EFFECTS OF SELF-EFFICACY PROMOTING PROGRAM ON BREASTFEEDING BEHAVIOR AND DURATION AMONG FIRST-TIME WORKING MOTHERS

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ABSTRACT

The purpose of this quasi-experimental research is to study the effects of self-efficacy in breastfeeding promoting program of first-time working mothers. The study group was composed of sixty first-time working mothers who attended the prenatal clinic and had a normal delivery at Siriraj Hospital. Thirty mothers were randomized into a control group receiving routine nursing care and the following thirty mothers were randomized into an experimental group receiving perceived self-efficacy in breastfeeding promoting program for first-time working mothers. Statistical analysis used were percentage, mean, standard deviation, repeated measure analysis, pair-wise comparison, independent t-test, dependent t-test and ANCOVA.

Results revealed that mothers in the experimental group achieved higher scores of perceived self-efficacy in breastfeeding during the study and at the end of the study compared to the scores of mothers in the control group, at a statistically significant level $p<.001$. Mothers in the experimental group achieved significantly higher scores of breastfeeding behavior before discharge from hospital, compared to before the study scores and compared to mothers in the control group, at the statistical level .001. At eight-week postpartum, mothers in the experimental group had duration and intention of exclusive breastfeeding longer than mothers in the control group at the statistically significant level .001.

This finding suggests that establishing successful breastfeeding in first-time working mothers, nurses should focus on enhancing perceived self-efficacy in breastfeeding during hospital stay, maternity leave and when returning to work.

KEY WORDS : SELF-EFFICACY PROMOTING PROGRAM / BREASTFEEDING BEHAVIOR / BREASTFEEDING DURATION / FIRST-TIME WORKING MOTHERS

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ผลของโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองต่อพฤติกรรมและระยะเวลาในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก (EFFECTS OF SELF-EFFICACY PROMOTING PROGRAM ON BREASTFEEDING BEHAVIOR AND DURATION AMONG FIRST-TIME WORKING MOTHERS)

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บทคัดย่อ

การวิจัยครั้งนี้เป็นการวิจัยกึ่งทดลอง เพื่อศึกษาผลของโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองต่อพฤติกรรมและระยะเวลาในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก กลุ่มตัวอย่างเป็นมารดาทำงานนอกบ้านที่ฝากครรภ์และคลอดปกติบุตรคนแรกที่โรงพยาบาลศิริราช จำนวน 60 คน โดยสุ่มมารดา 30 คนเข้ากลุ่มควบคุมที่ได้รับการพยาบาลตามปกติ และ 30 คนหลังเข้ากลุ่มทดลองที่ได้รับโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก วิเคราะห์ข้อมูลโดยใช้ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตราฐาน การวิเคราะห์ความแปรปรวนทางเดียว การเปรียบเทียบพหุ ทดสอบค่าที และการวิเคราะห์ความแปรปรวนร่วม

ผลการศึกษาพบว่ามารดากลุ่มทดลองมีคะแนนการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่หลังคลอด 4 และ 8 สัปดาห์สูงกว่ามารดากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ $p < .001$ มารดากลุ่มทดลองมีคะแนนพฤติกรรมการเลี้ยงลูกด้วยนมแม่ก่อนจำหน่ายจากโรงพยาบาลสูงกว่าก่อนการศึกษาและสูงกว่ามารดากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ $p < .001$ และเมื่อ 8 สัปดาห์หลังคลอดมารดากลุ่มทดลองมีระยะเวลาในการเลี้ยงลูกด้วยนมแม่และระยะเวลาที่ตั้งใจจะเลี้ยงลูกด้วยนมแม่อย่างเดียวนานกว่ามารดากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ $p < .001$

จากการวิจัยครั้งนี้มีข้อเสนอแนะว่าพยาบาลควรให้ความสำคัญกับการส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ให้มารดาขณะอยู่ที่โรงพยาบาล ระหว่างลาคลอด และเมื่อกลับไปทำงาน เพื่อให้มารดาทำงานนอกบ้านที่มีบุตรคนแรกประสบความสำเร็จในการเลี้ยงลูกด้วยนมแม่

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CHAPTER I
INTRODUCTION

Background and Significance of the Study

Breast milk is the best and the most appropriate food for babies because it contains all beneficial nutrients for growth and development of body, brain, retina (Reynold, 2001), oral cavity and airway (Palmer, 1998). These benefits include protection against acute illness, long term health protection, the psychological relationship and even saving in health care costs (Lugus, and Cole, 1990; Lawrence, 2000; Wong, 2000). Breastfeeding also contributes to the health and well-being of mothers including the reduction of risks for postpartum hemorrhage (King, 1995), premenopausal breast cancer, ovarian cancer (Labbok, 2001), spinal and hip fracture after menopause (Miriam, 2001). In addition, the mothers will develop the sense of pride in maternal role and the mother-child bonding will be well established (Brandt, Andrew, and Kvale, 1998). Breastfeeding is also cost-effective as the family does not have to spend money on formula milk.

The World Health Organization and the United Nations International lead to an increase in family and national resources. Children's Emergency Fund, in collaboration with the Ministry of Public Health, has developed a campaign for the protection, promotion and support of breastfeeding in Thailand. The Baby Friendly Hospital Initiative was launched in 1991 with the foundation for hospital practice, known as the "Ten Steps to Successful Breastfeeding". The American Academy of Pediatrics (1997) recommends that babies receive exclusive breastfeeding for approximately the first 6 months of age, continuing to at least 12 months, in addition to appropriate complementary diet at about age of 6 months. Nevertheless, a worldwide survey has estimated that 35 percents of babies in every region of the world receive exclusive breastfeeding less than 4 months (WHO, 1996).

In Thailand, breastfeeding is given at a low rate. According to nationwide

surveys, the rates of 4-month exclusive breastfeeding in 1993, 1995 and 1998 were at the percentages of 1.9 (Teinthaworn, 1994), 0.4 (Department of Health, 1996) and 2.1 (Durongdej, 1998), respectively. While the Eighth National Economic and Social Development Plan (1997-2001) aimed to increase the incidence of 4-month exclusive breastfeeding from 3.6 to 30 percents, the incidence of 4-month exclusive breastfeeding in 1999 was only 2.9 percents (Health Promotion Office, 2000). Another study on working mothers who lived in Bangkok found that only 4.4 percent of the mothers exclusively breastfed their babies for 4 months (Sumritsopak, 1999). These data indicate that the promotion of breastfeeding may encourage mothers to breastfeed while they are hospitalized; however, the number and duration of breastfeeding decrease when the mothers are discharged from the hospital.

In a review of breastfeeding research, factors affecting the shortened duration of breastfeeding include mother's lack of confidence (Chezem, Friesen, and Boettcher, 2003), mother's belief that the breast milk is insufficient (Moore, Bianchi-Gray, and Stephen, 1991) and lack of social support (WHO, 1996). A number of studies found that physical problems such as insufficient milk (Feinstein, Berkelhamer, Gruszka, Wong, and Carey, 1986) breast engorgement or sore nipples, also result in the discontinuation of breastfeeding as 62 percents of mothers reported the discontinuation with in 4 weeks postpartum (Quarles, Williams, Hoyle, Brimeyer, and Williams, 1994). Other reasons for the discontinuation of breastfeeding include latch problems, incorrect positioning (Righard, 1998) and returned to work (Meek, 2001; Adams, Berger, Conning, Cruikshank, Land Dore, 2000). Hill, and Humenick (1989 cited in McCarter-Spaulding, and Stephens, 2001) noted that many mothers reported an insufficient milk supply as a reason they gave up breastfeeding. It is not clear, however, whether insufficient milk supply is real, perceived, or both. If low confidence in her parenting ability leads a first-time mother to perceive she has insufficient milk, this perception may be enough to cause her to supplement breast milk with formula, experience a real milk supply decline, and eventually weaning the baby.

In Thailand, factors affecting the duration of breastfeeding include the lack of knowledge and skill in breastfeeding (Jantrapat, 1994), mother's unprepared situation, age and education level (Hudisaewee, 1997) and mother's work

(Durongdej, 1998; Yimyam, 1999). Reasons for the discontinuation of breastfeeding in working mothers include the lack of knowledge about the expression and storage of breast milk, stress and tiredness from work, breast engorgement, milk leakage and inadequate education from healthcare professionals (Kumdee, 1997). Nearly half of working mothers (48%) reported the termination of breastfeeding at averagely 2.04 weeks before returning to work (Jitjareon, 1994).

Referring to the review, a number of program is set up for the promotion of breastfeeding; for example, the promotion during hospitalization, telephone contact after hospital discharge, home visits and the promotion on visit at 4-week postpartum. These program have effects on the extension of breastfeeding duration, compared to the breastfeeding duration of mothers not participating in the program (Dennis, 2002). In Thailand, most interventions for the promotion of breastfeeding have focused on the education and practice of breastfeeding skill during hospitalization. Mothers with normal labor usually stay in the hospital for two or three days. Hence, first-time mothers become anxious and feel unconfident when they confront with breastfeeding problems after early postpartum discharge due to no experience in breastfeeding. These feelings have effects on the production and excretion of breast milk, resulting insufficient milk and other breastfeeding problems.

Successful breastfeeding requires not only knowledge, skills and support from the husband, relatives, friends and healthcare professionals (Luangkwan, 1994; Pontee, 1998; Barton, 2001), but also focus on increasing a mother's confidence in breastfeeding (Ertem,Votto, and Leventhal, 1999). Breastfeeding confidence describes a women's belief or expectation that she processes the knowledge and skills to successfully breastfeed her baby. These expectation are based on information gained from prior breastfeeding experience, observation of other mothers breastfeeding, support and encouragement from individuals whose opinions are respected, and the physiological reaction to the prospect or act of breastfeeding (Dennis, and Faux, 1999 cited in Dennis, 2002).

Hence, to breastfeed successfully, a mother must feel confident (King, 1995). Maternal confidence and perceived problem-solving competence can be characterized as self-efficacy. Bandura (1977) defined self-efficacy as the belief

that one has the skill and competence to carry out specific actions. A study conducted by Nitviboon (1998) found that structured advice based on self-efficacy concept induces correct breastfeeding behaviors and exclusive breastfeeding for 4 weeks after childbirth.

Siriraj Hospital has participated in the Baby Friendly Hospital Initiative program since 1992. The program is composed of interventions for the promotion of breastfeeding as detailed below.

Pregnancy period : Every mother receiving care from the Prenatal Clinic receives an examination of breasts and nipples. If any abnormality, such as short, flat or invert nipples, is found, the abnormality will be corrected. The mother also receives knowledge, breastfeeding education and self-care at various stages of pregnancy until delivery period.

Delivery period : The baby is given to the mother to provide skin-to-skin contact and for the baby to start suckling as soon as possible or within 30 minutes after the delivery (unless there is a contraindication for breastfeeding).

Postpartum period : In normal labor, the mother will be transferred for recovery and postpartum care at Postpartum Ward with the baby. During the recovery period, the mother will receive education on postpartum self-care, newborn care, and practicing breastfeeding skills from nursing staffs. A handbook of breastfeeding is also given to the mother. The mother who had complicated breastfeeding, such as having short, flat or invert nipples, will receive counseling service from the Lactation Clinic. The mother with normal delivery who does not have complications or breastfeeding problems usually stays in the hospital for three days and will be scheduled for postpartum follow-up at 4 weeks after hospital discharge at the gynaecological clinic. The baby will be scheduled for follow-up and vaccination at the Pediatric Outpatient Department when he is one month old. Thus breastfeeding promotion finishes when the mother is discharged from the hospital.

A review of literature reveals that breastfeeding problems commonly occur in the first week after childbirth (Kearney, Cronenwett, and Barrett, 1990). The problems usually occurred in first-time mothers who have no experience in breastfeeding and some are low confident that they can breastfeed the baby (King,

1995). With early discharge, the occurrence of problems during home stay, lack of continuous support from health care professionals and lack of social support contribute to the lack of confidence in breastfeeding. In addition, when returning to work, the mother has to combine the working role with maternity role and she may then change the feeding from breast milk to the combination of breast milk and formula milk. Some mothers may eventually replace breastfeeding with bottle feeding.

Regarding the aforementioned problems, the researcher is interested in studying the effects of self-efficacy promoting program on breastfeeding behavior and duration among first-time working mothers. The program was planned to provide the mothers with continuous care about breastfeeding from pregnancy stage, hospitalized postpartum stage, and maternity leave period until 8-week postpartum. It was a cooperation with the Postpartum Care Unit, Pediatric Outpatient Department and Lactation Clinic, aiming to enhance perceived self-efficacy in mothers not receiving continuous breastfeeding support after hospital discharge until 8-week postpartum.

This program was divided into 4 stage comprising. Stage 1: interventions for enhancing mother's confidence in breastfeeding and for promoting appropriate breastfeeding behavior during hospitalization. Stage 2: telephone contact at the second day after hospital discharge to evaluate breastfeeding problems was designated as a critical to call mothers because their milk has usually come in by this time. They are often engorged, overwhelmed by the new responsibilities of being a mother and exhausted from repeated sleep interruptions (Moore, Bianchi-Gray & Stephen, 1991) which would provide early awareness of breastfeeding problems leading to early problem solving and enjoyable breastfeeding experience (Philipp, 2001). Stage 3: interventions for an increase in perceived self-efficacy of the mothers before returning to work at 4-week postpartum during the hospital visits for the baby follow-up and vaccination. Stage 4: telephone contact at 6-week postpartum to evaluate manual expression, and to storage breast milk.

It was expected that this program would increase perceived self-efficacy in breastfeeding, promote appropriate breastfeeding behavior and increase knowledge concerning the prevention of problems arising from breastfeeding in first-time

working mothers. As a result, the mothers would have satisfactory experience in breastfeeding and gain confidence in breastfeeding in both maternity leave period and working period; and finally, the duration of breastfeeding would be extended.

Research Question

1. Do perceived self-efficacy in breastfeeding of mothers in the experimental group differ from those in the control group before, during and the end of the study periods and are there any difference in both group?
2. Does breastfeeding behavior scores of mothers in the experimental group differ from the scores of mothers in the control group prior to hospital discharge?
3. Does breastfeeding behavior scores of mothers in the experimental group prior to hospital discharge differ from the scores achieved before the study?
4. Does the exclusive breastfeeding duration of the experimental group differ from that of the control group at the end of the study?
5. Does the intentional exclusive breastfeeding duration in the experimental group differ from that of the control group at the end of the study?

Purposes of the Study

1. To compare perceived self-efficacy between mothers in the experimental group and those in the control group before, during and the end of the study periods and to compare the results at different periods within the same group.
2. To compare breastfeeding behavior scores of mothers in the experimental group with that of mothers in the control group before hospital discharge.
3. To compare breastfeeding behavior scores of mothers in the experimental group before the study and after intervention at stage 1 before hospital discharge.
4. To compare the exclusive breastfeeding duration of the experimental group with that of the control group at the end of the study (8-week postpartum).

5. To compare the intentional exclusive breastfeeding duration of the experimental group with that of the control group at the end of the study (8-week postpartum).

6. To investigate the satisfaction toward the program for promoting self-efficacy in breastfeeding of first-time working mothers in the experimental group at the end of the study (8-week postpartum).

Conceptual Framework

This research was based on the self-efficacy concept developed by Albert Bandura (1997). The self-efficacy concept has stated that perceived self-efficacy has effects on a person's behavior and it is composed of four sources: physiological. and affective states, vicarious experience, enactive mastery experience and verbal persuasion. This theory was applied to the development of program for the promoting self-efficacy in breastfeeding of mothers in the experimental group. This program was divided into 4 stage comprising.

Stage 1 : Before discharge from hospital, interventions to increase confidence in breastfeeding skills by four source of self-efficacy comprising.

1.1 Physiological and affective states

- Establish interpersonal relationship with the mother with gentle and polite manners.
- Give the mother opportunities to talk and express her feeling.
- Care for the mother's comfort during breastfeeding

1.2 Vicarious experience

- Arrange the demonstration of appropriate breastfeeding behaviour by vicarious experienced mothers.
- Distribute a handbook of breastfeeding for working mothers.

1.3 Enactive mastery experience

- Coach the mother in breastfeeding practice with instant advice and help.

1.4 Verbal persuasion

- Persuade the mother to perceive self-efficacy in breastfeeding
- Give complement at every step of breastfeeding.

Stage 2 : At the second day after discharge from hospital, interventions to evaluate breastfeeding problems via telephone contact mothers by two source of self-efficacy comprising.

2.1 Physiological and affective states

- Ask questions concerning the mother and her baby's health condition as well as their well-being.
- Ask about the process of breastfeeding

2.2 Verbal persuasion

- Give complement and psychological support

Stage 3 : At 4-week postpartum, interventions to prepare the mothers before returning to work by four source of self-efficacy comprising.

3.1 Physiological and affective states.

- Initiate a conversation with gentle and polite manners

3.2 Vicarious experience

- Encourage the mothers to share her experience in breastfeeding during the past 4 weeks and have a conversation about preparation for breastfeeding during working period.

3.3 Enactive mastery experience

- Ask the mother to review breastfeeding behavior.

3.4 Verbal persuasion

- Give the mother complement and psychological support.

Stage 4 : At 6-week postpartum, interventions to evaluate expressing of breast milk, storing and cup feeding via telephone contact mothers by two source of self-efficacy comprising.

4.1 Physiological and affective states

- Ask questions concerning the mother and her baby's health condition as well as their well-being.

4.2 Verbal persuasion

- Ask about the process of breastfeeding.
- Give complement and psychological support.

The process of and details in each stage and conceptual framework of this study are summarized in the following diagram.

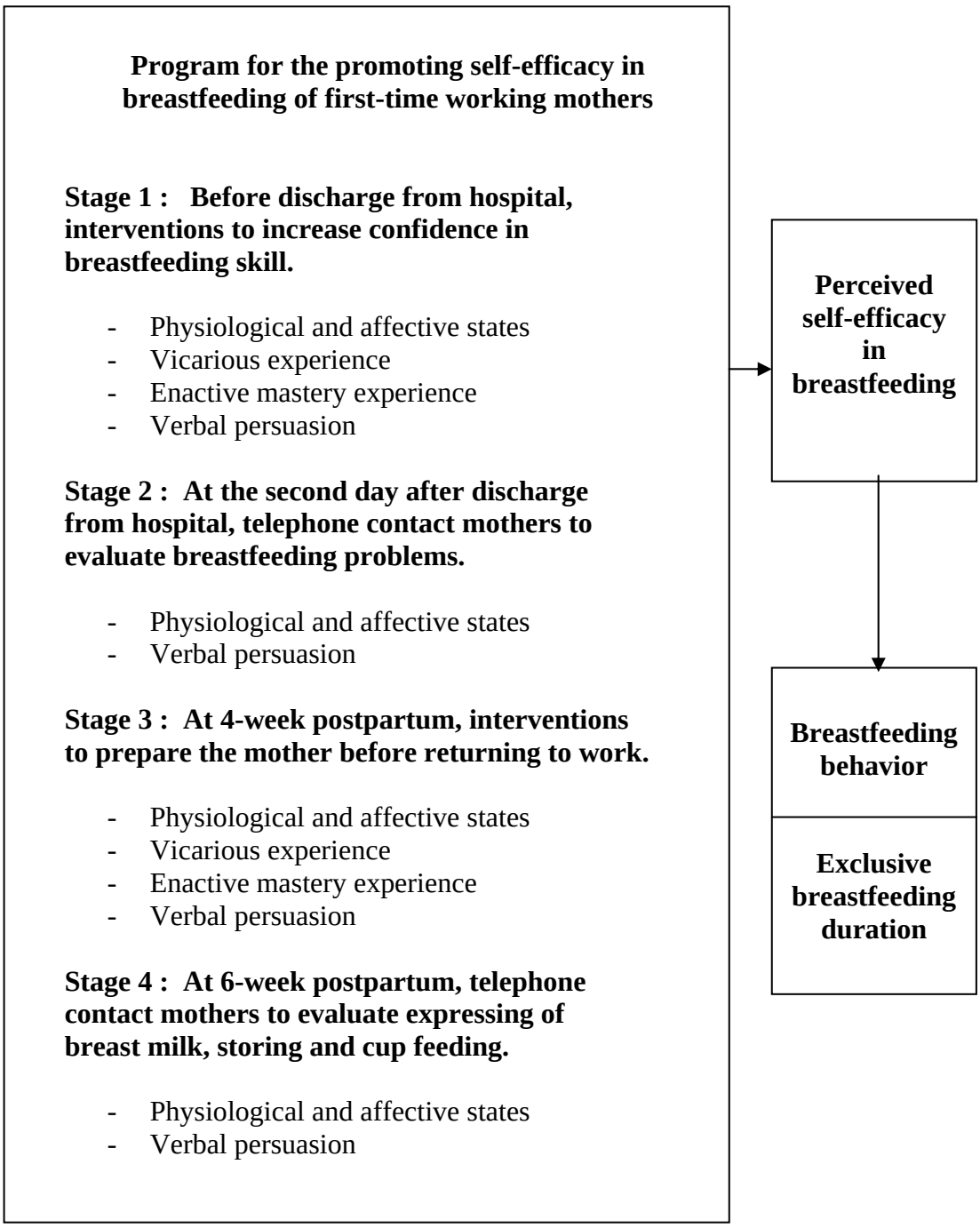

Figure 1: Conceptual framework of the study

Hypothesis of the Study

1. The perceived self-efficacy in breastfeeding of mothers in the experimental group and the control group before, during and the end of the study are different and there are different periods within the same group.
2. Mothers in the experimental group achieved higher scores of breastfeeding behavior before hospital discharge, comparing to mothers in the control group.
3. Mothers in the experimental group achieved higher scores of breastfeeding behavior before hospital discharge, comparing with the scores achieved before the study.
4. At the end of the study, mothers in the experimental group had exclusive breastfeeding duration longer than mothers in the control group.
5. At the end of the study, mothers in the experimental groups intended to exclusively breastfeed the baby for a longer duration than mothers in the control group.

Definition of Terms

1. Program for the promoting self-efficacy in breastfeeding of first-time working mothers refers to the nursing interventions provided for mothers in the experimental group starting from before hospital discharge until 6-week postpartum. The interventions include establishing interpersonal relationship, setting up appropriate environment for breastfeeding, demonstrating of breastfeeding behavior by mother who has vicarious experience, showing breastfeeding technique on handbook of breastfeeding for working mothers, coaching mothers in breastfeeding practice and psychological support and enhancing mother's confidence at home by telephone contact. This program is based on the self-efficacy concept with the following.

1.1 Physiological and affective states involves the establishing of good interpersonal relationship with the mothers, having a conversation with them with gentle and polite manners, taking care of the mothers' comfort during breastfeeding,

assisting the mothers to rest while continuing to breastfeed such as promoting lying position, giving the mothers opportunities to talk and express their feelings, and making telephone calls to express concerned.

1.2 Vicarious experience involves the demonstration of appropriate breastfeeding behavior by mother who has vicarious experience in breastfeeding. Another activity is to distribute of handbooks of breastfeeding for working mothers.

1.3 Enactive mastery experience involves the mothers' practice of breastfeeding behavior with coaching from the researcher until they feel confident and are able to appropriately breastfeed.

1.4 Verbal persuasion involves the conversation with the mothers to help their perceive self-efficacy in breastfeeding. In addition, compliment is given at every step of breastfeeding practice and the psychological support is continuously given through telephone contact after hospital discharge.

2. Perceived self-efficacy in breastfeeding refers to the levels of mothers' confidence in their capacity for breastfeeding behavior performances comprising delivering breastfeeding, expressing of breast milk and feeding breast milk to the baby with a cup. The perceived self-efficacy was evaluated with the self-efficacy in breastfeeding questionnaire.

3. Breastfeeding behavior refers to the mothers' action before breastfeeding, during breastfeeding and after breastfeeding, including expressing breast milk and feeding breast milk to the baby with a cup. The breastfeeding behaviors are evaluated with the breastfeeding behaviors observation by researcher.

4. Exclusive breastfeeding duration refers to the period of time, in weeks, that the mother feed exclusive breast milk to the babies. The feeding might be a direct breastfeeding or might be the feeding of breast milk with a cup. Nevertheless, the baby does not receive formula milk, complementary drink or complementary diet apart from medications or vitamins prescribed by pediatricians.

5. Satisfaction with the program for the promoting self-efficacy in breastfeeding of first-time working mothers refers to the level of satisfaction of mothers after participating in the self-efficacy in breastfeeding promoting program. The level of satisfaction toward the program is evaluated with the questionnaire for measuring satisfaction toward the program

6. Routine nursing care refers to the routine practice of nursing staffs in Juthathush-7 Ward including individual teaching and group teaching about postpartum self-care, baby care and breastfeeding during recovery period after childbirth, as well as the distribution of handbooks of postpartum self-care and breastfeeding.

Expected Outcomes and Benefits

1. Nursing practice

1.1 The results of this study can be applied to set up a program for the promoting self-efficacy in breastfeeding for first-time working mothers during prenatal and postnatal period at Siriraj Hospital. This program is a collaborative service among the Prenatal Clinic, Postpartum Ward, Pediatric Outpatient Department and Lactation Clinic.

1.2 Mothers will be confident and be able to achieve successful breastfeeding. They could apply their experience to nurse the second baby and could be a good example of breastfeeding for other mothers, relatives, friends, and other women in the same community. As a result, a network for the promotion of breastfeeding could be developed in the community.

2. Further study

2.1 The results of this study could be used as basic information for further study on self-efficacy in breastfeeding with other groups of mothers.

2.2 There should be a study of long-term effects of self-efficacy in breastfeeding promoting program.

CHAPTER II
LITERATURE REVIEW

The review of literature for the study of effects of self-efficacy promoting program on breastfeeding behavior and duration among first-time working mothers is presented in the following order:

1. Breastfeeding
2. Problems of breastfeeding in working mothers
3. Self-efficacy
4. Program for the promoting self-efficacy in breastfeeding of first-time working mothers

Breastfeeding

Breastfeeding promotes development of babies from the newborn stage as the touch, embrace and eye contact strengthen mother-child bonding. Nurses should provide mothers with knowledge and advice about breastfeeding from the pregnancy until the postpartum period. They should also help mothers in developing breastfeeding behaviors and give support to enhance the mothers' self-esteem and ability to breastfeed their baby continuously and properly. Nurses should have knowledge about the anatomy of the breast, lactogenesis and galactokenesis, the suckling reflex, benefits of breastfeeding, breastfeeding behavior, expression of breast milk, and breastfeeding problems. For working mothers, nurses should also give advice on the storage of breast milk and cup feeding when the mothers return to work.

Anatomy of the breast

At puberty, the breasts in the female enlarge to their adult size. In a nonpregnant woman, the mature breast weighs approximately 200 grams. During pregnancy, breast size and weight increase; and when the woman is near term, the breast weighs 400 to 600 grams. During lactation the breast weighs 600 to 800 grams. The shape of the breast varies from woman to woman, just as do body build and facial characteristics (Lawrence, and Lawrence, 1999).

The breast consists partly of gland tissue, supporting tissue and fat. The gland tissue makes milk, which then goes along small tubes or ducts. The ducts become much wider and form lactiferous sinuses in which milk collects. About 15-20 milk ducts lead from the lactiferous sinuses to the outside, to the tip of the nipple. The nipple contains many sensory nerves so it is very sensitive. This is important for the reflexes, which help milk to come. Around the nipple there is the circle of dark skin called the areola, which has small swellings. These are glands that produce an oily fluid that helps to keep the nipple skin soft and in good condition. Beneath the areola are the lactiferous sinuses (King, 1995; Lawrence, and Lawrence, 1999).

Lactogenesis and Galactokenesis

During pregnancy, hormone changes prepare the gland tissue to make milk. The gland tissue develops and the breasts become larger. Immediately after delivery, hormone changes make the breast begin to produce milk. When the baby begins to suckle, two reflexes make the milk come in the right quantity and at the right time (King, 1995).

The baby’s suckling stimulates the nerve endings in the nipple. These nerves carry messages to the anterior part of the pituitary gland, which makes prolactin. The prolactin goes in the blood to the breasts and make them secrete milk. Prolactin works after the baby suckles, and make milk for the next feed. These events, from stimulation of the nipple to the secretion of milk, are called the milk-secreting reflex. The pituitary gland secretes more prolactin during the night than the day so breastfeeding at night especially helps to keep up a good supply of milk. It is very important to understand the effect of suckling on milk production. If the baby suckles mores, the breasts make more milk. If the baby suckles less, the breasts make less milk. If the baby stops suckling completely,

the breasts stop making milk. If the baby is not able to suckle for a time, the mother can remove milk by hand.

Oxytocin is secreted by the posterior part of the pituitary gland and goes in the blood to the breast. Oxcytocin works while the baby is suckling and makes the milk flow for this feed. These events are the milk ejection reflex, or the let down reflex. The mother's thoughts, feelings and sensations can affect this reflex. Usually mother's feelings such as, thinks lovingly of her baby or hears baby crying, help the reflex, but sometimes, mother's embarrassment, mother's worries or pain, inhibits it. Oxytocin makes the uterus contract which helps to deliver the placenta. Breastfeeding help to stop bleeding immediately after delivery .

The level of the prolactin and oxytocin hormones increase in blood while babies suckle milk and decrease as the suckling stops, thus to get the breast to produce milk quickly, babies must be brought for suckling the breast milk as soon as possible or within 30 minutes after delivery, as frequently and regularly as possible at the day and the night time, and correct positioning, to keep the level of prolactin and oxytocin hormones higher all the time (Jelliffe, and Jelliffe, 1978; Ontrakarn, 2002; King, 1995).

The suckling reflex

A healthy full-term baby has three reflexes that help him in feeding. For effective suckling, a baby needs to latch on the breast correctly. The suckling subsequently occurs upon the functioning of the following reflexes (King, 1995; Lauwers, and Shinskie, 1999)

- The rooting reflex. This reflex helps the baby to find the nipple. If something touches the baby near his mouth and he is hungry, he will turn toward the touch and open his mouth.

- The suckling reflex. When something goes into the baby's mouth and touches his palate, he sucks it. The suckling reflex may be very strong in the first hour after birth.

- The swallowing reflex. When the baby's mouth fills with milk, he swallows it.

Benefits of breastfeeding

Breast milk is the best and the most appropriate food for a baby because it provides all nutrients that a baby needs for growth and development (Reynlod, 2001). It is digestible, clean, convenient and safe for babies. Breast milk is highly beneficial for babies' health, as it gives protection against various diseases such as gastrointestinal disease, respiratory disease, or middle ear infection (King, 1995). Breastfeeding promotes mother-child bonding thus, when the baby grows up, he will have good relationship with other people, as well as having confidence and trust toward other people (WABA, 1998). The suckling of the breast also helps in the development of oral cavity (Palmer, 1998).

Breastfeeding also contributes to health and well-being of mothers because oxytocin secretion has positive effect on uterine contractions and thus reduce postpartum hemorrhage (King, 1995). In addition, it reduces the risk of breast cancer, as well as ovarian cancer, in premenopause period (Riordan, and Auerbach, 1993; Labbok, 2001), spinal and hip fracture after menopause (Miriam, 2001) Breastfeeding also helps the mother in quickening the reshaping of body figure as the subcutaneous fat collected during the pregnancy stage is utilized for milk production. Moreover, it enhances maternal behavior by inducing the sense that the maternal role is completely performed (Worthington, and William, 1993; Miriam, 2001; Lawrence, and Lawrence, 1999).

Breastfeeding behavior

Nurses should help mothers in breastfeeding during the postpartum period, as the mothers are still tired from the delivery. First-time mothers are inexperienced in nurturing and breastfeeding the babies; thus, nurses need to assist them and give them suggestion about breastfeeding to raise their confidence and to prevent possible complications such as sore nipple, breast engorgement, inadequate breast milk and delayed lactation and to promote sufficient lactation (Ontrakarn, 2002). Nurses can help mothers in breastfeeding during postpartum period as follows:

1. Early suckling

Immediately after delivery, the baby should be placed on mother's chest, skin to skin. Babies are very alert after they are born and they are usually hungray. The initiation of breastfeeding soon after the delivery or within the first 30 minutes after birth. This early suckling also stimulates the baby to nurse better later.

2. Frequent feeding

The mother should frequently and regularly breastfeed the baby every 2-3 hours, both at night and during the day because frequent suckling activates the secretion, as well as the production, of breast milk. Moreover, frequent suckling allows opportunities for the mother and the baby to learn about each other.

3. Correct suckling

Mothers require support to practice appropriate breastfeeding. The baby needs to take a mouthful of the areola with his gums pressing on the breast tissue, which contains the lactiferous sinuses. The pressure on lactiferous sinuses, the containers of breast milk, squeezes the milk out into the baby's mouth. The baby's gums may press on the nipple if it is not placed deeply into the baby's mouth; as a result, the mother will get hurt and may have sore nipple.

Therefore, nurses should closely help mothers in training their baby to correctly suckle until the mothers can correctly breastfeeding the baby and gain confident in their ability. The following suggestions should be given for breastfeeding practice (Messenger, 1982; Lauwers, and Shinskie, 1999; Klaus, Kennell, and Kiaus, 1995).

Before breastfeeding

1. Cleanse hands with soap and water.
2. Be relaxed and find a quiet and comfortable area to feed the baby.
3. Sit or lie down in a comfortable and relaxing position as detailed below.

- Sitting position. The mother sits upright in an armchair or on the bed with pillows supporting her back. Both feet are rested on a stool. A pillow or rolled blankets may be used as a support for the mother's arms and to lift the baby to the mother's breast.

- Lying position. The mother lies down on one side in head-raising position with two pillows supporting her head. A pillow is placed between the legs to prevent backache.

During breastfeeding

1. The mother pulls the baby close to her (the mother's abdomen is close to the baby's). The baby's head is in straight line with his body and is raised a little higher than the bottom. The baby's mouth is at the same level as the mother's nipple.

2. The mother holds her breast with tip of the thumb on the top outside the areola area and the other four fingers placed under the breast to give support; this holding is also known as the C-hold.

3. The mother then pulls the baby closer with his lips at her nipple and gently touches his lips with the nipple to activate the rooting reflex. When the baby opens his mouth widely, the mother gently and quickly moves his head to the breast and inserts the nipple into his mouth to the depth that his lips and gums cover the areola with the tongue placing under the nipple.

4. While the baby is suckling, the mother notes that his cheeks are not concave and there is no other sound apart from the gentle swallowing sound.

5. The mother should look at the baby during breastfeeding, have eye contact with him, smile and talk to him to develop mother-child bonding.

6. The mother breastfeeds the baby until the milk in one breast is finished (the breast feels softer) or breastfeeds him for at least 10 to 15 minutes so that the baby receives high fat milk that comes later. If the baby is not full yet, the mother breastfeeds him with the other breast.

7. If the baby falls asleep before he is full, the mother should press the Thumb on the breast to squeeze the milk into the baby's mouth, activating his suckling reflex.

8. When the baby is full, he will let go of the nipple. If the mother wants to take the nipple out of the baby's mouth, she should place the finger in between the baby's gums and gently pull the nipple out.

After breastfeeding

1. For a sitting position, the mother should hold the baby to sit upright or put him over her shoulder and stroke his back gently to stimulate a burp to prevent aspiration. Nevertheless, the mother should not get worried if the baby does not burp because breast milk is easy to absorb and digest and it does not induce flatulence.

2. For a lying position, the mother should lie the baby on his right hand side with head raised to facilitate milk flow from the stomach to the intestine and to prevent vomiting in some cases.

3. The mother does not need to feed the baby with water after breastfeeding because there is enough water in breast milk. Moreover, breast milk contains agents that

can prevent the growth of oral fungus, hence the baby will not have white crush from fungal infection.

4. The mother leaves the nipple to be properly dry before putting on the brassiere that fits. She should constantly wear a brassiere during the baby's meal to prevent poor reshaping of the breasts.

5. The mother should drink 1-2 glasses of milk, water or juice after breastfeeding.

6. The baby should be fed with the breast that he has in the last meal and did not properly finish it. If the baby is full after finishing a breast, he should be fed with another breast in the next meal.

7. Nurses should give support and raise the mother's self-efficacy; they should not make the mother feel worried or stressed and should take care that the mother has sufficient rest.

8. The mother and her baby should be together all the time. If they have to stay separately, nurses should teach the mother how to express the milk and collect the milk as much as she can at every usual mealtime of the baby to maintain the production of breast milk.

9. Nurses should encourage the mother to breastfeed the baby every time he needs with no limitation. The mother should not use rubber teat or artificial nipple to feed the baby as he may get used to it or may be confused and reject natural breastfeeding.

10. Before hospital discharge, nurses should instruct the mother about assessment of baby's adequate intake and should train her to manually express the breast milk, as well as storing the milk and feeding the milk with a cup. The mother should also learn about the prevention and management of sore nipple, breast engorgement and insufficient breast milk. She should also receive information about sources of knowledge and help, as well as the breastfeeding follow-up after hospital discharge.

Positioning

Correct positioning and latching on are the keys to successful breastfeeding. It also helps preventing discomfort from sore nipples, and assuring that the baby will stimulate the breast correctly to receive and maintain an adequate supply of milk. It is recommended that the mother should find a comfortable position and prepare good

support for the arm that is holding the baby (Lauwer, and Shinskie, 1999; Smith, and Tully, 2001).

1. Cradle hold. The mother holds the baby as follows:

- carry the baby with the arm of the same side as the breast with which the baby will be fed;

- turn the baby and pull him close to the body, his head placing on the mother's elbow joint with his back and bottom being supported with the mother's hand; his lips are close to the mother's nipple.

2. Cross cradle hold. The mother holds the baby as follows:

- carry the baby with the arm of the opposite side of the breast with which the baby will be fed;

- holding the baby close to the mother's body, supporting the back of his neck with the palm of hand; his lips are close to the nipple.

3. Football hold. The mother holds the baby as follows:

- carry the baby with the arm of the same side of the breast with which the baby will be fed;

- turn the baby to the mother's side with both feet pointing toward the back of the mother, support his neck and head with the palm of hand and level his mouth at the nipple.

4. Side lying hold. The mother holds the baby as follows:

- The mother and the baby lie down turning toward each other.

- The mother holds the baby with the arm of the same side of the breast with which the baby will be fed, placing his head on the elbow joint and leveling his mouth at the nipple.

Manual expression of breast milk

Breast milk can be expressed by hand, manual pump or electric pump. Expressed breast milk is highly beneficial for newborns with low birth weight or ill babies. For mothers, expression of breast milk helps in reducing breast engorgement, maintaining milk production, reducing leaking breasts. It also ensures adequate milk supply for the baby when his mother is away e.g. going to work or going out. Manual expression is simple, convenient and safe as it induce no infection to the baby. To obtain a large

amount of milk and to prevent breast soreness, mothers should gently express her breast milk as suggested below (Fenwick, 1990; King, 1995; Biancuzzo, 1999).

1. Relax; mother should think that this is a relaxing time and she is preparing a good thing for the baby.

2. Prepare the milk container in advance; the milk container, which may be a cup or a bottle with a well-fitted lid, should be cleaned and boiled in water for 10 minutes.

3. Cleanse hands; mother should wash her hands clean with soap and water.

4. Sit in a comfortable position and gently massage both breasts before expressing the milk.

5. Place the thumb and the index finger on the outer rim of the areola or about 3 centimeters back from the tip of the nipple; the two fingers are on opposite side.

6. Press the breast with both fingers while pulling the fingers toward each other; the pressing and pulling of fingers should not be so hard that it hurts.

7. Squeeze the first, 3 or 4 drops out before collecting the following milk in a sterilized container.

8. Press, squeeze and let go the breast on the same area until less amount of milk comes out; then, move to other areas around the areola before changing to the other.

Storing breast milk

1. Squeeze breast milk in to a sterilized container made of glass or hard plastic, which could be cleaned with a sterilization technique; soft plastic container is not recommended as the fat in breast milk may stick to the wall of the container.

2. Divide the expressed milk into the right amount for each meal, keep it in separate containers and seal the containers tightly.

3. Write the date and the time when the milk is expressed on each container; the milk expressed first should be used first.

Duration of milk storage

Expressed breast milk should be kept as follows (Biancuzzo, 1999):

1. At room temperature

- At the room temperature lower than 25 degrees Celsius, can keep expressed milk for 4 hours.

- At the room temperature 25 degrees Celsius or higher, can keep expressed milk for an hour.

2. In a refrigerator

- On the first shelf next to the freezer at the innermost depth of the refrigerator, can keep expressed milk for two days (with the temperature control at the level of 5-6).

- The freezer of a single-door refrigerator is not recommended for milk storage because the temperature in the freezer is not stable.

- The freezer of double-door refrigerator (-14 degrees Celsius) can keep expressed milk for 3 months.

- The extra-freezer of a special refrigerator (-20 degrees Celsius) can keep expressed milk for six months.

3. In an ice thermos : can keep for 24 hours.

Feeding of breast milk with a cup

Before feeding the baby with expressed breast milk, the mother needs to thaw the milk in advance by leaving it at room temperature for a while or swirling the container in a bowl of warm water. It is not recommended to boil the milk. The mother should shake the milk well before feeding to make the fat curd dissolved and mixed well with the liquid. The mother then feeds the baby with the expressed milk in the following steps (King, 1995; Riordan, and Auerbach, 1998; Lauwers, and Shinskie, 1999).

1. Prepare a transparent cup (or a medication glass) for feeding by washing to clean and boiling it in water for 10 minutes;

2. Pour expressed breast milk into the cup at the amount of not more than half the cup.

3. Sit in a comfortable position, holding the baby on the laps in an upright position; his head was supported with the mother’s palm while his body is leaning backward for approximately 45 degrees.

4. Place the rim of the cup on the baby’s lower lip and tilt the cup to let the milk brimmed just at the edge of the milk; to prevent aspiration and to allow time for the baby to have a break, the milk should not be poured directly into the baby’s mouth.

5. Gently tilt the cup when the baby sticks his tongue out to lick the milk; take care that the milk is constantly brimming.

6. Occasionally stimulate the baby to burp during the feeding.

7. Do not give water after the feeding finishes, as in usual breastfeeding.

8. Use thawed milk within 24 hours; the leftover milk must not be reused.

Problems of Breastfeeding in Working Mothers

Problems contribute to the discontinuation of breastfeeding include inadequate milk (Feinstein, Berkelhamer, Gruszka, Wong, and Carey, 1986; Chapman, Macey, Keegan, Borum, and Bennett, 1985; Hill, 1991), sore nipples, leaking breast milk and postpartum blue (Kearney, Cronenwett, and Barrett, 1990). This is consistent with the study led by Moor, which found that problems in breastfeeding are breast engorgement, sore nipple, and latch-on problems (Moore, Bianchi-Gray, and Stephens, 1991). Another common cause of breastfeeding discontinuation is leaving home to work (Visness and Kennedy, 1997; Department of Health, 1996; Samritsopak, 1999). This is in accordance with the results of a study conducted by Durongdej (1998) which found that the causes of breastfeeding discontinuation are working (51%) and insufficient milk (32%). It was found that working mothers breastfeed their babies for a shorter period of time, as compared with the mothers working at home (Yimyam, 1999). Referring to a review of literature concerning breastfeeding by Meek (2001) it was found that working mothers have shorter duration of breastfeeding when they return to work. Mothers may discontinue breastfeeding before returning to work (Jitjaroen, 1994) or after returning to work and having breastfeeding-related problems that they cannot resolve.

Discontinuation of breastfeeding among working mothers may be due to lack of knowledge about milk expression and milk storage, stress and tiredness from work, inconvenience from leaking breasts, sore nipples, breast engorgement and reception of incomplete information from health care professionals (Kumdee, 1991). This is supported by a study conducted by Sutiprapa (2001) which is an investigation of workplace support on breastfeeding for working mothers. Among 200 working mothers receiving health care services from Maharaj Nakhon Chiengmai Hospital and Mother

and Child Hospital of Chiengmai, 43.9 percents reported having problems in breast feeding as follows: having no time as the mother needs to work (42.5%), inconvenience in traveling back home for breastfeeding (35.2%), breast engorgement (11.1%), low amount of breast milk (9.3%), having no container for storing breast milk (7.4%), etc.

For the solution of breastfeeding problems, most mothers fed the baby with formula milk in combination with breast milk (87.4%) and 30 percents reported that they squeezed breast milk out and just threw it away. Referring to the aforementioned literature, breastfeeding problems are summarized below.

1. Stress and tiredness. Working mothers who breastfeed their babies have additional role from work in addition to their maternal role thus they are tired and are under stress. In addition, the mothers are likely to have problem of leaking breast at the baby's mealtime. To prevent this problem, the mothers should express breast milk before the baby's feeding time.

2. Breast engorgement. The breasts are not stimulated from baby's suckling as usual, thus there is retention of breast milk in lactiferous sinuses and the sinuses subsequently expand and press on the surrounding ducts, inhibiting milk flow. Consequently, breast engorgement occurs. Therefore, the mothers should express their milk during working hours and should breastfeed the baby when they are at home, especially at nighttime.

3. Inadequate breast milk. This may be due to several causes. There may be no stimulation of ejection reflex at the post-delivery stage. After mothers returning to work, stress, anxiety, inadequate diet and inadequate rest may have effect on the production and secretion of breast milk.

4. Lack of knowledge about milk expression and milk storage. Mothers may suffer from pain during the milk expression if they do not receive proper knowledge about milk expression. Similarly, inappropriate storage of breast milk may shorten the length of time for milk storage and the milk may be contaminated or may turn bad, inducing diarrhea to the baby.

5. No container and storing place for expressed milk. Expressed milk could be constantly stored in an ice-full thermos and be fed to the baby within 24 hours.

Breastfeeding problems in working mothers can be prevented and resolved. The mothers should receive support, encouragement, help and advice during the post delivery period and leaving period, as well as when they return to work in order to

promote appropriate breastfeeding behavior and the mother's self-esteem in breastfeeding. The mothers should learn to prevent and solve problems in breastfeeding, to ask for advice from experts or consultants specialized in breastfeeding problems and to express, as well as storing and feeding, breast milk. Mothers should be able to train the baby's caregiver to feed the baby with expressed milk when they are away or are at work.

Working mothers can continue breastfeeding despite having full-time work by breastfeeding the baby when they are at home and storing expressed milk for the baby before going to work and during work hours. Regular milk expression will maintain constant milk production and supply adequate milk for the baby.

The researcher of this study, therefore, applied the self-efficacy concept to develop a nursing intervention for promoting self-efficacy of working mothers in breastfeeding at the hospitalized postpartum period, maternity period and when they return to work.

Self-Efficacy

Self-efficacy is an one concept of social learning theory developed by Albert Bandura (1997). The social learning theory is composed of three main concepts comprising observation learning, self-regulation and self-efficacy.

Self-efficacy refers to self-appraisal of person capabilities in performing activities under certain circumstances (Bandura, 1997; Prasonkittikun, 2001). It is a person's expectancies of his or her ability, which are varied according to the task or the activities and the circumstance in which the person is experiencing. Self-efficacy has influence on a person's behavior because a person's knowledge and capabilities cannot induce a successful performance unless the person is confident in applying the knowledge and capabilities into their practice. According to Bandura, the development of human behavior is based on the following factors (Bandura, 1986).

1. Outcome expectancies. A person expects possible outcome resulting from the performance of certain behavior. The outcome per se is not the behavior but it is the consequence of that behavior.

2. Efficacy beliefs. A person believes that he or she is able to perform the behavior or conduct the assigned activity. Bandura believes that this is an essential factor that leads to actual practice to achieve the outcome expectancies, as sown in diagram 2.

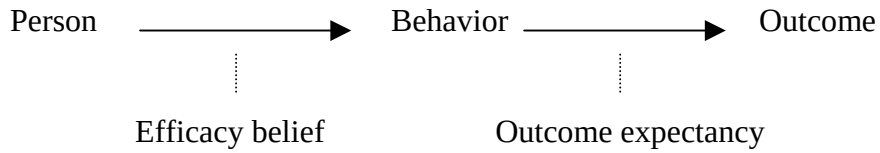

Diagram 2. The relationship between efficacy belief and outcome expectancy and behavior (Bandura, 1997).

Self-efficacy is dynamic and constantly changeable depending on the task or the activities as well as the circumstance. Factors affecting changes in self-efficacy include the following:

1. Level of difficulties in performing the behaviors or in accomplishing the task. Some people believe in their capabilities in performing simple activity only. When the activity is more complicated or requires more effort, their efficacy belief may decrease.

2. Strength – the power of self-efficacy belief in performing the activities that a person needs to do. People with strong belief in their capabilities are not easily discouraged or stop making an effort even though the task or the activity is very difficult.

3. Generality – the coverage of perceived self-efficacy under one circumstance to another circumstance. A person may believe in his or her personal capability in one situation but the efficacy belief may be reduced when the situation changes.

Self-efficacy can be constructed or developed from various sources as discussed below (Bandura, 1997).

1. Enactive mastery experience: Enactive mastery experiences are the most influential source in the development of self-efficacy. Success contributes to a person's belief in self-efficacy whereas failure undermines it, especially when failure occurs before a sense of efficacy is firmly established. The development of self-efficacy requires experiences in problem solving as well as experiences in overcoming obstacles through perseverant effort. Difficulties and failures provide a person with opportunities

to learn that sustained effort is required for success. Thus the person will perseveres in dealing with adversities, difficulties and obstacles.

2. Vicarious experience : The attainment of other people who are similar to one's self may have positive effect on one's efficacy belief. On the other hand, observing others perceived to be similar competent fail may lower a person's judgment of his or her own capabilities, as well as his or her motivation to accomplish a task. The effects of the model on a person's self-efficacy depends on the similarity between the model and that person: the more similar they are, the more influential the model. The model is classified into two types as follows (Iamsupasit, 2000):

1. Live model – the model that a person can directly observe and interact with.

2. Symbolic model – the model that is presented through the media such as radio, television, comic books or magazines.

3. Verbal Persuasion : If a person's significant others express faith in that person's capabilities to accomplish a task with an effort, the person will try harder and will gain confidence in developing his or her skills. Nevertheless, verbal persuasion is insufficient for the promotion of a person's efficacy belief; hence it should be used in combination with other sources.

4. Physiological and affective states : In developing their self-efficacy and judging their capabilities, people rely partly on their physiological and emotional states. For activities requiring physical strength and stamina, a person usually interprets the sense of tiredness, ache and pain as a signal of physiological fatigue. Emotion is also used in appraising one's capabilities. Positive emotions induce the sense of increased efficacy whereas negative emotions undermine it. Therefore, in developing self-efficacy, a person should be physiological and emotional relaxed.

A person's learning from enactive mastery experience, vicarious experience, verbal persuasion and physiological and affective states does not automatically occur. The information from these sources becomes instructive through cognitive processing and through selecting and weighing the information for a person's learning process before integrating into self-efficacy judgment. Moreover, several factors such as personal, social and situational factors also have effects on the interpretation of a person's experience, as well as a person's fundamental idea of self-efficacy, difficulties

of the task, effort given to the task, physical capabilities, external assistance and the circumstance in which the person performs the activity.

The research studies on the application of self-efficacy concept to promote or develop mothers' self-efficacy have demonstrated its effect on mothers' increased self-efficacy. Sakamanee (1998) examined the effect of a program for promoting perceived self-efficacy on the maintenance of first-time maternal role performance in post-delivery mothers and found that mothers receiving the intervention program demonstrated high level of the maintenance of first-time maternal role performance and presented higher capability in maintaining the maternal role, comparing with the mothers receiving usual care and advice from staff nurses, at a statistically significant level.

The aforementioned studies, therefore, support the self-efficacy concept could be promoted or developed and it has effects on a person's behavior. In Thailand, however, there were two studies relating to this issue. Nitwiboon (1998) studied the effect of structured suggestion with an application of Bandura's self-efficacy and found that mothers receiving the structured suggestion performed appropriate breastfeeding behavior and exclusively breastfed the baby for 4 weeks after the delivery more than the mothers receiving usual suggestion at a statistically significant level.

This finding is supported by the results of a study conducted by Kerdpan (2002), which examined the effects of promotion of breastfeeding program on breastfeeding behavior in adolescent mothers. It was found that the aldolescent mothers attending the breastfeeding promotion program achieved higher overall scores of breastfeeding behavior than mothers receiving usual care at six-hour, 30-hour and 4-week after delivery. The comparison of behavior score at six-hour with the score at 30-hour and the score at 30-hour with the score at 4-week after delivery showed different behavior scores in the group attending the breastfeeding promotion program whereas the behavior scores of mothers receiving usual care demonstrated no difference.

Nevertheless, there has been no study on the application of self-efficacy concept to the promoting self-efficacy in first-time working mothers. The researcher of this study, therefore, applied the four aforementioned sources of self-efficacy to promote perceived self-efficacy in these mothers and to maintain the sense of efficacy through the whole period of breastfeeding.

Program for the Promoting Self-Efficacy in Breastfeeding of First-Time Working Mothers

Self-efficacy concept was applied to the development of program for the promoting self-efficacy in breastfeeding for mothers in the experimental group as discussed below.

1. **Physiological and affective states :**Mothers participating in the program should have physical and emotional relaxation. Including establishing good relationship with the mothers with gentle and polite manners, the mothers were given opportunities to express their feelings as well as talking about their breastfeeding problems. The researcher prepared appropriate environment and cared for mothers' comfort during breastfeeding.Assisting mothers to rest while continuing to breastfeed, coaching mothers nurse baby with lying position After hospital discharge, the researcher gave the mothers elephone contact to evaluate problems and to follow the process of breastfeeding.

2. **Vicarious experience :**Mothers with vicarious breastfeeding experience And correct breastfeeding skill demonstrated breastfeeding behavior to the first-time mothers. Observing other mothers successful breastfeeding can influence self-efficacy. They also shared their experience in breastfeeding. Handbooks of breastfeeding for working mothers were distributed as is symbolic model.

3. **Enactive mastery experience :**The participating mothers would practice breastfeeding with coaching and support from the researcher. Coaching and support related to other known influences on milk supply, such as correct sucking patterns and latch-on will also help mothers to have the experience of successful breastfeeding and satisfied baby.

4. **Verbal persuasion :** The researcher ensured the mothers that they were Able to breastfeed the baby by giving them psychological support and compliments at every step of breastfeeding practice. The mothers were persuaded to observe the babies' manners and expressions during breastfeeding. They might have a conversation with each other about breastfeeding after returning to work and they would receive a telephone contact for psychological support from the researcher.

CHAPTER III
METHODOLOGY

Research Design

This study was a quasi-experimental research with two groups, pre-post test design, aiming to examine effects of self-efficacy promoting program on breastfeeding behavior and duration among first-time working mothers**.**

Population and Sampling

The Population

1. The population of this study were first-time working mothers receiving prenatal care and having normal labor at Siriraj Hospital.

2. Inclusion criteria for recruitment are listed below :

2.1 The mother had normal breasts and nipples.

2.2 The mother had full term pregnancy and received education about breastfeeding from prenatal clinic before childbirth.

2.3 The mother intended to breastfeed the baby.

2.4 Both mother and infant were healthy and had no complication that was a contraindication to breastfeeding.

2.5 During postpartum period, the mother lived in the same area of Siriraj Hospital or in a nearby district (i.e. Bangkok Yai, Bang Plad, Talingshan, Pasee-Charoen and Pranakorn Districts).

2.6 The mother and the infant stayed in the same house and there were a Baby caregiver when the mother returned to work.

2.7 The mother had a telephone for making contact with the researcher.

3. Exclusion criteria for recruitment are listed below :

3.1 During the study, both mother and infant had complication that was a contraindication to breastfeeding.

3.2 Mother did not return to work

The Sample

The samples of this study were composed of first-time working mothers admitted in the postpartum ward – Juthathuch 7, Siriraj Hospital. The total number of 30 mothers whose characteristics met the inclusion criteria were randomized on Monday, Wednesday and Friday for the first control group and of 30 mothers for the later experimental group. The separated period of recruitment was aimed to prevent intervention contamination in the control group .

The mothers in each group were then paired by matching ages and educational levels on the basis that mothers in each pair were less than five-year differences in ages and educated at similar level.

Research Setting

Data were collected at Juthathuch 7 ward and Pediatric Outpatient Department, Siriraj Hospital. The Juthathuch 7 ward delivered care to postpartum mothers and their infants who hold the rights to receive health service through social insurance. The nursing care included giving information about self-care at postpartum period and childcare, as well as knowledge about breastfeeding. The mother with normal delivery who did not have complications usually stayed in the hospital for three days and would be scheduled for postpartum follow up at 4 weeks after hospital discharge at the gynaecological clinic. The infant will be first scheduled for follow up and vaccination at the Pediatric Outpatient Department when he was one month old.

The Pediatric Outpatient Department provided medical care to either healthy or ill children, ranging from newborn to children up to 15 years of age. The medical service included health promotion such as well baby clinic, continuity clinic, provision of medical treatment, rehabilitation and prevention of illness and complications.

Instrumentation

The research instruments were composed of intervention program for promoting self-efficacy of breastfeeding for first-time working mothers. The data collection instruments as detailed below :

1. Intervention Program. Intervention comprising the program promoting perceived self-efficacy in breastfeeding for mothers in the experimental group, handbooks of breastfeeding for working mothers, self-assessment of problems in breastfeeding and record of telephone visits(Appendix D).

1.1 Program for the promoting self-efficacy in breastfeeding of first-time working mothers

This program was developed from the self-efficacy concept proposed by Bandura in combination with the review of related literature. The program was composed of intervention for the promotion of perceived self-efficacy in breastfeeding divided into 4 stages comprising : stage 1 before hospital discharge, stage 2 at the second day after hospital discharge, stage 3 at 4-week postpartum, and stage 4 at 6-week postpartum.

1.2 Handbook of breastfeeding for working mothers

The researcher developed this handbook from the review of literature concerning breastfeeding. The handbook consisted of information about physiology of lactation, latch-on and positioning, breast care, hand expression, storage of breast milk, cup feeding, problem and how to solve it.

1.3 Telephone contact form

The record about breastfeeding follow up, ideas for problem solving and suggestions given to the mothers.

2. Data collection instruments Data collection instruments were demographic data questionnaires, perceived self-efficacy in breastfeeding questionnaires, record forms of breastfeeding follow up and mother's satisfaction with the program for promoting perceived self-efficacy in first-time working mothers (Appendix D).

2.1 Demographic data questionnaire was developed by the researcher for the collection of the mother's data regarding age, telephone number, educational level, occupation, maternity leave, baby feeding plan during maternity leave and

when returning to work. The collection of demographic data also includes baby's data regarding date of birth, birth weight and body length, date of discharge and follow up date.

2.2 Perceived self-efficacy in breastfeeding questionnaire was developed by the researcher from the self-efficacy concept of Bandura and breastfeeding literature review. The questionnaire was aimed to assess perceived self-efficacy of mothers in three postpartum stages: stage 1 before hospital discharge, stage 2 at 4-week postpartum and stage 3 at 8-week postpartum. This questionnaire consisted of 23 items concerning perceived self-efficacy of mothers. The answer given for each statement was a 10-rank scale, ranging from 0 to 100 percent. Each rank on the scale reflected 10-percent difference in level of confidence. The 0-percent level indicated no confidence in doing activity stated in the item; 50-percent level indicated moderate confidence; and 100-percent level indicated definite confidence in doing the activity. The total score varied from 0 to 100-percent; the higher score demonstrated the higher perceived self-efficacy in breastfeeding.

2.3 Breastfeeding behavior assessment form was developed by the researcher from the review of related literature for the assessment of mother's performance in breastfeeding practice, comprising delivering breastfeeding, expressing breast milk and feeding breast milk with a cup. The assessment was composed of 30 items for the observation at different steps as follows: activities before delivering breastfeeding 3 items, during breastfeeding 10 items and after delivering breastfeeding 6 items; manual expressing of breast milk 6 items; and feeding breast milk with a cup 5 items. The answer for the observation of breastfeeding behavior was yes-no answer. The 'yes' indicated that the performance of that activity was observed; the 'no' indicated that the activity was not observed, not performed or incorrectly performed. The 'yes' answer was scored 1 whereas the 'no' answer was scored 0. The assessment of breastfeeding behavior was conducted after the mother received knowledge about breastfeeding skill from the researcher. The total score varied from 0 to 30. The obtained scores were interpreted as follows:

- The total score from 0 to 23 (less than 80%) indicated that the mother had inappropriate breastfeeding behavior.

- The total score from 24 to 30 (80% or more) indicated that the mother had appropriate breastfeeding behavior.

2.4 The record form of breastfeeding follow up was developed by the researcher to record the details regarding breastfeeding duration, problems of any barriers to breastfeeding as well as the solution of those problems, intention to breastfeed the baby and the body weight of the baby at 8 week old.

2.5 Questionnaire of satisfaction with the program for the promoting self-efficacy in breastfeeding of first-time working mothers was developed by the researcher. The questionnaire asked about mother's satisfaction with the promoting program at all three stages of intervention. The answers were three-rank scale of approximated level of satisfaction comprising:

- Much meant the mother was very satisfied with the intervention.
- Moderate meant the mother was moderately satisfied with the intervention.
- Little meant the mother was not or hardly satisfied with the intervention.

Content Validity and Reliability

Step in checking for instrument quality were as follow :

1. The content validity of intervention program and data collection instruments were examined by a panel of five experts comprising one pediatrician, one pediatric nurse instructor, one obstetric nurse instructor , one expert nurse at the Lactation Clinic and one head nurse of postpartum care unit. The instruments were revised according to comments and suggestions from the experts. List of experts showed on Appendix B.
2. The reliability of data collection instruments was tried out with 10 postpartum mothers whose characteristics met the inclusion criteria and then calculated for reliability

2.1 The perceived self-efficacy in breastfeeding questionnaires were Then calculated for reliability with alpha coefficient equation presented below.

$$\propto = \frac{n}{n-1} \left| \frac{1 - \Sigma S^2 i}{S^2 t} \right|$$

when α = reliability coefficient
n = number of questionnaire items
$S^2 i$ = variance of score in each item
$S^2 t$ = variance of total score

Reliability coefficient of the perceived self-efficacy in breastfeeding questionnaire = .93

2.2 The researcher and a nurse expert of lactation clinic together observed and assessed ten mothers' breastfeeding behaviors at the Lactation Clinic to find interobserver reliability of the measurement of breastfeeding behavior. The interobserver reliability of the measurement was calculated with the following equation (Polit & Hungler, 1991)

$$\text{Percent agreement} = \frac{\text{Number of agreement}}{\text{Number of agreement + Number of disagreement}}$$

When number of agreement = Number of items that two observers observed in the same way

Number of disagreement = Number of items that two observers observed in the different ways

The interobserver reliability of the measurement of breastfeeding behavior = .98

Data Collection and Human Right Protection of the Subjects

1. The researcher prepared for the intervention program by receiving intensive training from experts in breastfeeding at the Lactation Clinic in order to develop ability and skills in helping mothers in breastfeeding. The training was given twice a week for 4 months.

2. The introduction letter from the Faculty of Graduate Studies, Mahidol University, was sent to the Director of Siriraj Hospital for permission for data collection.

3. The researcher submitted the research proposal to the Ethic Committee for Research in Human Subjects, Faculty of Medicine, Siriraj Hospital.

4. After permission for data collection was granted the researcher met and informed the heads of Obstetric-Gynecological Nursing and Pediatric Nursing to inform about the objectives of the study and the details of data collection in the control group and the experimental group as detailed below :

Control group

1. The researcher recruited the second day postpartum mothers who participated In breastfeeding lessons provided by staff nurses at Juthathuch 7. The breastfeeding lessons are regularly held on Monday, Wednesday and Friday from 9.00 a.m. until 6.00 p.m. The initial number of women selected for the control group were 45 in total. These women were then selected by matching with subjects in the experimental group regarding age differences of less than five years and similar educational levels. After recruiting 30 subjects for the experimental group, 30 matched subjects were as sample in the control group and the other 30 mothers were excluded from the study.

2. The researcher introduced herself and the subjects were informed about the objectives of the study, the human right protection and the consent forms (Appendix C). The researcher also explained that the subjects may refuse to give information, to answer questionnaire or to have behavior assessment should they wish. They could withdraw from the study at anytime and their withdrawal would not affect the treatment they received at the hospital in any way. When the subjects well understood their right and were willing to participate in the study, the consent letter was presented for signature. The researcher then explained how to answer the questionnaire, the process and duration of data collection and started collecting data.

3. The researcher assessed breastfeeding behaviors of mothers (pre-test). The mothers were also asked to answer the questions in demographic data and perceived self-efficacy in breastfeeding questionnaires. Post-test assessment was conducted at the third day postpartum. The researcher then made appointments with the mothers at 4 weeks and 8 weeks postpartum for collecting data during the intervention and at the end of the intervention.

4. The mothers answered perceived self-efficacy in breastfeeding questionnaires again at 4-week and 8-week postpartum during the baby's follow-up visit for check-up and vaccination at the Pediatric Outpatient Department. The researcher also took care of mothers' convenience in receiving the service.

5. The researcher checked completeness of the data and thanked the subjects for their cooperation.

6. The obtained data were analyzed.

Experimental group

1. The researcher randomly selected the second day postpartum mothers who participated in breastfeeding lessons providing by staff nurses at Jutathuch 7 on Monday, Wednesday and Friday from 9.00 a.m. until 6.00 p.m.; 2-3 mothers were selected each day until 30 mothers were recruited for the experimental group. Each subject was paired with subjects in the control group by matching regarding age differences of less than five years and similar educational level.

2. The researcher introduced herself and informed the subjects about the Objectives of the study, the human right protection and the consent form (Appendix C). The researcher also explained that the subjects may refuse to give information, to answer questionnaire or to have behavior assessment should they wish. They could withdraw from the study at anytime and their withdrawal would not affect the treatment they received at the hospital in any way. When the subjects well understood their right and were willing to participate in the study, the consent letter was presented for signature. The researcher then explained how to answer the questionnaire, the process and duration of data collection, as well as program activities.

3. The researcher started collecting data after the mothers received usual care concerning breastfeeding techniques. Breastfeeding behavior of mothers in the experimental group were assessed and the mothers answered demographic data questionnaires and the perceived self-efficacy in breastfeeding questionnaires.

4. The researcher arranged interventions for a group of 2-3 mothers (Appendix D) aiming to promote perceived self-efficacy in breastfeeding before hospital discharge from 1.00 – 2.00 p.m. (which was mothers' free time). The handbooks of

breastfeeding for working mothers were distributed for mothers to review breasfeeding practice and to learn how to prevent and solve problems in breastfeeding. The handbooks provided mothers with guidelines for the assessment of breastfeeding problems and for making decision to obtain suggestion from the researcher or other counselling resources. The mothers were informed that the researcher would call them at home to follow up their breastfeeding practice and they could call the researcher if they have questions concerning breastfeeding. The researcher made appointment with some mothers to meet at the Lactation Clinic to provide assessment and help.

5. The researcher assessed breastfeeding behaviors of mothers in the experimental group at three day postpartum between 8.00 and 10.00 p.m. An appointment for 4-week postpartum interventions was made at 8.00 a.m. on the same day as the infants' follow up appointment for vaccination at the Pediatric Outpatient Department.

6. The researcher conducted an intervention for the promotion of self-efficacy on the second day after hospital discharge by making a telephone contact to give psychological support and information if the mothers had problems in breastfeeding (Appendix D).

7. The mothers answered perceived self-efficacy in breastfeeding questionnaires at 4 week postpartum during the hospital visit for baby's vaccination at Pediatric Outpatient Department. Program for the promoting self-efficacy was set for a group of 2-6 mothers and their babies (Appendix D) from 8.00 until 8.45 a.m. The researcher accommodated the mothers in receiving service for baby's vaccination.

8. The researcher conducted an activity for the promoting self-efficacy in breastfeeding at 6-week postpartum by making a telephone contact mothers at home. In addition to giving mental support, the researcher also followed up the mothers' practice of manual expressing breast milk, and feeding breast milk with a cup. An appointment at 8-week postpartum for baby's vaccination was also emphasized (Appendix D).

9. The mothers answered perceived self-efficacy in breastfeeding questionnaires at 8-week postpartum. The record for breastfeeding follow-up and the satisfaction with the promoting program questionnaires were also completed when the mothers

brought their babies to received vaccination at Pediatric Outpatient Department. The results were to be used for the evaluation of this study.

10. The researcher checked the completeness of data and thanked the subjects for their participation in the study.

11. The obtained data were analyzed with statistical method.

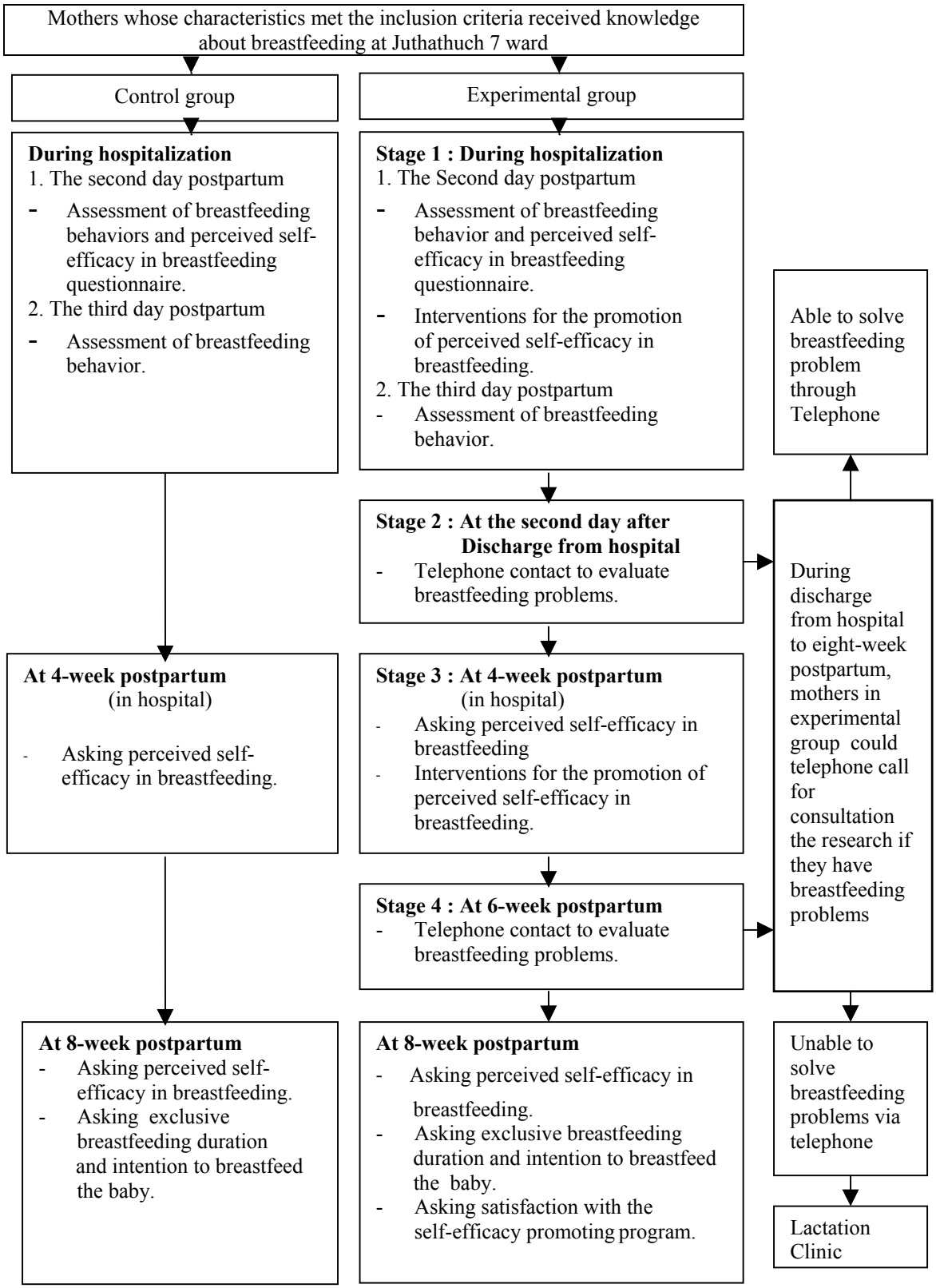

Figure III: The process of the data collection

Data Analysis

The data were analyzed with the SPSS/PC statistical method as follows:

1. Demographic data were analyzed with frequency count method and were expressed in percentage.

2. Mean and standard deviation were used with the data elicited with the perceived self-efficacy in breastfeeding scores and breastfeeding behavior of mothers in the experimental group and the control group .

3. Perceived self-efficacy in breastfeeding scores before, during and the end of the study were compared within a group and between the experimental and the control groups, using repeated measure analysis .

4. Perceived self-efficacy in breastfeeding scores of mothers in the experimental group scores before, during and the end of the study were compared with the control group at each stage of the study, using independent t-test.

5. Mean scores of breastfeeding behavior before hospital discharge in the experimental group were compared with that of the control group, using ANCOVA

6. Mean scores of breastfeeding behaviors of the experimental group before the study were compared with the mean scores prior to hospital discharge (after receiving the promoting program stage 1), using dependent t-test.

7. Mean value of breastfeeding duration at 8-week postpartum in the experimental group were compared with those in the control group at the end of the study, using independent t-test.

8. Numbers and percentages used to express the data intended breastfeeding duration at 8-week postpartum in the experimental group were compared with those in the control group at the end of the study.

9. Percentages were used to express the data elicited with the satisfaction with the program for the promoting self-efficacy in breastfeeding for mothers in the experimental group at the end of the study.

CHAPTER IV
RESULTS

This study of effects of self-efficacy promoting program on breastfeeding behavior and duration among first-time working mothers was conducted on 60 mothers randomized into control and experimental groups with 30 subjects in each group. The findings are presented in the following order:

Part 1 : Demographic data of the sample, presented in Table 1-2
Part 2 : Perceived self-efficacy, presented in Table 3-5
Part 3 : Breastfeeding behavior, presented in Table 6-8
Part 4 : Breastfeeding duration, presented in Table 9-11
Part 5 : Breastfeeding problems, presented in Table 12
Part 6 : Satisfaction toward the program for the promoting self-efficacy in breastfeeding of first-time working mothers, presented in Table 13

Part 1: Demographic data of the sample

Table 1 Numbers and percentages of the mothers, categorized by ages, education levels, occupation, family income, duration of maternity leave, and the type of milk that the infant would be fed afterward (N=60)

Characteristics	Experimental group (N=30)		Control group (N=30)	
	Number	Percent	Number	Percent
Age (years)				
21-25	17	56.67	15	50.00
26-30	8	26.67	11	36.67
31-35	5	16.67	4	13.33
Education level				
Primary school	8	26.67	6	20.00
Secondary school	10	33.33	12	40.00
High school	7	23.33	6	20.00
Vocational/Bachelor	5	16.67	6	20.00
Occupation				
Goverment/ State enterprise	1	3.33	0	0
Private company	7	23.33	16	53.33
Employee	22	73.33	14	46.67
Family incomes (baht/month)				
< 5000	0	0	1	3.33
5000 -10000	14	46.67	12	40.00
10001-15000	16	53.33	17	56.67
Duration of maternity leave (weeks)				
4	2	6.67	1	3.33
6	3	10.00	5	16.67
8	4	13.33	4	13.33
12	21	70.00	20	66.67
Type of milk planned for infant feeding afterward				
Breast milk	4	13.33	4	13.33
Breast milk with Formula milk	15	50.00	16	53.37
Formula milk	11	36.67	10	33.33

The data from table 1 showed that the demographic data of mothers in the experiment group and the control group were similar in ages, education levels, family

income, duration of maternal leave, and the type of milk that the infant would be fed afterward. However, there were differences in occupation. Approximately 50 percents of the mothers were aged between 21 and 25 years. Most of them were educated at a secondary-school level, had family income in the range of 10,001-15,000 baht per month. The majority of mothers in the experimental group were employees whereas control group worked in private company. The most common duration of maternity leave was 12 weeks. Nearly half of mothers planed to feed the baby with breast milk in combination with formula milk when they returned to work.

Table 2 Mean and standard deviation of the babies' birth weights and weights at 8-week old.

Body weight of babies (gms.)	Experimental group (N=30)		Control group (N=30)	
	M	S.D.	M	S.D.
Birth weight	3037.67	245.77	3163.67	380.56
Body weight at 8 wk.	5311.67	299.47	5036.33	508.56

Table 2 showed that the babies of mothers from both groups had birth weights and 8-week body weight in normal range. For the babies of mothers in the experimental group, the average birth weight was 3037.67 grams and the average 8-week body weight was 5311.67 grams whereas the corresponding weights of babies of mothers in the control group were 3163.67 grams and 5036.33 grams, respectively.

Part 2: Perceived self-efficacy

Table 3 Mean and standard deviation of the perceived self-efficacy in breastfeeding of mothers in the experimental and the control groups before, during, and after the study and the comparison of results with repeated measure analysis.

Sample group	Before the study		During the study		End of the study		ANOVA
	M	SD.	M	SD.	M	SD.	F (2,28)
Experimental group	67.43	8.69	81.49	15.21	80.62	9.08	35.75 ***
Control group	68.11	13.57	67.97	9.40	67.23	10.73	.31

*** P < .001

Data in Table 3 showed that:

1. Mothers in the experimental group demonstrated differences in their perceived self-efficacy in at least two stages of the study at the statistically significant level .001.
2. Mothers in the control group demonstrated no difference in their perceived self-efficacy at each stage of the study.

Table 4 Comparison of perceived self-efficacy scores of mothers in the experimental group at each stage of the study, using the pair-wise comparison analysis after the measurement with repeated measure analysis.

Self- efficacy (I)	(J)	Mean Diffirence (I – J)	Std. Error	Sig
Before the study	During the study	-14.06*	2.80	<.001
Before the study	End of the study	-13.19*	1.67	<.001
During the study	End of the study	0.87	2.94	1.00

* The mean difference is significant at the .001 level
Adjustment for municipal comparisons : Bonferroni

Table 4 showed that mothers in the experimental group demonstrated higher scores of perceived self-efficacy during the study, comparing to the scores before the study (mean difference = -14.06) and the scores after the study were higher than the scores before the study (mean difference = -13.19) at the statistically significant level .001. There was no difference between the scores during and the end of the study.

Table 5 Comparison of perceived self-efficacy scores of the experimental group and the control group before, during, and at the end of the study, using independent t-test.

Stage of the study	Experimental group(N=30)		Control group (N=30)		t
	M	SD	M	SD	
Before the study	67.43	8.69	68.11	13.57	0.23
During the study	81.49	15.21	67.97	9.40	- 4.14 ***
End of the study	80.62	9.08	67.23	10.73	- 5.21 ***

*** P < .001

Table 5 showed no difference in the perceived self-efficacy scores between the experimental group and the control group before the study. The perceived self-efficacy scores during the study and the end of the study of the two groups were significantly different at the statistical level 0.001 (t = - 4.14 during the study and - 5.21 at the end of the study).

Part 3: Breastfeeding behavior

Table 6 Mean and standard deviation of breastfeeding scores before the study and at discharge of mothers in the experimental group and the control group

Stage of the study	Experimental group (N=30)				Control group (N=30)			
	Total score	M	SD	interpretation	Total score	M	SD	Interpretation
Before-study	30	12.90	2.83	inappropriate (<80 %)	30	14.16	4.03	inappropriate (<80 %)
Before discharge	30	25.86	3.15	appropriate (>80%)	30	15.90	3.83	inappropriate (<80 %)

Table 6 showed that the mean and standard deviation of breastfeeding behavior scores of mothers in the experimental group before the study reflected inappropriate behavior whereas the results at discharge reflected appropriate behavior. The mean and standard deviation of the breastfeeding behavior scores of mothers in the control group before the study and at discharge reflected inappropriate behavior.

Table 7 Comparison of breastfeeding behavior scores of mothers in the experimental group before hospital discharge with the corresponding scores of mothers in the control group, using ANCOVA and the breastfeeding behavior scores before the study as covariate

Deviation source	DF	SS	MS	F
Covariate	1	388.20	388.20	67.47***
Inter-group	1	1725.42	1725.42	299.88 ***
Error	57	327.96	5.75	
Total	60			

*** P < .001

Table 7 showed that the breastfeeding behavior scores of mothers in the experimental group before hospital discharge were significantly different from the corresponding scores of mothers in the control group at the statistical level .001.

Table 8 Comparison between the average breastfeeding behavior scores in weeks before the study and before discharge of mothers in the experimental group, using dependent t-test

Breastfeeding behavior scores (N=30)	Before study		Before discharge		t
	M	SD	M	SD	
	12.90	2.83	25.86	3.15	-22.42***

*** P < .001

Table 8 showed that mothers in the experimental group had significantly higher scores of breastfeeding behavior before discharge at the statistical level .001, comparing with before study scores.

Part 4: Breastfeeding duration

Table 9 Numbers and percentages of mothers in the experimental group and the control group, classified by the exclusive breastfeeding duration in 8 weeks postpartum

Exclusive breastfeeding duration (weeks)	Experimental group (n=30)		Control group (n=30)	
	Number	Percent	Number	Percent
1	0	0	3	10.00
2	2	6.67	7	23.33
3	0	0	2	6.67
4	0	0	16	53.33
6	6	20.00	2	6.67
8	22	73.33	0	0

Table 9 showed that 73.33 percents of mothers in the experimental group still exclusively breastfed their babies at 8 weeks postpartum whereas 53.33 percents of mothers in the control group used exclusive breastfeeding for 4 weeks and at 8 weeks postpartum none of them fed the infant with exclusive breastfeeding.

Table 10 Comparison of mean and standard deviation of exclusive breastfeeding duration at 8-week postpartum between the experimental groups and the control group using independent t-test.

Sample	Exclusive breastfeeding duration (weeks)			t
	N	M	SD	
Experimental group	30	7.03	1.74	-5.865***
Control group	30	3.97	2.23	

*** P < .001

Table 10 showed that at 8-week postpartum, the exclusive breastfeeding duration of mothers in the experimental group was significantly longer than the mothers in the control group at the statistical level .001.

Table 11 Numbers of mothers in the experimental group, classified by the intended exclusive breastfeeding duration at 8-week postpartum.

Intended exclusive breastfeeding duration (weeks)	Number of mothers (N=22)
10	1
12	14
16	7

Table 11 showed that at the end of the study (8-week postpartum), 14 mothers in the experimental group intended to maintain exclusive breastfeeding for 12 weeks and 7 mothers intended to maintain exclusive breastfeeding for 16 weeks.

Part 5: Breastfeeding problems

Table 12 Numbers and percentages of mothers in the experimental group and the control group, classified by breastfeeding problems.

Duration (weeks) / Breastfeeding problem	Experimental group (n=30)		Control group (n=30)	
	Number	Percent	Number	Percent
1-2 weeks	18	60.00	20	66.67
- Insufficient breast milk	7	23.33	11	36.67
- Breast engorgement	6	20.00	6	20.00
- Sore nipples / pain	5	16.67	8	26.67
3-4 weeks	13	43.33	2	6.67
- Overwhelming breast milk	13	43.33	2	6.67
6-8 weeks	4	13.33	0	0
- Tiredness	4	13.33	0	0

Data in Table 12 showed that most mothers in both groups had breastfeeding problems in the first 1-2 week postpartum. At 3-4 week postpartum, 43.33 percents of mothers in the experimental group reported having breastfeeding problems. Whereas only 6.67 percents of mothers in the control group reported having breastfeeding problems because they exclusively breastfed their babies average 4 weeks postpartum.

Part 6: Satisfaction toward the program for the promoting self-efficacy in breastfeeding of first-time working mothers.

Table 13 Level of satisfaction toward the program for the promoting self-efficacy in breastfeeding of mothers in the experimental group.

Interventions	Level of satisfaction (%)		
	high	moderate	low
Stage I			
- Relationship between you and the researcher	66.67	33.33	0
- Reception of assurance that you can breastfeed the baby	40.00	60.00	0
- Observing breastfeeding techniques from experienced mothers	80.00	20.00	0
- Practice on breastfeeding with assistance from the researcher	100.00	0	0
- Breastfeeding handbook	76.67	23.33	0
Stage II			
- Telephone call from the researcher	93.33	6.67	0
- Being able to contact the researcher on telephone at anytime	83.33	16.67	0
Stage III			
- Relationship between you and the researcher	90.00	10.00	0
- Relationship between you and other mothers	30.00	70.00	0
- Exchange of experience among mothers	66.67	33.33	0
- Reception of assurance that you can still breastfeed the baby after returning to work	60.00	30.00	10.00
Stage IV			
- Telephone call form the researcher	96.67	3.33	0
- Being able to contact the researcher on telephone at anytime	90.00	10.00	0

Table 13 showed that mothers in the experimental group expressed satisfaction toward the program for promoting self-efficacy in breastfeeding in each stage as follows: in stage 1, 80 percents of the mothers were satisfied with the observation of other mothers' breast feeding technique and all of them expressed satisfaction toward the practice of breast feeding with assistance from the researcher; in stage 2, more than 90 percents of the mothers were satisfied that they received the follow-up telephone calls from the researcher and they could call the researcher at any time; in stage 3, most of the mothers were satisfied with their relationship with the researcher; and in stage 4, they expressed satisfaction in the same way as in stage 2.

CHAPTER V
DISSCUSSION

This study is a quasi-experimental research aiming to study the effects of self-efficacy promoting program on breastfeeding behavior and duration among first-time working mothers who give birth at Siriraj Hospital. The results are discussed below, following the purpose and the hypothesis of the study.

Part 1: Perceived self-efficacy in breastfeeding

Purpose 1 : To compare perceived self-efficacy between mothers in the experimental group and those in the control group before, during and the end of the study periods and to compare the results at different periods within the same group.

Hypothesis 1 : The perceived self-efficacy in breastfeeding of mothers in the experimental group and the control group before, during and the end of the study are different and there are different periods within the same group

This study found that the scores of perceived self-efficacy in breastfeeding of mothers in the experimental group during and the end of the study were significantly higher than the scores before the study at the statistically significant level .001 but there were no difference between the scores during and after the study. For the control group, there was no difference in the perceived self-efficacy in breastfeeding scores at each stage of the study.

Before the study, mothers in the experimental group and the control group presented insignificant difference in the scores of perceived self-efficacy in breastfeeding. During and the end of the study, however, the scores of the two groups were significantly different at the statistical level .001. This finding can be explained as discussed below.

The sample of this study was composed of first-time working mothers who received nursing care at Siriraj Hospital. Therefore, several characteristics of these women were similar; for instance, ages, education levels, and received breastfeeding

knowledge from prenatal clinic, labor room, and postpartum wards. Therefore, the mothers achieved near scores of perceived self-efficacy in breastfeeding. Moreover, mothers in both groups were first-time working mothers thus not having experience in breastfeeding. This could explain why mothers in both groups achieved low scores of perceived self-efficacy in breastfeeding, which were lower than 70 percent.

The mothers in experimental group participated in the program for promoting self-efficacy in breastfeeding for working mothers, which was a continual program consisting of four stage : interventions at hospitalized postpartum period to increase confidence in breastfeeding skill, telephone contact at the second day after discharged from the hospital to evaluate breastfeeding problems, interventions at 4-week postpartum during the hospital visits for baby to prepare the mother before returning to work, and telephone contact at 6-week postpartum to evaluate expressing of breast milk, storing and cup feeding. This could explain why the scores of perceived self-efficacy in breastfeeding of mothers in the experimental group during and after the study were significantly higher than the scores before the study.

There was no difference in the scores of perceived self-efficacy during and the end of the study in the experimental group. This is probably because before 4-week postpartum, the mothers in experimental group had interventions for the promotion of perceived self-efficacy in breastfeeding twice (or more for those having breastfeeding problems), indicating that the interventions they received over that period could enhance their perceived self-efficacy in breastfeeding until 4 week postpartum. At 6-week postpartum, the mothers still had interventions for the promotion of perceived self-efficacy in breastfeeding, thus they still felt confident in breastfeeding as well as at 4-week postpartum. Otherwise, intervention via telephone contact once during 4-8 weeks postpartum probably had a negligible effect on increasing perceived self-efficacy in breastfeeding from 4 to 8 weeks postpartum. Hence, mothers in the experimental group, therefore, demonstrated no difference in the scores of perceived self-efficacy in breastfeeding during (4-week postpartum) and the end of the study (8-week postpartum).

Mothers in the control group obtained average 68.11 percents in the scores of perceived self-efficacy in breastfeeding before the study; however, there was not

continuous follow-up to promote their perceived self-efficacy in breastfeeding after they were discharged from the hospital. Therefore, the scores of perceived self-efficacy during the study (4-week postpartum) and the end of the study (8-week postpartum) of mothers in this group were not different from before the study scores. The scores did not increase from their experience probably because most mothers breastfed the babies for less than 4 weeks (M =3.97). Similarly, Hill and Humenick (1996) found that women with lower maternal confidence scores had a lower level of breastfeeding at 6 weeks postpartum ($r = .66$, $p < .05$).

The alteration of perceived self-efficacy in breastfeeding among mothers in the experimental group resulted from the development of perceived self-efficacy from their background knowledge in combination with the program for the promoting self-efficacy in breastfeeding of first-time working mothers.

Physiological and affective states are a source of efficacy (Bandura, 1997).One reason that mothers gave for babies receiving formula was the mothers' need for rest. Hence, assisting mothers to find opportunities for rest; when the babies sleep, breastfeed side lying position or relaxation with music while continuing to breastfeed and decreasing the first time mothers' anxiety would enhance self-efficacy. Teaching the first time mother to interpret her baby's readiness-to-feed behavior after breastfeeding will help her feel more competent and satisfied with her experience of breastfeeding. Verbal persuasion is another source of efficacy. Observing other mothers' successful breastfeeding can influence self-efficacy by vicarious experience and the mothers might also share their experience in breastfeeding. Handbooks of breastfeeding for working mothers were distributed, as its symbolic model would enhance their self-efficacy. Enactive mastery experiences are the most influential source of self-efficacy (Bandura, 1977). Mothers in the experimental group received support, teaching, and coaching during the initiation of breastfeeding thus they were more likely to have positive experiences, contributing to their perceived self-efficacy of their ability to continue to breastfeed successfully.

Part 2: Breastfeeding behavior

Purpose 2 : To compare breastfeeding behavior of mothers in the experimental group with that of mothers in the control group before hospital discharge.

Hypothesis 2 : Mothers in the experimental group achieved higher scores of breastfeeding behavior before hospital discharge, compared to mothers in the control group.

Mothers in the experimental group achieved significantly higher scores of breastfeeding behavior before hospital discharge, comparing to mothers in the control group, at the statistical level .01.

Before the study, mothers in both groups demonstrated inappropriate breastfeeding behavior (M = 14.16 in the control group, and M = 12.90 in the experimental group). In both groups, most mothers put only the nipples in the babies' mouths, breastfed in lying position, squeezed the milk out incorrectly. They received advice about how to squeeze the milk with their hands, milk storage, and cup feeding but most mothers still felt low confident in practice.

Mothers in the experimental group participated in the interventions in stage 1 of program for the promoting self-efficacy in breastfeeding. Handbooks of breastfeeding for working mothers were distributed as symbolic model. The participating mothers would practice breastfeeding with coaching and support from the researcher, such as correct sucking patterns and latch-on also help mothers to have appropriately breastfeeding behavior. Thus they achieved significantly higher scores of breastfeeding behavior at a statistical level (M = 25.86), in comparison with before the study scores and the scores of mothers in the control group. Similarly, Jaruvan Keardphan (2002) found that adolescent mothers who attended a program for breastfeeding promotion had higher scores of breastfeeding behavior than adolescent women receiving routine nursing care, at 6-hour, 30-hour, and 4-week postpartum with statistical significance ($p < .001$)

On the other hand, before they were discharged from the hospital, mothers in the control group had more practice on breastfeeding but they still demonstrated inappropriate breastfeeding behavior (M = 15.90), especially in the latch-on positioning. Many mothers could not hold the babies to latch on properly. The babies' gums would press on the nipples causing pain, laceration, or bleeding and the

pain would inhibit the letdown reflex (Philipp, 2001), thus having problems such as sore nipples, breast engorgement, and mastitis.

Moreover, breastfeeding is a skill that needs to be learned in mother-baby relationship. The mother needs to have knowledge about breastfeeding and also needs to practice to gain confidence in perceived self-efficacy, as having knowledge without perceived self-efficacy cannot lead to successful behavior (Bandura,1997).

Purpose 3 : To compare breastfeeding behavior of mothers in the experimental group before the study and after intervention at stage 1 before hospital discharge

Hypothesis 3 : Mothers in the experimental group achieved higher scores of breastfeeding behavior before hospital discharge, compared with the scores achieved before the study

Mothers in the experimental group achieved higher scores of breastfeeding behavior before hospital discharge, compared with the scores achieved before the study at the statistically significant level .001.

Before the study, mothers in experimental group were first-time working mothers thus little having experience in breastfeeding and achieved low scores perceived self-efficacy in breastfeeding. Hence, they demonstrated inappropriate breastfeeding behavior (M= 12.90). Before hospital discharge, mothers in experimental group participated in the program for the promoting self-efficacy in breastfeeding stage1. The participating mothers would practice breastfeeding with coaching and support from the researcher, such as correct sucking patterns and latch-on also help mothers to have appropriately breastfeeding behavior (M = 25.86). This could explain why they achieved higher scores of breastfeeding behavior before hospital discharge, compared with the scores achieved before the study at the statistically significant level .001.

Part 3 : Breastfeeding duration

Purpose 4 : To compare the exclusive breastfeeding duration of the experimental group with that of the control group at the end of the study (8 weeks postpartum).

Hypothesis 4 : At the end of the study, mothers in the experimental group had exclusive breastfeeding duration longer than mothers in the control group.

Mothers in the experimental group had exclusive breastfeeding duration longer than mothers in the control group at the statistically significant level .001.

This is probably because, mothers in the experimental group had interventions in the 4-stage program for promoting self-efficacy in breastfeeding from hospitalized postpartum period until 6-week postpartum. As a result, the mothers in this group had increased confidence in breastfeeding and could properly conduct breastfeeding behavior. Their breastfeeding problems were evaluated at the right time, and they received support and help from the researcher. When they have breastfeeding problems, mothers in the experimental group could read the handbook of breastfeeding for working mothers and could call for advice from the researcher. They had appropriate breastfeeding behavior thus gaining an increase in perceived self-efficacy, leading to more efforts in maintaining exclusive breastfeeding in comparison with mothers in the control group.

Mothers in the experimental group reported breastfeeding problems in the first 1-2 weeks postpartum even though they had attended breastfeeding promoting program before discharge. Nevertheless, they received help and continuous follow-up from the researcher. Among 30 mothers in this group, 18 mothers received advice from telephone contact and consulted the breastfeeding handbook and 8 mothers contacted the researcher on telephone calls. One of the mothers in the experimental group had sore nipples and the problem could not be solved through the instruction via telephone; the researcher, therefore, made an appointment with this mother at the Lactation clinic and helped her solve the problems until she could continue breastfeeding.

At 8-week postpartum, 22 mothers in the experimental group still exclusively breastfed the babies and intended to continue breastfeeding. However, 4 mothers fed water along with breastfeeding and the other 4 mothers fed formula in addition to breastfeeding on account of tiredness, husband’s suggestion, and work nature that did not facilitate the collection and storage of breast milk. There were 4 mothers who still breastfed the babies after having returned to work for 2-4 weeks; among these, two

mothers intended to exclusively breastfeed until 16-week postpartum and the other two fed water in addition to breast milk.

This results demonstrated that the program for promoting self-efficacy, which included interventions in hospital before discharge, telephone contact for evaluation of breastfeeding at the second day postpartum and 6-week postpartum, in addition to the intervention at the hospital when the baby received vaccination at 4 weeks postpartum, could support and encourage the mothers to maintain breastfeeding for a longer duration than mothers receiving routine nursing care, which consisted of instructions during hospital stay and follow-up phone call at one month postpartum.

Dennis (2002) reported the review of literature concerning breastfeeding promotion programs and found that a successful breastfeeding program should have interventions for the promotion of breastfeeding in hospital and at home. For instance, the promotion during hospitalization, telephone contact after hospital discharge, home visit and the promotion on follow-up visit at 4-week postpartum. These programs have effects on the extension of breastfeeding duration, compared to the breastfeeding duration of mothers not participating in the program

This is consistent with Bandura's self-efficacy concept, which states that perceived self-efficacy is influential to human's behavior. Knowledge and ability cannot lead to success if the person does not have self-esteem in using his or her knowledge and ability. For example, even though mothers in the experimental group received help in performing breastfeeding behavior and could successfully breastfed the babies while they were in the hospital, they might feel unconfident and stop breastfeeding when having problems if there was not a continual follow-up for promoting perceived self-efficacy. .

This finding is consistent of a study conducted by Nitwiboon (1998), which found that the provision of structured instruction with an application of Bandura's self-efficacy theory could enhance appropriate breastfeeding behavior in mothers and could maintain exclusive breastfeeding over a period of 4-week postpartum.

In this study, the mothers in control group were also first-time mothers, having no experience in breastfeeding for the babies. Mothers received instruction about breastfeeding in limited time due to early discharge thus they had fairly low level of perceived self-efficacy in breastfeeding and performed inappropriate breastfeeding

behavior. Moreover, mothers in control group were not a follow-up after they were discharged from the hospital, especially in the first 1-2 week postpartum when they were likely to have breastfeeding problems.

This study found that the majority of mothers in the control group also had problems in breastfeeding during the first 1-2 week postpartum. When mothers who did not have breastfeeding experience were confronted with these problems, they would be unconfident in breastfeeding (WHO, 1998) and they did not have continuous support for breastfeeding or did not seek resources . There was only one mother made a telephone call to health care professionals when she had breastfeeding problems.

Among mothers in the control group, 20 of them had 12-week maternity leave and 27 mothers reported the intention of breastfeeding; however, at 6-week postpartum only two mothers exclusively breastfed the babies. The follow-up at 8-week postpartum found that none of the mothers exclusively breastfed the baby; 13 of them fed babies with formula in addition to breast milk; 12 of them used formula milk only; and five mothers reported feeding water and breast milk to the babies. Consequently, most mothers in the control group stopped breastfeeding or used formula milk in addition to breastfeeding during the maternity leave and they maintained exclusive breastfeeding for only 4 weeks. They terminated breastfeeding and started formula feeding at about 2-4 weeks before returning to work as reasons; breastfeeding problems and prepared for returning to work. Similarly, Jitjareon (1994) noted that 48 percents of working mothers reported the termination of breastfeeding at averagely 2.04 weeks before returning to work.

This result indicated that the nursing interventions delivered to the mothers at the hospital are not sufficient in promoting mothers' ability of breastfeeding even when they were on maternity leave.

Purpose 5 : To compare the intentional exclusive breastfeeding duration of the experimental group with that of the control group at the end of the study (8 weeks postpartum).

Hypothesis 5 : At the end of the study, Mothers in the experimental groups intended to exclusively breastfeed the baby for a longer duration than mothers in the control group.

Mothers in the experimental group expressed an intention to give exclusive breastfeeding at a longer duration than mothers in the control group.

Thus the finding of this study supports the hypothesis. This is because mothers in the experimental group participated in the program for promoting self-efficacy in breastfeeding thus they felt confident about breastfeeding. Moreover, they were prepared for breastfeeding when returning to work and had appropriate breastfeeding behavior. 14 mothers in the experimental group intended to maintain exclusive breastfeeding for 12 weeks, 7 mothers intended to maintain exclusive breastfeeding for 16 weeks and one intended to maintain exclusive breastfeeding for 16 weeks postpartum.

Whereas mothers in the control group reported that none of the mothers exclusively breastfed the baby because most of mothers (28 mothers) in control group had duration of exclusive breastfeeding less than or equal 4 weeks (see table 9).

This data indicated that interventions for the promotion of self-efficacy in breastfeeding delivered to the mothers at the hospital until 6-week postpartum were not sufficient in promoting exclusive breastfeeding for 6 months. On the other hand, 4 to 12 weeks of maternity leave probably had a negligible effect on exclusive breastfeeding status at 6 months postpartum.

Part 4 : Breastfeeding problems

The result of this study found that during the first 8-week postpartum,the major of breastfeeding problems in first-time working mothers include insufficient breast milk, breast engorgement, sore nipples and pain. This is consistent with the study led by Moore, Bianchi-Gray, and Stephens(1991) which found that problems of breastfeeding are breast engorgement, sore nipple, and latch-on problems . This study, there were two peaks for the breastfeeding problems. The first peak was during 1-2 week and the second peak was from 3-4 week postpartum (see table 12).

During 1-2 week postpartum when 18 mothers (60%) in experimental group and approximately 20 mothers (67%) in control group reported breastfeeding problems. The reported problems were insufficient breast milk, breast engorgement, and sore nipples. There were similar in number of mothers and kind of problems but different in level of problem. Mothers in experimental group had commom breastfeeding problems because they received intervention stage 1(before hospital discharge); to increase confidence in breastfeeding skill. At the second day after discharge from hospital, they received telephone contact from the research for evaluation breastfeeding problems and suggestions. They could make a phone call to consult research whenever they had breastfeeding problems. Thus they could be solve the problem until they could continue breastfeeding. Whereas, mothers in control group had severe breastfeeding problems that they could not be solve and finally stopped breastfeeding.

This is consistent with a study conducted by Oztur, Votto, and Leventhal (2001), which found that 26.6 percents of mothers terminated breastfeeding in the first week postpartum on account of two related major factors: the mothers were younger than 20 years old and they lacked confidence in breastfeeding.

The second peak was from 3-4 week postpartum when 13 mothers (43.33%) in experimental group had breastfeeding problems in contrast to 2 mothers (6.67%) of those in the control. The lower incidence of breastfeeding problems among mothers in the control group at the second peak is due to the fact that most of mothers (28 mothers) in this group exclusively breastfed their babies averagely 4 weeks or less than thus they did not have much problems afterward. Whereas, the problems of mothers in the experimental group was milk aspiration due to overwhelming breast milk. This problem could be solve when mothers participated interventions in stage 3 during the hospital visit for baby's vaccination. Thus milk aspiration due to overwhelming breast milk could prevention by instruction before hospital discharge.
They had breastfeeding problem in this period but they could solve it. At 4-week postpartum, 28 mothers in experimental group were still exclusively breastfed their babies.

At 6-8 week postpartum, 4 mothers (13.33%) in the experimental group still had breastfeeding problems. This problem was mothers' tiredness because they were still

breastfed the babies after having returned to work for 2-4 weeks. Whereas none of the mothers in the control group reported breastfeeding problems because most of them (28 mothers) stopped exclusive breastfeeding before 6-8 week postpartum.

This results found that breastfeeding problems usually occurred during 1-2 weeks postpartum when mothers discharged from the hospital. Hence, routine nursing interventions should add in this period to prevent complicated breastfeeding problems and continuous support after hospital discharge until the baby will be scheduled follow-up at one month old.

Part 5 : Satisfaction toward the program

Purpose 6 : To investigate the satisfaction toward the program for promoting self-efficacy in breastfeeding of mothers in the experimental group at the end of the study.

It is also found that at least 90 percent of mothers in the experimental group expressed satisfaction toward the intervention program, in which they had practiced breastfeeding behavior and subsequently achieved successful breastfeeding, received telephone contact from the researcher, and could make a phone call to consult the researcher whenever they had breastfeeding problems.

The program, therefore, was not only extend the exclusive breastfeeding duration in first-time working mothers but it also provided good start of breastfeeding with assistance from nurses, leading to knowledge and intention of breastfeeding, increase in perceived self-efficacy in breastfeeding, and correct latch on and positioning. Therefore, when working mothers return home after the delivery, she should receive support from the family, health care professionals, and the society. They should receive a telephone contact for the evaluation of breastfeeding problems within one week postpartum, when breastfeeding problems commonly occur. If the problems could not be solved through telephone communication, the mothers should get an appointment at lactation clinic so that breastfeeding experts could solve the complicated problems. Mothers should be prepared before returning to work, receive support from the family, and receive permission from employers or supervisors in collecting breast milk during the work hours. With these preparations, mothers will be able to continue breastfeeding after returning to work.

CHAPTER VI
CONCLUSION

Summary of the Study

This study is a quasi-experimental research aiming to study the effects of self-efficacy promoting program on breastfeeding behavior and duration among first-time working mothers, based on Bandura's self-efficacy concept. The sample was composed of first-time working mothers who attended the prenatal clinic and had the delivery at Siriraj Hospital. The mothers whose characteristics met the inclusion criteria were recruited and paired with matching method based on ages and education levels. The first 30 mothers were randomized into the control group and the following 30 mothers were randomized into the experimental group.

Mothers in the experimental group received the self-efficacy in breastfeeding promoting program for first-time working mothers provided by the researcher. This program consisted of interventions for the promoting self-efficacy in first-time working mothers while they were in the hospital, at the second day after hospital discharge, and at 4 and 6-week postpartum, covering all sources as stated in Bandura's self-efficacy concept. Before the collection of data, mothers whose characteristics met the inclusion criteria received information about objectives of the study and the process of data collection. Those who expressed willingness to participate in the study were required to sign the consent forms.

The researcher then started the study by asking the mothers to answer a questionnaire asking about personal information and perceived self-efficacy. The perceived self-efficacy data were collected again during and the end of the study. The researcher assessed breastfeeding behavior twice while the mothers were staying in the hospital, which were before study and before discharge data. At 8-week postpartum, the mothers would be asked about their breastfeeding over the past 8 weeks. Mothers in the experimental group received self-efficacy in breastfeeding

promoting program in four phases: before discharge, at the second day after discharge and at 4-week and 8-week postpartum.

The collected data were then analyzed according to the hypothesis of the study and were presented in percentage term, mean, standard deviation, repeated measure analysis, pair-wise comparison, independent t-test, dependent t-test and ANCOVA. The results of this study are summarized below.

1. Mothers in the control group had insignificantly different scores of breastfeeding behavior at each stage of the study.

2. Mothers in the experimental group had perceived self-efficacy scores during the study and the end of the study higher than the scores before the study at the statistically significant level .001. However, the scores during the study were insignificantly higher than the scores the end of the study.

3. Before the study, mothers in the experimental group and the control group presented insignificant difference in the scores of perceived self-efficacy in breastfeeding. During and the end of the study, however, the scores of the two groups were significantly different at the statistical level .001.

4. Mothers in the experimental group achieved significantly higher score of breastfeeding behavior before hospital discharge, comparing to mothers in the control group, at the statistical level .01.

5. Mothers in the experimental group had scores of breastfeeding behavior before discharge higher than the scores before the study at the statistically significant level .001.

6. At the end of the study, mothers in the experimental group had exclusive breastfeeding duration for a longer than mothers in the control group at the statistically significant level .001.

7. At the end of the study, mothers in the experimental group intended to exclusively breastfeed the baby for a longer duration than mothers in the control group.

8. Mothers in the experimental group expressed satisfaction toward the program for promoting self-efficacy in breastfeeding for working mothers at a high level.

Limitation of Research

1. The intervention program of this research did not have interventions that involved the husbands or the mothers' significant others and there was no control of other variables such as duration of maternal leave, work characteristics, and work place or other factors that might affect the use of formula in addition to breastfeeding.

2. The research design was a quasi-experimental study, the researcher could not control external factors which might have affected breastfeeding duration such as information from other resources.

3. At 6-week program might not be sufficient for encouraging six-month exclusive breastfeeding, thus there should be a study of long-term effects of self-efficacy in breastfeeding promoting program at least 4-6 month.

Implications and Application of Research Findings

Implications of research findings

The results of this study suggest that a mother's self-efficacy may affect her success at breastfeeding. Nurses can help enhancing self-efficacy in breastfeeding by helping first-time mothers to have a good start with breastfeeding. Mothers stated that they expected nurses to stay with them during their initial breastfeeding attempts (Gill, 2001). Mothers are exhausted during the first 1-2 days after delivery, hence nurses must anticipate first-time mother's needs rather than waiting for her to ask questions or seek help. Routines and practices in hospital need to be changed so that the first time mothers can successfully establish breastfeeding. Especially, interventions should focus on increasing first time working mother's efficacy in breastfeeding since pregnancy until postpartum periods. Nurses should consider using the breastfeeding Self-efficacy scale to assess maternal confidence, guide individualized confidence-enhancing strategies and determine the efficacy of various interventions, as follows:

1. Nurses should be encouraged to screen primiparous pregnant women about their perceived self-efficacy in breastfeeding. Some women will need only reassurance, whereas others will require more in-depth perceived self-efficacy in breastfeeding promoting program because of their lack of confidence.

2. Nurses should encourage 24 hour rooming in and prohibit supplementation unless breastfeeding is contraindicated.

3. Hospital nurses are key in helping and coaching first time mothers to get off a good start with breastfeeding. Hence, nurses should assist first time mothers with correct latch on and positioning to hold their infants. Unfortunately, mothers have little time in the hospital and have few opportunities to breastfeed there. Nurses must demonstrate appropriate latch on and positioning, while allowing and coaching first time mothers to perform the task. It may be necessary to observe first-time mother at several feedings to ensure that she can correctly latch her infant on her breast.

4. Nurses must assess first-time mother's support system, such as information about community resources, lactation clinic, telephone number for breastfeeding assistance after discharge, telephone contact at the second day after discharged to assess and resolve breastfeeding problems.

5. Any intervention program should evaluate mother's perceived self-efficacy in order to arrange the interventions that are appropriate to the mothers. For instance, mothers whose perceived self-efficacy was at low level should receive more booster interventions than those who have high level of perceived self-efficacy.

6. For the success of breastfeeding, the self-efficacy in breastfeeding promoting program should include the evaluation of mothers' perceived self-efficacy. The program must be given continually and periodically; from pre - delivery, delivery to postpartum while mothers are in the hospital, take maternity leave and return to work for at least 6 months.

7. Finally, a program for promotion of positive attitude, knowledge, and understanding about breastfeeding should be designed for male and female adolescents in order to cultivate and encourage breastfeeding behavior in the future.

Application of research findings

A program for breastfeeding promotion should start from prenatal period and carry on to the postnatal period, thus covering the periods of pregnancy preparation, pregnancy, delivery, hospitalized postpartum, maternity leave, and return to work. It requires teamwork and coordination of several health care units, comprising Prenatal unit, Labor room, Pospartum unit, Lactation clinic, Well baby clinic or Continuity clinic, and Primary health care centers that could coordinate with community health centers and the community network.

The results of this study found that the critical period of breastfeedig problems was 1-2 week postpartum. Hence, health care providers should agreement and cooperation with Postpartum Care Unit, Pediatric Outpatient Department and Lactation Clinic, aiming to enhance perceived self-efficacy in breastfeeding via telephone contact at 1-2 week postpartum after hospital discharge and the mothers could call counseling resources, such as Breastfeeding Center, Lactation Clinic and community network, if they have problems or question concerning breastfeeding. Therefore, home visits may be add to the program and there should be a development of help network in communities.

There should be a document for the referral of information among different units. Public awareness should be raised and non-government organizations should be encouraged to join in the promotion of breastfeeding, not only in response to the policy but for continuous and active practice.

Recommendations for Further Studies

1. There should be a study of long-term effects of self-efficacy in breastfeeding promoting program on breastfeeding behavior and duration among first-time working mothers and their husband; for example at the length of 4 or 6 months postpartum.
2. There should be a study of the effects of self-efficacy on breastfeeding behavior and duration among working mothers who are experienced of breastfeeding.
3. There should be a study of the effects of telephone contact for breastfeeding promoting program, comparing with home visit for breastfeeding promoting program.

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APPENDIX

APPENDIX A

The Ethical Committee on Research Involving Human Subject
Faculty of Medicine Siriraj Hospital Mahidol University

๒ ถนนพรานนก บางกอกน้อย กรุงเทพฯ ๑๐๗๐๐
โทร. (๒๒-๒) ๔๑๑-๔๒๒๙, ๔๑๑-๓๒๕๓
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Faculty of Medicine Siriraj Hospital
Mahidol University

The Ethical Committee on Research Involving Human Subject
Faculty of Medicine Siriraj Hospital, Mahidol University

No 145/2002

Protocol Title	Effects of self – efficacy promoting program on breastfeeding behavior and duration among the first time working mothers.
Protocol Number	--------
Principal Investigator	Miss. Nunthaporn Puangkeaw
Name of Department	Faculty of Nursing

The aforementioned project and informed consent have been reviewed and approved by the Ethical Committee, Faculty of Medicine Siriraj Hospital, Mahidol University, based on the Declaration of Helsinki on September 6, 2002

Signature of Chairman .....

(Prof. Sumalee Nimmannit)

Signature of Dean .....

(Clin. Prof. Piyasakol Sakolsatayadorn)

APPENDIX B

LIST OF EXPERTS

The validity of research instruments was assessed by five consulting experts:

1. Professor Doctor Krengsak Jirapate
   Department of Pediatric
   Faculty of Medicine, Mahidol University
2. Assistant Professor Dr. Nittaya Sinsuksai
   Department of Obstetric and Gynecological Nursing
   Faculty of Nursing, Mahidol University
3. Assistant Professor Dr. Tassanee Prasopkittikun
   Department of Pediatric Nursing
   Faculty of Nursing, Mahidol University
4. Miss. Thidaratana Wongvisutdhi
   Lactation Clinic, Siriraj Hospital
5. Mrs. Sonjai Sujarit
   Obstetric and Gynecological Nursing Division,
   Siriraj Hospital

APPENDIX C

Consent to Participate in Research Study (control group)

เอกสารแนะนำสำหรับผู้เข้าร่วมวิจัย

ดิฉัน นางสาวนันทพร พ่วงแก้ว นักศึกษาปริญญาโท สาขาการพยาบาลเด็ก คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล มีความสนใจที่จะศึกษาผลของโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองต่อพฤติกรรมและระยะเวลาในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก เพื่อนำผลการวิจัยไปเป็นแนวทางในการจัดกิจกรรมส่งเสริมความมั่นใจในการเลี้ยงลูกด้วยนมแม่ให้กับมารดาทำงานนอกบ้านที่มีบุตรคนแรก โดยมีรายละเอียดของการศึกษา ดังนี้

1. ให้ท่านตอบแบบสอบถามข้อมูลส่วนบุคคล แบบสอบถามความมั่นใจในการเลี้ยงลูกด้วยนมแม่ จำนวน30 ข้อ ใช้เวลาประมาณ 10-15 นาที และขออนุญาตสังเกตวิธีให้ลูกดูดนมแม่ 2 ครั้ง ในระหว่างที่ท่านพักหลังคลอดในโรงพยาบาล
2. ให้ท่านตอบแบบสอบความมั่นใจในการเลี้ยงลูกด้วยนมแม่ ใช้เวลาประมาณ 10-15 นาที เมื่อท่านพาบุตรมาตรวจสุขภาพและรับวัคซีนตามนัด 1 เดือนและ2 เดือน ที่หน่วยตรวจโรคกุมารเวชศาสตร์ โรงพยาบาลศิริราช โดยผู้วิจัยจะอำนวยความสะดวกในการที่ท่านพาบุตรมารับบริการ

ข้อมูลที่ได้จากการวิจัยครั้งนี้ ผู้วิจัยจะนำไปวิเคราะห์และเสนอผลในภาพรวม และนำผลที่ได้จากการวิจัยมาเป็นแนวทางในการพัฒนาการพยาบาลเพื่อส่งเสริมความมั่นใจในการเลี้ยงลูกด้วยนมแม่ให้กับมารดาทำงานนอกบ้านที่มีบุตรคนแรก

จึงเรียนมาเพื่อขอความร่วมมือจากท่านในการเข้าร่วมการวิจัยและท่านสามารถยกเลิกการเข้าร่วมการวิจัยได้ตลอดเวลา โดยไม่มีผลต่อการรักษาพยาบาลแต่อย่างใด หากท่านยินดีโปรดกรุณาเซ็นชื่อในเอกสารให้ความยินยอมเข้าร่วมโครงการวิจัยที่แนบมานี้ด้วย

ขอขอบคุณในความร่วมมือ
นางสาวนันทพร พ่วงแก้ว
ผู้วิจัย

Consent to Participate in Research Study (experimental group)

เอกสารแนะนำสำหรับผู้เข้าร่วมวิจัย

ดิฉัน นางสาวนันทพร พ่วงแก้ว นักศึกษาปริญญาโท สาขาการพยาบาลเด็ก คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล มีความสนใจที่จะศึกษาผลของโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองต่อพฤติกรรมและระยะเวลาในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก เพื่อนำผลการวิจัยไปเป็นแนวทางในการจัดกิจกรรมส่งเสริมความมั่นใจในการเลี้ยงลูกด้วยนมแม่ให้กับมารดาทำงานนอกบ้านที่มีบุตรคนแรก โดยมีรายละเอียดของการศึกษา ดังนี้

1. ให้ท่านตอบแบบสอบถามข้อมูลส่วนบุคคล แบบสอบถามความมั่นใจในการเลี้ยงลูกด้วยนมแม่ จำนวน 30 ข้อ ใช้เวลาประมาณ 10-15 นาที ขออนุญาตสังเกตวิธีให้ลูกดูดนมแม่ จากนั้นผู้วิจัยจะจัดกิจกรรมที่ทำให้ท่านมีความมั่นใจในการเลี้ยงลูกด้วยนมแม่ และมีพฤติกรรมการเลี้ยงลูกด้วยนมแม่อย่างถูกต้องทั้งการอุ้มลูกดูดนมแม่ การบีบน้ำนมแม่ด้วยมือ ตลอดจนการป้อนน้ำนมแม่ด้วยถ้วย และให้ท่านตอบแบบสอบถามความพึงพอใจในกิจกรรมของโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ระยะที่1ในระหว่างที่ท่านพักหลังคลอดที่โรงพยาบาล

2. ผู้วิจัยจะโทรศัพท์ติดต่อท่านที่บ้านหลังจากที่ท่านกลับจากโรงพยาบาลได้ 2 วัน เพื่อสอบถามปัญหาการเลี้ยงลูกด้วยนมแม่ ให้คำแนะนำ และเสนอแนวทางช่วยเหลือ

3. เมื่อท่านพาบุตรมาตรวจสุขภาพและรับวัคซีนตามนัด 1 เดือน ที่หน่วยตรวจโรคกุมารเวชศาสตร์ โรงพยาบาลศิริราช ในระหว่างที่ท่านรอพบแพทย์ ผู้วิจัยจะให้ท่านตอบแบบสอบความมั่นใจในการเลี้ยงลูกด้วยนมแม่ จากนั้นให้เข้าร่วมกิจกรรมเพื่อเตรียมความพร้อมสำหรับการเลี้ยงลูกด้วยนมแม่ในระยะที่ท่านกลับไปทำงาน และตอบแบบสอบถามความพึงพอใจกิจกรรมในโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ระยะที่ 2 และ 3 ใช้เวลาประมาณ 30-45 นาที โดยผู้วิจัยจะอำนวยความสะดวกในการที่ท่านพาบุตรมารับบริการ

4. ผู้วิจัยจะโทรศัพท์ติดต่อท่านที่บ้านหลังคลอด 6 สัปดาห์ เพื่อสอบถามปัญหาและอุปสรรคในการเตรียมให้นมแม่ในระยะที่กลับไปทำงาน

5. เมื่อท่านพาบุตรมาตรวจสุขภาพและรับวัคซีนตามนัด 2 เดือน ที่หน่วยตรวจโรคกุมารเวชศาสตร์ โรงพยาบาลศิริราช ในระหว่างที่ท่านรอพบแพทย์ผู้วิจัยจะให้ท่านตอบแบบสอบความมั่นใจในการเลี้ยงลูกด้วยนมแม่ และให้ท่านตอบแบบสอบถามความพึงพอใจในกิจกรรมของ

โปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ระยะที่ 4 ใช้เวลาประมาณ 10-15 นาที โดยผู้วิจัยจะอำนวยความสะดวกในการที่ท่านพาบุตรมารับบริการ

ข้อมูลที่ได้จากการวิจัยครั้งนี้ ผู้วิจัยจะนำไปวิเคราะห์และเสนอผลในภาพรวม และนำผลที่ได้จากการวิจัยมาเป็นแนวทางในการพัฒนาการพยาบาลเพื่อส่งเสริมความมั่นใจในการเลี้ยงลูกด้วยนมแม่ให้กับมารดาหลังคลอด

จึงเรียนมาเพื่อขอความร่วมมือจากท่านในการเข้าร่วมการวิจัยและท่านสามารถยกเลิกการเข้าร่วมการวิจัยได้ตลอดเวลา โดยไม่มีผลต่อการรักษาพยาบาลแต่อย่างใด หากท่านยินดีโปรดกรุณาเซ็นชื่อในเอกสารให้ความยินยอมเข้าร่วมโครงการวิจัยที่แนบมานี้ด้วย

ขอขอบคุณในความร่วมมือ
นางสาวนันทพร พ่วงแก้ว
ผู้วิจัย

เอกสารแสดงเจตนายินยอมเข้าร่วมโครงการวิจัย

วันที่.....เดือน.....พ.ศ.....

ข้าพเจ้า.....อายุ.....ปี
อาศัยอยู่บ้านเลขที่.....ถนน.....ตำบล.....
อำเภอ.....จังหวัด.....
โทรศัพท์.....โทรสาร.....

ขอแสดงความยินยอมเข้าร่วมโครงการวิจัยของ นางสาวนันทพร พ่วงแก้ว นักศึกษาปริญญาโท สาขาการพยาบาลเด็ก คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล เรื่อง ผลของโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองต่อพฤติกรรมและระยะเวลาในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก โดยข้าพเจ้าได้รับทราบรายละเอียดของโครงการดังต่อไปนี้

วัตถุประสงค์ของการวิจัย เพื่อศึกษาพฤติกรรมและระยะเวลาในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก

ประโยชน์ที่คาดว่าจะได้รับจากการวิจัย เพื่อนำผลการวิจัยไปเป็นแนวทางพัฒนากิจกรรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ให้มารดาทำงานนอกบ้านที่มีบุตรคนแรก

ความเสี่ยงหรือผลข้างเคียงที่อาจจะเกิดขึ้นและแนวทางป้องกัน/แก้ไข การวิจัยครั้งนี้ไม่มีการทำหัตถการหรือกิจกรรมใดๆที่เป็นอันตรายต่อมารดาและทารก จึงไม่มีความเสี่ยงหรือผลข้างเคียงใดๆ

หากผู้วิจัยมีข้อมูลเพิ่มเติมทั้งด้านที่เป็นประโยชน์และโทษ ที่อาจจะเกี่ยวข้องกับการวิจัยครั้งนี้ ผู้วิจัยจะแจ้งให้ข้าพเจ้าทราบทันทีโดยไม่ปิดบัง และข้าพเจ้ามีสิทธิ์ที่จะของดการเข้าร่วมโครงการวิจัยครั้งนี้โดยไม่มีผลกระทบต่อการได้รับบริการหรือการรักษาที่ข้าพเจ้าและบุตรจะได้รับแต่ประการใด

หากมีข้อสงสัยกรุณาติดต่อผู้วิจัยได้ตลอด24 ชั่วโมง ที่โทรศัพท์หมายเลข 09-921-6827 และ 02-457-3188

ข้าพเจ้าได้รับทราบข้อมูล รายละเอียดและขั้นตอนการเข้าร่วมโครงการวิจัย ตลอดจนผลดี ผลเสีย ที่จะได้รับจากการเข้าร่วมโครงการวิจัยในครั้งนี้ และข้าพเจ้ายินยอมเข้าร่วม

ดังกล่าว โดยขอให้ผู้วิจัยงดการเปิดเผยชื่อ ประวัติ ตลอดจนข้อมูลที่เกี่ยวข้องกับข้าพเจ้าและบุตรแก่ผู้อื่นได้รับทราบ

ลงชื่อ .....

( ) ผู้ยินยอม

ลงชื่อ .....

( ) ผู้วิจัย

ลงชื่อ .....

( ) พยาน

ลงชื่อ .....

( ) พยาน

APPENDIX D

RESEARCH INSTRUMENTATION

เลขที่แบบสอบถาม……

แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง ให้เขียนเครื่องหมาย / ลงใน □ และเติมข้อความลงในช่องว่าง

ข้อมูลของมารดา

1. ชื่อมารดา……นามสกุล……อายุ……ปี
   ที่อยู่ที่ติดต่อได้……
   เบอร์โทรศัพท์ที่บ้าน……ที่ทำงาน……มือถือ……
2. ระดับการศึกษาสูงสุด……รวมระยะเวลาการศึกษา……ปี
3. อาชีพ
   □ รับราชการ / รัฐวิสาหกิจ □บริษัท □ ธุรกิจส่วนตัว □ ค้าขาย
   □ ทำสวน / ทำไร่ / ทำนา □ รับจ้าง □ อื่นๆ ระบุ……
4. รายได้ของครอบครัว
   □ น้อยกว่า 5000บาท □ 5000-10000บาท □ 10001-15000บาท □ มากกว่า15000 บาท
5. ระยะเวลาลาคลอด
   □ 1 เดือน □ 2 เดือน □ 3 เดือน □ อื่นๆ ระบุ……สัปดาห์ / เดือน
6. ระหว่างลาคลอดท่านตั้งใจจะให้ลูกกินนมชนิดใด
   □ นมแม่อย่างเดียว เพราะ……
   □ นมแม่กับนมผสม เพราะ……
   □ นมผสม เพราะ……
7. เมื่อครบกำหนดลาคลอดท่านตั้งใจจะให้ลูกกินนมชนิดใด

□ นมแม่อย่างเดียวจนลูกอายุ……เดือน

□ นมแม่ร่วมกับนมผสมเมื่อลูกอายุ……เดือน

□

นมผสมอย่างเดียวเมื่อลูกอายุ……เดือน**……**

……

ข้อมูลของทารก (สำหรับผู้วิจัย)

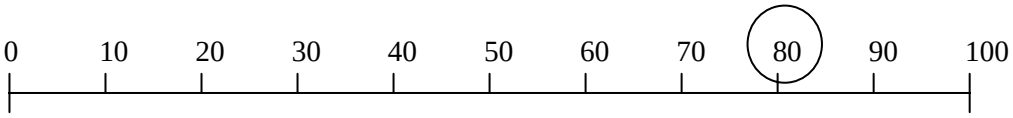
1. เกิดวันที่……น้ำหนักแรกเกิด……กรัม ความยาว……ซ.ม.
2. จำหน่ายจากโรงพยาบาลวันที่……นัดตรวจสุขภาพวันที่……

เลขที่แบบสอบถาม…….**..**ครั้งที่……วันที่……

แบบสอบถามการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่

คำชี้แจง แบบสอบถามนี้เป็นแบบสอบถามความมั่นใจในความสามารถของท่านเรื่องการเลี้ยงลูกด้วยนมแม่ โปรดอ่านข้อความในข้อ 1-23 และพิจารณาว่า ท่านมีความมั่นใจในความสามารถของตนเองกี่เปอร์เซ็นต์ (%) ที่จะกระทำหรือจะปฏิบัติตามข้อความในแต่ละข้อ โดยให้ท่านวงกลมรอบตัวเลขเป็นเปอร์เซ็น(%)ตั้งแต่ 0-100 ที่ตรงกับความมั่นใจในความสามารถของท่านมากที่สุด

ตัวอย่าง…ฉันมั่นใจว่า ฉันจะสามารถล้างมือก่อนรับประทานอาหารทุกมื้อ

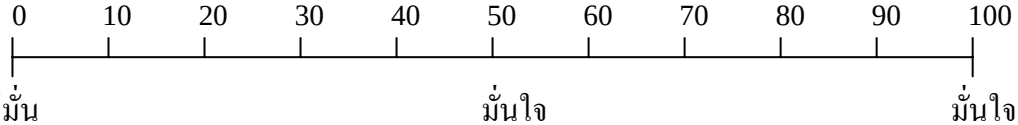


แสดงว่าท่านมีความมั่นใจ 80 % ว่าท่านสามารถล้างมือก่อนรับประทานอาหารทุกมื้อ

……**..**

การปฏิบัติของท่านในการให้ลูกดูดนมแม่

1. ฉันมั่นใจว่า ฉันสามารถหาความรู้เรื่องการเลี้ยงลูกด้วยนมแม่ได้

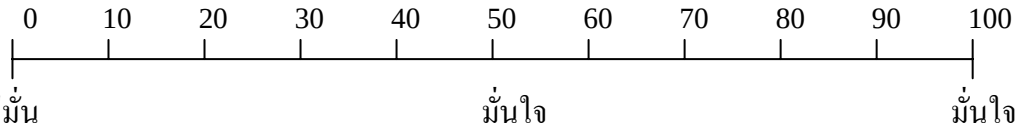


•
•

การบีบน้ำนมด้วยมือและการป้อนนมแม่ด้วยถ้วย

•
•

23. ฉันมั่นใจว่า ฉันสามารถเลือกใส่เสื้อผ้าที่สะดวกต่อการบีบน้ำนมขณะอยู่ที่ทำงานได้



เลขที่แบบประเมิน……. วันที่…….

□ กลุ่มควบคุม ( ) Pretest ( ) Posttest □ กลุ่มทดลอง ( ) Pretest ( ) Posttest

แบบประเมินพฤติกรรมการเลี้ยงลูกด้วยนมแม่

แบบประเมินพฤติกรรมการเลี้ยงลูกด้วยนมแม่ แบ่งเป็น 2 ส่วน ส่วนที่ 1 ได้แก่ แบบประเมินพฤติกรรมการให้นมแม่ ส่วนที่ 2 ได้แก่ แบบประเมินพฤติกรรมการบีบน้ำนมแม่ด้วยมือและการป้อนนมแม่ด้วยถ้วย โดยการสังเกตการปฏิบัติของมารดาก่อนให้นมแม่ ขณะให้นมแม่ และหลังให้นมแม่ การบีบและการป้อนน้ำนมแม่ด้วยถ้วย ถ้าพฤติกรรมในข้อที่หมายเหตุไว้ยังไม่เกิดขึ้นในช่วงเวลาที่สังเกตให้สอบถามจากมารดา พฤติกรรมที่สังเกตพบว่ามารดาปฏิบัติได้ถูกต้องหรือสอบถามว่าปฏิบัติ ให้ 1 คะแนนลงในช่อง " ใช่ "
และพฤติกรรมที่มารดาไม่ได้ปฏิบัติหรือปฏิบัติไม่ถูกต้อง ให้ 0 คะแนนลงในช่อง " ไม่ใช่ "

พฤติกรรม	ใช่	ไม่ใช่
ส่วนที่ 1 แบบประเมินพฤติกรรมการให้นมแม่ 1. มารดาล้างมือให้สะอาดด้วยน้ำและสบู่ • • • • • • • 19. มื้อต่อไปมารดาให้ทารกดูดนมข้างที่ดูดค้างไว้ครั้งก่อนหรือถ้าทารกดูดนมข้างเดียวอิ่ม มื้อต่อไปให้ทารกดูดข้างที่ยังไม่ได้ดูดก่อน **ส่วนที่ 2 แบบประเมินพฤติกรรมการบีบน้ำนมแม่ด้วยมือและการป้อนน้ำนมแม่ด้วยถ้วย** 20. มารดาล้างมือให้สะอาดด้วยน้ำและสบู่ • • • • • • 30. มารดาไล่ลมให้ทารกเป็นระยะ ระหว่างป้อนนมด้วยถ้วย		
รวมคะแนน		

เลขที่แบบบันทึก……. วันที่…….

แบบบันทึกการติดตามการเลี้ยงลูกด้วยนมแม่

คำชี้แจง โปรดใส่เครื่องหมาย / ลงในช่อง □ ที่ตรงกับคำตอบของท่านและเติมข้อความลงในช่องว่าง

1. ในระยะที่ผ่านมาท่านประสบปัญหาและอุปสรรคในการเลี้ยงลูกด้วยนมแม่หรือไม่ (ตอบได้มากกว่า 1 ข้อ)
   - •
   - •
   - •
   - •
2. เมื่อเกิดปัญหาในการเลี้ยงลูกด้วยนมแม่ท่านแก้ไขอย่างไร (ตอบได้มากกว่า 1 ข้อ)
   - •
   - •
   - •
   - •
3. ผลการแก้ไขปัญหาเป็นอย่างไร…….
4. ปัจจุบันท่านให้ลูกกินนมชนิดใด
   - •
   - •
   - •
5. นอกจากนมท่านให้ลูกกินอาหารอื่นบ้างหรือไม่ (ตอบได้มากกว่า 1 ข้อ)
   - •
   - •
6. ปัจจุบันลูกอายุ…….เดือน น้ำหนัก……กรัม ความยาว……ซ.ม.
7. ปัจจุบันท่าน □ อยู่ในระหว่างลาคลอดและจะกลับไปทำงานเมื่อวันที่……..
   □ กลับไปทำงานตั้งแต่วันที่……..

เลขที่แบบสอบถาม……

แบบสอบถามความพึงพอใจในโปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเอง
ในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก

คำชี้แจง ให้ท่านพิจารณากิจกรรมที่ท่านได้รับในการเข้าร่วมโปรแกรมส่งเสริมการรับรู้สมรรถนะในการเลี้ยงลูกด้วยนมแม่และ ใส่เครื่องหมาย / ลงในช่องที่ตรงกับความคิดเห็นของท่านเกี่ยวกับกิจกรรมที่ได้รับว่าท่านมีความพึงพอใจในระดับใด มาก ปานกลาง หรือ น้อย กิจกรรมละ1 ช่อง

มาก หมายถึง ท่านมีความพึงพอใจในกิจกรรมนั้นมาก

ปานกลาง หมายถึง ท่านมีความพึงพอใจในกิจกรรมนั้นปานกลาง

น้อย หมายถึง ท่านมีความพึงพอใจในกิจกรรมนั้นน้อย

กิจกรรม	**ระดับความพึงพอใจ**		
	มาก	**ปานกลาง**	**น้อย**
ระยะก่อนออกจากโรงพยาบาล • • • • • •			
ระยะหลังกลับจากโรงพยาบาล 2 วัน • •			
ระยะหลังคลอด 4 สัปดาห์ • • • •			
ระยะหลังคลอด 6 สัปดาห์ • •			

โปรแกรมส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ของมารดาทำงานนอกบ้านที่มีบุตรคนแรก

วัตถุประสงค์ทั่วไป

เมื่อสิ้นสุดการเข้าร่วมโปรแกรม ผู้เข้าร่วมโปรแกรม

1. มีการรับรู้สมรรถนะ ของตนเองในการเลี้ยงลูกด้วยนมแม่เพิ่มขึ้น
2. มีพฤติกรรมการเลี้ยงลูกด้วยนมแม่ที่ถูกต้อง
3. ทราบวิธีป้องกันและแก้ไขปัญหาที่อาจเกิดขึ้นในการเลี้ยงลูกด้วยนมแม่

กลุ่มเป้าหมาย

มารดาทำงานนอกบ้านหลังคลอดบุตรคนแรก

การดำเนินกิจกรรม

กิจกรรมของโปรแกรมแบ่งเป็น 4 ระยะ ดังนี้

- ระยะที่ 1 : หลังคลอดก่อนจำหน่ายจากโรงพยาบาล โดยการจัดกิจกรรมเป็นกลุ่มให้มารดาหลังคลอด ที่หอผู้ป่วยจุฑาธุช 7 จำนวนสมาชิก 2-3 คน ในช่วงเวลาประมาณ 18.00-19.00 น. ใช้เวลาประมาณ 60 นาที
- ระยะที่ 2 : หลังกลับจากโรงพยาบาล 2 วัน โดยการโทรศัพท์ติดต่อมารดาที่บ้านเพื่อประเมินปัญหาการให้นมแม่
- ระยะที่ 3 : หลังคลอด 4 สัปดาห์ โดยการจัดกิจกรรมเป็นกลุ่มให้มารดาขณะที่พาบุตรมารอตรวจสุขภาพและรับวัคซีนตามนัดที่ คลินิกดูแลสุขภาพเด็กต่อเนื่อง หน่วยตรวจโรคกุมารเวชศาสตร์ ตึกเจ้าฟ้ามหาจักรี 1 จำนวนสมาชิก 3-5 คน เวลา 12.00-12.45 น. ใช้เวลาประมาณ 45 นาที
- ระยะที่ 4 : หลังคลอด 6 สัปดาห์ โดยการโทรศัพท์ติดต่อมารดาที่บ้านเพื่อประเมินการบีบน้ำนมแม่ด้วยมือ การป้อนนมแม่ด้วยถ้วยและการเก็บรักษาน้ำนมแม่

ผู้ดำเนินการ

นางสาว นันทพร พ่วงแก้ว (ผู้วิจัย)

วิธีดำเนินการ ตามรายละเอียดในแผนการส่งเสริมการรับรู้สมรรถนะของตนเองในการเลี้ยงลูกด้วยนมแม่ 4 ระยะ

เลขที่แบบบันทึก.....

แบบบันทึกการเยี่ยมมารดาทางโทรศัพท์

ชื่อมารดา.....นามสกุล.....
เบอร์โทรศัพท์ที่บ้าน.....มือถือ.....
วันที่คลอด.....วันที่จำหน่ายจากโรงพยาบาล.....
.

ส่วนที่ 1 : โทรศัพท์เยี่ยม ครั้งที่ □ หลังกลับจากโรงพยาบาล 2 วัน เมื่อวัน
ที่.....

1. การติดตามการเลี้ยงลูกด้วยนมแม่
   •
   •
2. ปัญหาที่พบ
   •
   •
3. วิธีแก้ไขของมารดา
   •
   •
4. คำแนะนำและการช่วยเหลือโดยผู้วิจัย.....
5. มารดาโทรศัพท์ขอคำแนะนำเรื่อง.....

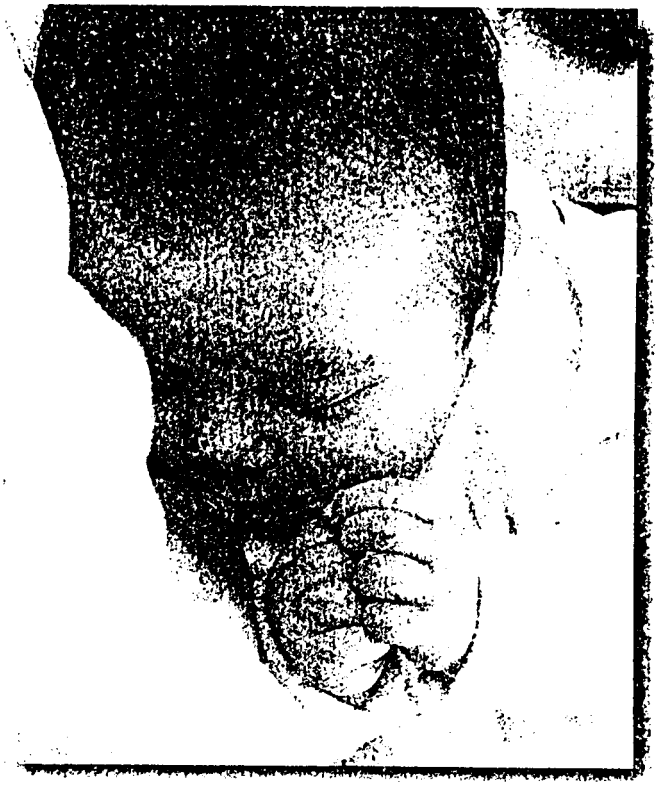
ส่วนที่ 2 : โทรศัพท์เยี่ยม ครั้งที่ □ หลังคลอด 6 สัปดาห์ เมื่อวันที่.....

1. การเตรียมความพร้อมของมารดาและบุตรในการให้นมแม่ในระยะที่กลับไปทำงาน
   •
   •
   •
   •
   •
2. ปัญหาและอุปสรรคอื่นๆ.....
3. คำแนะนำจากผู้วิจัย.....
4. มารดาโทรศัพท์ขอคำแนะนำเรื่อง.....

Handbook of Breastfeeding in Working Mothers

คู่มือการเลี้ยงลูกด้วยนมแม่

สำหรับ...คุณแม่ทำงานนอกบ้าน



BIOGRAPHY

NAME	Nunthaporn Poungkaew
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