Effectiveness of Breastfeeding Skills Training and Support Program among First Time Mothers: A Randomized Control Trial

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Abstract: Exclusive breastfeeding continuously for six months is difficult for new mothers. Breastfeeding problems are caused mostly by improper positioning and incorrect latch-on techniques. This randomized control trial investigated the effects of breastfeeding skills training and support program on 6-month-exclusive breastfeeding among Thai mothers giving birth to their first child in a university hospital of northern Thailand. Eighty-three first-time mothers were recruited and randomly assigned to either the experimental (n=41) or the control group (n=42). The experimental group received the usual care plus the breastfeeding skills training and support program. The control group received only usual care. Data were collected by the Demographic Data Questionnaire, Breastfeeding Self-Efficacy Scale: Short Form, Effective Suckling Checklist, and Food Record form. They were analyzed using descriptive statistics, Chi-square test, and Mann-Whitney U-test.

Results showed that the rate of 6-month-exclusive breastfeeding in the experimental group was significantly higher than those in the control group. Average scores of breastfeeding self-efficacy were significantly higher in the experimental group than those in the control group at discharge and at 6-weeks postpartum, respectively. It is recommended that this program needs further testing with different groups.

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Introduction

Exclusive breastfeeding (EBF) is defined as giving an infant only breast milk with no other liquid or solid food except medical treatment with oral rehydration solution, vitamins, minerals, or medicine.[1] The World Health Organization (WHO) has set the global target to increase the rate of EBF for the first six months of life up to at least 50% in 2025.[1] According to this policy, the Ministry of Public Health of Thailand also set a goal to achieve 6-months EBF to 50% in 2021.[2]

Evidence suggests that breastfeeding education is effective to increase the rate of BF initiation, but does not have a significant impact on the long-term duration of EBF.[3] Professional and peer support can help mothers to breastfeed for longer periods but their effects are uncertain.[4,5] Combined breastfeeding education and support have been found to be more effective than education or support alone.[5] However, many intervention studies that included breastfeeding education and support together could not increase the rate of 6-month EBF. The United Nations Children's Fund (UNICEF) reported that globally, only 41% of infants aged 0 to 6 months were exclusively breastfed in 2018[6], but in Thailand the total was only 23.1%[7] This low rate of EBF is due to lack of confidence or knowledge, perception of insufficient milk, lack of support, work outside the home, a short duration of maternity leave and stress at work.[8,9] Therefore, a lot of work remains to make EBF a standard for infant feeding.[1]

There are many studies promoting EBF in Thailand, but these programs monitor the EBF for the short periods or the intervention was not comprehensive, especially for first-time mothers.[10] Although they received BF knowledge they might not be able to breastfeed correctly because of inexperience in positioning or latching on of their babies.[11] Therefore, providing an opportunity to practice before childbirth, before facing the real situation, would be helpful.[12] Training new mothers about positioning the baby to attach to the breast and how to express breast milk, store and use it, may also help the mothers to have the necessary skills to breastfeed well and for longer. The duration of skills training should be 20-30 minutes to be effective.[13] This is a key clinical pathway towards successful and sustained EBF.

This study was designed to determine the effectiveness of the Breastfeeding Skills Training and Support Program (BSTSP) on breastfeeding self-efficacy and 6-month-exclusive breastfeeding among first-time mothers in a university hospital in northern Thailand.

Theoretical Framework

Pender's Health Promotion Model (HPM) was used as the theoretical framework for this study. The HPM focuses on the relationship among an individual's characteristics and experiences, behavior-specific cognition and affect, and behavioral outcomes.[14] According to the HPM, the individual characteristics and experiences are unmodifiable through nursing actions[14] but need to be controlled to determine the effect of the intervention on the outcomes. Therefore, only first-time mothers were chosen to be in this study.

Behavior-specific cognitions and affect are the most vital part of the HPM. They consist of perceived benefits, barriers and self-efficacy, activity-related affect, and interpersonal and situational influences related to the health behaviors of interest. These variables can be modified and can guide the interventions. The participants in this study learned about the benefits and possible problems of BF, and how to solve such problems. They were expected to have a positive attitude towards BF and high confidence to EBF for six months. Moreover, assistance, support, and encouragement from this program were expected to enhance the participants' perceived self-efficacy. Besides, offering the opportunity to their significant persons to learn about how to do BF support and encouragement to the participants is a way to establish positive interpersonal influences and activity-related effects. These activities can motivate mothers to breastfeed and provide good care for their infants. Telephone follow-up periodically to yield counseling for breastfeeding problems could help them to BF. However, the situational influence was not manipulated in this study because it was beyond the researcher's control. The behavioral outcome of this study was 6-months EBF. The following hypotheses were proposed:

1. The rate of EBF at six months of the mothers in the experimental group would be significantly higher than those in the control group.

2. BF self-efficacy mean scores at discharge and at six weeks in the experimental group would be significantly higher than those in the control group.

3. The effective suckling mean score of the mothers in the experimental group would be significantly higher than those in the control group.

Methods

Design: A randomized controlled trial (RCT).

Setting and Sample:

The setting was a university hospital in northern Thailand, and the sample was pregnant women who sought prenatal care and childbirth services at this hospital. Inclusion criteria were being: pregnant; age 18 years or more; at 36-37 weeks of gestational age; expected to have a first child as a singleton pregnancy; intending to breastfeed; having normal breasts and nipples; able to understand Thai; and contactable by phone. Exclusion criteria were having a contra-indication to BF; planning to have a cesarean section; unable to attend the entire program; undergoing a cesarean section during the program implementation; mother and infant were separated; and mother or the newborn developing health complications.

The sample size was estimated using power analysis, with a power of .80 and a significance level of .05.[15] The estimated effect size (0.67) was calculated from the previous study.[16] The sample size required was 35 per group. To compensate for the dropout rate, this study had determined an attrition rate of 15%. The total number of participants was 42 per group.

One hundred eligible potential participants were approached at the antenatal care unit (ANC), but three of them were unable to participate in all processes of this study due to lack of time. Therefore, 97 participants joined the study and were randomly assigned either to the experimental or the control groups using simple random sampling. This brought to 48 participants in the experimental and 49 in the control group. During the program implementation, seven participants in the experimental group were excluded due to cesarean birth and were separated from their infants. Seven participants in the control were excluded due to loss of contact, cesarean birth or separated from the babies. Therefore, 83 participants completed the program with 41 in the experimental group and 42 in the control group (**Figure 1**).

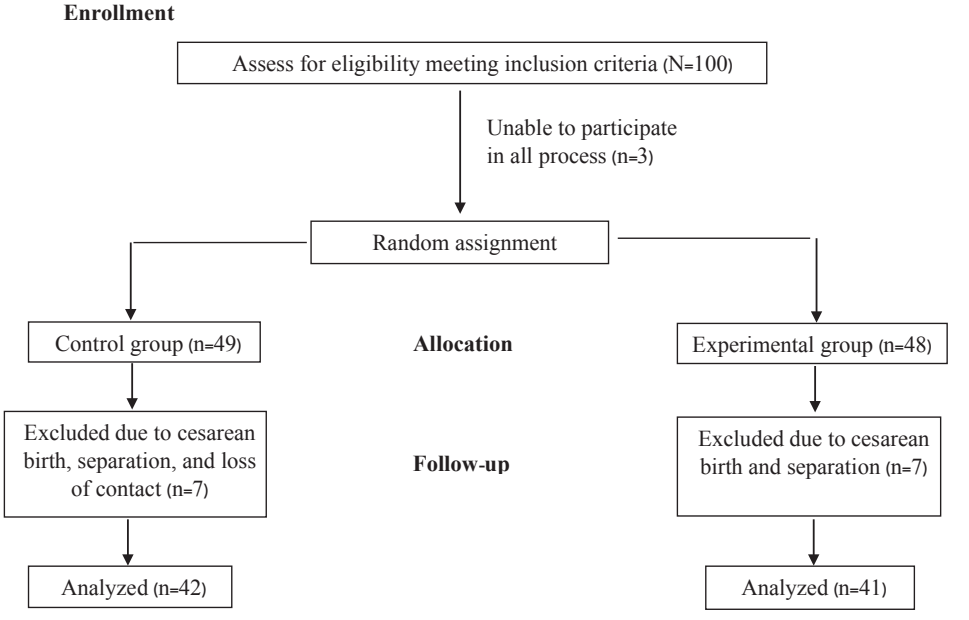

Figure1. Flow diagram of participants in a randomized controlled trial

Ethical Considerations

Study approval was obtained from the research ethics committees of the Faculty of Nursing, Mahidol University (COA No. IRB-NS2015/307.2109) and the Faculty of Medicine, Chiang Mai University (IRB No. 315/2015). All participants were informed of the study purpose and processes and their rights. When the women agreed to participate, they were asked to complete and sign a consent form.

Instruments: Four instruments were used for data collection - the Demographic Questionnaire, the Breastfeeding Self-Efficacy Scale-Short Form, the Effective Suckling Checklist, and the Food Record Form. The content validity of all instruments and the intervention program were reviewed by five experts: one nurse in the lactation clinic, one nurse instructor in pediatrics and three nurse instructors in obstetrics and gynecological nursing.

The Demographic Questionnaire was developed by the principal investigator (PI) to collect data on maternal age, marital status, educational level, occupation, family income, the sufficiency of income, family type, the person expected to help with childcare, date, time and type of delivery, baby's birth weight and gender.

The Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) developed by Dennis[17] was translated into Thai by Thussanasupap.[18] It has 14-items and is self-administered. The participants were asked how confident they are with breastfeeding their new babies (e.g., "I can always determine that my baby is getting enough milk"). Each item is rated on a 5-point rating scale ranging from 1 (not at all confident) to 5 (very confident). Total scores range from 14 to 70, with higher scores indicating higher levels of BF self-efficacy. Cronbach's alpha coefficient of the BSES-SF Thai version used in Thussanasupap's study was 0.84[18], and 0.90 for this study.

The Effective Suckling Checklist was developed by the researchers, based on four key signs of good attachment[19] and literature review, and it is used to observe proper latch-on and effective suckling techniques. It consists of 10 items, and scoring is marked 1 for correct behavior and 0 for incorrect behavior. The score range between 0 and 10. The score of 8-10 refers to the effective suckling techniques while the lower the score the less effective the technique is considered to be. The CVI is 1.00 and the inter-rater reliability of the checklist was assessed by PI and one research assistant is 0.98.

The Food Record Form was developed by the researchers to monitor the kinds of food the infants received after hospital discharge. The PI used telephone calls to interview participants about food that the infants were fed, the age of infant in days when starting to receive other food and the reason that other food was given to the infants at Day 7, 1 month, six weeks, then at 3, 4, 5 and 6 months. The recorded data were summarized into two categories: EBF or not EBF. If the infant received water or any kind of complementary food the category of not EBF was given.

Intervention Program: The BSTSP includes providing BF knowledge, demonstrating and practicing BF skills, and providing BF support. BF knowledge includes benefits of BF, proper positioning for breastfeeding, effective suckling, common BF problems and how to prevent and resolve that problems, Then, participant were asked to watch 5-min VCDs concerning BF techniques, breast milk expression, and storage. This content and activities were divided into two sections. They were provided once a week for two consecutive weeks starts at 36-37 week of gestational age. After providing knowledge in each week, the PI allowed them to practice BF skills after the demonstration. The BF knowledge was expected to increase perceived benefits of BF, perceive less barrier to BF, and have positive attitudes toward BF. The BF skills would enhance the mother's confidence before facing the real situation.

Provision of BF support begins at day one, two, and three after delivery by encouraging participants to breastfeed their infants with the PI's assistance, helping with positioning and guiding to recognize the

baby's feeding cues and signs of satiety. Providing the opportunity to the participant's significant persons to learn about BF support and to assist mothers and the baby. After going back home, the PI provides BF support continuously by telephone calls to monitor problems and provide counseling on day 7, and once a month until six months after birth. Sufficient and appropriate support from the researcher and family members were expected to increase the participants' BF self-efficacy and positive attitudes toward BF, leading to successfully EBF. Detail and implementation of the program is shown in **Table 1**

Table 1: Schedule and Content of BSTSP Intervention Protocol

Times and Purpose	Content/Activities
At ANC	
Session 1 (36-37 wks.)	
Purposes:	
: Enhancing perceived benefits of BF : Reducing perceived barriers to BF	- Providing knowledge and discussing the content on BF benefits, proper positioning and correct latch-on, BF problems, and solutions by using PowerPoint presentation. (10 minutes)
: Enhancing BF self-efficacy	- Showing VCD illustrated BF techniques produced by the Thai BF Center Foundation to participants with the researcher summarizes the main point of the BF techniques. (5 minutes)
: Enhancing BF self-efficacy : Developing positive activity related affect	- Demonstrating and BF practicing with details on correct latch-on and proper positions by using a life-size breast model and a baby doll. (30 minutes)
Session 2 (following week)	
Purposes:	
: Reducing perceived barriers to BF	- Providing knowledge and discussing the content of methods of hand expressing and storing breastmilk. Reviewing the knowledge of proper BF positioning and correct latch-on. (10 minutes)
: Enhancing BF self-efficacy : Reducing perceived barriers to BF	- Showing VCD illustrated hand expression and breast milk storage produced by the Thai BF Center Foundation to the participants. (5 minutes)
: Enhancing BF self-efficacy : Developing positive activity related affect	- Demonstrating and BF skills practicing with details on hand expression techniques and repeating BF skills practice on the correct latch-on and proper position. (30 minutes)
At postpartum unit	
Session 3 (within 24 hours after birth)	
Purposes:	
: Enhancing BF self-efficacy : Developing positive activity related affect	- Encouraging to breastfeed and providing assistance helping to adjust BF positions, giving advice and encouragement to ensure correct practice with strong verbal encouragement. - Providing the information about the baby's early feeding cues, and signs that the baby was satisfied at the end of the feeding.

Table 1: Schedule and Content of BSTSP Intervention Protocol (Cont.)

Times and Purpose	Content/Activities
: Enhancing social support	- Providing the opportunity to significant persons in the mothers' life learn how to BF support and encouraged to participate in practice in assisting mothers to breastfeed and take care of the infants.
Session 3 (day 2 after birth) Purposes: : Enhancing BF self-efficacy : Developing positive activity related affect : Enhancing social support	- Observing the participant breastfed and providing assistance helping to adjust BF positions, giving advice and encouragement to ensure correct practice with strong verbal encouragement. - Encouraging to begin hand expressing and providing assistance helping to ensure correct practice. - Encouraging the significant persons in the mothers' life practicing in assisting mothers and take care of the infants.
Session 5 (day 3 after birth) Purposes: : Enhancing BF self-efficacy : Developing positive activity related affect : Enhancing social support	- Observing the participant breastfed and providing assistance helping to adjust BF positions, giving advice and encouragement to ensure correct practice with strong verbal encouragement. - Encouraging the significant persons in the mothers' life practicing in assisting mothers and take care of the infants. - Reviewing the knowledge and skills and providing feedback for self-evaluation - Making an appointment for telephone call
At Home ***Session 6, 7*** (Evening of the discharge day, day 7 and 1 month after birth) Purpose: : Enhancing social support	- Telephone support for counseling about BF problems and the way to solve the problem, and monitoring the EBF (10-20 min for each call)
At Hospital ***Session 8*** (6 week after birth, the participants were routinely followed-up) Purpose: : Enhancing social support	- Counseling about BF problems and the way to solve the problem, and monitoring the EBF. (20 min)
At Home ***Session 9-12*** (3-6 month, once a month) Purpose: : Enhancing social support	- Telephone support for counseling about BF problems and the way to solve the problem, and monitoring the EBF (10-20 min. for each call)

Usual Care: Usual care refers to the routine care provided to pregnant women and postpartum mothers by the hospital staff and midwives. Midwives in the ANC inform pregnant women about healthy behaviors during pregnancy and the benefits of BF in one session by allowing them to watch the VCD. In the postpartum unit, midwives provide support for mothers and inform mothers about the techniques of BF and newborn care. They offer a group postnatal education session with the contents covering a variety of topics such as perineum care, breast care, activities and rest, family planning, expressing and storing breast milk.

Preparing the Research Assistants (RA): A registered nurse working at the postpartum unit was trained to assess effective suckling by the Effective Suckling Checklist.

Data Collection/Procedures

After the participants were assigned to either the experimental or the control group, they were asked to complete the demographic data questionnaire and the BSES-SF as baseline data. The experimental group was given usual care plus BSTSP while the control group received only usual care. Both groups were assessed for effective suckling and completed the BSES-SF before discharge and were assessed with the BSES-SF again at six-weeks when we met at the postnatal check-up clinic.They were also assessed regarding infant feeding by telephone as follow up on day 7, 1 month, and then each month until the sixth month or after stopping EBF in order to determine EBF or not EBF.

Data Analysis

The Shapiro-Wilk test was used to determine the normality of the numerical variables. Descriptive analysis was used to evaluate demographic data. The chi-square test, independent t-test, and Fisher's exact test were used to examine the differences of sample characteristics between the control and experimental groups. The difference in the EBF rate at six months between the two groups was analyzed using the Chi-square test. The Mann-Whitney U-test was used to compare the duration of EBF, the BF self-efficacy scores, and the effective suckling score between the two groups, due to EBF duration, the BF self-efficacy scores, and the effective suckling score did not have a normal distribution.

Results

There were no statistically significant differences in demographic characteristics between the two groups **(Table 2)**. After the receiving the BSTSP, the number of mothers who exclusively breastfed for the first six months in the experimental group [15 (36.6%)] was significantly higher than those in the control group [6 (14.3%)]. The average EBF duration of the mothers in the experimental group (131.33 days) was significantly longer than that in the control group (73.31 days) **(Table 3)**.

At baseline, no significant difference was found in the average BF self-efficacy scores at between groups. However, the average BF self-efficacy scores at discharge and six weeks in the experimental group was significantly higher than the control group **(Table 3)**. In the experimental group, the BF self-efficacy scores increased with time, while the control group decreased at discharge and then increased at 6 weeks **(Table 3)**. It was also found that the average effective suckling scores in the experimental group were significantly higher than the control group **(Table 3)**.

Table 2: Demographic characteristics of study participants

Characteristics	Experimental group (N=41)		Control group (N=42)		p
	n	%	n	%	
Age (years)					
20-24	8	19.5	11	26.2	.466[a]
25-29	19	46.5	20	47.6	
30-34	10	24.4	5	11.9	
≥ 35	4	9.8	6	14.3	
Mean (SD)	27.90 (4.60)		27.10 (4.70)		.436[c]
Min-Max	20-41		20-37		
Marital status					
Married	41	100.0	41	97.6	NS[b]
Separated/Widowed/Divorced	-	-	1	2.4	
Education					
≤ High school	7	17.1	12	28.6	.459[a]
Diploma	10	24.4	9	21.4	
≥ Bachelor's degree	24	58.5	21	50.0	
Occupation					
Employee	20	48.8	25	59.5	.222[b]
Government Official	6	14.6	3	7.1	
Vendor	3	7.3	7	16.7	
Homemaker	12	29.3	7	16.7	
Family income (Baht/month; 32 Baht = 1 USD)					
< 20,000	10	24.4	17	40.5	.232[a]
20,000-29,999	14	34.1	9	21.4	
≥ 30,000	17	41.5	16	38.1	
Mean (SD)	26,024.40 (10,607.00)		22,268.81 (8,230.69)		.075[c]
Min-Max	10,000-50,000		10,000-40,000		
Sufficiency of income					
Sufficient	23	56.1	20	47.60	.469[b]
Sufficient with no savings	17	41.50	18	42.90	
Insufficient	1	2.40	4	9.50	
Family Type					
Nuclear family	19	46.30	26	61.90	.155[a]
Extended family	22	53.70	16	38.10	
Personal support					
Husband	4	9.80	8	19.00	.277[a]
Own mother and husband	31	75.60	25	59.50	
Husband's mother and husband	6	14.60	9	21.50	

Note: a= Chi-square; b= Fisher's exact test; c= t-test, NS= non-significant with $p > .999$

Table 2: Demographic characteristics of study participants (Cont.)

Characteristics	Experimental group (N=41)		Control group (N=42)		p
	n	%	n	%	
Mode of delivery					
Normal delivery	39	95.10	33	78.60	.078[b]
Forceps extraction	–	–	3	7.1	
Vacuum extraction	2	4.90	6	14.30	
Sex of infant					
Male	17	41.50	23	54.80	.470[a]
Female	24	58.50	19	45.20	
Weight of infant (gram)					
2000-2499	2	4.90	5	11.90	.506[b]
2500-2999	16	39.00	18	42.90	
3000-3499	17	41.50	16	38.10	
≥ 3500	6	14.60	3	7.10	
Mean (SD)	3,099.40 (361.40)		2,985.36 (360.19)		.154[c]
Min-Max	2,360-3,810		2,290-3,670		

Note: a= Chi-square; b= Fisher's exact test; c= t-test, NS= non-significant with $p > .999$

Table 3: Comparison of the EBF rate, the EBF duration, the BSES, and ESS between the experimental and the control groups

Variables	Experimental group (N=41)	Control group (N=42)	*p*
BF at six months, n (%)			
EBF	15 (36.60)	6 (14.30)	.011[a]
Non-EBF	26 (63.40)	36 (85.70)	
Duration of EBF (days)			
Min - Max	7 – 180	3 – 180	
Mean (SD)	131.33 (56.66)	73.31 (63.87)	
Median (IQR)	150.00 (90.00)	72.50 (110.00)	< .001[b]
BSES at baseline			
Min - Max	35 – 66	34 – 64	
Mean (SD)	51.55 (8.36)	52.64 (6.86)	
Median (IQR)	52.00 (10.25)	53.50 (7.50)	.585[b]
BSES at discharge			
Min - Max	37 – 64	32 – 62	
Mean (SD)	52.22 (8.16)	47.97 (5.68)	
Median (IQR)	54.00 (12.50)	48.00 (6.00)	.011[b]
BSES at 6 weeks			
Min - Max	34 – 69	20 – 68	
Mean (SD)	58.73 (8.56)	51.21 (11.25)	
Median (IQR)	60.00 (12.00)	53.00 (14.00)	.001[b]
ESS at discharge			
Min – Max	9 – 10	5 – 10	
Mean (SD)	9.66 (0.48)	7.26 (1.23)	
Median (IQR)	10 (1)	7 (2)	< .001[b]

Note: a= Chi-square; b= Mann-Whitney U-test; BF=breastfeeding; EBF= exclusive breastfeeding; BSES= breastfeeding self-efficacy scores; ESS= effective suckling scores.

Discussion

The BSTSP was successful in promoting the EBF for 6 months among first-time mothers. Moreover, the EBF duration was longer in the experimental group than that in the control group. According to HPM, the BSTSP could enhance 6-month EBF rate and EBF duration through the set of variables for behavior-specific cognitive and affect; perceived benefits, perceived barriers, perceived self-efficacy, activity-related affect, and interpersonal influences. The participants in the experimental group obtained knowledge and information about the benefits of BF, possible problems and guidelines for solving breastfeeding problems. Moreover, they practiced how to properly position the baby to have effective suckling. Therefore, the capability to perform effective BF was developed (an average effective suckling scores in the experimental group =9.66 ± .48, while in the control group =7.26 ± 1.23). Consistent with previous studies educating mothers regarding the benefits of BF and assisting them to practice breastfeeding and problem-solving skills can help them to extend the BF duration and increase EBF rates.[20, 21, 22]

Therefore, training mothers for proper lactation can help mothers understand clearly and practice breast feeding correctly, and is the key to sustained EBF.[23] The BSTSP provides social support and breastfeeding assistance to the participants after giving birth and can help them to breastfeed effectively and reduces BF barriers. Moreover, effective breastfeeding can stimulate prolactin and oxytocin in secretion to produce and release more milk. Such mechanisms would help to ensure sufficient milk for their babies.[24] If mothers can breastfeed smoothly with enough breast milk, it enhances positive attitude towards BF and also increases BF self-efficacy leading to sustained EBF until 6 months.[25, 26]

The BSTSP could enhance self-efficacy through three influential sources of self- efficacy, namely, enactive mastery experiences, verbal persuasion, and emotional or physical arousal. Enactive mastery experiences were enhanced by practicing the common BF positions and attachments during the prenatal period and providing support during the initiation of BF leading to increased BF self-efficacy.[27] Verbal persuasion was enhanced by providing moral support, encouragement and reflective comment to build the mother's confidence. Emotional or physical arousal was enhanced by providing anticipatory guidance about normal physiological changes, cope with anxiety, and how to interpret baby cues which increased their confidence to breastfeed. Therefore, the BF self-efficacy scores of the experimental group were significantly higher than those in the control group. In accordance with the previous study, the level of BF self-efficacy scores in the intervention group higher than those in the control group.[28] Moreover, mothers with higher BF self-efficacy scores had a long duration of EBF than those with lower BF self-efficacy scores.[29]

Limitations of the Study

The implementation was time-consuming and required considerable cooperation from nurses in the ANC and postpartum units. Moreover, the situational influence was not manipulated. Therefore, this may be considered a study limitation. In addition, this program was only implemented in a tertiary hospital in northern Thailand, so the results may not represent the entire population.

Conclusions and Implications for Nursing Practice

First-time mothers who participated in this program had a significantly higher rate of EBF for six months and increased BSES at discharge and at six weeks. It may be concluded that this program was effective in promoting EBF for six months and enhancing BF self-efficacy. Therefore, nurses and

midwives can integrate this theory-based intervention program into the regular services of a hospital or in community healthcare at every stage from pregnancy to the postpartum period to promote 6- month EBF. However, further testing of the program is warranted to ensure that it is context and culture specific with different Thai populations. Especially, a skills training session can help convey to new mother the proper breastfeeding positioning and attachment which influence breastfeeding self-efficacy and appear to encourage them to persist with EBF for six months.

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ประสิทธิผลของโปรแกรมการฝึกทักษะและสนับสนุนการเลี้ยงลูกด้วยนมแม่ในมารดาที่บุตรคนแรก: การทดลองแบบสุ่ม

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บทคัดย่อ: ปัญหาของการเลี้ยงลูกด้วยนมแม่ในมารดาครรภ์แรกส่วนใหญ่เกิดจากท่าในการอุ้มลูกดูดนมไม่ถูกวิธี การศึกษาแบบทดลองนี้มีวัตถุประสงค์เพื่อศึกษาผลของโปรแกรมการฝึกทักษะและสนับสนุนการเลี้ยงลูกด้วยนมแม่ต่ออัตราการเลี้ยงลูกด้วยนมแม่อย่างเดียว 6 เดือนในมารดาที่คลอดบุตรคนแรกในโรงพยาบาลมหาวิทยาลัยแห่งหนึ่งทางภาคเหนือของประเทศไทย กลุ่มตัวอย่างได้รับการสุ่มเข้ากลุ่มทดลอง (44 คน) และกลุ่มควบคุม (42 คน) กลุ่มทดลองได้รับโปรแกรมการฝึกทักษะเลี้ยงลูกด้วยนมแม่ร่วมกับการสนับสนุนและการพยาบาลตามปกติ กลุ่มควบคุมได้รับการพยาบาลตามปกติ เก็บรวบรวมข้อมูลโดยใช้แบบสัมภาษณ์ข้อมูลส่วนบุคคล แบบสอบถามการรับรู้สมรรถนะแห่งตนในการเลี้ยงบุตรด้วยนมมารดา แบบประเมินประสิทธิภาพการดูดนม และแบบบันทึกการให้อาหารทารก วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนา สถิติไค สแควร์ และสถิติแมน-วิทนีย์ ยู

ผลการศึกษาพบว่าอัตราการเลี้ยงลูกด้วยนมแม่อย่างเดียว 6 เดือนในกลุ่มทดลองสูงกว่ากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ คะแนนเฉลี่ยการรับรู้สมรรถนะแห่งตนในการเลี้ยงบุตรด้วยนมมารดาในวันจำหน่ายออกจากโรงพยาบาล และ 6 สัปดาห์หลังคลอดของกลุ่มทดลองสูงกว่ากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ จากผลการศึกษามีข้อเสนอแนะว่าควรนำโปรแกรมนี้ไปทดลองใช้กับประชากรกลุ่มอื่นๆ

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คำสำคัญ: การเลี้ยงลูกด้วยนมแม่ มารดา ระยะตั้งครรภ์ ระยะหลังคลอด การรับรู้สมรรถนะแห่งตนในการเลี้ยงบุตรด้วยนมมารดา

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