"Striving for Sufficient Milk to Have a Healthy Late Preterm Baby": A Grounded Theory Study

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Abstract: Late preterm infants are at risk for more health problems than full-term infants. They require good nutrition for growth, and breast milk is the gold standard because it contains valuable nutrients. Such infants are increasing globally while exclusive breastfeeding rates are decreasing. This grounded theory study explored exclusive breastfeeding experiences among first-time mothers of late preterm infants. Seventeen mothers from Northern Thailand who had exclusively breastfed for the first six weeks were recruited by purposive sampling to provide the initial data, and they were interviewed in-depth for 30-60 minutes. Constant comparative analysis was used during data collection and analysis. Striving for sufficient milk to have a healthy baby emerged as the core category representing a process in which the mothers of late preterm infants had to exert great effort to produce sufficient milk for their infants. This process consisted of preparing for breastfeeding, overcoming the problem of insufficient milk supply, and managing to continue breastfeeding. In conclusion, perceived insufficient milk supply in first-time mothers was a threat to achieving exclusive breastfeeding of their late preterm infants. However, the desire to have a healthy baby results in mothers' greater efforts to achieve a sufficient milk supply. Understanding the findings of this study by nurses, midwives, and other relevant health professionals about the breastfeeding perceptions of mothers of these infants can lead to better outcomes for mothers and babies. Supportive care regarding exclusive breastfeeding is needed for mothers throughout the sequence of antenatal, intrapartum, and postpartum care.

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Introduction

Late preterm infants (LPIs), defined by birth at 34 through to 36 weeks plus six days of gestation, are less physiologically and metabolically mature than term infants. Thus, they are at risk for more health problems and have higher death rates than full-term infants.[1-2] Breast milk is the ideal food for optimal nutrition and growth in preterm infants[3] as mothers of preterm infants initially produce breast

milk with higher amounts of protein, fat, free amino acids, and sodium than those of full-term infants.[4] Regarding development, breast milk contributes positively to physical, neurological, and psychological development in preterm infants.[5]

Although breastfeeding is beneficial for all infants, the exclusive breastfeeding rate is lower than the global requirement.[5] The WHO set a goal for an exclusive breastfeeding rate in infants—both full-term and preterm—of 50% by 2025.[6] In Thailand, a target rate of 50% for exclusive breastfeeding was also set in the Twelfth National Health Development Plan.[7] However, Thailand has not reached that target. The exclusive breastfeeding rate for all infants in Thailand is 14 %.[8] Currently, the rate of preterm birth is still increasing. Late preterm births account for more than 70% of all preterm births.[9] As a consequence, late preterm infants are less likely to be breastfed than term infants.[10] Due to the high mortality rates of preterm infants and the low rates of exclusive breastfeeding, the need to study how mothers can continue to breastfeed to ensure the survival of their late preterm children is an urgent issue.

Late preterm infants (LPIs) are sleepy during at-breast feedings with subsequent detachment from the nipple that means difficulty maintaining breastfeeding. They cannot empty the breasts, thereby leading to a decreased milk supply, because breast milk production decreases to the level of demand.[11] Thus, LPTs are at higher risk of a lower rate of initiation and continued breastfeeding than full-term infants.[12-13]

Studies have described many factors associated with breastfeeding in LPTs, including socio-demographic characteristics, maternal health, perception of insufficient milk supply, abnormal nipples and breast problems, negative feelings about infant condition[14] maternal health conditions, and delayed breastfeeding.[3,15] These are often related to the discontinuation of breastfeeding. In contrast, previous experiences in breastfeeding[16] and the breastfeeding durations of older siblings[17] are associated with the duration of breastfeeding. Moreover, the breastfeeding intention helps to prepare women for breastfeeding, increasing the breastfeeding rates in mothers of LPTs.[15] The intention to breastfeed for longer periods,[17] and the mother's knowledge about the benefits of breastfeeding,[15] are facilitators of breastfeeding duration.

In addition, inadequate support for breastfeeding, including little or no access to consultants or health care providers, lactation experts, and breastfeeding support groups, are barriers to breastfeeding.[15,18] Importantly, the continuation of breastfeeding is related to the support of husbands and other family members,[19] while separating an infant from their mother for treatment becomes an inhibitor of breastfeeding. In this case, mothers do not have independence in caring for their infants.[15,18,20] Restricted visiting times are also an inhibiting factor in breastfeeding.[21] Understanding factors associated with breastfeeding will allow healthcare decision-makers to plan and evaluate appropriate interventions to improve the initiation and continuation of breastfeeding.

An integrative review found that the interventions to promote breastfeeding in LPTs included skin-to-skin contact (kangaroo care), cup-feeding and triple feeding (second-line strategies), and rooming-in could promote exclusivity and duration of breastfeeding.[1] According to a study conducted in Thailand on the effects of a self-efficacy-promoting program on perceived self-efficacy, breastfeeding effectiveness and breastfeeding rates among mothers of LPIs, no differences were found in perceived self-efficacy and breastfeeding rates between the experimental and control groups.[22] A literature review of breastfeeding interventions found that breastfeeding of LPTs was promoted, but the focus was during the neonatal intensive care unit (NICU) hospitalization. Moreover, the breastfeeding interventions were neither aimed at exclusive breastfeeding nor first-time mothers.[2] Regardless, those interventions of breastfeeding promotion studies were conducted in Western countries, which may be

different in terms of culture, healthcare providers, nurses, midwives, and healthcare delivery systems in Asia, particularly in Thailand, the setting of this study.

Two qualitative studies exploring mothers' experiences of LPIs have been identified.[23-24] These were conducted in parous mothers of LPTs with complications and in NICUs. The findings revealed the number of breastfeeding and non-breastfeeding mothers and the reasons for discontinuation of breastfeeding. However, the researchers did not address the management of successful exclusive breastfeeding in first-time mothers or their experiences with exclusive breastfeeding. Furthermore, the previous two studies were conducted in Western settings. Therefore, it was essential to investigate whether Thai first-time mothers of LPTs exclusively breastfeed.

Because quantitative research could not address this study's research questions, grounded theory (GT),[25] a systematic methodology was applied to qualitative research. The grounded theory uses symbolic interactionism (SI), which focuses on interaction processes between people, exploring behavior and social roles.[26] Therefore, the researchers believed GT could be used to understand breastfeeding experiences among mothers of LPIs and the breastfeeding management processes that facilitate success in exclusive breastfeeding. The grounded theory is particularly suited to areas of research that had not previously been explored. Moreover, this approach allows the emergence of theory from research material that could be explained by human behavior and social contexts.[27]

Mothers at six weeks postpartum formed the sample for this study because this period is critical for establishing exclusive breastfeeding.[28] A mother's ability to breastfeed at this time is a significant predictor of exclusive breastfeeding for up to 6 months.[29] In addition, a follow-up at six weeks postpartum can reveal the management of breastfeeding among Thai mothers of LPIs while in the hospital, until discharge, and at home.[30]

Research Questions

1. What are the exclusive breastfeeding experiences among first-time mothers of LPTs?
2. How do first-time mothers of LPTs manage exclusive breastfeeding?

Methods

Study Design: Grounded theory was used to create a theory from the qualitative research process via inductive reasoning. In other words, drawing conclusions about the study phenomenon by going from the specific to the general, gathering and analyzing data systematically.[27] The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was used as the guideline for reporting this study.[31]

Participants and setting: A purposive sampling strategy and theoretical sampling were used in this study. First-time mothers of LPIs who had delivered at gestational ages between 34 weeks to 36 weeks plus six days were eligible to participate if they met the following inclusion criteria in order to ensure homogeneity of study participants: a) 20 years of age or older, b) exclusively breastfeeding, c) normal delivery, d) no underlying diseases, e) Thai-speaking, f) having a healthy infant without congenital abnormalities, and g) exclusively breastfeeding until first six weeks.

Enrollment occurred when the participants came for a six-week postpartum checkup at the family planning clinic of a university hospital in northern Thailand. After the mother agreed to participate in the study, the primary investigator (PI) made appointments and set up dates, times, and private places for the interviews, convenient for her.

Ethical considerations: Permission to conduct the study was obtained from the Institutional Review Board, Faculty of Nursing, and the Faculty of Medicine, Chiang Mai University, No. 2018-EXP065 and No. 2561-05865. The potential participants were informed about the purpose and process of the research and

ensured with verbal and written guarantees of anonymity and confidentiality. It was clarified that they could refuse to participate or withdraw from the study at any time. All participants signed informed consent forms, which included permission to record the interviews. All interview transcripts were kept confidential and anonymous, and only the advisory committee could check them for review purposes.

Data collection: A total of 17 in-depth interviews were conducted face-to-face with each participant in the family planning clinic room at the study site using an interview guide to obtain intensive descriptions of experience related to the research purposes (See **Table 1**). The guide was constructed based on SI and GT studies and included open-ended questionnaires. The interviews inquired about the experiences and management of exclusive breastfeeding among mothers of LPIs during pregnancy, giving birth and the postpartum period. The guide was reviewed by two breastfeeding experts and a GT expert to examine the appropriateness of the content and tested with two mothers who were separate from the study participants. All interviews were conducted by the PI, a PhD candidate, lasted an average of one hour, and were audio-recorded and transcribed verbatim. The PI probed into specific issues introduced by the participants to gain deeper, more precise information, using expressions such as "Please tell more about...". The interviews lasted 30-60 minutes. All participants were interviewed twice in the interest of thoroughness and academic accuracy. The PI used theoretical sampling to sample the next participants. The data was continually collected until it was saturated.[32]

Table 1. The interview guideline

What was your experience during pregnancy?
What were your postpartum experiences during your stay in the hospital?
How about your breastfeeding experience?
How do you feel about breastfeeding?
How does breastfeeding affect your life? How do you feel about this effect?
What are your needs (encouragement/support) during breastfeeding?
From whom? How much support do you want for what reasons?
How do you manage to exclusively breastfeed?

Data analysis: Data collection and analysis were performed simultaneously using the three steps of data analysis,[32] which involved a constant comparative method during the coding procedure, memos with diagrams, and theoretical sensitivity. After each interview, the PI made field notes, wrote theoretical memos and transcribed the entire recording. Codes were identified in the initial phase using open, line-by-line, and incident-by-incident coding, followed by selective, focused, and theoretical coding. Next, the topic codes were grouped to form phases. In the memos-with-diagrams step, each phase was linked and compared with the other phases to verify the findings and the phases to ensure that these phases fitted the data by using the constant comparative method. Finally, the PI used theoretical sensitivity to assist in the formulation of a theory that was specific to the phenomena under study.[25] Following analysis, member checking was used to ascertain whether the participants recognized the study findings as true to their experiences. The participants were revisited to ensure that the interpretation of their responses suitably reflected their thoughts about their experience. The first three interviews were coded and discussed with the PI's advisory committee in the peer debriefing process. Data analysis was supervised by the PI's advisory committee consisting of two experts in GT, three experts in breastfeeding, and an expert in preterm infant care throughout the inquiry process.

Trustworthiness: The trustworthiness of the data was established following the approach of Lincoln and Guba,[33] whose criteria of trustworthiness for qualitative research consisted of credibility, transferability, dependability, and confirmability.[33] Member checking with participants and peer debriefing ensured credibility. In addition, the researchers used thick descriptions, purposive sampling, and theoretical sampling to judge the transferability potential. Dependability was achieved by tracking the memos the researcher provided across the research process to report the ongoing process of the substantive theory generated by the emerging data for readers. For confirmability, triangulation, including field notes, audio recordings, and memos, was used to confirm that the research findings were not caused by the bias of the researcher. The PI regularly checked in with the participants to ensure that they understood the research process and to address any concerns they might have. The data analysis process and the PI's conceptualizations were overseen, discussed, and confirmed with the advisory committee. Through these means, external credibility was strengthened with the obtained agreement pertaining to the emerging phases and the core category. Additionally, a summary of the emerging themes was given to participants to determine whether the codes and categories matched their perspectives.

Findings

Description of Participants

The participants were 17 first-time Thai mothers of LPIs; 88.24% lived in extended families, and 52.94% gave birth at 35-35 weeks plus six days of gestation. Of the infants, 70.6% were transferred to the neonatal ward; 29.4% were transferred to the NICU; 64.7% were breastfed at six weeks postpartum; and 32.3% were given breast milk by bottle feeding (**Table 2**).

Table 2. Demographic characteristics of the participants (N = 17)

Characteristics	Number	Percentage
Age (years)		
21-30	10	58.82
31-37	7	41.18
Educational level		
Secondary School	2	11.76
Vocational College	3	17.65
Bachelor's Degree	11	64.71
Master's Degree	1	5.88
Occupation		
General Employee	7	47.06
Housewife	3	17.65
Merchant	2	11.76
Civil Servant	1	5.88
Government Employee	3	17.65
Type of family		
Extended	15	88.24
Nuclear	2	11.76
Number of family members (persons)		
3-4	9	52.94
5-6	8	47.06

Table 2. Demographic characteristics of the participants (N = 17) (Cont.)

Characteristics	Number	Percentage
Family monthly income (THB and USD)		
5001–10,000 (153-304)	1	5.88
10,001–15,000 (305-457)	3	17.65
15,001–20,000 (458-609)	3	17.65
20,001–25,000 (610-762)	8	47.06
25,001–30,000 (763-914)	2	11.76

Core Category: Striving for sufficient milk to have a healthy baby

The data analysis revealed that "*Striving for sufficient milk to have a healthy baby*" was a process in which the participants had to exert great effort to secure sufficient milk for their infants. This process was a fundamental social process in their life journey that began when participants planned to give breast milk to their babies during pregnancy and lasted until they achieved breastfeeding, which continued until six weeks postpartum (at the time of the study). The process consisted of the three phases, described below (Figure 1).

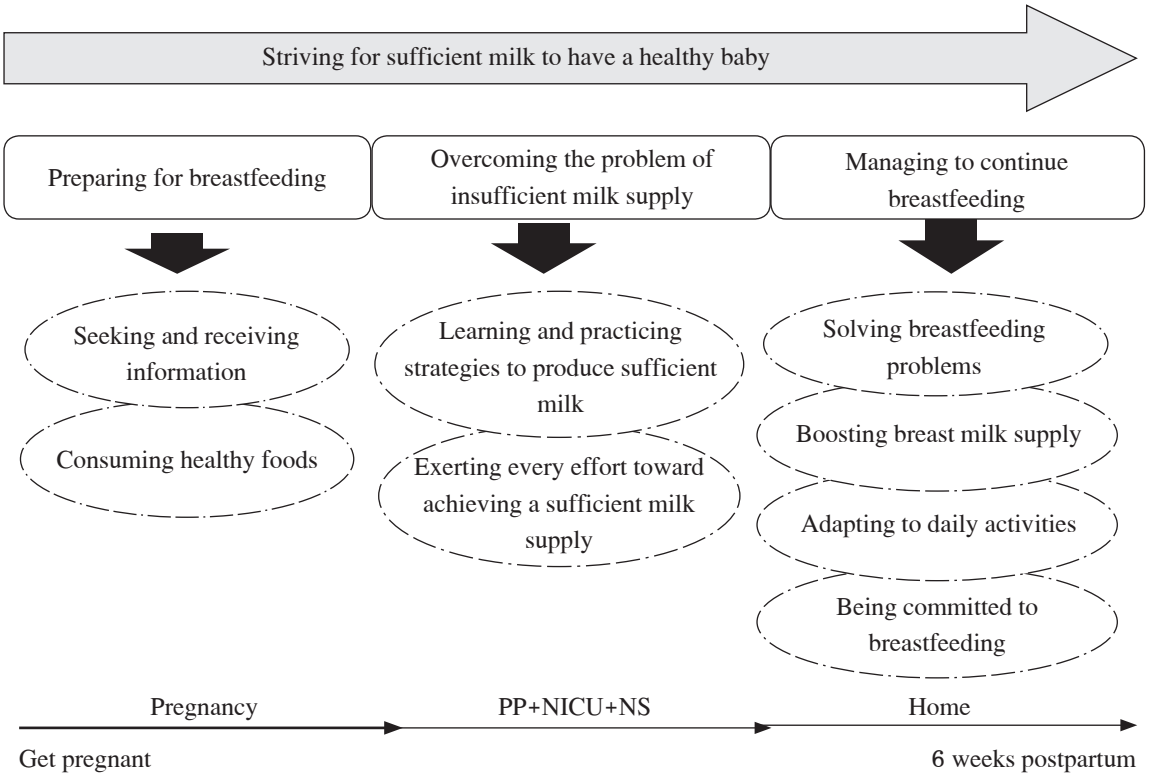

Figure 1. The process of "striving for sufficient milk to have a healthy baby"

Abbreviations

PP = Postpartum period, NICU = Neonatal intensive care unit, NS = Neonatal ward

Phase 1: Preparing for breastfeeding

This phase began while the mothers were pregnant until they delivered their preterm babies. All participants received antenatal care services from the hospital, where they received information on the benefits of breastfeeding from professionals, particularly nurses and midwives at the antenatal clinics, through group learning sessions. Therefore, all participants made the decision to breastfeed prenatally, recognizing its value with regard to enhancing infant growth and immunity and saving money, for example:

> *I decided to breastfeed when I got pregnant... because breast milk has all the nutrients and immunity, so babies are healthy and strong.* (P11)

Seeking and receiving information

Phase 1 also involved the mothers seeking and receiving information on when to obtain as much information as possible about breastfeeding from various sources, including health care professionals, non-professionals, and the Internet. Most indicated that they sought and received much information through a group learning session on breastfeeding, which was a part of their antenatal care. In addition, in antenatal care, the nurses advised the mothers to watch a video with content on breast milk:

> *It recommended that we should breastfeed for two years... breastfeeding for six months, then adding dietary supplements...The nurses gave information about how much nutrition breast milk contains. (P4)*

Consuming healthy foods

During Phase 1, the mothers consumed healthy foods that they believed stimulated their milk supply, such as dates and ginger, to prepare for lactation during pregnancy. They also drank ginger tea to boost breast milk, based on advice from relatives

> *When I was 5 months pregnant, I ate dates sometimes. I ate dried dates or dates boiled with pandan leaves* [pandanus amaryllifolius]*... People in the maternity group on Facebook said that eating dates gave them a lot of milk.* (P14)

Phase 2: Overcoming the problem of insufficient milk supply

Phase 2 started when the mothers gave birth and included when the babies were hospitalized. After the mothers gave birth, they were confronted with separation from their infants and lack of skin-to-skin contact, causing lactation problems that led to an insufficient milk supply, for example:

> *After delivery, I saw my baby only for a second... the doctor told me my baby had to stay in the pediatric ward. He was preterm and his lungs weren't strong yet. I was afraid I wouldn't have any milk. Everything I'd read had said newborns have to be offered breastfeeding within an hour or two after birth.* (P4)

The mothers overcame the problem of insufficient milk supply by learning and practicing strategies to produce sufficient milk and exerting every effort toward achieving a sufficient milk supply.

Learning and practicing strategies to produce sufficient milk

The mothers received advice from nurses about producing sufficient milk by massaging and learned proper breastfeeding positioning and attachment. They learned to compress and massage the breasts and express breast milk for their infants every 2-4 hours. The nurses placed hot towels on their breasts before breast massage. The mothers tolerated the process of learning to collect milk in a syringe for their babies:

> *The nurses taught me how to massage my breasts... they would bring me towels soaked in hot water... I tried to express milk. If I was able to get milk, I would collect it in a syringe.* (P1)

After learning the breast massage technique, the mothers said they produced a considerable amount of milk within a few days after massaging and expressing breast milk every 2-4 hours.

I expressed milk every 2–3 hours...the more frequently I expressed, the more I got. ... Once I was discharged, I was able to express about 1 ounce of milk. (P7)

The mothers practiced the breastfeeding positions and attachment until they could execute them properly and the babies suckled well. Then, they could be discharged from the hospital:

When I knew how to do it, he suckled well. The baby was really good at it. When the baby suckled well, my milk kept flowing... and we were able to go home. (P13)

Exerting every effort toward achieving a sufficient milk supply

During Phase 2, the mothers exerted every effort toward achieving a sufficient milk supply. After learning and practicing techniques to produce sufficient milk, the mothers followed the nurses' advice. All the mothers recognized that breastfeeding was beneficial for their babies. They wanted healthy babies, so they exerted every effort toward achieving a sufficient milk supply. The mothers mentioned that breast milk contains good nutrients, with more nutrition and immunity benefits than formula milk.

Breastfed babies are healthy, and breast milk has benefits. I'd like to breastfeed my baby for a year...but I'll be satisfied if we make it to six months. (P1)

The mothers disciplined themselves to breastfeed, even though they had small amounts of milk at first. They woke up every night to pump milk to obtain a sufficient supply. Pumping milk was very painful, but the mothers were able to endure the pain because of their love for their children and desire to have a healthy infant. One mother explained:

It's in a mother's nature to produce milk. It's up to me to have the discipline to get it out... I have to pump, even at night...If I don't wake up to pump milk at night, there won't be enough milk...if I'm not strong... I won't be able to breastfeed successfully. (P4)

The mothers attempted to produce enough milk by breastfeeding frequently. They pumped milk so that they could give breastmilk at every feeding. After breastfeeding frequently, they had a greater milk supply. They felt glad to have sufficient milk for their babies:

My baby has eight feedings a day...I try to pump for every feeding...I try to pump the amount my baby needs for each feeding... I try to pump as much milk as possible, ...so, I have enough for my baby at each feeding. (P2)

While their babies were hospitalized, the mothers visited the hospital every day. They pumped milk and brought fresh breast milk to their babies, and they had appointments to practice breastfeeding. They also pumped breast milk at the lactation clinic at every hospital visit:

I have to deliver milk to my baby every day. My baby needs fresh milk, as he is small and drinking fresh milk is best... I pump milk at night; when I get to the hospital, I pump again in the lactation clinic. (P5)

During breastfeeding, ten mothers had breast engorgement. This condition was relieved by massaging the breasts to express milk, with lactation nurses' assistance and independently:

My breasts were engorged... I went to the lactation clinic. The nurses helped massage my breasts, so I felt better. (P4)

Phase 3: Managing to continue breastfeeding

Phase 3 started when the infants were discharged and lasted from when the babies went home to six weeks postpartum. The mothers recognized that breast milk is good for an infant's health. However, at home, the mothers encountered lactation problems and could not consult with health care professionals; these problems

included sleepiness, refusal to breastfeed, and crying on the part of the infant.

> *Breast milk has so many benefits. It helps with bowel movements, but formula milk makes it difficult for babies to have bowel movements. My baby is healthy.* (P11)

Solving breastfeeding problems

The mothers had sore nipples because the babies mouthed at the nipples without deeply suckling over the areola. They solved this problem by stimulating their babies to open wide. They modified the breastfeeding position for attachment following the advice given to them by nurses in the hospital:

> *I wasn't able to attach...My baby cracked my nipples...I tried to get my baby to suck deeply on the areola.* (P3)

Boosting breast milk supply

During Phase 3, the mothers received advice from nurses, colleagues, and their family members to drink herbal teas and avoid prohibited foods to boost their breast milk supply for continued breastfeeding. As a result, they drank ginger tea, banana blossom tea, and a Northern Thai herb tea called *mai nomnang* [xantolis] instead of water to increase milk production. After drinking, they felt their breasts were full:

> *Most of the time, I have ginger tea...like drinking it in place of water.... I drink when I feel thirsty and after pumping milk. I always drink it after waking up. I just drink it all the time.* (P6)

Adapting to daily activities

The mothers also adapted their activities in daily life to continue breastfeeding by managing their time to perform activities in a variety of situations. They adjusted by sleeping in the daytime, doing activities while their babies were sleeping, and asking family members to support them.

> *I didn't really get any sleep and my body was tired...I was tired in those early days.... I took some daytime naps, too.* (P5)

Being committed to breastfeeding

The mothers persevered with breastfeeding, despite their fatigue and less sleep, they endured this because they were happy to breastfeed. They felt rejuvenated when they saw their babies' faces and responses and felt their babies were healthy while receiving breast milk. Hence, the mothers were committed to breastfeeding because of their love for their babies:

> *Breastfeeding causes a child to have good health to avoid severe illnesses and being admitted to a hospital.* (P13)

In summary, the mothers of late preterm infants adopted a maternal role of "*striving for sufficient milk to have a healthy baby.*" GT was used to reach a preliminary stage of theory construction. This enabled the researchers to define the phenomenon of producing sufficient milk as a process of great effort and exertion with respect to correct gestures, timing, facial expression, and offering the breast for infants to breastfeed. A theoretical diagram was developed regarding the provision of adequate milk supply to breastfeed babies for improved health, composed of three phases: *preparing for breastfeeding, overcoming the problem of insufficient milk supply,* and *managing to continue breastfeeding.* The process of producing sufficient milk helped participants achieve successful exclusive breastfeeding and improve the health of their infants.

Discussion

In a GT study, according to the symbolic interactionist perspective, social interactions with others and sociocultural environments influence individuals' interpretations.[34] Our findings merged to highlight the core category of *striving for sufficient milk to have a healthy baby*. This core category emerged from social interactions with others and the sociocultural environments of first-time mothers of LPIs. During interactions, they expressed their thoughts, emotions, needs, and management processes, leading to their behaviors.

This finding can be explained by the fact that the mothers entered the maternity world once they became aware of their pregnancies. They took on the maternal role and demonstrated their behaviors for having healthy babies through gestures, timing, facing, and offering their breasts to breastfeed.

At first, when the mothers learned that they were pregnant, they prepared for breastfeeding by seeking and receiving information from nurses, friends, and the internet and by consuming healthy foods during pregnancy. This is consistent with another study finding that women searched for information during pregnancy from various sources, including friends, family and the Internet.[35] Interestingly, the mothers in the study consumed ginger tea and dates to promote their milk supply during pregnancy. This finding was in contrast with a literature review in which women consumed foods and herbs to increase their milk production during the postpartum period.[36]

The mothers had preterm births, a situation they had not expected. At the time, they were separated from their infants by a hospital protocol for caring for preterm infants. Late preterm infants are typically healthier and suckle and swallow more effectively than early preterm infants,[5] despite being separated from their mother. However, LPIs have more difficulty latching, suckling, and swallowing than full-term infants.[37] They do not have stimulation to initiate breastfeeding and skin-to-skin contact to promote breastfeeding, and also because they are usually separated from their mother. Hence, oxytocin, an essential hormone for triggering milk flow or the milk ejection reflex, is not released as it usually would during breastfeeding.[4] Separation and a lack of skin-to-skin contact interrupt the breastfeeding process and lead to insufficient milk. In contrast, early initiation of breast milk pumping before 12 hours postpartum increases breastfeeding rates.[38] The mothers in our study learned how to massage their breasts and express and collect milk during separation from their babies until they were ready to be breastfed. Breast massage effectively increases milk volume among mothers of premature neonates.[39]

At home, the mothers in this study encountered lactation problems but could not consult with healthcare professionals, so they dealt with these problems by themselves. They modified the baby's position to allow good attachment to resolve cracked nipples. Poor positioning indicates ineffective breastfeeding techniques, potentially causing nipple pain.[40] Incorrect suckling causes the mother's nipples to crack, leading to inadequate milk production. In addition, the mothers in this study sought ways to boost their breast milk supply. They drank herbal teas of ginger, banana blossom, and *mai nomnang* to ensure sufficient milk production, as nurses, colleagues, and family members advised. Banana blossoms and ginger are herbs used in Thailand to stimulate breast milk production and have long been widely popular. Traditionally, herbs have been used in cooking or boiled to make teas.[41] During breastfeeding, the mothers in this study consumed only certain foods and avoided cold water to ensure that they had an adequate milk supply for their babies. This finding is similar to that of a study of traditional beliefs in China, in which cold foods such as pork liver soup, cock, and cuttlefish were found to be prohibited foods thought to decrease breast milk production.[42]

The mothers adapted their daily activities to continue breastfeeding, such as eating and bathing while their babies were sleeping and asked their family members to help them with housework while breastfeeding. Mothers struggle to balance life responsibilities while dealing with uncertain breastfeeding progress and muted feeding cues during breastfeeding.[43] Our findings showed that the mothers of LPIs were committed to breastfeeding. They felt good about breastfeeding when they saw their babies' faces and responses, even though they felt fatigued. Consistent with previous studies on breastfeeding experience, the mothers were delighted when their babies fed at their breasts,[16] as breastfeeding is a beautiful bonding experience.[23]

Limitations and Future Research

The study was conducted at a university hospital in Chiang Mai, Thailand. This study's findings represent a small group of first-time mothers of LPIs and cannot be generalized to other mothers. In addition, all the participants in this study decided to breastfeed antenatally and were breastfeeding at six weeks postpartum. Therefore, the findings do not apply to those who did not intend to breastfeed. Further research that includes multiple sites, diverse groups of women across societies, and longitudinal studies will contribute to the body of knowledge related to exclusive breastfeeding experiences among mothers of LPTs. This research needs to include studies on mothers who did not initially intend to breastfeed.

Conclusion and Implications for Nursing Practice

This study has highlighted a specific aspect of mothers' experience of having an LPI, thereby providing new insights and contributing to a greater understanding of the breastfeeding experiences of such mothers. The findings of this GT study revealed that the experience and management of exclusive breastfeeding among first-time mothers of LPIs had three phases and a core category of *striving for sufficient milk to have a healthy baby*. This process involved the phases of *preparing for breastfeeding, overcoming the problem of insufficient milk supply, and managing to continue breastfeeding*, describing the experience of first-time mothers with LPIs who adjusted to exclusive breastfeeding to have healthy babies. From Phase 1 to Phase 3, the management process of first-time mothers of the LPIs was focused on striving for *sufficient milk to have a healthy baby*. Thai first-time mothers of LPIs did everything they could to succeed in exclusively breastfeeding their babies. They were resourceful and applied many strategies to have an adequate milk supply for a healthy infant. In this study, exclusive breastfeeding among first-time mothers of LPTs was a management process from pregnancy until it was achieved. The knowledge gained from this study can help develop nursing practices that support first-time mothers of LPIs in successfully exclusively breastfeeding their babies. Healthcare providers need to support these mothers by mobilizing social support networks and encouraging breastfeeding, especially in the late postpartum period. Nursing and midwifery interventions, in particular, can help mothers achieve a sufficient milk supply.

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References

1. Cartwright J, Atz T, Newman S, Mueller M, Demirci JR. Integrative review of interventions to promote breastfeeding in the late preterm infant. JOGNN. 2017;46(3):347-56. doi:10.1016/j.jogn.2017.01.006.
2. Dib S, Kittisakmontri K, Wells JC, Fewtrell M. Interventions to improve breastfeeding outcomes in late preterm and early term infants. Breastfeed Med. 2022;17(10):781-92. doi:10.1089/bfm.2022.0118.
3. World Health Organization. Breastfeeding [Internet]. 2020 [cited 2020 Aug 30]. Available from: https://www.who.int/health-topics/breastfeeding#tab=tab_1
4. Lawrence RA, Lawrence RM. Breastfeeding: a guide for the medical profession. 9th ed. Maryland Heights: Elsevier; 2021.
5. Krol KM, Grossmann T. Psychological effects of breastfeeding on children and mothers. Bundesgesundheitsbla [Internet]. 2018 Jun 22 [cited 2018 Aug 24];61(8):977-85. Available from: https://link.springer.com/article/10.1007/s00103-018-2769-0

6. World Health Organization. Infant and young child feeding [Internet]. 2020 [cited 2020 Aug 30]. Available from: https://www.who.int/en/news-room/fact-sheets/detail/infant-and-young-child-feeding
7. Bureau of Health Promotion, Department of Health, Ministry of Public Health. Report A.D. 2014-2015 [Internet]. 2017 [cited 2019 Jan 23]. Available from: http://anamai.moph.go.th
8. National Statistical Office. Child and women situation survey project in Thailand 2019: complete report [Internet]. 2020 [cited 2020 Jan 23]. Available from: https://www.unicef.org/thailand/reports/thailand-multiple-indicator-cluster-survey-2019
9. Martin J, Osterman M. Describing the increase in preterm births in the United States, 2014-2016. NCHS Data Brief [Internet]. 2018 [cited 2019 Jan 23];(312):1-8. Available from: https://www.cdc.gov/nchs/products/databriefs/db312.htm
10. Jonsdottir RB, Jonsdottir H, Orlygsdottir B, Flacking R. A shorter breastfeeding duration in late preterm infants than term infants during the first year. Acta Paediatr. 2021;110:1209-17. doi:10.1111/apa.15596.
11. Meier P, Patel AL, Wright K, Engstrom JL. Management of breastfeeding during and after the maternity hospitalization for late preterm infants. Clin Perinatol. 2013;40(4):689-705. doi:10.1016/j.clp.2013.07.014.
12. Ayton J, Hansen E, Quinn S, Nelson M. Factors associated with initiation and exclusive breastfeeding at hospital discharge: late preterm compared to 37 weeks gestation mother and infant cohort. Int Breastfeed J. 2012;7(1):7-16. doi:10.1186/1746-4358-7-16.
13. Charkaluk ML, Bomy H, Delguste S, Courdent M, Rousseau S, Zaoui-Grattepanche C, et.al. Impact of structured programs on breastfeeding initiation rates in preterm neonates in a socioeconomically deprived area in France: a 10-year population-based study. Arch Pediatr. 2018; 25(1):18-22. doi:10.1016/j.arcped.2017.10.026.
14. Boies EG, Vaucher YE, Academy of Breastfeeding Medicine. ABM clinical protocol# 10: breastfeeding the late preterm ($34-36^{6/7}$ weeks of gestation) and early term infants ($37-38^{6/7}$ weeks of gestation), second revision 2016. Breastfeed Med. 2016;11(10):494-500.
15. Gianni ML, Bezze E, Sannino P, Stori E, Plevani L, Roggero P, et.al. Facilitators and barriers of breastfeeding late preterm infants according to mothers' experiences. BMC Pediatr. 2016;16(1):179. doi:10.1186/s12887-016-0722-7.
16. Sarapat P, Fongkaew W, Jintrawet U, Mesukko J, Ray L. Perceptions and practices of parents in caring for their hospitalized preterm infants. Pacific Rim Int J Nurs Res [Internet]. 2017 Jul 10 [cited 2018 Jan 24];21(3):220-33. Available from: https://he02.tci-thaijo.org/index.php/PRIJNR/article/view/78177
17. Briere CE, McGrath J, Cong X, Cusson R. An integrative review of factors that influence breastfeeding duration for premature infants after NICU hospitalization. JOGNN. 2014;43(3):272-81. doi:10.1111/1552-6909.12297.
18. Carpay NC, Kakaroukas A, Embleton ND, van Elburg RM. Barriers and facilitators to breastfeeding in moderate and late preterm infants: a systematic review. Breastfeed Med. 2021;16(5):370-84. doi:10.1089/bfm.2020.0379.
19. Ornlaor S, Klunklin P, Urharmnuay M. Factors predicting breastfeeding among mothers of preterm infants. JFONUBUU. 2016;24(4):32-42 (in Thai).
20. Pezzati M. Hospital readmissions in late preterm infants. Ital J Pediatr. 2014;40(Suppl 2):A29. doi:10.1186/1824-7288-40-S2-A29.
21. Lee SNC, Long A, Boore J. Taiwanese women's experiences of becoming a mother to a very-low-birth-weight preterm infant: a grounded theory study. Int J Nurs Stud. 2009; 46(3):326-36. doi:10.1016/j.ijnurstu.2008.10.004.
22. Arthibenyakul C, Sangperm P, Prasopkittikun T, Ngerncham S. The effects of self-efficacy promoting program on perceived self-efficacy, efficiency of breastfeeding and breastfeeding rate among mothers of late preterm infants. Nur Sci J Thai. 2017;35(1):23-35 (in Thai).
23. Kair LR, Flaherman VJ, Newby KA, Colaizy TT. The experience of breastfeeding the late preterm infant: a qualitative study. Breastfeed Med. 2015;10(2):102-6. doi:10.1089/bfm.2014.0121.
24. Dosani A, Hemraj J, Premji SS, Currie G, Reilly SM, Lodha AK, et.al. Breastfeeding the late preterm infant: experiences of mothers and perceptions of public health nurses. Int Breastfeed J;2017, 12(1):1-10. doi:10.1186/s13006-017-0114-0.
25. Glaser BG. Basic of grounded theory analysis. Mill Valley: Sociology Press; 1992.

26. Holloway I, Galvin K. Qualitative research in nursing and health care. 4th ed. London: Blackwell; 2017.
27. Glaser BG, Strauss AL. The discovery of grounded theory: strategies for qualitative research. Chicago: Aldine; 1967.
28. Walker M. Breastfeeding management for the clinician: using the evidence. 4th ed. Massachusetts: Jones and Bartlett Learning; 2016.
29. Semenic S, Loiselle C, Gottlieb L. Predictors of the duration of exclusive breastfeeding among first-time mothers. Res Nurs Health. 2008 Oct, 31(5):428-41. doi:10.1002/nur.20275.
30. Bureau of Reproductive Health, Department of Health, Nonthaburi: Ministry of Public Health. Mother's guide to postpartum and baby care: for moms [Internet]. 2019. [cited 2020 Jan 10]. Available from: https://pubhtml5.com/wrfu/kwrz/basic
31. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19(6):349–57. doi:10.1093/intqhc/mzm042.
32. Glaser BG. Doing grounded theory: issues and discussions. Mill Valley: The Sociology Press; 1998.
33. Lincoln YS, Guba EG. Naturalistic inquiry. Beverly Hills, CA: Sage; 1985.
34. Aldiabat KM, Navenec L. Philosophical roots of classical grounded theory: its foundations in symbolic interactionism. Qual Rep. 2011;16(4):1063-80. doi:10.46743/2160-3715/2011.1121.
35. Bryant J, Waller AE, Cameron EC, Sanson-Fisher RW, Hure AJ. Receipt of information about diet by pregnant women: a cross-sectional study. Women Birth. 2019; 32(6): e501-7.
36. Budzynska K, Gardner ZE, Dugoua J-J, Low Dog T, Gardiner P. Systematic review of breastfeeding and herbs. Breastfeed Med. 2012;7(6):489-503. doi:10.1089/bfm.2011.0122.
37. Ahmed AH, Sands LP. Effect of pre-and postdischarge interventions on breastfeeding outcomes and weight gain among premature infants. JOGNN. 2010;39(1):53-63. doi:10.1111/j.1552-6909.2009.01088.x.
38. Maastrup R, Hansen BM, Kronborg H, Bojesen SN, Hallum K, Frandsen A, et.al. Factors associated with exclusive breastfeeding of preterm infants. Results from a prospective national cohort study. PloS One. 2014;9(2): e89077. doi:10.1371/journal.pone.0089077.
39. Jose S, D'Souza SR, Sreedevi C. Effect of breast massage on breast milk volume and experience on the expression of breast milk among mothers of preterm neonates. MJNHS [Internet]. 2019 Jan 1 [cited 2019 Jan 10];5(2):6-11. Available from: https://impressions.manipal.edu/mjnhs/vol5/iss2/2
40. Yilak G, Gebretsadik W, Tadesse H, Debalkie M, Bante A. Prevalence of ineffective breastfeeding technique and associated factors among lactating mothers attending public health facilities of South Ari district, Southern Ethiopia. PloS One. 2020;15(2):e0228863. doi:10.1371/journal.pone.0228863.
41. Yimyam S. Galactagogue herbs. Nursing J [Internet]. 2018 Mar 31 [cited 2019 Jan 23];45(1):133-45 (in Thai). Available from: https://he02.tci-thaijo.org/index.php/cmunursing/article/view/136183
42. Wang Q, Fongkaew W, Petrini M, Kantaruksa K, Chaloumsuk N, Wang S. An ethnographic study of traditional postpartum beliefs and practices among Chinese women. Pacific Rim Int J Nurs Res [Internet]. 2019 Mar 27 [cited 2019 Apr 30];23(2):142-55. Available from: https://he02.tci-thaijo.org/index.php/PRIJNR/article/view/118488
43. Flacking R, Ewald U, Starrin B. "I wanted to do a good job": experiences of 'becoming a mother' and breastfeeding in mothers of very preterm infants after discharge from a neonatal unit. Soc Sci Med. 2007 Jun;64(12):2405-16. doi:10.1016/j.socscimed.2007.03.008.

ปัจจัยการเพียรพยายามให้มีน้ำนมเพียงพอเพื่อให้บุตรเกิดก่อนกำหนดระยะท้ายมีสุขภาพดี: การศึกษาทฤษฎีฐานราก

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บทคัดย่อ: ทารกเกิดก่อนกำหนดระยะท้ายมีความเสี่ยงต่อปัญหาสุขภาพมากกว่าทารกครบกำหนด ทารกกลุ่มนี้ต้องการสารอาหารที่ดีเพื่อการเจริญเติบโต และน้ำนมมารดาเป็นสารอาหารที่มีคุณค่า จำนวนประชากรของทารกเกิดก่อนกำหนดระยะท้ายเพิ่มขึ้นทั่วโลกขณะที่อัตราการเลี้ยงบุตรด้วยนมมารดาอย่างเดียวลดลง การศึกษาทฤษฎีฐานรากนี้มีวัตถุประสงค์เพื่อศึกษาประสบการณ์การเลี้ยงบุตรด้วยนมมารดาอย่างเดียวของมารดาชาวไทยที่มีทารกเกิดก่อนกำหนดระยะท้ายครั้งแรก ผู้ให้ข้อมูลเป็นมารดาครั้งแรกที่เลี้ยงลูกด้วยนมแม่อย่างเดียวในช่วงหกสัปดาห์แรกหลังคลอด จำนวน 17 คน ที่อาศัยอยู่ทางภาคเหนือของประเทศไทย ซึ่งได้รับการคัดเลือกโดยการสุ่มตัวอย่างแบบเจาะจงในขั้นแรก จากนั้นจึงทำการสุ่มตัวอย่างเชิงทฤษฎีเพื่อนำไปสู่การพัฒนารหัส ประเภทและข้อมูลจำเป็นเพิ่มเติม โดยการสัมภาษณ์เชิงลึก ระยะเวลาประมาณ 30-60 นาที/ครั้ง จนข้อมูลอิ่มตัว วิเคราะห์ข้อมูลโดยใช้วิธีการเปรียบเทียบคงที่ “การเพียรพยายามให้มีน้ำนมเพียงพอเพื่อให้บุตรมีสุขภาพดี” เป็นหมวดหมู่หลักซึ่งแสดงถึงกระบวนการที่มารดาของทารกคลอดก่อนกำหนดระยะสุดท้ายต้องใช้ความพยายามอย่างมากในการผลิตน้ำนมที่เพียงพอสำหรับทารก กระบวนการนี้ประกอบด้วยการเตรียมการสำหรับการเลี้ยงลูกด้วยนมแม่ การเอาชนะปัญหาน้ำนมไม่เพียงพอ และการจัดการเพื่อเลี้ยงลูกด้วยนมแม่ต่อไป

การรับรู้ว่าปริมาณน้ำนมไม่เพียงพอในมารดาที่คลอดบุตรครั้งแรกเป็นภัยคุกคามต่อความสำเร็จในการเลี้ยงลูกด้วยนมแม่อย่างเดียวของทารกที่คลอดก่อนกำหนดระยะท้าย อย่างไรก็ตาม ความปรารถนาที่จะมีบุตรที่แข็งแรงส่งผลให้มารดาพยายามให้มีน้ำนมที่เพียงพอ พยาบาล ผดุงครรภ์ และบุคลากรทางสุขภาพสามารถใช้กระบวนการจัดการเลี้ยงลูกด้วยนมแม่อย่างเดียว เป็นแนวทางในการสนับสนุนมารดาเหล่านี้ ตลอดช่วงลำดับการดูแลตั้งแต่การฝากครรภ์ ระหว่างตั้งครรภ์ และหลังคลอดต่อไป

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คำสำคัญ: การเลี้ยงลูกด้วยนมแม่อย่างเดียว ทารกเกิดก่อนกำหนดระยะท้าย การจัดการการให้นมบุตร พยาบาล ผดุงครรภ์ การศึกษาทฤษฎีฐานราก ประเทศไทย

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