implementing guidelines for well child primary care, which is tailored to the needs of mothers of LPT infants, is of the utmost importance.

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## CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

## ORCID

Rakel B. Jonsdottir  <https://orcid.org/0000-0003-1961-4339>

Renée Flacking  <https://orcid.org/0000-0002-4013-1553>

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