EFFECTS OF SPOUSE INVOLVEMENT IN BREAST-FEEDING PROMOTION PROGRAM FOR WORKING MOTHER ON EXCLUSIVE BREAST-FEEDING IN FIRST MONTH

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THE EFFECTS OF SPOUSE INVOLVEMENT IN A BREASTFEEDING PROMOTION PROGRAM FOR WORKING MOTHERS ON EXCLUSIVE BREASTFEEDING IN THE FIRST MONTH

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ABSTRACT

This quasi-experimental research aimed to investigate the effects of spouse involvement in a breastfeeding promotion program for first-time working mothers on exclusive breastfeeding in the first month. The study sample consisted of 100 first-time working mothers who sought neonatal care at the Bangkok Metropolitan Medical College and Vajira Hospital between July 2006 and March 2007. Of these, 50 were assigned into the experimental group, and the other 50 into the control group. The control group received routine nursing care from the hospital, while the experimental group received routine nursing care together with spouse involvement in a breastfeeding promotion program. The rate and duration of exclusive breastfeeding were assessed through interviews.

The findings revealed that the duration of exclusive breastfeeding of the mothers in the experimental group were statistically significantly longer than that of the mothers in the control group ($\bar{x}$ = 29.30 days and $\bar{x}$ = 14.36 days, respectively; U = 164.5, $p < .001$). In addition, the rates of exclusive breastfeeding of the mothers in the experimental group and the control group were different , with statistical significance at two weeks postpartum (96% in the experimental group and 34% in the control group; $\chi^2 = 42.242$; P = .000) and at four weeks postpartum (94% in the experimental group and 10% in the control group; $\chi^2 = 67.267$; P = .000).

The study findings have led to the conclusion that spouse involvement in a breastfeeding promotion program for first-time working mothers could effectively increase the rate and duration of exclusive breastfeeding. Based on this finding, it is recommended that the long-term effects of spouse involvement in a breastfeeding promotion program should be followed up such, for example four or six months after child delivery, to better understand the effectiveness of spouse involvement in the promotion of exclusive breastfeeding.

KEY WORDS: EXCLUSIVE BREASTFEEDING / WORKING MOTHER / BREASTFEEDING PROMOTION PROGRAM / SPOUSE INVOLVEMENT

92 pp.

ผลจากการมีส่วนร่วมของสามีในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ของหญิงทำงานนอกบ้านต่อการเลี้ยงลูกด้วยนมแม่อย่างเดียวในเดือนแรก (EFFECTS OF SPOUSE INVOLVEMENT IN BREAST-FEEDING PROMOTION PROGRAM FOR WORKING MOTHER ON EXCLUSIVE BREAST-FEEDING IN FIRST MONTH)

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บทคัดย่อ

การวิจัยครั้งนี้เป็นการวิจัยกึ่งทดลอง เพื่อศึกษาผลจากการมีส่วนร่วมของสามีในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ของหญิงครรภ์แรกที่ทำงานนอกบ้าน ต่อการเลี้ยงลูกด้วยนมแม่อย่างเดียวในเดือนแรก ที่มาฝากครรภ์และคลอดที่วิทยาลัยแพทย์ศาสตรกรุงเทพมหานครและวชิรพยาบาล ระหว่างเดือนกรกฎาคม 2549 ถึงเดือนมีนาคม พ.ศ. 2550 จำนวน 100 ราย แบ่งเป็นกลุ่มควบคุม 50 ราย และกลุ่มทดลอง 50 ราย โดยกลุ่มควบคุมได้รับการพยาบาลตามปกติ ส่วนกลุ่มทดลองได้รับการพยาบาลตามปกติร่วมกับการมีส่านร่วมของสามีในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ของหญิงที่ทำงานนอกบ้าน ประเมินอัตราและระยะเวลาการให้นมทารกจากการสอบถาม

ผลการวิจัยพบว่า มารดากลุ่มทดลองมีระยะเวลาการเลี้ยงลูกด้วยนมแม่อย่างเดียว นานกว่ามารดากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ ($x = 29.30$ วัน ในกลุ่มทดลอง และ $x = 14.36$ วัน ในกลุ่มควบคุม $U = 164.5$, $P < .001$).และมารดากลุ่มทดลองมีอัตราการลี้ยงลูกด้วยนมแม่อย่างเดียวแตกต่างจากมารดากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ 2 สัปดาห์หลังคลอด (96%ในกลุ่มทดลอง 34%ในกลุ่มควบคุม ; $\chi^2 = 42.242$; $P = .000$) และที่ 4 สัปดาห์หลังคลอด (94% ในกลุ่มทดลอง และ 10%ในกลุ่มควบคุม ; $\chi^2 = 67.267$; $P = .000$).

จากผลการวิจัยครั้งนี้สรุปได้ว่า การมีส่วนร่วมของสามีในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ของหญิงครรภ์แรกที่ทำงานนอกบ้าน สามารถเพิ่มอัตราและระยะเวลาการเลี้ยงลูกด้วยนมแม่อย่างเดียวให้ยาวนานได้อย่างมีประสิทธิภาพ ซึ่งงานวิจัยครั้งนี้มีข้อเสนะแนะว่าควรติดตามผลนำสามีเข้ามามีส่วนร่วมในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ ในระยะเวลาที่ยาวนานเพิ่มขึ้น อาทิ 4 เดือน หรือ 6 เดือน เป็นต้น

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INTODUCTION

Background and Significance of the Study

Breastfeeding is the best gift a mother can give to her child. This is because breast milk consists of beneficial nutrients appropriate for the child's physical and psychological growth and development. It also consists of immunity that helps protect the child from infections and diseases, especially respiratory and gastrointestinal infections (American Academy of Pediatrics.2005: 495-506). In addition, breastfeeding helps strengthen bonding between the mother and her child, and it makes the mother feel proud of herself and realize the significance of being a mother (Worthington & William, 1993: 410). Breastfeeding also promotes the health of the mother. A study of Newcomb (1999: 164-182) revealed that when the newborn infant sucks the mother's nipples, the secretion of oxytocin hormone will be stimulated, and this makes the uterus shrink, hence preventing postpartum hemorrhage. In cases that mothers breastfeed their children for longer than two years, they reduce their chances of developing pre-menopausal and post-menopausal breast cancer and ovarian cancer. Besides, breastfeeding is convenient as there will always be enough breast milk to serve the infant's need, there is no packaging or storage required, it saves time preparing for feeds, and it helps save money needed to buy formula. Weimer (2001) carried out a study in the United States and found that the mothers who breastfed their infants for one month could save as much as 700 US dollars per year. Overall, the immunity infants receive from their mothers can help the nation save its healthcare budgets for as much as 30 million US dollars per year. If the duration of breastfeeding is longer than three months, the healthcare expenses will be saved by 48 million US dollars. Another study also pointed out that the companies that had a policy promoting breastfeeding among their employees paid lower medical reimbursements than those that had no such policy (Cohen, Mrtek & Mrtek,1995:148-153).

As the significance and benefits of breastfeeding are widely accepted, breastfeeding is increasingly promoted. World Health Organization has recommended that mothers exclusively breastfeed their infants for at least six months (WHO, 2005). The Pediatrician Association of America has aimed to increase initial breastfeeding to 75% among postpartum mothers, exclusive breastfeeding for six months to 50%, and continuous breastfeeding for 12 months to 25%. However, one study has shown that only 36% of the mothers were able to breastfeed their infants for six months (Center for Disease Control and Prevention, Department of Health and Human Services, 2003).

In Thailand, the Ministry of Public Health has recognized the significance of breastfeeding. In the Ninth Public Health Development Plan B.E. 2545-2549, it was specified that the rate of exclusive breastfeeding at 4 and 6 months should be no lower than 30%. The development plan also included the policy devised to encourage breastfeeding, and the Baby Friendly Initiative Project has been promoted based on the Ten Steps to Successful Breastfeeding since 1991. However, a survey conducted with Thai mothers who breastfed their infants in 1997 revealed that only 2.08% of these mothers exclusively breastfed their infants for four months (Somchai Durongdej,1997). The rates of exclusive breastfeeding increased to 2.92% in 2000 (Health Promotion Office, B.E. 2544) and 13.8% in 2002 (Jintana Pattanapongthorn, B.E. 2547). It could be seen that the rate of breastfeeding rose gradually, and it reached only half of what had been aimed at. Furthermore, UNICEF surveyed the rate of breastfeeding in Thailand in 2004 and found that the rate was lowest in the Asia-Pacific region; that is, only approximately 17% of Thai mothers were able to exclusively breastfeed their infants for six months (Somkid Gorcharoenrat, B.E. 2548: 175). In particular, only 4.4% of working mothers living in Bangkok Metropolis were able to breastfeed their infants for four months (Roongtip Samritsopak, B.E. 2542).

Previous studies have indicated that there are a number of factors that affect duration of breastfeeding. One factor is the problems related to breasts and nipples. The most important reason is incorrect breastfeeding positions, which bring about a number of problems with the breasts and nipples including sore nipples, cracked nipples, and engorged nipples. As a result, the newborn infants receive insufficient nutrients and they fail to gain weight. According to the statistics of the breastfeeding

clinic of Siriraj Hospital recorded since 1999, the most important problems for breastfeeding mothers are problems with breasts and nipples, infants' inability to suckle, and mothers' anxiety and stress due to insufficient breast milk (Thidarat Wongvisut, Su-aree Tontrakarn, & Kriengsak Jirapat, B.E. 2548: 165). Moreover, the most important reason that prevent mothers from continuing breastfeeding is cracked nipples and pain caused by infected breasts during the first couple of weeks after child delivery, accounting for 30% of the causes that stop mothers from breastfeeding their infants. In fact, when the mothers reduce the frequency of breastfeeding, the production and expression of breast milk will be affected, and the problem with insufficient breast milk will follow (Hoyer, & Pokorn, 1998:1250-1256). Hogan (2001) conducted a study and found that the reasons that made mothers turn to formula instead of breastfeeding were lack of knowledge, skills, and experience regarding breastfeeding, especially first-time mothers. Thus, this particular group of mothers should receive special attention as they may be less able to solve problems related to breastfeeding such as cracked nipples, lack of breast milk, or infants' nipple rejection. When these problems occur, they may experience a high level of anxiety and stress. This, coupled with lack of knowledge about benefits of breast milk, may make it easier for them to opt for formula-feeding. A study carried out by Sa-nga Damapong (B.E. 2548) showed that 47.7% of the mothers felt that formula could replace breast milk.

In addition to the aforementioned factors, there are other factors that affect duration of breastfeeding. For instance, when mothers have to work outside the house, especially in industrial factories or private companies, they may not be able to take a full maternity leave they are entitled to (Alan , Wenjun, &Mary, 2006: 243). A study of Sranya Jitcharoen (B.E. 2537) indicated that 48% of the mothers prepared to wean their infants from breastfeeding 2.04 weeks before returning to work. Similarly, Green. (2003: 418-419) found that mothers who planned to go back to work sooner than two months after giving birth tended to encounter more breastfeeding problems and wean their infants from breastfeeding sooner than others. A large number of mothers believe that they are unable to continuously breastfeed their infants for a long period of time because they have to resume their work. As such, they try to seek weaning methods rather than searching for ways to continue breastfeeding after going

back to work (Boworn Ngamsiriudom, B.E. 2548: 160). It has been discovered that most of these mothers stopped breastfeeding within one month (Lewallen, Margaret, & Janet., 2006: 166-172). The time when most mothers stopped breastfeeding their infants was found to be the first week and the second week after child delivery (Ertem, Votto, & Leventhal, 2001: 546). This finding was in congruence with the finding of Ilgi (2001) that there are 2 peaks for termination of breastfeeding. The first peak is during the first week postpartum, and second peak is between 2 weeks postpartum. In Thailand, Nantaporn Puangkaew (B.E.2548) found that the rate of breastfeeding of first-time mothers reduced to half within four weeks after giving birth. Therefore, it could be seen that if mothers are enabled to solve problems effectively during the initial period after giving birth, their duration of breastfeeding should be prolonged. Hall RT, et al. (2002) pointed out that if problems with breastfeeding are appropriately solved within the first two weeks after giving birth, the mothers would be able to breastfeed their infants for at least four months.

Based on the reasons previously mentioned, it could be concluded that the tendency to perform breastfeeding reduces as soon as the mothers are discharged from the hospital, especially among working mothers. This may be because when the mothers are hospitalized, they receive assistance from healthcare team members to solve breastfeeding problems. After hospital discharge, there will be only the husband or other relatives who could provide help to breastfeeding mothers. At present, the structure of the Thai society has changed from an extended family to a nuclear family, especially in Bangkok which is a metropolitan city (Kue Wongboonsin & Achara Thawatvibulphol, B.E. 2534: 21). Therefore, the most important source of social support of postpartum mothers is their husband. According to Gamble & Morse (1993: 363), social support from the husband has a significant influence on mothers' decision to continue breastfeeding their infant or stop breastfeeding their infant, and it is also an important reinforcing factor that helps promote breastfeeding. Besides, the attitude of the husband also plays a crucial role in the success or failure in breastfeeding. If the husband does not support or is against breastfeeding, the mother may use this as an excuse to stop the practice. A study conducted by Giugliani et al. (1994: 157-161) showed that husbands' support and promotion of breastfeeding was

positively associated with duration of breastfeeding when compared to the husbands who did not pay attention to the type of feeding their infants received.

Increasing social support of postpartum mothers by encouraging their husbands to take part in breastfeeding will enable the mothers to continue breastfeeding practice. Shuster (1993) points out that during the postpartum period, working mothers tend to experience loss of self-identity and self-confidence. This is because the postpartum period is the time when mothers try to develop self-confidence by being good and successful mothers. However, working mothers face restrictions in time, and they have less opportunity to be close to their infants, which affects their development of a maternal role. If they receive encouragement and support from their husbands, they will be better able to adjust their behaviors and continue breastfeeding. The fathers can show support by giving them information and advice to the mothers to help them solve problems they are facing, which can prolong the duration of breastfeeding. Smith, et al.(2006) found that husbands who participated in a breastfeeding training session were better able to help their wives become successful with breastfeeding and continue breastfeeding longer than those who did not. This is because the husbands had both willingness and capacity to assist and support their wives.

Evidently enough, breastfeeding problems of first-time mothers and husbands are likely to result from lack of experience, knowledge, understanding, and skills of breastfeeding. Sometimes they may not have positive attitudes toward breastfeeding. For these reasons, appropriate methods to promote breastfeeding both at the hospital and at home are called for. During hospital admission, mothers receive advice and assistance from nurses and other healthcare team members when they face problems with breastfeeding. However, when they return to their home, there is only their husband or relatives who can mostly provide help. Consequently, support from such persons is important for postpartum mothers to prolong breastfeeding. The researcher believed that nursing system that provides support and knowledge to mothers and husbands during pregnancy, after childbirth, and after hospital discharge would help increase their knowledge and skills and adjust their attitudes, which, in turn, could increase their motivation and confidence to become successful with breastfeeding and to continue breastfeeding for a longer period of time.

Recently, a large number of studies have been conducted to develop breastfeeding promotion programs. Most of these programs tend to deal with promotion of exclusive breastfeeding during hospitalization and after hospital discharge using telephone calls or home visits during the first four weeks after childbirth (Dennis, 2002: 12-32). In Thailand, the programs developed tend to increase knowledge and skills in breastfeeding among pregnant women and hospitalized postpartum mothers. At present, the mean length of hospital stay after giving birth is reduced to two to three days on average. Therefore, first-time mothers may not be able to correctly breastfeed their infants or solve problems with breastfeeding after they have returned to their home. This may result in the mothers' anxiety and stress, which in turn affects production of breast milk. In addition, if family members, especially the husband, do not realize the significance of breastfeeding and are not able to help postpartum mothers solve their breastfeeding problems, these mothers may more easily turn to formula feeding. A study conducted by Kim, Kevin, & Carter (2000) found that when husbands lacked knowledge and believed that formula was as good as breast milk, the mothers were more likely to formula-feed their infants. This finding suggests that if the husbands have correct understanding and are able to appropriately support their wives, the mothers are more likely to become successful with breastfeeding.

When considering the relationship between husbands' support and success in breastfeeding, the researcher was interested in investigating the effects of husbands' participation in a breastfeeding promoting program of first-time working mothers on rate of breastfeeding at one month postpartum. It was anticipated that the findings of this study could be used as guidelines in developing a nursing intervention to promote knowledge, understanding, skills, and ability to perform breastfeeding among first-time mothers and husbands to increase the duration of exclusive breastfeeding among this group of mothers.

Conceptual Framework

Three nursing theories proposed by Orem were employed as the conceptual framework of the present study including the Theory of Nursing System, the Theory of Self-Care Deficit, and the Theory of Self-Care.

Self-care action is a goal-oriented and deliberate action which is carried out to maintain life, health, and well-being of individuals. When self-care is effectively performed, it helps maximize individuals' structures, functions, and developments. Individuals who are growing up will adjust their functions and developments and prevent, control, or eliminate disease or injuries by means of daily living activities. They learn to take care of themselves and deal with their environments which are believed to affect their functions and developments (Orem, 1991 cited in Somchit Hanucharunkul, B.E. 2544: 23). Besides, self-care is a deliberate action and goal-oriented. Individuals consider and make decisions about self-care before actually carrying out self-care activities. Individuals have search for ways to reach the set goals, while assessing duration and looking for resources or persons who can offer assistance.

Assessment of self-care efficacy involves assessment of ability to meet therapeutic self-care demand to determine self-care deficit. In general, individuals are able to perform self-care to meet self-care requisites, but if they do not carry out self-care

practice or perform incorrect self-care practice, they have self-care deficit. In other words, self-care deficit results when there is more therapeutic self-care demand than self- care efficacy. The causes of self-care deficit need to be thoroughly considered (Somchit Hanucharunkul, B.E. 2544: 36), which will shed lights on the role of nursing intervention and the individuals involved. For first-time mothers and husbands who tend to lack necessary experience, knowledge, and skills in breastfeeding, they may have incorrect beliefs about breastfeeding and childcare. Thus, they are unable to develop self-care efficacy to serve self-care demand in breastfeeding. This is a major factor that hinders breastfeeding success. A previous study has shown that 50% of first-time mothers were worried about childcare and needed to return to the hospital to seek advice from healthcare team members (Ash & Chase-Hall, 1980 cited in Aungsana Siriwattanametanont, 2002: 30). It can be seen that first-time mothers and husbands are unable to respond to self-care demand in breastfeeding, and they need to rely on a supportive-educative nursing system, which is one of the three systems of nursing care, to develop their and their husbands' ability to take care of their infants. The nursing system helps them determine problems and

self-care need as well as enables them to carry out action to respond to self-care demand. It also encourages mothers and husbands to adjust and develop their ability to care. In fact, the nursing care system is a dynamic process which constantly changes due to ability and need of care of service receivers. Generally, the supportive-educative nursing system consists of guiding another, supporting another, teaching, and managing environments to enable first-time mothers and their husbands to develop their efficacy to respond to self-care demands necessary to take care of their newborn infants.

It is believed that the aforementioned supportive-educative nursing system can enable the first-time mothers to develop motivation to breastfeed their infants during hospital admission. However, according to findings of previous research and the researcher's own professional experience, the rate of breastfeeding would decline as soon as the mothers are discharged from the hospital, and it will continue to decline as time passes by. This has led to a conclusion that the breastfeeding promoting program currently in use may not be effective enough to enable first-time mothers to adjust their health behaviors. They need motivation which is an important power for individuals to perform self-care. Orem (1985 cited in Somchit Hanucharunkul, B.E. 2544: 122) points out that motivation is a power component of self-care agency. In order to motivate mothers to continue breastfeeding in a prolonged period of time, mothers need to receive motivational drives from society and environment which have an influence on their behaviors. Generally, individuals' decision to have behavioral adjustment depends on the influence of significant others who have power over them (Prapit Pijitwaipreecha, B.E. 2539: 30).

In Thai society, the husband is regarded as the leader of the family. As a result, support or resistance from the husbands can have a great effect on family members' behaviors, especially the wife's. Social support from the husband is very crucial as the husband and wife share the closest relationship, and it is a profound social support that results in the wife's sense of self-worth. Physical, psychological, and emotional support from the husband enables the wife to develop motivation to breastfeed their infant. According to Maslow's hierarchy of need (Maslow, 1970 cited in Somchit Hanucharunkul, B.E. 2544: 123), individuals' need should be satisfied in a hierarchical order beginning from physical needs for safety. One of the higher levels

of needs is the need for sense of self-worth and social acceptance. If such need of the wife is served by the husband, she will be motivated to breastfeed their infant in a long run. As Orem (1985 cited in Somchit Hanucharunkul, B.E. 2544: 129) points out, in order for mothers to adjust health behaviors, they need motivation which is one power component of self-care agency. Put another way, motivation is an energy which can stimulate and drive mothers to adopt a behavior and practice to increase their potential, hence successful breastfeeding as planned.

Based on the relationship between problems and the nursing theories proposed by Orem, ways to solve breastfeeding problems can be suggested. First-time mothers and their husbands tend to lack experience, knowledge, and skills in breastfeeding, and they need to rely on nurses to solve their problems. A supportive-educative nursing system aimed at promoting breastfeeding among first-time mothers and their husbands should motivate first-time mothers to breastfeed their infants and extend the overall duration of exclusive breastfeeding.

Therefore, the supportive-educative nursing system based on Orem's nursing theories were used to promote breastfeeding among first-time working mothers and their husbands in the present study, as illustrated in Figure 1 below.

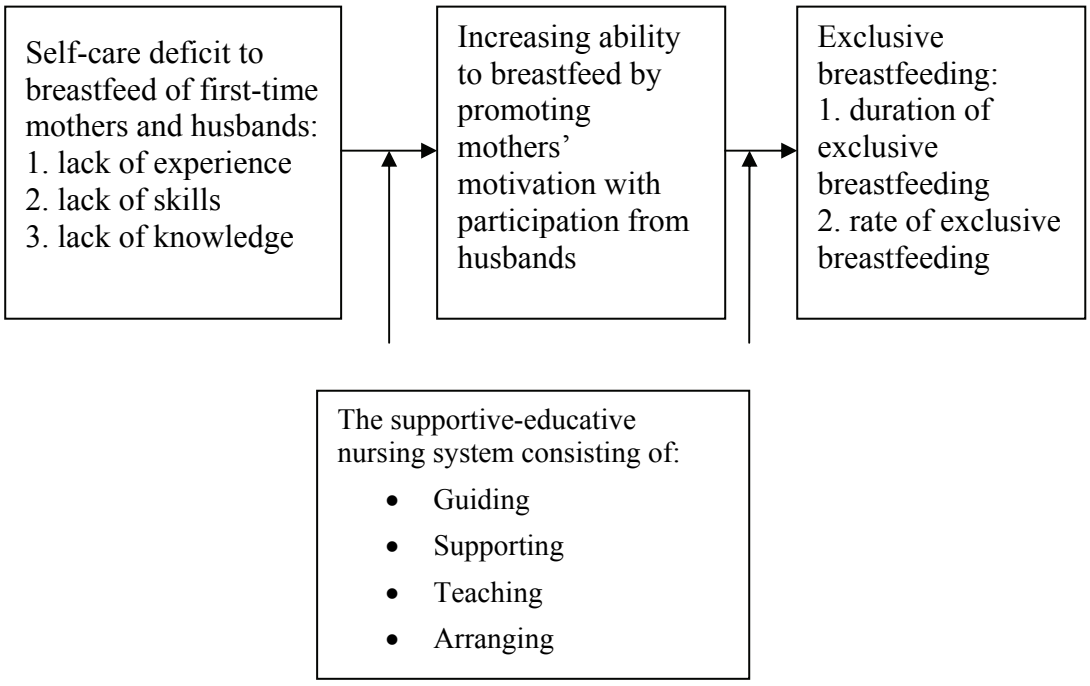

Figure 1: Conceptual Framework of the Study

Research Questions

1. Is the duration of exclusive breastfeeding of first-time working mothers whose spouse involvement in a breastfeeding promoting program plus routine nursing care different from that of first-time working mothers who receive only routine nursing care or not?

2. Is the rate of exclusive breastfeeding at 1 month of first-time working mothers whose spouse involvement in a breastfeeding promoting program plus routine nursing care different from that of first-time working mothers who receive only routine nursing care or not?

Purpose of the Study

1. To study the type of feeding, duration of exclusive breastfeeding and cessation of breastfeeding of first-time working mothers whose spouse involvement in a breastfeeding promoting program.

2. To compare duration and rate of exclusive breastfeeding of first-time working mothers whose spouse involvement in a breastfeeding promoting program plus routine nursing care and those of first-time working mothers who receive only routine nursing care at 1 month after delivery.

Hypothesis of the study

1. The duration of exclusive breastfeeding of working mothers whose spouse involvement in a breastfeeding promoting program plus routine nursing care is longer than that of working mothers who receive only routine nursing care.

2. The rate of exclusive breastfeeding of working mothers whose in spouse involvement a breastfeeding promoting program plus routine nursing care is higher than that of working mothers who receive only routine nursing care.

Scope of the Study

The present study aimed at investigating the effects of spouse involvement in a breastfeeding promoting program based on a supportive-educative nursing system on the duration and rate of exclusive breastfeeding of working mothers within one month after giving birth. The study sample consisted of first-time pregnant women whose

gestational age over 28 weeks when data collection began. These women sought prenatal care and child delivery services at Bangkok Metropolitan Medical College and Vajira Hospital from July 2006 to March 2007.

Definition of Terms

Spouse's involvement in a breastfeeding promoting program referred to the format of nursing activities provided to the first-time mothers and their husbands according to the nursing theories proposed by Orem. The types of activities in the program included guiding, supporting, teaching, and arranging environment in three phases as follows: the third trimester of the pregnancy, within 24 hours after giving birth and before hospital discharge, and with telephone visits after hospital discharge. The program included dissemination of knowledge and adjustment of attitudes to motivate the mothers and their husbands to exclusively breastfeed their infants. Demonstration and practice were also provided to ensure development of skills necessary in preventing and solving breastfeeding problems. In this program, husbands were encouraged to participate to develop the mothers' ability and motivation to exclusively breastfeed their infants for a longer duration.

Routine nursing care referred to the nursing care activities normally provided by nurses working at the hospitals under Bangkok Metropolitan Administration. It included a group lecture on breastfeeding offered to pregnant women who sought prenatal care during the third trimester and another lecture on childcare and breastfeeding given to postpartum mothers at the hospital ward.

Exclusive breastfeeding referred to type of feeding which the infants were fed with their mothers' breast milk and nothing else. In this study, exclusive breastfeeding was assessed by using a breastfeeding questionnaire developed by the researcher to elicit data regarding the type of feeding and percentage of the infants who were exclusively breastfed by their mothers.

Rate of exclusive breastfeeding referred to the percentage of the infants who were exclusively breastfed by their mothers during the past 24 hours.

Duration of exclusive breastfeeding referred to the duration of the infants who were exclusively breastfed by their mothers

Type of feeding referred to categorizes breastfeeding into four type as follows:

- Exclusive breastfeeding: The infant is fed with only the mother's breast milk, which may come directly from the breast, from expressed milk, or from other human mother's breast without receiving anything else except water, vitamins, minerals, or medications for medical purposes.

- Predominant breastfeeding: The infant is mainly fed with breast milk together with water, and drinks such as syrup, tea, drink with artificial flavors, drink used in religious ceremonies, as well as juices, vitamins, minerals, or medications for medical purposes, with no formula or other forms of nutrition.

- Complimentary breastfeeding: The infant receives breast milk together with formula or other types of food such as semi-solid food or solid food.

- Formula feeding or bottle feeding: The infant receives semi-solid food, or solid food with a bottle and a teat, as well as formula fed with a bottle and a teat.

Expected Outcomes and Benefits

1. As for nursing practice, the findings of the present study could be used as guidelines in devising nursing plans to offer nursing services and knowledge to enable first-time working mothers and their husbands to solve problems related to breastfeeding and to extend the duration of exclusive breastfeeding.

2. As for nursing education, the study findings could be used as guidelines in designing a nursing curriculum on provision of support and knowledge to encourage first-time mothers to correctly breastfeed their infants.

CHAPTER II
LITERATURE REVIEW

The present study aimed at investigating the effects of spouse involvement in a breastfeeding promotion program for first-time working mother on exclusive breast feeding in the first month postpartum. In this chapter, related literature has been reviewed in the following topics:

1. Breastfeeding
2. Problems of breastfeeding in working mothers
3. Problems of breastfeeding in first-time mothers
4. Supportive-educative nursing systems with social support
5. Spouse involvement in a breastfeeding promotion program
6. Research on breastfeeding promotion programs

Breastfeeding

At present, the benefits of breastfeeding have been widely recognized. Both WHO and UNICEF have proposed steps involved in breastfeeding promotion with clear and easy-to-follow methods of practice for ease of application in real life situations. The success of breastfeeding depends on cooperation from both the government and the general public. The persons who play the most important role in success of breastfeeding are the mothers and their husbands. They need to have understanding of the anatomy of the breasts, the mechanisms involved in production and secretion of breast milk, breastfeeding positions, and expression methods so as to use the knowledge and understanding to solve breastfeeding problems they may have.

Anatomy of the breasts

The breasts are located in the superficial fascia between the second rib and six intercostals cartilage and are superficial to the pectoralis major muscle. At puberty,

the breasts in the female enlarge to their adult size with the left frequently slightly larger than the right. In a non-pregnant woman, the mature breast weighs approximately 200 grams. During pregnancy, the breast size and weight increase; thus, when the pregnant woman is near term, the breast weighs about 400 to 600 grams. During lactation, the breast weighs approximately 600 to 800 grams (Lawrence, 2005: 44-45). The three major structures of the breasts are skin, subcutaneous tissue, and body of the breast (corpus mammae).

The skin of the breasts includes the nipple, areola, and general skin, which are visible externally. The areola is a pigmented area that surrounds the nipple. In the areola are Montgomery's glands, which appear as raised projections. These are actually sebaceous glands that provide secretion to protect the areola and nipple. The nipple contains 15 to 25 milk ducts (Lawrence, 2005: 50). It contains smooth muscle fibers and is richly innervated with sensory nerve endings that cause it to become erect when stimulated.

As regards subcutaneous tissue as well as fat and connective tissue, the size of a woman's breast reflects the amount of fat and connective tissue, not glandular tissue. The body of the breast is composed of tubuloalveolar gland containing 15 to 25 irregular lobes radiating from the nipple. Each lobe has a lactiferous duct (2 to 4 millimeters in diameter) lined by stratified squamous epithelium. The duct from the lobus goes to the nipple. Lobi are subdivided into lobuli (about 20 to 40 lobuli in the breast), and each lobulus is again subdivided into 10 to 100 alveoli (Biancuzzo, 2003: 58-59).

Lactogenesis and lactation

Lactogenesis is "the process by which the mammary gland develops the capacity to secrete milk" (Neville, Morton, & Umemura, 2001). Lactogenesis occurs in two stages, referred to as lactogenesis stage I which begins around the middle of pregnancy and lactogenesis stage II which begins at two to three days postpartum when the major compositions of milk such as sodium, chloride, and protein are changed (Neville, 2001). Milk production at 46 to 96 hours postpartum is usually referred to as the coming-in of milk. According to Neville (2001), the volume of milk transferred to the newborn begins to increase dramatically at approximately 36 hours

postpartum and continues to increase for approximately 48 hours. Also, the volume of milk increases from zero to about 200 milliliters at 48 hours postpartum.

Lactation is the process of milk secretion and maintenance of established milk secretion originally called galactopoiesis. Established lactation is regulated by two hormones in the hypothalamic-pituitary axis regulating levels essential to the maintenance of lactation; that is, prolactin and oxytocin (Lawrence, 2005: 79). Human prolactin is a significant hormone in pregnancy and lactation, and prolactin levels rise during pregnancy and drop for a brief time before birth before rising again a few hours after birth or as soon as the neonate is suckled. Oxytocin is the primary hormone responsible for the milk-ejection reflex, or "let-down," and its levels rise significantly during the first 45 minutes after delivery compared with the levels at 15 minutes before delivery (Nissen et al., 1995: 530-533). Suckling stimulates the release of adenohypophyseal prolactin and neurohypophyseal oxytocin, both of which stimulate milk synthesis and production of milk-ejection. Although both oxytocin and prolactin released are stimulated by nipple stimulation, some oxytocin is released by other sensory pathways, such as visual, tactile, olfactory and auditory (Newton, 1992). However, responses to physical stress such as pain, exercise, cold, and heat are blunted or reversed during lactation (Lawrence, 2005).

Benefits of breastfeeding

Human breast milk is specifically produced for the need of the human infant because it contains a balance of nutrients that matches requirements for growth and cognitive development, especially in the first year of life (Picciano, 2001: 53-67). Breast milk contains specific antibodies such as leukocytes that protect the infant from infection of the upper and lower respiratory system (Center for Disease Control and Prevention, Department of Health and Human Services, 2003). The infants who are breastfed have reduced risks of type 1 and type 2 diabetes, childhood lymphoma, and allergy (Pettitt, Forman, & Hanson., 1997: 166-168).

Breastfeeding provides the mother with a number of benefits. Women who breastfeed their infants return to the pre-pregnancy state more promptly than those who do not. This is because breastfeeding increases the level of oxytocin, a hormone that stimulates the uterus to contract and induces a more rapid uterine involution (Ball & Bennett, 2001: 253-262). In addition, breastfeeding decreases the risk of

osteoporosis, as serum calcium and phosphorus concentration are greater in lactating than in nonlactating women. Lactation stimulates the greatest increases in fractional calcium absorption and serum calcitriol after weaning (Kalkwarf & Specker, 1995: 26). Mothers who breastfeed their infant have been shown to experience an increase in the mothers' engrossment with and attachment to their infants. Finally, breastfeeding empowers the mothers as it enables them to develop self-esteem and assertiveness (Kuzela, Stifter, & Worobey, 1990: 185-194).

Successful milk production and transfer

1. Duration of suckling

Breastfeeding should take place immediately after delivery or as soon as possible or within half and hour to one hour after delivery. This is because this stage is the most alert active for the infants and mothers. Significant elevations of the maternal oxytocin level occur at 15, 30, and 45 minutes after delivery when the infant is put skin to skin with the mother, and the level returns to baseline after 60 minutes if the infant dose not suckle (Nissen 1995: 530). The total duration of early feeding should be at least 15 minutes per breast (Leifer, 2003: 225:229). The duration of the feeding may be related to infant consumption but not maternal production of milk. In the past, it was believed that limiting time at the breast minimized or prevented sore nipple. On the contrary, it appears that restricted breastfeeding has been associated with an increase in sore nipple (Renfrew, Lang, & Martin, 2000).

2. Frequency of suckling (Biancuzzo, 2003:54-57)

Frequency of suckling is important because it provides stimulation to the maternal breasts. Milk production increases as the frequency of stimulation increases during the first month of life. During the first 60 hours of life, time between feed is 3.36 ± 0.17 hours, for an average of seven to eight feedings per 24 hours. However, in the early days, feeding 10 to 15 times in a 24-hour period is not usual.

3. Effectiveness of suckling

Suckling is removal of the milk from the breast, not just mouth to nipple contact. Good positioning and latch-on are prerequisites for milk transfer. The nipple should be centered in the newborn's mouth, and the mother should wait until the jaw is completely extended. This open-wide concept is central to achieving effective latch-on. The tongue should be scoop-shaped. If the infant latches on before his or her

mouth is gaping open, the mothers should insert their finger between the mouth and the nipple to break the suction (to prevent sore nipple).

Breastfeeding techniques

1. The mother should clean her hands with soap and water.

2. The mother's position should be prepared. The good body position for the mother is to sit on a chair with a foot-stool beneath her feet and pillows to support her arm to help maintain a good position. The breastfeeding can take place in the bed when the mother lies down in a semi-Fowler's position and the infant lies beside her. The mother should be reminded to relax her shoulders for comfort. The mother who hunches over when breastfeeding should be instructed to sit up straight, and she should bring the infant to the breast, not the breast to the infant (Biancuzzo, 2003: 150). The mother can hold her breast in hand position to support breastfeeding with all the fingers under the breast and only the thumb above the palmar grasp, which is called the C-hold position. If the hand is large or the breast is small, the suitable hand position for the mother is the scissor grasp or the V-hold, with the thumb and index finger above the areola and third finger below the breast.

3. The newborn's position can be prepared with four basic positions used during breastfeeding as follows:

- Cradle Position: The mother holds the newborn chest-to-chest with the arm of the same breast while feeding the newborn. The mother has to make sure that there is no space between the mother's body and the newborn's body and that the newborn is held at the same level as the nipple.
- Cross-cradle Position: The mother holds the newborn with the arm opposite the breast while feeding the newborn.
- Side-lying Position: The mother lies down and the newborn is placed on its side facing the breast, while the mother is holding the breast with her upper hand. A rolled-up blanket is used to support the back of the newborn, and a pillow is used to support the mother's knees and back to ensure comfort.
- Football Position: The mother holds the newborn on the same side of her breast and supports the newborn's head with her arm. The football hold is generally used with the mothers who underwent a cesarean section for child delivery.

4. The mother hold breast for newborn in favorite position, pull the baby to skin to skin contact and help the newborn in ventral surface, bring the breast to the newborn. When the woman's back is straight the nipple are in position that newborn can best achieve good latch-on.

5. The mother repositions the newborn on the second breast if the newborn is still interested after releasing the first side (Lawrence, 2005: 275). If the newborn is asleep, the mother can use the finger to touch the newborn's cheek to stimulate suckling.

6. The mother can check signs of satiety including sounds of swallowing dwindling and stopping, nonnutritive suckling occurring in brief bursts, arms and legs reflex, falling asleep, and usually releasing the nipple (Lawrence, 2005: 275).

The mother and nurse can determine the effectiveness latch-on to prevent most of the problem associated with sore nipple. The LATCH system is the tool developed by Jenzen, Wallance, & Kelsay (1994: 27-32) to evaluate effectiveness of breastfeeding efforts as described in detail below:

1. L (Latch) refers to how the infant's mouth covers the areola and the nipple (the mother should try to avoid covering only the nipple). Two points are given if the infant correctly covers the areola and the nipple; that is, his or her chin and nose have to touch the breast, the mouth is open on the sides, and the infant can rhythmically suckle. The mouth has to cover the areola so that the tongue can massage or press the areola to stimulate the breast to secrete the milk. One point is given if the infant covers only the nipple, but not the areola, which is wrong as the milk will not be secreted well and cracked nipples can result. When the mother has cracked nipples, the pain will prevent her form continue breastfeeding. Finally, no score is given if the infant is not interested in covering the areola or the nipple, or if the infant is too sleepy to latch.

2. A (Audible) refers to how clearly the suckling sound is heard. Two points are given if the suckling can be heard clearly in rhythms, which means the infant is able to latch very well. One point is given if the suckling sound is not clearly heard, and no point is given if the infant refuses to suckle or makes to sound while suckling.

3. T (Type of nipple) refers to three aspects of the breasts including shape, size, and texture. As regards shape, the nipples should not be non-protruding or inverted

nipples. As for size, consideration has to be made whether the nipples are too big for the infants' mouth. Finally, with regard to texture, the elasticity of the areola and the nipples is determined. Besides, the nipples need to be examined to see if there is any wound or injury. As for scoring, two points are given if the nipples are normal in terms of shape, size, and texture. If the nipples are abnormal, the abnormality should be taken into consideration whether it interferes with latching such as non-protruding nipples, unusually large nipples, or nipples with cuts or wounds. No point is given if such abnormalities are found. A score of one point is given if it is in between.

4. C (Comfort) is determined by asking the mothers to assess if they feel comfortable during breastfeeding. Physical examination is conducted to see if the nipple is injured, if the breasts are engorged, or if there is any sign of inflammation or abscess. Two points are given if the mothers are happy when breastfeeding their infants, and no point is given if the mothers experience discomforts including aching during or after breastfeeding, cracked nipples, signs of inflammation or abscess, or breast engorgement. A score of one point is given if the mother feels that she is in between happiness and discomfort.

5. H (Hold) refers to how the mother holds the infant and her breast during breastfeeding. The correct position results in comfort and lack of aching, and the infant will be enabled to latch correctly. The positions used for holding the infant and the breasts are named differently. The former includes cradle, cross cradle, and football holds, while the latter includes V shape, C Shape, and U Shape. This is to enable the physicians or nurses to give advice to the mother which positions to use to hold the infant and to hold the breast when the mother has a certain shape of breast or when they suffer from a cracked nipple. If the mother continues to hold the infant in the same position, the pressure point will remain the same. However, when the mother changes the position, the pressure point on the nipple will be changed as well, and this can help the mother avoid the wound. Two points are given if the mother can correctly hold the infant and her breast with comfort and without ache or pain, hence a good latch. On the other hand, if the mother does not have a correct holding position, experiences discomfort, or the baby cannot latch very well, no score is given. One point is given if the mother is in between.

After the score for each of the five aspects of L, A, T, C, and H is given, the total score will be calculated. If the APGAR score is lower than 8 and the LATCH score is also lower than 8, breastfeeding is not yet correctly mastered by the mother and assistance should be provided. Thus, in the postpartum ward, LATCH scores need to be assessed in every shift and during transfer of duties. If the LATCH scores are lower than eight, it means that assistance is needed to enable the mother to succeed in breastfeeding.

Hand expression of breast milk

Hand expression of breast milk is indicated for both maternal and infant reasons including when the mother needs to stimulate her breasts to initiate or increase her supply, when the infant is unable to adequately suckle the breast and the mother needs more stimulation, and when the infant is separated from the mother (Biancuzzo, 2003: 407). Hand expression is a simple skill, is convenient, has relatively few bacteria, and contains economic benefits. The procedure of hand expression of breast milk is described below:

1. The mother prepares storage milk containers, washing and boiling the containers for cleanliness (plastic bag designed for storing human milk is recommended). Hands should be cleaned with soap and water.

2. The mother sits in a comfortable and relaxed position, preparing a picture of the baby or sound of the baby's cry to stimulate oxytocin and prolactin secretion.

3. Warm compresses should be applied to the breast, starting with gentle tactile massage around all quadrants. The fingers should be placed under the breast, with the thumb about three centimeters on top of the nipple base. The mother uses the hand to press the breast toward the chest wall and then compress the thumb and fingers together. The hand should be rotated around the breast to stroke all quadrants at different positions (avoid pulling, squeezing, or rubbing motions) (Lawrence, 2005: 1017).

4. The date and time that the milk was expressed should be written on the container. Human milk should be stored in a container between two and four ounces (60 to 120 ml.) at the beginning which is appropriate for each feeding.

Milk storage (Lawrence, 2005: 1019)

1. Milk can be stored at room temperature (up to 77° F or 25° C) for six to eight hours. The temperature greater than 77° F (25°C) may not be safe for room temperature storage. Containers should be covered and kept as cool as possible; covering the container with a cool towel may keep milk cooler.

2. Milk may be stored in an insulated cooler bag with ice packs for 24 hours.

3. Milk may be safely refrigerated (39° F or 4°C) for up to five days. Milk should be stored at the back of the main body of the refrigerator, where the temperature is the coolest.

4. The type of freezer in which the milk is kept determines the duration for which frozen milk cab be stored. Generally, milk should be stored toward the back of the freezer, where the temperature is most constant, instead of the door. Milk stored for the longer duration in the ranges listed below is considered safe:

- Freezer compartment located inside the refrigerator (5° F or -15° C) for two weeks
- Refrigerator/freezer with separate doors (0°F or -18°C) for three to six months
- Chest or upright manual defrost deep freezer that is opened infrequently and maintains ideal temperature (-4° F or -20° C) for six to twelve months.

Thawing or warming milk

1. The oldest milk expressed should be used first.

2. Frozen milk should be thawed by moving it into the refrigerator on the night before use or thawing in a bowl of warm water, rotating the bowl to mix the cream with the rest of the milk.

3. Never use a microwave, hot water, or oven to heat the milk because it develops hot spots and destroy antibodies.

4. Milk left in the feeding container after feeding should be discarded and not used again.

Type of breastfeeding

At a conference held on June 11-12, 1999 in Geneva, WHO proposed the definition of breastfeeding, which categorizes breastfeeding into four type as follows:

1. Exclusive breastfeeding: The infant is fed with only the mother's breast milk, which may come directly from the breast, from expressed milk, or from other human mother's breast without receiving anything else except water, vitamins, minerals, or medications for medical purposes.

2. Predominant breastfeeding: The infant is mainly fed with breast milk together with water, and drinks such as syrup, tea, drink with artificial flavors, drink used in religious ceremonies, as well as juices, vitamins, minerals, or medications for medical purposes, with no formula or other forms of nutrition.

3. Complimentary breastfeeding: The infant receives breast milk together with formula or other types of food such as semi-solid food or solid food.

4. Formula feeding or bottle feeding: The infant receives semi-solid food, or solid food with a bottle and a teat, as well as formula fed with a bottle and a teat.

Breastfeeding is the best way to feed an infant because it ensures that the infant receives all the nutrition needed for growth and development. Infants should be exclusively fed with breast milk for at least six months, as stated in the policy of the WHO. However, Roongtip Samritsopak (B.E. 2542) studied the duration of maternity leaves and patterns of breastfeeding of working mothers living in Bangkok and found that none of the subjects exclusively breastfed their infants for four months. There was only one infant who mainly received the mother's breast milk, accounting for only 0.4%. Also, mothers liked to give the infants water together with breast milk believing that doing so would help clean the infants' mouth, prevent jaundice, help stimulate bowel movement, or they believed that infants needed water just like adults. In addition, Srinual Osotsathien (B.E. 2533) found that 34.62% of teenage mothers exclusively breastfed their infants, 52.56% used formula together with breast milk, and 11.54% used only baby formula.

Duration of breastfeeding

Breast milk is unique as its components constantly change to suit the infants' growth and development in each stage and age. Moreover, it acts as a contraceptive and also helps the mothers save money for formula. Therefore, breastfeeding is considered the best form of feeding for infants. In 1979, WHO began to promote breastfeeding during the first four to six months after birth, without definitely

specifying the duration of four or six months. The Division of Nutrition, Ministry of Public Health, then stated that there was only breast milk that best suited the infants' nutritional needs to comply with WHO and UNICEF which emphasized that newborn infants should be exclusively fed with breast milk until they were four months old and that breast milk contained necessary nutrition for the first six months of life (Sanga Damapong, B.E. 2537: 28). When the infants reached the age of six months, they would need more nutrition, and the mothers could continue breastfeeding together with feeding the infants with supplementary foods until the infants were two years old. After that, however, specialists began to realize that the duration of exclusive breastfeeding should be extended to six months as research findings have shown that exclusive breastfeeding has positive effects on the infants' health. At the 54th World Health Assembly (WHA), WHO changed its recommendation of exclusive breastfeeding from four to six full months without water or other supplementary food. It has been found that extending the period of exclusive breastfeeding from four to six months clearly benefits both the mothers and their infants. As for the infants, they tend to have normal growth and development, and they have reduced risks of respiratory and digestive tracts infection. As for the mothers, this will prolong the menstruation and help them lose weight better (Siraporn Sawasdiworn & Sophon Iamsirithavorn, B.E. 2548: 99). However, in the past two decades, the rate of exclusive breastfeeding has obviously declined. It has been found that most mothers begin with exclusive breastfeeding, but within one month after birth, the rate of exclusive breastfeeding will reduce by 20%. The mean duration of breastfeeding is 12.70 months (Nantiya Panchana, B.E. 2536), which is a remarkable decline from the mean of 17.60 months found in a study conducted in Thailand in 1984. A survey of breastfeeding conducted with newborn infants who sought medical care at the newborn clinic of Charoenkrungpracharak Hospital in 1997-1998 revealed that working mothers began feeding their infants with formula within one month after birth (Piyapat Trangkapan, B.E. 2544).

Problem of Breastfeeding in Working Mothers

In modern culture, more women are employed outside the home. A survey carried out in Thailand in 1991 confirms that the percentage of women who work

outside rises to 46.4% (Sukanya Prajusilp, B.E. 2548). It has been found that working mothers breastfeed their babies for a shorter period of time as compared with the mothers working at home. The effects of employment on the duration of breastfeeding may be influenced by the fact that breastfeeding can be carried out while the mothers perform other tasks around the house so that it is easier to breastfeed when the mothers are home. These trends are confirmed by recent surveys (Krieger, 1992). In 2002, the duration of breastfeeding at six months was as follows: 21.7% of those mothers who were employed full time breastfed their infants, 36.9% of the mothers who were employed part time breastfed their infants, and 35.2% of those who were unemployed breastfed their infants. Likewise, Roongtip Samritsopak (B.E. 2542) investigated the duration of breastfeeding among 250 working mothers in Bangkok. The findings showed that only 1% continued to breastfed their infants at four months. The mothers cited "going back to work" as one of the most important reasons they would choose not to breastfeed. Mothers planning to return to work before six to eight weeks postpartum experience the likelihood that will not continue breastfeeding (Noble, 2001: 423-428). Discontinuation of breastfeeding among working mothers may also be caused by "role overload" (Green, 2003: 418-419), as the mothers feel the conflict between work responsibilities and mothering responsibilities and assume that breastfeeding will intensify that conflict.

Besides, more women feel forced to return to work for economic reasons. In Thailand, government officials are allowed to take a 90-day paid maternity leave, plus another 150-day unpaid leave. As for employees under the protection of the Social Security Act, they are able to take a 90-day maternity leave during which they will receive no more than twice financial reimbursements. However, in reality, the mothers generally take a shorter leave than that allowed by the law. This is because they feel that they have a lot of duties and responsibilities, they want to earn an income, and they are afraid that the leave will affect their promotion or salary (Roongtip Samritsopak, B.E. 2542). According to the law, the mothers receive financial support for the first 45 days from Social Security Office, and another 45 days from the employer or company, but most mothers take only a 45-day leave and return to work to earn their salary. Thus, they receive money from the Social Security Fund, from the employer, and their own salary. For this reason, even though the law

allows them to take a 90-day leave, they tend to take only a 45-day leave. This is a method used by the employer or company to make the employees return to work sooner. Furthermore, other problems are found to be related to work setting. In general, these are lack of administrative policy, lack of a place to express milk, and lack of understanding of the importance of breastfeeding on part of the employer. Other barriers to breastfeeding among working mothers may be due to lack of knowledge about milk expression and milk storage, stress, and exhaustion from work (Kanchana Kamdee, B.E. 2537).

Problems of Breastfeeding in First-Time Mothers

Pregnancy and childbirth are major changes in life, leading to a development of a human's life. During pregnancy and after childbirth the mothers have to undergo drastic physical, psychological, emotional, and social changes. According to Mercer (1981: 73-75), the mothers aged between 20 and 30 years old have better emotion, learning, and decision making skills than mothers who are younger than 18 years of age. Also, the mothers aged between 20 and 29 years old and 30 and 42 years old have better maternal development than those who are teenage mothers aged between 15 and 19 years old (Mercer, 1986: 25-32).

However, first-time mothers tend to lack experience, knowledge, and skills to take care of their infants and breastfeed them. They also have anxiety and worry after having to take the maternal role. According to Graham & Oakley (1981), mothers not only want to give birth to a healthy baby, but they want to have positive experience during pregnancy and after child delivery as well. In the present study point out that mothers need to learn new roles and adapt good maternal skills as they have to endure new experiences, exhaustion, and anxiety about the health of the newborn infants, especially first-time mothers, which restrict their maternal role development and can lead to stress. Thus, mothers need advice, support, and assistance from family members or specialists to give knowledge and demonstrate how to take care of the infants from family members (Tarkka, Paunomen, & Laippala, 1999).

Previous studies have indicated that 50% of the first-time mothers have anxiety after childbirth and tend to come back to the hospital to seek help from experts. In other words, first-time mothers need help, support, and guidance from healthcare staff

to take care of infants including solving problems with breastfeeding such as cracked nipples, insufficient breast milk, infected breasts, etc. (Birchfield, 1963: 96 cited in Aungsana Siriwattanametanont, B.E. 2545: 30-31).

Supportive-Educative Nursing Systems with Social Support

In the present study, the breastfeeding promotion program was developed based on the theory of supportive-educative nursing system proposed by Orem (1991) that the nursing system is a system in which nurses apply both theoretical and practical knowledge to find a balance between self-care efficacy and the desires to perform total self-care of service receivers. Such nursing system will take place when nurses have interactions with the mothers to learn about their problems and needs for care before taking action by giving nursing care to respond to the mothers' needs (Somjit Hanucharunkul, B.E. 2544: 37). Nurses use their ability to determine the total needs of care of the patients and make judgment about their self-care deficits by comparing the patients' then efficacy and select the nursing systems categorized based on types of care which are further divided according to individual patients' self-care efficacy. Put another way, in the supportive-educative nursing system, mothers determine their total needs of care and take care of themselves with teaching, advice, and support from nurses. Both the mothers and their husbands, who are the significant others, involve in the teaching and consultation. Nurses then constantly provide stimulation and encouragement to enable mothers to maintain self-care efficacy based on nurses' assistance as follows:

1. Teaching: Nurses teach mothers and their husbands to develop knowledge and skills to increase their ability to take care of and breastfeed the infants. The teaching aims at increasing the mothers' and husbands' integrity and sense of self-worth. Sometimes there may be problems caused by mothers' and husbands' beliefs or attitudes that are different from those of the nurses. However, nurses have to always keep in mind that mothers and husbands are key players in deciding which activities to perform self-care after hospital discharge, which may be based on their own knowledge, understanding, and interpretation of the events. Therefore, these factors need to be assessed by nurses to increase the effectiveness of the teaching and consultation. In general, nurses should teach the mothers and husbands and give

advice on what they want to know. Nurses have to ask them and listen to what they have to say, thus making them feel that nurses are interested in them and creating a feeling of trust. This will increase the mothers' and husbands' interest and attention to learn more. Besides, the contents of the teaching need to supplement what the mothers and husbands already know as learning is an activity which aims at adjusting or promoting ideas, thoughts, and actions. For this reason, previous experiences of mothers and husbands are important and need to be taken into careful consideration by nurses when setting the goals and planning for lessons to promote more learning. In addition, the readiness of the mothers and husbands need to be considered because if they are too stressed or anxious, they may have restrictions in learning. Furthermore, learning can be better enhanced if mothers and husbands have a chance to take part in actual practice which will enable them to learn from their mistakes and increase their learning and memorization (Somjit Hanucharunkul, B.E. 2544: 44-46).

2. Advice: Giving advice is a method to be used when mothers and husbands are capable of making decisions to select appropriate self-care activities to promote breastfeeding under the direction and supervision of nurses. Advice may be in the forms of suggestions or instructions, depending on the situation.

3. Support: Nurses promote mothers' and husbands' attempt to breastfeed their infants. The supports of the nurses may be verbal or non-verbal, and nurses may offer both physical and spiritual supports to increase the mothers' morale and confidence to breastfeed their infants. Nurses need to provide support at the right time, place, and situation of individual mothers and husbands so as to enable them to breastfeed their infants successfully.

4. Environmental management: This is nurses' attempt to promote self-care efficacy of mothers and husbands to breastfeed their infants or to adjust their activities appropriately. It is a method that can be used to increase motivation of mothers and husbands to set goals and adjust behaviors to achieve the goals. Environmental management also includes adjustment of attitudes and values of self-care practices. Nurses may offer the mothers and husbands to interact with nurses or other persons to receive encouragement and support. Nurses' efforts to manage the environment in the postpartum ward include initiate breastfeeding within 30 minutes after delivery, rooming-in, or bedding-in, which can result in more frequent breastfeeding practices.

Also, the environment which facilitates development tends to facilitate learning as well (Orem, 1985 cited in Somjit Hanucharunkul, B.E. 2544: 48).

When providing a supportive-educative nursing system to mothers and husbands, in addition to dissemination of knowledge, adjustment of attitudes, and practicing skill development, mothers need motivation so as to successfully breastfeed their infants. Motivation is seen as one of the ten capabilities that enable self-care practices and links perception with action.

Behavioral theories related to motivation maintain that social driving force and environment have an influence on individuals (Somjit Hanucharunkul, B.E. 2544: 123-124). Social support is a psychosocial factor which has been long accepted as affecting behaviors and health of human beings in terms of physical and mental well-being, disease prevention, health promotion, and compliance with medical advice. The concept of social support has been widely studied by anthropologists, physicians, nurses, psychiatrists, psychologists, and social security specialists. As a result, social support is viewed differently based on the concepts of the investigators. Kaplan, Cassel, & Gore (1977: 50-51) define social support in two ways. First, social support refers to interaction with other individuals which makes individuals satisfied with social basic necessities including respect, acceptance, recognition, security, compassion, and assistance received from the group. The second definition of social support involves the relationship which can be perceived from social groups which are significant to individuals. House (1981) contends that social support is an interaction between individuals which involves love, care, affection, trust, financial and material support, labor, information, and feedback for learning and self-assessment. Social support, especially emotional support, enables individuals to reduce stress and better withstand problems. Social support is also seen as absorbing or relieving the effects of stress to prevent both physical and mental sickness through stress coping processes. If individuals have sufficient social support, they will not assess an arousal as a stressor. Even though they assess the arousal as a stressor, they will not be seriously affected by it (Caplan, 1974 cited in Prapit Pichitwaipreecha, B.E. 2539: 30).

Although there are various definitions of social support provided by different scholars and researchers, it can be concluded that social support refers to individuals'

reception of love, care, attention, as well as their being valued and accepted by others, including closeness, participation, and sense of belonging to society. It also involves information, advice, and material support, financial support, time, and labor individuals receive from others through social interactions which help them solve problems and enable them to develop desirable behaviors to maintain health.

Social support from spouses is a microlevel of support which affects individuals' adaptation and health, physically, mentally, and socially. This is because the relationship between the husband and wife is a particularly close relationship which is filled with love, attachment, mutual understanding, and interdependence. That is, when the wife takes care of the family, the husband will acts as a provider who finds money, materials, and facilities for the family. When one partner is sick and unable to fulfill his or her role in the family, the other has to take over the partner's responsibilities. As a consequence, social support from a spouse is an effective and significant form of social support as it enables the couple to continue living their lives together. Previous studies have pointed out the most important source of social support of teenage mothers is the husband (Kamolrat Suppatitpattana, B.E. 2533; Sopit Suwannawela, B.E. 2537; Nanta Kaliang, B.E. 2541). Lowenstein & Rineheart (1981) conducted a study and found that married individuals have better healthcare practices than those who are not married. This means that the spouse has an influence on individuals' self-care practices. Therefore, in the present study, the researcher employed the concept of social support of House (1981) to assess social support the mothers received from their husbands. According to House (1981), social support can be categorized into four aspects as follows:

1. Emotional support is an expression of respect, value, love, trust, care, attention, and compassion. When mothers feel that they receive such feelings from their husbands, they will develop mental security and warmth, and they will not experience loneliness in life (Kaplan et al., 1977 cited in Prapit Pichitwaipreecha, B.E. 2539: 30). Emotional support helps reduce the effects of stress on physical and mental well-being of individuals. It enables individuals to better cope with problems. The more stress individuals have, the more beneficial social support will become. Immediately after giving birth, first-time mothers have to deal with stress caused by having to adjust themselves to the new role. Consequently, postpartum mothers need

to receive social support, especially from their husbands who are the closest persons. Chantakan Angkawattananont (B.E. 2540) found that social support from spouses could reduce stress and increase sense of security and stability as individuals feel that they are loved, cared for, valued, and respected, which could lead to appropriate self-care practices.

2. Appraisal support refers to provision of information necessary for self-learning or information that mothers can make use of when performing self-assessment. It enables mothers to feel certain about agreement, disagreement, and acceptance of the correctness or appropriateness of their decisions regarding breastfeeding. Thus, appraisal support makes mothers confident and committed to breastfeeding when comparing themselves to others who are around them. On the contrary, if mothers are not certain about what they are doing, or feel that their breastfeeding is objected to or unaccepted by others, they may neglect or discontinue the practice.

3. Information support refers to husbands' provision of advice, suggestions, warnings, and consultancy regarding breastfeeding as well as information about breastfeeding and participation in making decision about breastfeeding (Saranya Jitcharoen, B.E. 2537), especially in the postpartum period when mothers are under pressure and stress and need information to cope with stress. Most of the information comes from persons they value, believe in, or have faith in, or from physicians, nurses, or close persons such as husbands, which enables mothers to develop sense of self-confidence and ability to solve problems (Onuma Sonpa, B.E. 2547).

4. Instrumental support refers to direct participation in activities which enable mothers to breastfeed infants such as helping with household chores or taking care of the infants to reduce the burdens of the mothers. If husbands do not provide assistance in different activities, mothers will have to shoulder all the burdens and they may become too stressed or exhausted to continue breastfeeding (Saranya Jitcharoen, B.E. 2537).

Spouse Involvement in a Breastfeeding Promotion Program

In recent years, the structure of the family has been changed from extended families to nuclear families. The number of family members has also reduced from

five members on average in 1980 to four members on average in 1990 (Office of Elderly Promotion and Protection, B.E. 2549). The family members usually consist of the father, mother, and children. Thus, becoming a mother during pregnancy and after delivery entails physical, mental, and social changes for women. The fathers are recognized as significant persons who can provide necessary support to the mothers (Yimyam, 2003: 150-160). After delivery, what mothers need most are support and advice from husbands. According to Humenick & Burgen (1987: 36-39), postpartum mothers who have difficulty adapting to the new role tend to find that the husband is the only source of support they have. Also, breastfeeding is not only the mother's business, but it requires participation on part of the husbands and family members. Husbands are significant persons who can support and promote breastfeeding by giving moral support and encouragement to mothers and helping mothers with other tasks. If husbands understand the significance of their role, there is more likelihood that the infants will be exclusively breastfed. Put another way, support from the infants' fathers through active participation in the breastfeeding decision, together with a positive attitude and knowledge about breastfeeding benefits, has been shown to influence the choice and duration of breastfeeding (Chew, Kim, Kevin, & Harden Carter, 2000). A previous study conducted by Iolanda et al. (2004) has revealed that the husbands of mothers who exclusively breastfeed their infants tend to have more positive attitudes and understanding of benefits of breastfeeding than those who use formula to feed their infants. Likewise, in an Australian study, Scott et al. (2001) reports that women who perceive their partners to favor breastfeeding are significantly more likely to breastfeed at discharge than women who perceive their partner to either prefer formula feeding or to be ambivalent about how their infant is fed. It may be assumed that husbands may play a certain role which influences the mothers' decision to breastfeed the infants (Jordon & Wall, 1993). Furthermore, Lawrence (2005:229-230) has suggested that the husbands may well play the active role of the doula who provides psychological encouragement and physical assistance to the newly delivered mothers because they understand the importance of what the mothers do. The husbands' support of lactation has been associated with both increased rates of initiation and prolonged duration. In one study, when husbands were strongly supportive of providing breast milk, initiation rates increased to 98.1%

compared to 26.9% when the husbands were indifferent (Littman, Medendorp, & Goldfarb, 1994: 423-428).

Research on Breastfeeding Promotion Programs

A review of research has indicated that there is no study which investigated the use of a supportive-educative nursing system with spousal involvement to promote duration and rate of exclusive breastfeeding. However, a number of studies have been carried out and reported that breastfeeding success depends on husbands' participation in dissemination of knowledge on breastfeeding with the mothers.

Sciacca (1995) investigated the effects of a program to provide detailed basic knowledge and spousal support on knowledge, attitudes, and support of breastfeeding among 68 first-time mothers. In this study, both the mothers and their husbands participated in activities to receive detailed knowledge about breastfeeding. The findings showed that both the mothers and their husbands had more positive knowledge and attitudes toward breastfeeding. Besides, having the husbands participate in dissemination of knowledge about breastfeeding and practice breastfeeding techniques had more influence than mothers' intention to breastfeed their infants during pregnancy. Also, the husbands in the experimental group showed more support to the mothers than those in the control group. Therefore, it could be concluded that the husbands were better able to support breastfeeding, had more knowledge, showed more support, and were able to stimulate the mothers to continue breastfeeding. Moreover, Lulie et al. (1999) examined the effects of an educative program on breastfeeding provided to postpartum mothers and their husbands on frequency of breastfeeding. The subjects were divided into three groups—208 couples in group 1, 197 couples in group 2, and 196 couples in group 3. Group discussion and videos were used, and mothers and their husbands were asked to respond to a breastfeeding questionnaire immediately after child delivery and at one month postpartum. The findings revealed that the mothers and husbands with high scores on breastfeeding knowledge had higher frequency of exclusive breastfeeding and that the husbands' knowledge on breastfeeding had an effect on the rate of exclusive breastfeeding with statistical significance. Likewise, Stremler & Lovera (2004) studied a supportive-educative program which provided knowledge on how to

assist and support the breastfeeding mothers and how to maintain the role of the husbands. Advice on other related issues was also offered to the husbands. It was found that the mothers whose husbands received the supportive-educative program had a higher rate of breastfeeding than those whose husbands did not participate in the program.

In Thailand, Sirirat Angkanavin (B.E. 2544) studied the effects of the fathers' participation on the role of husbands to take care of the children, pattern of feeding, and duration of exclusive breastfeeding after child delivery. The experimental subjects received a breastfeeding promotion program twice—immediately after child delivery and on the following day. After that, house visits were conducted at the fourth, eighth, and 12th weeks after delivery. It was found that the scores of paternal role and duration of breastfeeding of the experimental subjects were statistically significantly different from those of the control subjects at the .05 level. Also, at the fourth week postpartum, the patterns of feeding of the experimental subjects and the control subjects were different with no statistical significance at the .05 level. However, at the eighth week and 12th week postpartum, the patterns of feeding of the subjects in both groups were statistically significantly different at the .05 level.

However, there is no study that has been conducted to investigate the effects of spousal involvement in a breastfeeding promotion program among first-time working mothers. In fact, these mothers have to encounter various problems and obstacles in breastfeeding, and this results in a lower rate and shorter duration of breastfeeding when compared to other groups of mothers. Thus, the researcher was interested in using a supportive-educative nursing program involving spousal support to increase these mothers' motivation to successfully maintain exclusive breastfeeding for the benefits of the infants and the mothers.

CHAPTER III
METHODOLOGY

Research Design

The present study was quasi-experimental research which aimed to investigate the effects of spouse involvement in a breastfeeding promotion program for working mothers on exclusive breastfeeding during the first month postpartum at Bangkok Metropolitan Medical College and Vajira Hospital . The sample was divided into the experimental and control groups. The experimental group received the breastfeeding promotion program with spouse involvement and routine nursing care, while the control group received only the routine nursing care provided by the hospital.

Population and Sampling

The population of this study was working mothers and their husbands who received prenatal care and had normal labor at Bangkok Metropolitan Medical College and Vajira Hospital.

The sample of the study was selected by means of purposive sample based on the recruitment inclusion criteria listed below:

1. The mothers had gestation age over 28 weeks and had normal breasts and nipples.
2. The mothers had normal labor with no complication before or after delivery.
3. The mothers, their husbands, and their infants lived together as a family in the same house in Bangkok Metropolis.
4. The mothers and their husbands were able to read and write the Thai language.
5. The husbands were willing to continuously participate in the breastfeeding promotion program.
6. The mothers were employed.

7. The mothers intended to breastfeed their infants.

The exclusion criteria were as follows:

1. During the study, the mothers and the infants had complications that were a contraindication to breastfeeding.

2. During the study, the husbands terminated their involvement in the breastfeeding promotion program.

3. The researcher lost contact with the mothers and their husbands during the study.

Study sample

The sample of this study consisted of 100 first-time working mothers who were recruited by means of purposive sampling. The sample was divided into two groups—the control and experimental groups. Each group consisted of 50 subjects. Data collection was first conducted with the experimental group, and after its completion, data were then collected from the control group to prevent contamination of information of data.

The mothers and their spouse in each group were then paired by matching their age and educational level on the basis that the age difference of the mothers and their spouse in each pair was less than five years and that their educational background was similar.

Research Setting

Data were collected at Bangkok Metropolitan Medical College and Vajira Hospital which is located in Bangkok Metropolis. It is a hospital with 1,000 beds, and it has adopted the baby-friendly initiative following the guidelines proposed by UNICEF and WHO to promote breastfeeding. The pregnant women who seek prenatal care at the hospital generally receive knowledge about breastfeeding, and those with normal delivery also receive information about self-care during the postpartum period and childcare at the postpartum ward. The mothers with normal delivery who do not have any complications usually stay at the hospital for three days and will be scheduled for a postpartum follow-up four weeks after hospital discharge

at the family planning clinic. The infants will be first scheduled for a follow-up and vaccination at the Pediatric Outpatient Department when they are one month old.

Sample size

In determining the sample size, this study aimed to compare the differences in the mean of duration of breastfeeding between the 2 groups by using t-test with a power of .80 at a significant level of .05. From the previous researches, they found that the effect size were .31 and 1.37 (Poungkaew, 2005; Sirirat Oangkanawin, B.E. 2544). Most of the researches in nursing could not determine the effect size of more than .50 (Polit & Beck, 2004: 498). Therefore, the effect size was determined at the .50 level with the sample size of 50 cases per group (Cohen, 1988: 52-54). This study selected the sample size of 100 cases by studying on a continuing basis about effects of continuing spouse involvement in breastfeeding promotion program of working first time mother on exclusive breastfeeding in the second phase beginning with the baby aged 1 to 4 months old. First phase of the study started at the third trimester, during postpartum and follow up on exclusive breastfeeding in the first month of child's life.

Instrumentation

1. Research Instruments

The research instrument was the supportive-educative nursing program to promote breastfeeding among working mothers.

The program was composed of the activities designed based on Orem's nursing theory, textbooks, and relevant research on breastfeeding. The program could be divided into four stages as follows:

Stage 1: During the third trimester

- Relationship building phase

The researcher established rapport with the subjects in the groups and among the subjects in the group. The researcher introduced herself and let the subjects in the group introduce themselves to the other group members. An easy and comfortable atmosphere was also created. After that, the researcher informed the subjects of the objectives and steps involved in the program. The focus of this phase was to enable

the mothers and their husbands to feel confident to share their feelings, ideas, beliefs, and attitudes toward breastfeeding.

- Operational phase

During the third trimester, the researcher tried to convince the mothers and husbands to breastfeed their infants by disseminating knowledge about benefits of breastfeeding, anatomy of breasts, and mechanisms involved in production and secretion of breast milk. The subjects' misconceptions and negative attitudes toward breastfeeding were also adjusted under an appropriate environment. Experienced mothers who had been successful with breastfeeding were invited to share their stories, and the subjects and their husbands were motivated to interact and exchange ideas within the group. They were also offered the opportunity to practice techniques and methods in breastfeeding. Advice and suggestions were given if the mothers and their husbands needed improvement, and compliments were given when they were able to practice breastfeeding correctly so as to encourage them to continue good practice.

Stage 2: Within 24 hours postpartum

The research met each of the couples within 24 hours after giving birth to emphasize problem solving and encourage the mothers and their husbands to solve problems with breastfeeding by themselves. The researcher elicited information regarding the problems the couples were facing and gave them teaching and advice to help solve such problems. The involvement of the husbands was emphasized to enable them to assess breastfeeding skills of the mothers. Assistance and support was provided to the mothers to create their motivation to breastfeed their infants under an environment which was private and filled with interactions between the mothers and their husbands.

Stage 3: Before hospital discharge

Before the mothers were discharged from the hospital, the researcher met with the couples again to instill confidence in their ability to breastfeed their infants after returning home and to solve problems related to breastfeeding in different situations. The researcher asked the mothers and their husbands about their feelings, problems, and obstacles during their stay at the hospital and which may take place at home. After that, the researcher taught and gave advice on how to solve breastfeeding

problems such as engorged breasts, too much leaking, feeding from a cup, etc. and how to breastfeed their infants after they had to go back to work. Techniques on how the husbands could provide assistance to the mothers to maintain breastfeeding were also disseminated. The activities were conducted under an environment which facilitated learning and practice, and a breastfeeding manuals for the fathers was also given.

Stage 4: Within four weeks postpartum

The researcher used telephone calls to visit the mothers and their husbands with an aim to act as a consultant to help the couples overcome obstacles in breastfeeding. Emotional support was given through the use of kind, persuasive, and motivational talks to encourage the mothers and their husbands to continue breastfeeding. Telephone calls were made within 48 hours after hospital discharge, one week after delivery, two weeks and four weeks after delivery. The mothers and their husbands were assured that they were able to call the researcher at any time if they had problems with breastfeeding.

Learning materials

In this study, a number of learning materials were used to promote breastfeeding. They were as follows:

1.1 A breastfeeding manual called "Breast milk…an investment for the baby's brain" which was constructed by the Breast Milk Center of Thailand was used by the researcher. The manual contained information regarding benefits of breastfeeding, breastfeeding techniques, and preparation for breastfeeding when the mothers had to return to work.

1.2 A breastfeeding manual for the father was developed by the researcher based on an extensive review of textbooks, research, and related manuals. The manual covered the topics of benefits of breastfeeding and techniques for husbands to assist and support breastfeeding mothers and to help when the mothers had to resume work.

There were also two sets of video materials used in this study as follows:

The first set was used during the third trimester. Its content consisted of mechanisms involved in breast milk production and secretion, benefits of breastfeeding for both mothers and infants, breastfeeding techniques, and adjustment

of incorrect beliefs and misconceptions such as feeding water after breastfeeding, sagging breasts after breastfeeding, etc.

The second set of videos was used before hospital discharge. The contents included prevention of and solutions to problems with nipples and breasts, expression and storage of breast milk, feeling from a cup, and what to do when the mothers have to return to work, etc.

2. Data Collection Instruments

Data collection instrument comprised demographic data questionnaire, pattern and duration in breastfeeding questionnaire, and a record form of breastfeeding follow-up by telephone contact.

2.1 Demographic data questionnaire was developed by the researcher to elicit data regarding demographic characteristics of the mothers and their husbands regarding age, telephone number, education level, occupation, income, baby feeding plan, and plan to return to work. The data collected also included date of delivery and follow-up date.

2.2 The record form of pattern and duration of breastfeeding was developed by the researcher to record the details regarding breastfeeding pattern and duration, problems or obstacles in breastfeeding, as well as solution to those problems.

2.3 The record form of telephone contact was developed by the researcher to record the details regarding breastfeeding pattern and duration, problems and obstacles to breastfeeding, as well as solution to those problems as elicited through telephone calls after hospital discharge.

Validation of instruments

Content Validity

The content validity of the intervention program and data collection instruments were examined by a panel of five experts comprising one pediatrician, one obstetrician, one pediatric nurse instructor, and two expert nurses at the Lactation Clinic. The instruments were revised and improved according to comments and suggestions from the experts.

Data Collection and Human Rights Protection of the Subjects

1. The researcher submitted the research proposal to the Bangkok Ethics Committee for Research Involving Human Subjects.

2. After permission for data collection was granted, the researcher coordinated with the heads of antenatal clinic, postpartum unit, and pediatric outpatient clinic to inform them of the objectives of this study and the data collection procedures.

3. The researcher selected the subjects and assigned them into the control group and the experimental group by reviewing hospital charts at the antenatal clinic from Monday to Friday from 8:00 a.m. to 12:00 a.m.

4. The researcher met each of the couples and introduced herself. After that the researcher informed them of the objectives of the study and the human rights protection of the subjects. They were told that they could withdraw from the study at any time, and their withdrawal would not affect the treatment they would receive at the hospital. When the couples agreed to participate in the study, they were asked to sign the informed consent from. The researcher then interviewed them and recorded their personal information.

Control group

1. The control group received routine nursing care provided by the ward nurses.

2. At two weeks postpartum, the researcher make telephone contact with the mothers again to collect data regarding the duration and type of breastfeeding. The researcher made an appointment with the mothers at four weeks postpartum for data collection.

3. At four weeks postpartum, the researcher met the subjects in the control group at the Pediatric Outpatient Department. The researcher asked the mothers to complete the questionnaires on the type and duration of breastfeeding.

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

Experimental group

1. The researcher began collecting data from the subjects in the experimental group after the data were completely collected from the subjects in the control group.

2. After the subjects completed their check up procedure, the researcher led them to the health education room. The researcher provided the intervention using the breastfeeding promotion program based on the concept of supportive-educative nursing system on the topic of breastfeeding for first-time working mothers. The researcher conducted the intervention with one group of subjects per day, each of which consisting of no more than five couples. The intervention lasted one hour per day, from 11:00 a.m. to 12:00 a.m. The activities carried out during the intervention were as follows:

2.1 The researcher established rapport within the group by introducing herself and letting the subjects introduced themselves to one another. They were asked to share personal information regarding their name, age, gestational age, and due date. This activity aimed at creating a relationship among the group members and making them confident and comfortable to share their ideas and opinions.

2.2 The researcher asked the mothers and their husbands to write questions about the concerns, anxiety, or feelings about breastfeeding that they had. The researcher then categorized the questions and let the subjects watch a video on benefits of breast milk, techniques for successful breastfeeding, and breastfeeding practices. After that, the researcher answered the questions of the mothers and their husbands. The subjects were allowed to take part in the discussion, share their knowledge, and exchange ideas and information about their beliefs, attitudes, and feelings about breastfeeding, by comparing them with what they had learned from the video. Breastfeeding practice was conducted with a life-size model of breasts and infants. Demonstration of breastfeeding was carried out by experienced mothers, and the subjects and their husbands were given opportunity to practice breastfeeding. The interaction between the mothers and their husband was constantly stimulated. Before the end of the session, the researcher let the mothers and their husbands asked questions before summarizing the contents covered in the session.

3. Within 24 hours after delivery, the researcher gave teaching and demonstration to each of the couples on an individual basis to further enable them to

perform breastfeeding including breastfeeding positions, how to hold the mothers' breasts, problems with breastfeeding and possible solutions, etc., with an emphasis on the husbands' involvement to provide assistance and support to the mothers. After the breastfeeding efficiency was evaluated using the LATCH scores. If the mothers obtained a low score, the researcher would work with their husbands and them to help solve the problems. The breastfeeding efficiency would be reevaluated during the next feeding. The mothers and their husbands were given opportunity to ask questions if they had any doubts or misunderstanding.

In case that 24 hours after delivery fell between 8:00 p.m. and 6:00 a.m. on the following day, the researcher would postponed the teaching and demonstration, but not beyond 36 hours after delivery.

4. Everyday, from Monday to Sunday, from 7:00 a.m. to 10:00 a.m., the researcher surveyed the names of the experimental subjects to be discharged from the hospital from the hospital charts in the postpartum ward. The researcher gave group teaching on practices to ensure sufficiency of breast milk, how to express breast milk by hand, how to breastfeed the infants when the mothers had to return to work, frequently found problems with breastfeeding and solutions, and the husbands' role to support breastfeeding. The video was used, and the session lasted approximately 45 minutes. Actual practice was also included in the session. Before the end of the session, the mothers and their husbands were asked to summarize the information and knowledge they received, and a breastfeeding manual for the fathers, a breastfeeding manual, and a video on breastfeeding were distributed for further revision at home. The subjects were informed that the teaching was ended.

After the end of the teaching, the researcher made an appointment with the mothers and their husbands for telephone contacts 48 hours after hospital discharge so that they would be able to ask questions and receive advice to solve problems with breastfeeding.

5. The researcher called the husbands within 48 hours after hospital discharge to motivate them to continue support for breastfeeding. The researcher also asked them about their problems and gave advice on how to breastfeed their infants successfully. The researcher thanked the subjects for their time and made another appointment for the next telephone contact.

6. The telephone contacts were conducted again at one and two weeks after hospital discharge. The researchers asked them about the type and duration of breastfeeding, as well as problems and obstacles they may have had. Each telephone contact lasted about 15 to 30 minutes.

7. After four weeks postpartum, the researcher met the subjects in the experimental group at the pediatric outpatient ward. The subjects were asked to fill out the questionnaire on type and duration of breastfeeding. The researcher checked the returned questionnaire for completeness, and asked further questions if some of the questions were left unanswered or were answered with more than one response. The researcher informed the subjects of the end of the data collection procedure and thanked them for their participation. The process lasted approximately 30 minutes.

8. The aforementioned procedure was repeated until data were collected from all 50 subjects in the experimental group.

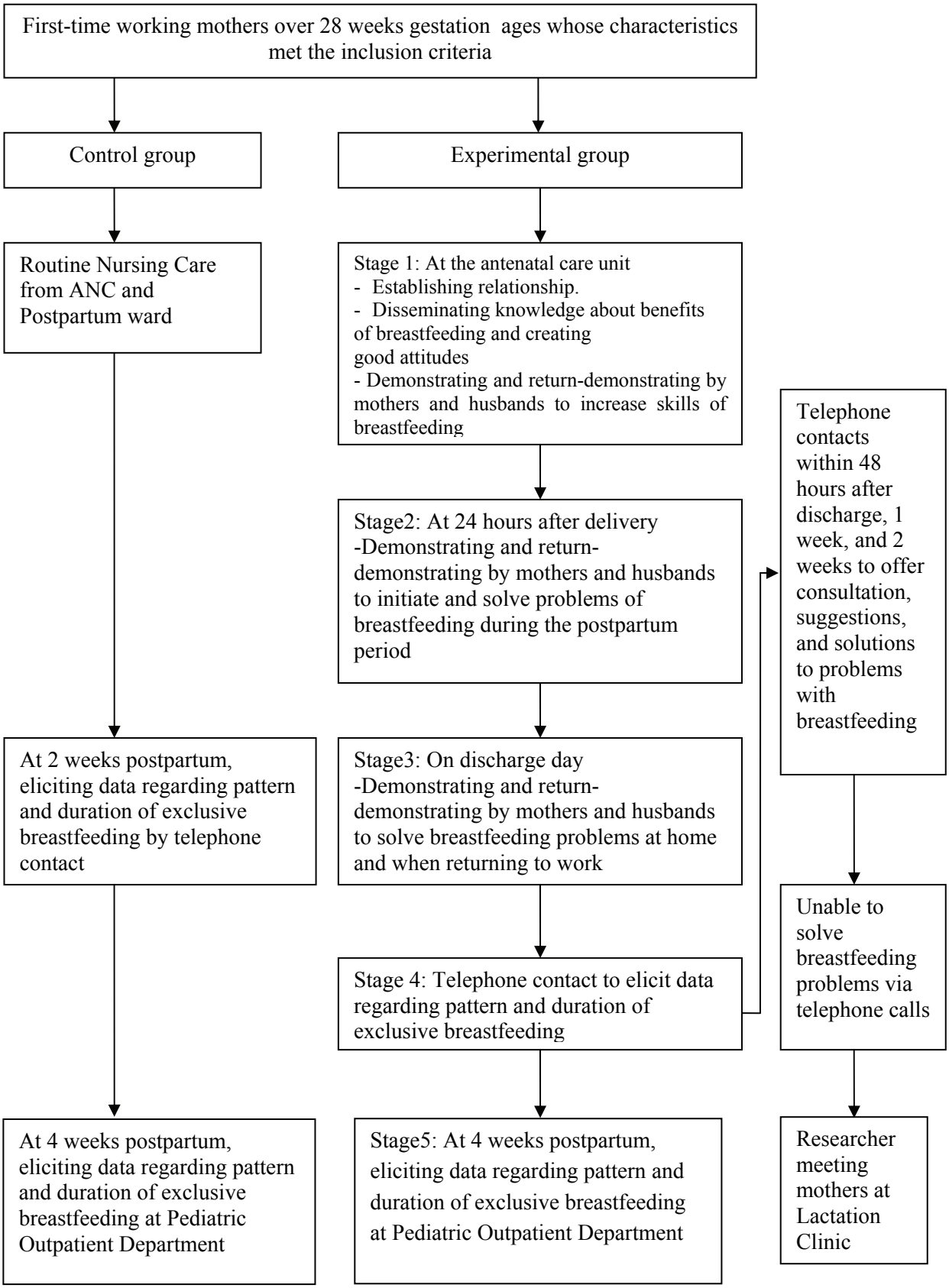

Figure 2 : The process of the data collection

Protection of the Rights of Human Subjects

1. The subjects explained the objectives of the study and the steps involved in data collection before asking the prospective subjects for their cooperation to take part in the study. After the subjects agreed to participate, they were asked to sign the informed consent form.

2. The subjects were informed that the data collected from them would be kept strictly confidential, and the data would be analyzed and presented in the form of group data for the purpose of the present study only.

3. During their participation, the subjects were informed that they were able to ask any question to clarify their doubts or misunderstanding. They were assured that they were able to withdraw from the study anytime if they wished, and their withdrawal would not affect the treatment they would receive from the hospital in any way.

Data Analysis

1. Comparison of demographic data of the subjects including education level, occupation, and family characteristics by Chi-square test and Fisher' exact probability test.

2. Comparison of age of the mother and the father between the control and the experimental groups by Independent t-test.

3. Mann-Whitney U test was employed to compare the difference of mean scores in mother' commitment to breastfeeding, husbands' commitment to breastfeeding, duration of maternity leave and family income between the experimental group and the control group.

4. Mann-Whitney U test was employed to compare the difference of mean scores in duration of breastfeeding between the experimental group and the control group.

5. Chi-square test was also utilized to compare the difference in rate of breastfeeding between the experimental group and the control group.

6. The calculation of frequency and percentage was used to measure the Cessation to breastfeeding between the experimental group and the control group.

CHAPTER IV
RESULTS

The present study aimed at investigating the effects of spouse involvement in a breastfeeding promotion program of first time working mothers on exclusive breastfeeding during the first month after delivery. The study sample consisted of 100 mothers who were recruited by means of purposive sampling and were then randomly assigned into the control and experimental groups with 50 subjects in each group. In this chapter, the findings of the study are presented in the following order:

Part I : Demographic data of the sample
Part II : Exclusive breastfeeding duration and exclusive breastfeeding rate
Part III: Obstacle to breastfeeding

Part I : Demographic data of the sample

The data showed the mothers in the control group and the experimental group were similar in terms of age (min-max = 16-35 and 18-34, respectively). The mean age of the control group ($\overline{X}$ = 24.92, S.D. = 4.237) was close to the mean age of the experimental group ($\overline{X}$ = 25.66, S.D. = 4.236). Thus, the independent t-test was used to compare the mean age of mother in the control and experimental groups (t = -.87, p = .38). Also, the mothers in the control group and the experimental group were similar when it came to their commitment to breastfeeding ($\overline{X}$ = 6.10, S.D. = 4.83 and $\overline{X}$ = 6.28, S.D. = 4.48, respectively). The durations of maternity leave of the subjects in both groups were rather similar as well ($\overline{X}$ = 82.20, S.D. = 18.49 and $\overline{X}$ = 84.30, S.D. = 17.11 in the control group and the experimental group). Finally, when considering average family income, that of the experimental group was lower than

that of the control group, accounting for 17,670 baht per month and 18,070 baht per month, respectively.

Furthermore, Mann-Whitney U test was used to determine both groups of mothers' commitment to breastfeeding, duration of maternity leave and family income while t-test was used to determine their differences in age.

According to the study findings, there were no statistically significant differences among the demographic characteristics between the experimental and control groups ($p > .05$) as shown in table 1.

Table 1: Comparison of age, mother' commitment to breastfeeding, duration of maternity leave, family income of the mother between the control and the experimental groups (N=100)

Characteristics	Experimental group (N = 50)		Control group (N = 50)			
	Number	Percent	Number	Percent	Statistic	P
Age (years)						
16-20	4	8	3	6	t = -.87	.38
21-30	38	76	41	82		
31-35	8	16	6	12		
	$\overline{X}$ = 25.66, S.D.=4.23 ; $\overline{X}$ = 24.92, S.D.=4.23					
Mother' commitment to breastfeeding (months)						
< 1	0	0	1	2	U=1120	.34
1-3	13	26	21	42		
4-6	27	54	18	36		
7-9	2	20	1	20		
10-12	6	12	7	14		
> 12	2	4	2	4		
	$\overline{X}$ = 6.28, S.D.4.48		**$\overline{X}$ = 6.10 S.D.=4.83**			
Duration of maternity leave (Days)						
< 30	2	4	3	6	U= 1199	.58
31-90	47	94	47	94		
91-120	1	2	0	0		
	$\overline{X}$ = 84.30 S.D. = 17.11		**$\overline{X}$ = 82.20 S.D. = 18.49**			
Family income (Baht)						
5,000-10,000	15	30	10	20	U=196.5	.29
10,001-15,000	18	36	19	38		
15,001-20,000	6	12	11	22		
>20,000	11	22	10	20		
	$\overline{X}$ = 17,670 S.D. = 12218.93		**$\overline{X}$ = 18,070 S.D.= 9452.35**			

Chi-square (χ^2) test was used to test the differences in the sample's characteristics regarding education level, occupation and family characteristics. In addition, the largest groups of subjects in both groups had nearly the same level of high school education (40% and 42% in the control group and the experimental group). In terms of occupation, the majority of the mothers in both groups were employees (70 % in the control group and 72% in the experimental group). However, more than half of the control group (54%) lived in an extended family, while close to two-thirds of the subjects in the experimental group (62%) lived in a nuclear family.

According to the study findings, there were no statistically significant differences among the demographic characteristics between the experimental and control groups as shown in table 2.

Table 2: Comparison of the demographic characteristics of the mother between the control and the experimental groups (N=100)

Characteristics	Experimental group (N = 50)		Control group (N = 50)			
	Number	Percent	Number	Percent	χ^2	P
Education level						
Primary school	8	16	7	14	.31	.95
High school	21	42	20	40		
Vocational school	8	16	10	20		
Bachelor's degree	13	26	13	26		
Occupation						
Government officials/ State enterprise	6	12	7	14	.15	.92
Private company Employees	7	14	6	12		
Employees	37	74	37	74		
Family Characteristics						
Nuclear	31	62	23	46	Fisher's	.16
Extended	19	38	27	54		

The data from Table 3 showed the husbands in the control group and the experimental group were similar in age (min-max = 18-48 and 18-49, respectively). The mean age of the control group ($\overline{X}$ = 28.28, S.D. = 6.54) was close to that of the experimental group ($\overline{X}$ = 29.12, S.D. = 6.99). Half of the husbands in the control group (50%) and in the experimental group (54%) were committed to breastfeed their infants for longer than six months. The mean of husbands' commitment to breastfeeding of the control group ($\overline{X}$ = 5.38, S.D. = 3.70) was nearly the same as that of the experimental group ($\overline{X}$ = 5.32, S.D. =2.83).

Furthermore, t-test was employed to determine the difference in age. Also Mann-Whitney U test was used to examine husbands' commitment to breastfeeding,

and the monthly family income of the mothers in the experimental group and the control group.

The results showed that there were no statistically significant differences among the aforementioned demographic characteristics between the experimental and control groups ($p > .05$). (Table 3)

Table 3: Comparison of age, husbands' commitment to breastfeeding of the husbands between the control and the experimental groups (N=100)

Characteristics	Experimental group (N = 50)		Control group (N = 50)			
	Number	Percent	Number	Percent	Statistic	P
Age (years)						
16-20	2	4	1	2	t = -.62	.53
21-30	29	58	34	68		
31-35	19	38	15	30		
	$\overline{X}$ = **29.12**	**S.D.= 6.99**	$\overline{X}$ = **28.28**	**S.D. = 6.54**		
Husbands' commitment to breastfeeding (month)						
< 1	0	0	0	0	U=1218	.81
1-3	16	32	23	46		
4-6	27	54	22	44		
7-9	0	0	0	0		
10-12	5	10	4	8		
> 12	2	4	1	2		
	$\overline{X}$ = **5.32S.**	**D.2.83**	$\overline{X}$ = **5.58**	**S.D. = 3.70**		

Chi-square (χ^2) test was used to test the differences of the sample's demographic characteristics in terms of education and occupation. Close to half of the subjects in both group completed high school education (48% and 44% in the control group and the experimental group, respectively). Moreover, most husbands were employees (70% in the control group and 72% in the experimental group).

The results showed that there were no statistically significant differences among the aforementioned demographic characteristics between the experimental and control groups ($p > .05$). (Table 4)

Table 4: Comparison the demographic characteristics of the husbands of the husbands between the control and the experimental groups (N=100)

Characteristics	Experimental group (N = 50)		Control group (N = 50)		χ^2	P
	Number	Percent	Number	Percent		
Education level						
Primary school	10	20	7	14	1.29	.73
High school	22	44	24	48		
Vocational school	9	18	7	14		
Bachelor's degree	9	18	12	24		
Occupation						
Government officials/ State enterprise	4	8	9	18	2.93	.23
Private company Employees	10	20	6	12		
Employees	36	72	35	70		

Part II : Exclusive breastfeeding duration and exclusive breastfeeding rate.

The findings revealed that 94% of the mothers in the experimental group exclusively breastfed their infants until four weeks postpartum, while only 10% of the mothers in the control group did so. Only three mothers is the experimental group completely stopped breastfeeding their infants at four weeks after delivery (Table 5).

Table 5: Duration of exclusive breastfeeding between the experimental group and the control group

Duration of exclusive breastfeeding (weeks)	Experimental group (N = 50)		Control group (N = 50)	
	Number	Percent	Number	Percent
1	50	100	20	40
2	49	98	17	34
3	47	94	12	24
4	47	94	5	10

The mean duration of breastfeeding was 14.36 days (S.D. = 10.05) in the control group and 29.30 days (S.D. = 3.18) in the experimental group. The mothers whose husbands participated in the breastfeeding promotion program (the experimental group) had a longer duration of exclusive breastfeeding than those whose husbands did not take part in the breastfeeding promotion program (the control group) (U = 164.5, P < .001) (Table 6).

Table 6: Difference in means of duration of breastfeeding between the experimental group and the control group after intervention using Mann-Whitney U test

Sample group (N=100)	**Duration of exclusive Breastfeeding (days)**			
	$\bar{X}$	**S.D.**	**Mann-Whitney U**	**P**
Experimental group (N=50)	29.30	3.183	164.5	<.001
Control group (N=50)	14.36	10.059		

As shown in Figure 3, the differences in type of breastfeeding between the experimental group and the control group were compared. More mothers (49 mother at two weeks postpartum and 47 mother at four weeks postpartum) in the experimental group exclusively breastfed their infants than mothers in the control group (17 mothers at two weeks postpartum and five mothers at four weeks postpartum). Of these, 33 mothers in the control group stopped exclusive breastfeeding by two weeks postpartum, 45 mothers stopped by the end of the fourth week postpartum (25 mothers chose predominant breastfeeding, seven mothers chose complementary breastfeeding, and one mother chose formula feeding at two weeks postpartum; 18 mothers chose predominant breastfeeding, 23 mothers chose complementary breastfeeding, and four mothers chose formula feeding at four weeks

postpartum). On the other hand, only one mothers in the experimental group stopped exclusive breastfeeding at two weeks postpartum (one mother chose predominant breastfeeding). At four weeks postpartum, only three mothers in the experimental group chose not to exclusively breastfeed their infants (one mother chose predominant breastfeeding and the other two mothers chose complementary breastfeeding). It was worth noting that no mother in the experimental group chose formula feeding (Figure 3).

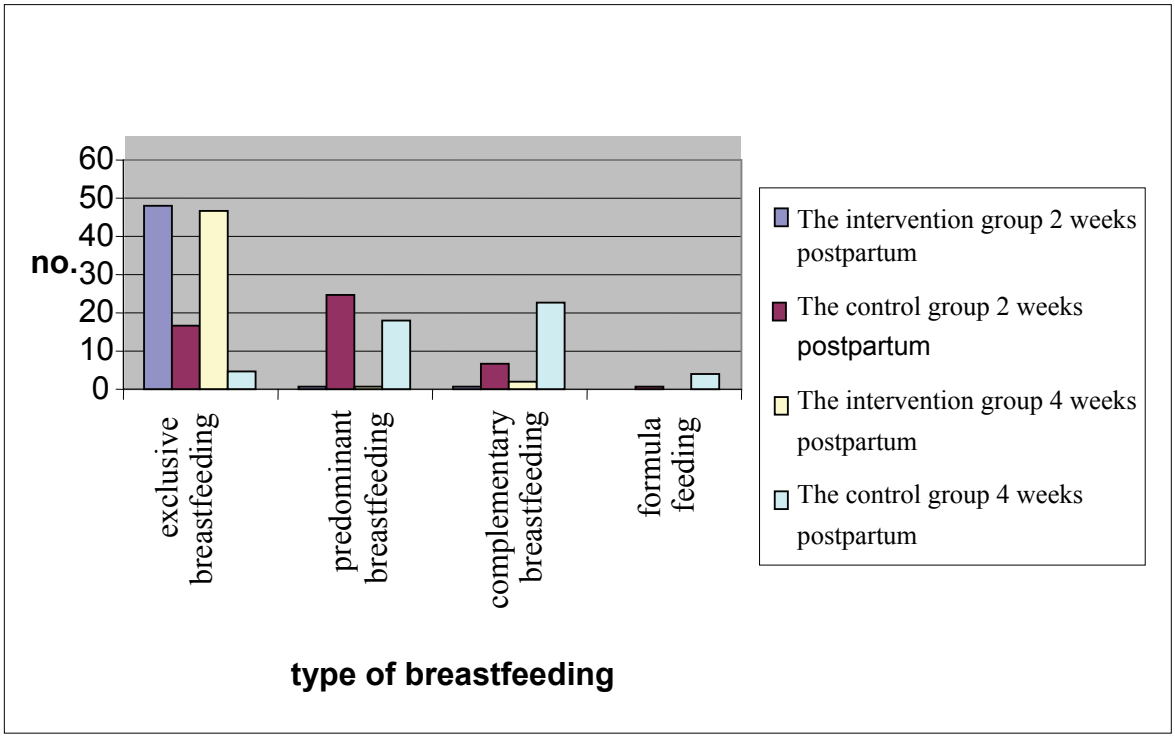

Figure 3: A comparison of type of breastfeeding between the experimental group and the control group

According to the study findings, at two weeks and four weeks postpartum, most mothers in the experimental group continued exclusive breastfeeding, accounting for 98% and 94%, in control group respectively. In contrast, the minority of the mothers in the control group chose to exclusively breastfeed their infants at two and four weeks postpartum, making up 34% and 10%, respectively. Based on such findings, it could be concluded that significant differences occurred between the experimental group and the control group at two weeks ($\chi^2 = 42.24$, P = .000) and four weeks postpartum ($\chi^2 = 67.26$, P = .000), as presented in Table 7.

Table 7: Comparison of differences in rate of exclusive breastfeeding between the experimental group and the control group using Chi-square test.

Duration of breastfeeding (weeks)	**experimental group (N = 50) n(%) Breastfeeding type**		**control group (N = 50) n(%) Breastfeeding type**			
	Exclusive breastfeeding	Non-exclusive breastfeeding	Exclusive breastfeeding	Non-exclusive breastfeeding	χ^2	P
2	49 (98%)	2 (4%)	17 (34%)	33 (66%)	42.24	.000
4	47 (94%)	3 (6%)	5 (10%)	45 (90%)	67.26	.000

Part III: Obstacle to breastfeeding

The finding revealed that at two weeks postpartum 1 mother stopped exclusive breastfeeding. The major breastfeeding problem for the mother in experimental group were rinsing the babies' mouth. At fourth weeks postpartum 3 mothers stopped exclusive breastfeeding. The most common breastfeeding were returning to work.

As illustrated in Table 8, of these, 33 mothers in the control group stopped exclusive breastfeeding by two weeks postpartum. The major breastfeeding problem were rinsing the babies' mouth, insufficient breast milk and preventing jaundice (28 %, 14% and 12% respectively). At fourth week postpartum 45 mothers stopped exclusive breastfeeding. The major breastfeeding problem were insufficient breast milk, returning to work and rinsing the babies' mouth (30%, 28% and 14% respectively).

Table 8: Frequency of obstacles to breastfeeding of the mother in the control group (possibly more than one problem occurred)

Obstacle to breastfeeding	Control group (N= 50)			
	2 weeks postpartum (N==33)		4 weeks postpartum (N=45)	
	Number	Percent	Number	Percent
rinsing the babies' mouth	14	28	7	14
insufficient breast milk	7	14	15	30
preventing jaundice	6	12	3	6
Prevention babies dehydration	5	10	3	6
Sore nipples / pain	3	6	2	4
Breast engorgement	2	4	2	4
return to work	1	2	14	28

CHAPTER V
DISCUSSION

The present study was quasi-experimental research which aimed at investigating the effects of spouses' involvement in the breastfeeding promotion program on exclusive breastfeeding of working mothers during the first month after giving birth. The data were collected from 100 subjects at Bangkok Metropolitan Medical College and Vajira Hospital. The findings of the study revealed that the working mothers and the husbands in the experimental group and the control group were not statistically significantly different. The age ranged of the subjects was 21 to 30 years, they completed secondary education, and most worked as wage earners with the average family income of 10,000 baht per month. The data regarding demographic characteristics also showed that 62% of the experimental subjects lived in an extended family, and 54% lived in an nuclear family.

Besides, after giving birth to their infants, the mothers whose husbands participated in the program exclusively breastfed their infants for 29.3 days, while those in the control group who did not participate in the program exclusively breastfed their infants for only 14.36 days. During the first two weeks after giving birth, almost all, or 98%, of the mothers whose husbands took part in the breastfeeding promotion program chose to exclusively breastfeed their infants, while only 34% of the mothers whose husbands did not take part in the breastfeeding promotion program chose to exclusively breastfeed their infants. Furthermore, at four weeks postpartum, 94% of the mothers whose husbands took part in the breastfeeding promotion program chose to exclusively breastfeed their infants, 2% breastfed their infants and fed them with water, and 2% used both breast milk and formula to feed their infants. On the other hand, only 10% of the mothers whose husbands did not take part in the breastfeeding promotion program chose to exclusively breastfeed their infants, 36% breastfed their infants as well as fed them with water, and 46% used both breast milk and formula to feed their infants. Also, 8% of the mothers whose

husbands did not take part in the breastfeeding promotion program stopped breastfeeding their infants and used only formula to feed their infants. It could be seen that at one month postpartum, the rate of exclusive breastfeeding among mothers whose husbands participated in the breastfeeding promotion program was as high as 94%. This finding was compared to data collected from other settings. For instance, at a university hospital in France where breastfeeding was systematically promoted, the rate of exclusive breastfeeding was 47% (S. De Lathouwer, 2004: 169). Moreover, at a health promotion hospital in the eighth health center in Nakhonsawan Province, the rate of exclusive breastfeeding was 55.6% during the home visits at one to four weeks postpartum (Sawaiwan Phaiprasert et al., 1995). These findings suggest that the ten steps to successful breastfeeding initiative implemented during the mothers' postpartum hospitalization is not sufficient to increase the rate and duration of exclusive breastfeeding after hospital discharge. Thus, the ten step which emphasizes breastfeeding support from individuals or groups to assist the mothers when facing problems or obstacles with breastfeeding after hospital discharge seems essential. In the present study, the researcher included the husbands in the breastfeeding promotion program to enable them to give support, assistance, and encouragement to the mothers as well as to help them solve breastfeeding problems under the home environment. As a consequence, it could be seen that the rate of exclusive breastfeeding remarkably increased. The findings of the study could be discussed according to the research hypotheses as follows:

Hypothesis One: The duration of exclusive breastfeeding of first-time working mothers whose husbands have participated in a breastfeeding promoting program is longer than that of first-time working mothers who receive only routine nursing care. The findings showed that the first-time working mothers whose husbands took part in the breastfeeding promotion program exclusively breastfed their infants longer than those who received only routine nursing care with statistical significance ($U = 164.1$, $P < .001$) (Table 4). Hypothesis Two: The rate of exclusive breastfeeding of first-time working mothers whose husbands have participated in a breastfeeding promoting program is longer than that of first-time working mothers who receive only routine nursing care. The findings indicated that the rate of exclusive breastfeeding of first-time working mothers whose husbands participated in a breastfeeding promoting

program was longer than that of first-time working mothers who received only routine nursing care with statistical significance at two weeks postpartum (χ^2 = 42.242, P = .000) and at four weeks postpartum (χ^2 = 67.267, P = .000) (Table 5).

It could be seen that Hypothesis One and Hypothesis Two were relevant. That is, if the duration of exclusive breastfeeding was longer, the rate of exclusive breastfeeding would be higher as well. For this reason, both hypotheses would be simultaneously discussed in the following section.

Firstly, the teaching in the breastfeeding promotion program based on the supportive-educative nursing system enabled the mothers and husbands to adjust on correct attitudes, beliefs, and misconceptions about breastfeeding to ensure mutual understanding while receiving appropriate knowledge about breastfeeding. The information they received could be used in making a decision about the type of milk to feed their infants. Somjit Hanucharunkul (2001: 44) explains that in order for individuals to initiate or maintain behavior, they need to receive correct and accurate information to consider and decide whether what they are going to do is appropriate or effective or not before actually doing it. Therefore, teaching is an important method to disseminate knowledge which helps individuals develop their skills and enhance self-care efficacy. In the present study, the researcher provided knowledge and information to the mothers and their husbands when the gestational age was 37 weeks, which was considered appropriate as it was the last phase of the pregnancy and the couples were eager to obtain information about breastfeeding to adjust themselves to the paternal and maternal role (Ledeman in Werly & Fitzpatrick, eds., 1984: 311). In addition, experienced mothers who had been successful with breastfeeding were invited to share their experience and ideas, thus making the talk more effective. This was because the mothers and husbands felt that the invited guest speakers were mothers who were truly knowledgeable and they had gone through the process by themselves, as they were not those who had only theoretical knowledge. Moreover, the information given by the invited mothers were not purely academic, but it was truly applicable in real life situations. As a result, the subjects felt that the advice given to them was easily applicable and that they themselves should also be able to overcome their problems (Somjit Hanucharunkul, 2001: 227). For these reasons, the mothers and husbands were confident enough to ask for clarification for

their doubts. Besides, the experimental subjects had a chance to exchange knowledge, attitudes, experiences, and beliefs freely among group members, and this enabled the researcher to examine and adjust incorrect attitudes while giving knowledge that directly served the needs of the mothers and their husbands.

A breastfeeding promotion program which encouraged the husbands' involvement in every step was significant. According to Somjit Hanucharunkul (2001), provision of support enables individuals to make an attempt and to develop morale and motivation to initiate an action. The fact that the researcher included the husbands in the breastfeeding promotion program since during pregnancy enabled the couple to take time to consider the type of milk to feed their infants. Making mutual decisions creates a sense of mutual responsibility, which would be translated into the husbands' behaviors to support the mothers to exclusively breastfeed their infants. With the husbands' support and assistance, it is likely that the mothers would be more successful with breastfeeding. They helped each other find solutions to problems and to overcome obstacles, both during pregnancy and after delivery. On the other hand, if the husbands did not support the mothers, nor did they realize the significance of the type of feeding for their infants or make mutual plans with the mothers, their decisions may have been different, and this could result in conflicts between the partners. When the couples lacked good planning, they were unable to deal with future events. Jorden & Wall (1990: 212) point out that when the mothers' knowledge, attitudes, and beliefs are congruent with those of the husbands, they will become confident in the husbands' knowledge about breastfeeding, and this is a significant factor which promotes successful breastfeeding of the mothers.

In the present study, it was found that most of the husbands did not have knowledge about breastfeeding. Thus, they did not realize the significance of breastfeeding and might have had misconceptions and misunderstanding about breastfeeding. Most of the husbands believed that breast milk and formula were equally nutritious, so they paid more attention to buying the best brand of formula instead of studying breastfeeding. In addition, according to the observation of the demonstration and practice provided to the mothers and their husbands using a model of breast and a life-size baby doll, it was discovered that most husbands lacked confidence and did not know how to correctly hold a baby due to lack of knowledge

and experience. However, after the mothers and husbands received advice from the researcher, they were able to correctly practice breastfeeding techniques. Such method resulted in more effective learning as the couples had a chance to fully participate in the teaching and practice, and they were able to learn from their mistakes and adjust their techniques. Such harmless trials and errors can increase individuals' learning capacity and promote memorization than just listening to lectures or watching a demonstration by 70-90 % (Biancuzzo M., 2003: 77).

Secondly, the breastfeeding promotion program employed the supportive-educative nursing system to promote husbands' involvement to satisfy the self-care needs of the mothers sufficiently and continuously. Orem (1991) explains that when one family member needs help, other members will act as supporters. Thus, the nursing system has to provide direct support to those who are reliant on others and indirect support through others who are responsible for offering assistance. Including the husbands in the breastfeeding promotion program put the husbands in the position of the assistance providers of the reliant mothers. They had a chance to perceive their capability and roles to promote breastfeeding. In other words, the husbands were encouraged to give advice and assistance to the mothers to breastfeed the infants. They learned to take charge of other household chores to let the mothers take a rest and reduce their emotional strain. The husbands who had participated in the breastfeeding promotion program were enabled to assist the mothers, and they were confident to support and assess breastfeeding techniques of the mothers. According to the data collected in this study, most of the husbands did not know how to help the mothers and did not think that they were important and able persons to help the mothers breastfeed the infants. Therefore, most of them did not dare to touch or hold the infants despite their desire to do so. Furthermore, it was observed that within 24 hours after delivery, the husbands were too afraid to hold the infants as they lacked the confidence to do so. Even though they may have wanted to help the mothers breastfeed the infants, they were unable to do so and felt helpless, which in turn increased the tension and pressure on the mothers. In the present study, the husbands who did not participate in the breastfeeding promotion program stated that they sympathized with their wives and wanted to help, so they fed their infants with formula. This clearly reflected the husbands' needs to take part in caring for the

infants and relieving the mothers' burdens, but they just did not know how they could do it. For this reason, the husbands tended to see breastfeeding as difficult or troublesome, and they turned to formula to solve the problem. When the husbands were taught to assess the breastfeeding techniques, understood how to breastfeed the infants, and knew how to solve problems related to breastfeeding such as when the infants were crying too much or when the mothers suffered from cracked nipples or engorged breasts, the husbands would be enabled to provide assistance, take care of the mothers' well-being, and help breastfeed the infants when the mothers have to return to work. Consequently, the mothers would not be overwhelmed with stress or exhaustion from breastfeeding.

Generally, when the husbands perceive their own roles, they are able to plan for how to respond to the mothers' needs to promote breastfeeding. In particular, the first four weeks after delivery and hospital discharge is seen as a crucial period as the mothers need to undergo a lot of adjustments and are more vulnerable to confusion, anxiety, and stress (Donaldson, 1981: 249). This may be because breastfeeding is a new experience, so the mothers need information and advice on what to do. If the husbands have participated in the breastfeeding promotion program, they could help reduce the problems. When the husbands take part in stimulating breastfeeding and solving breastfeeding problems, the mothers are likely to realize the significance of breastfeeding and to persevere until they are successful. During their stay at the hospital, mothers can rely on nurses and other healthcare team members. However, after discharge, the best person who can provide support and advice is their husband. In this study, the husbands were the persons who called the researcher to ask for clarification of their doubts or misunderstanding about breastfeeding, especially when the mothers were about to return to work. This meant that these husbands were able to assess the mothers' needs and respond to such needs. They were also able to adjust their life and give feedback to help the mothers. Therefore, the mothers did not feel that breastfeeding was solely their own burden or problem. They were more satisfied, and they had more time to breastfeed their infants.

Thirdly, the husbands' participation in breastfeeding can increase the mothers' encouragement and motivation to continue breastfeeding. According to Orem, motivation is part of self-care efficacy, and it is an important force that can stimulate

individuals to continue their action (Somjit Hanucharunkul, 2001: 129). During the postpartum period, first-time mothers have to undergo a lot of adaptations to prevent role conflicts. Jantakan Aungkanawattananon (1997: 65) conducted a study and found that postpartum mothers who received emotional support from the husbands had better adaptation and a low level of stress. Thus, when the husbands understand the problems and help the mothers solve problems, the mothers feel that breastfeeding is highly valued by the husbands, so they are filled with warmth, sense of security, and mental stability. They feel that they are loved and cared for, so their sense of self-worth tends to increase, especially when such feelings result from the husbands, the closest persons and a profound source of social support. Such feelings result in a romantic relationship, which is more qualitatively than quantitatively important. They can only take place between the mothers and their husbands, making the mothers feel that breastfeeding is valuable and have more motivation to continue breastfeeding their infants.

Besides, in the present day society, women tend to pay more attention to their physical appearance and body figure. For this reason, some mothers refuse to breastfeed their infants for fear that it will adversely affect their physical appearance. Spitz (1945) points out that mothers who are conscious about their physical appearance tend to have an eating disorder or bulimia. At present, breastfeeding infants in public is still an uncommon phenomenon. These mothers tend to avoid breastfeeding. Changing such attitudes can be done only with the involvement of the mothers' significant persons such as husbands. Mothers' awareness of the significance and value of breastfeeding needs to be raised so as to create motivation to initiate and continue breastfeeding. In this study, some of the experimental subjects stated that when they had to take care of the infants at home, they were exhausted and worried that breastfeeding would negatively affect their physical appearance. However, when their husbands gave them compliments and supported breastfeeding, and when their husbands talked about successful breastfeeding with other people explaining problems and obstacles they had overcome, the mothers felt proud and motivated to continue breastfeeding. This shows that the husbands are the most important source of emotional support. When the mothers receive favorable feedback

from the husbands who support breastfeeding, they are more confident in their role and able to adjust themselves to a new role of a mother.

Fourthly, family type, living condition, society, traditions, and cultures have both positive and negative influences on individuals (Orem, 2001: 16-19). Differences in beliefs and cultures about breastfeeding in the past can cause conflicts with current knowledge about breastfeeding. For example, according to a Thai cultural belief, infants should be given water, and this can hinder exclusive breastfeeding. In the present study, it was found that at two weeks after delivery, half of the subjects in the control group breastfed their infants and gave them water, while only 2% of the subjects in the experimental group did so. At four weeks after delivery, 18 subjects in the control group, or 36%, and one subject in the control group, or 2%, breastfed their infants and gave them water. They explained that they wanted to rinse the infants' mouth, to solve hiccup problems, and to prevent jaundice. In some cultures, it is believed that water would make the infants' eyes more beautiful. Such beliefs came from the grandmothers or relatives who had experience with raising an infant, and they directly affected the mothers in the control group, most of whom were living in an extended family. Furthermore, at four weeks after delivery, 23 subjects in the control group breastfed and formula-fed their infants, and four exclusively fed their infants with formula. Fifteen of them explained that they had to return to work and found breastfeeding inconvenient. Likewise, two of the mothers in the experimental group also fed their infants with formula, reasoning that they had to return to work and there was no place to express breast milk in the office, so breastfeeding became too troublesome. This showed that even though these mothers seemed to understand the significance of breastfeeding and were able to correctly breastfeed their infants without giving them water or formula, after they returned home, they had to deal with beliefs and pressure from other family members. This, coupled with the necessity to return to work, prevented the mothers from applying the knowledge they gained at the hospital in their situation.

The spouses' involvement in the breastfeeding promotion program enabled them to become knowledgeable and confident to help mothers effectively transfer the knowledge and information about breastfeeding to family and community. In Thai society, males are seen as the leader, so their actions and decisions are more likely to

be accepted from family and society. It was found that after hospital discharge, the mothers in both groups had to deal with similar situations. That is, relatives or close persons suggested that they give water to the infants. This caused them the feeling of unease and made them lose confidence in the knowledge received from the hospital. If the husbands did not realize the significance of exclusive breastfeeding, the mothers tended to follow the advice of relatives or close persons to reduce conflicts and pressure. Thus, the husbands' involvement in the breastfeeding promotion program enabled them to develop necessary skills that enable them to help the mothers give explanation to relatives or close persons to develop similar attitudes and beliefs. This can help reduce the tension the mothers have to cope with, and this means that the mothers do not have to overcome problems and obstacles in breastfeeding by themselves, so they are more likely to become successful with exclusive breastfeeding.

CHAPTER VI
CONCLUSION

Summary of the study

The present study was quasi-experimental research which aimed to investigate the effects of spouse involvement on duration and rate of exclusive breastfeeding among first-time working mothers within one month after delivery using the supportive-educative nursing system based on Orem's theory. The sample of the study consisted of the first-time working mothers who attended the antenatal care clinic during pregnancy and who had child delivery at Bangkok Metropolitan Medical College and Vajira Hospital. The purposive sampling was employed to select the mothers whose characteristics met the inclusion criteria, and the matched-pair technique was used based on age and education levels. The subjects were divided into two groups. The control group, which consisted of 50 mothers, received routine nursing care, while the experimental group, consisting of 50 subjects, received the spouse involvement to promote exclusive breastfeeding program based on the supportive-educative nursing system from the researcher in addition to routine nursing care provided by the hospital.

The spouse involvement to promote exclusive breastfeeding program based on the supportive-educative nursing system began when the gestation age of the mothers was 37 weeks. The program could be divided into four periods based on the concept of supportive-educative nursing system. During the first period, the mothers whose gestational age was 37 weeks received teaching and counseling to increase knowledge and promote positive attitudes towards breastfeeding. They also had a chance to practice with a model of an infant to increase their breastfeeding skills. In addition, experienced mothers were invited to share their knowledge and experiences with the first-time working mothers to give them encouragement and faith in breastfeeding. In the second period, which took place within 24 hours after child delivery, the focus was placed on helping the mothers solve problems and overcome obstacles in breastfeeding. The fathers also received teaching and guidance to develop their skills

and to enable them to provide assistance to the mothers when breastfeeding their infants. In the third period, before the hospital discharge, the mothers and fathers were taught skills necessary to solve problems and overcome obstacles in breastfeeding their infants which may take place at home such as engorged breasts, preparation for return to work, etc. The teaching emphasized the fathers' assistance in assessing the problems and needs of the mothers. In the fourth period, which was within four weeks postpartum, the follow-ups were conducted via telephone calls to stimulate the postpartum mothers to continue breastfeeding, to elicit information regarding their problems and obstacles in breastfeeding, and to enable the postpartum mothers and their husbands to ask for advice and consultation when they had problems with breastfeeding to ensure timely assistance and care.

The duration and rate of exclusive breastfeeding were assessed at two weeks and at four weeks after delivery. The data were analyzed by Man-Whitney U test which was used to compare the means of duration of breastfeeding and by Chi-square test which was used to compare the rate of breastfeeding.

Conclusion

1. The duration of exclusive breastfeeding of working mothers in the experimental group who participated in the spouse involvement to promote exclusive breastfeeding program based on the supportive-educative nursing system (the experimental group) was statistically significantly longer than that of the mothers in the control group ($x = 29.30$ days and $x = 14.36$ days in the experimental group and the control group, respectively; $U = 164.5$, $P < .001$).

2. The rate of exclusive breastfeeding of working mothers in the experimental group who participated in the spouse involvement to promote exclusive breastfeeding program based on the supportive-educative nursing system (the experimental group) was statistically significantly higher than that of the mothers in the control group at two weeks postpartum (96% in the experimental group and 34% in the control group; $\chi^2 = 42.242$; $P = .000$) and at four weeks postpartum (94% in the experimental group and 10% in the control group; $\chi^2 = 67.267$; $P = .000$).

Implications and Recommendations

The findings of the present study revealed that the mothers whose husbands participated in the spouse involvement to promote exclusive breastfeeding program based on the supportive-educative nursing system based on Orem's theory were able to exclusively breastfeed their infants for as long as one month. Based on such finding, the following recommendations could be made:

Recommendations for nursing practice

1. As the spouse involvement to promote exclusive breastfeeding program based on the supportive-educative nursing system could enable the postpartum mothers to solve problems, overcome obstacles, and establish motivation to breastfeed their infants, hence a longer duration and a higher rate of successful exclusive breastfeeding, a nursing practice should be developed based on the supportive-educative nursing system with the emphasis on the family and with the recognition of the significance of the husbands' involvement in every step of the program beginning in the third trimester to the postpartum period to hospital discharge so as to make the husbands realize the significance of their roles to assist the mothers in breastfeeding. Moreover, the mothers' breastfeeding skills should be assessed so as to be able to timely offer assistance and guidance to ensure continuation of breastfeeding after hospital discharge.

2. The findings also indicated that when experienced mothers were invited to share their experiences and information with the first-time working mothers in this study, the mothers and their husbands were confident in the information they received and realized the benefits of breastfeeding. As a result, when developing a breastfeeding promoting program, experienced mothers and husbands should be invited and a self-help group should be formed to offer first-time mothers encouragement and support and to make them develop positive attitudes toward breastfeeding to increase their chances of successful exclusive breastfeeding after child delivery.

3. A network should be established and promoted to transfer the postpartum mothers after hospital discharge to the fundamental public health services or to provide them with easy access to resources that could help them succeed in breastfeeding. In fact, successful breastfeeding depends largely on continuity of the

care the mothers receive. In this study, some mothers and husbands made a telephone call to the researcher to ask for solutions to breastfeeding problems right after hospital discharge, and this clearly shows that breastfeeding problems can take place anytime and require immediate responses. Thus, a 24-hour hotline telephone services, a breast milk clinic, and proactive nursing services should be established to detect and help the postpartum mothers solve their problems before they become to serious to solve.

4. The study findings also revealed that during hospitalization, healthcare team members played an important role to implement the ten steps to successful breastfeeding policy to increase the rate of exclusive breastfeeding at the hospital by disseminating knowledge and information, solving problems and obstacles, and adjusting the mothers' and husbands' conflicts of beliefs about and attitudes toward breastfeeding, hence more motivation for breastfeeding. For this reason, the study findings should be adapted to develop a nursing care program, both in theory and in practice, to be included in a nursing curriculum. Awareness of nursing students and healthcare team members should be raised to make them realize the significance of the ten steps to successful breastfeeding policy and to implement the family-centered nursing care that offers family members to take part in provision of nursing care as appropriate, during pregnancy, after child delivery, and after hospital discharge. Furthermore, nurses and healthcare team members should be equipped with skills to disseminate knowledge, give advice, and help postpartum mothers solve problems related to breastfeeding to ensure a longer duration and a higher rate of exclusive breastfeeding.

Recommendations for nursing research

1. As the findings of the present study indicated that the husbands' participation in the breastfeeding promoting program could increase the duration and rate of exclusive breastfeeding among postpartum mothers, studies should be conducted with other groups of mothers among whom the duration and rate of exclusive breastfeeding are still rather low such as teenage mothers, mothers who are separated from their infants due to illness, etc.

2. Studies should also be carried out to follow up on husbands' participation in breastfeeding among first-time working mothers and to determine the long-term effect

of husbands' participation on exclusive breastfeeding such as at four months and six months postpartum as these periods are the critical periods during which the rate of breastfeeding rapidly declines.

3. Even though it can be concluded from the study findings that husbands' participation leads to successful breastfeeding, it was also found that postpartum mothers and husbands tended to encounter conflicts caused by discrepancy between the knowledge and information they received from the hospital and the beliefs and attitudes of other family members, especially the grandmothers who had experience with breastfeeding. Further studies should be conducted to investigate the influence of grandmothers and other family members on breastfeeding and compare the success rates of breastfeeding with and without intervention of other family members.

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APPENDIX

APPENDIX A

LIST OF EXPERTS

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

1. Doctor Yupayong Hangchaovanich
   Senior officer of Obstetric and Gynecological
   Charoenkrungpracharak Hospital
2. Doctor Jintakarn Kasemsri Na Ayutthaya
   Neonatologist, Neonatal Unit, Qsnich,
   Queen Sirikit National Institute of Child Health
3. Assistant Professor Kannikar Vichitsukon
   Department of Pediatric Nursing
   Faculty of Nursing, Mahidol University
4. Miss Thidaratana Wongvisutdhi (Registered Nurse)
   Lactation Clinic, Siriraj Hospital
5. Miss Siriluck Thavonvattana (Registered Nurse)
   Lactation Clinic, Queen Sirikit National Institute of Child Health

APPENDEX B

ใบยินยอมและการพิทักษ์สิทธิ์ของผู้เข้าร่วมการวิจัย (กลุ่มควบคุม)

การพิทักษ์สิทธิของผู้เข้าร่วมการวิจัย

ชื่อโครงการ ผลจากการมีส่วนร่วมของสามีในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ของหญิงครรภ์แรกที่ทำงานนอกบ้าน ต่อการเลี้ยงลูกด้วยนมแม่อย่างเดียวที่ 1 เดือน

ชื่อผู้วิจัย นางสาวเฉลิมศรี เกิดมากมี

ชื่อผู้เข้าร่วมการวิจัย 1……..

2…….

คำยินยอมของผู้เข้าร่วมการวิจัย

ข้าพเจ้านาย.....(สามี) และนาง/นางสาว .....(ภรรยา) ได้ทราบรายละเอียดของโครงการวิจัย ตลอดจนประโยชน์ และข้อเสี่ยงที่จะเกิดขึ้นจากผู้วิจัยแล้วชัดเจน ไม่มีสิ่งใดปิดบังซ่อนเร้นและยินยอมให้ทำการวิจัยในโครงการที่มีชื่อข้างต้น หากมีข้อสงสัยหรือปัญหาเกิดขึ้น สามารถสอบถามจากผู้วิจัยได้ และสามารถบอกยกเลิกการวิจัยนี้เมื่อใดก็ได้ โดยไม่มีผลกระทบต่อการรักษาที่ได้รับ นอกจากนี้ผู้วิจัยจะเก็บข้อมูลของข้าพเจ้าทั้งสองคนเป็นความลับและจะเปิดเผยได้เฉพาะในรูปที่เป็นสรุปผลการวิจัย การเปิดเผยข้อมูลของข้าพเจ้าทั้งสองคนต่อหน่วยงานต่างๆ ที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ลงชื่อ.....(สามี)

.....(ภรรยา)

.....(พยาน)

.....(พยาน)

วันที่.....

คำอธิบายของผู้วิจัย

ข้าพเจ้าได้อธิบายรายละเอียดของโครงการ ตลอดจนประโยชน์ของการวิจัย รวมทั้งข้อเสี่ยงที่อาจจะเกิดขึ้นแก่ผู้เข้าร่วมการวิจัยทราบแล้วอย่างชัดเจน โดยไม่มีสิ่งใดปิดบังซ่อนเร้น

ลงชื่อ.....(ผู้วิจัย)

วันที่.....

ใบยินยอมและการพิทักษ์สิทธิ์ของผู้เข้าร่วมการวิจัย (กลุ่มทดลอง)

ดิฉัน นางสาวเฉลิมศรี เกิดมากมี นักศึกษาปริญญาโท สาขาการพยาบาลมารดาและทารกแรกเกิด ภาควิชาพยาบาลศาสตร์ คณะแพทย์ศาสตร์รามาธิบดี มีความสนใจศึกษาผล จากการมีส่วนร่วมของสามี ในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ ของหญิงครรภ์แรกที่ทำงานนอกบ้าน ต่อการเลี้ยงลูกด้วยนมแม่อย่างเดียวที่ 1 เดือน เพื่อนำผลการวิจัยไปใช้เป็นแนวทางในการจัดกิจกรรมเพื่อส่งเสริมการเลี้ยลูกด้วยนมแม่ โดยมีรายละเอียดของการศึกษา ดังนี้

1. ให้ท่านและสามีตอบแบบสอบถามข้อมูลส่วนบุคคล ใช้เวลาประมาณ 5 นาที จากนั้นผู้วิจัยจะจัดกิจกรรมเป็นรายกลุ่มให้ท่านและสามี เพื่อให้ทราบถึงประโยชน์ ความสำคัญ และวิธีแก้ไขปัญหาของการเลี้ยงลูกด้วยนมแม่ ด้วยการชมวิดีโอประกอบการอภิปรายกลุ่ม และการฝึกปฏิบัติ

2.ผู้วิจัยมาพบท่านและสามี ระหว่างท่านพักหลังคลอดครบ 24 ชั่วโมงที่หอผู้ป่วยหลังคลอด โดยจัดกิจกรรมแก่ท่านและสามี เพื่อให้สามารถแก้ไขปัญหาและเลี้ยงลูกด้วยนมแม่ได้อย่างถูกต้อง หลังจากนั้นผู้วิจัยจะมาพบท่านและสามีอีกครั้งในวันที่ท่านได้รับอนุญาตให้กลับบ้านได้ พร้อมทั้งจัดกิจกรรมแก่ท่านและสามีเพื่อให้สามารถแก้ไขปัญหาการเลี้ยงลูกด้วยนมแม่เมื่ออยู่ที่บ้าน

3.ผู้วิจัยจะโทรศัพท์ติดต่อสามีของท่านหลังจากที่ท่านออกจากโรงพยาบาลครบ 2 วัน เมื่อครบ 1 สัปดาห์ และครบ 2 สัปดาห์หลังคลอด เพื่อสอบถามชนิดของนมที่ใช้เลี้ยงทารก ปัญหาการเลี้ยงลูกด้วยนมแม่ พร้อมทั้งให้คำแนะนำ และเสนอแนวทางช่วยเหลือ โดยในระหว่างนี้ท่านและสามีสามารถโทรศัพท์ขอคำแนะนำจากผู้วิจัยได้ตลอดเวลา

4.เมื่อท่านพาบุตรมาตรวจสุขภาพและรับวัคซีนตามนัด 1 เดือน ที่ห้องตรวจเด็ก วิทยาลัยแพทย์ศาสตร์กรุงเทพมหานครและวชิรพยาบาล ในระหว่างที่ท่านรอพบแพทย์ ผู้วิจัยจะให้ท่านตอบแบบสอบถามแบบแผนการให้นมทารก และระยะเวลาการเลี้ยงทารกด้วยนมมารดา ใช้เวลาประมาณ 10 นาที

ข้อมูลที่ได้จากการวิจัยครั้งนี้จะถือเป็นความลับ และผู้วิจัยจะนำผลไปวิเคราะห์ในภาพรวม โดยผลการวิจัยจะนำมาใช้เป็นแนวทาง ในการพัฒนาการพยาบาล เพื่อส่งเสริมให้มารดาทำงานนอกบ้านที่มีบุตรคนแรก สามารถเลี้ยงลูกด้วยนมแม่อย่างเดียวได้ยาวนานมากขึ้น

จึงเรียนมาเพื่อขอความร่วมมือจากท่านและสามีในการเข้าร่วมการวิจัย โดยท่านและสามีสามารถยกเลิกการเข้าร่วมการวิจัยได้ตลอดเวลาโดยไม่มีผลต่อการรักษาพยาบาล

ขอขอบคุณในความร่วมมือ

เฉลิมศรี เกิดมากมี (ผู้วิจัย)

No....ท.222.....

Ethics Committee

For

Researches Involving Human Subjects, the Bangkok Metropolitan Administration

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Title of Project	:	Effects of Spouse Involvement in Breast-Feeding Promotion Program for Working First Time Mother on Exclusive Breast-Feeding in First month
Registered Number	:	0104.49
Principal Investigator	:	Miss Chalermsri Kerdmakmee
Name of Institution	:	Mahidol University

The aforementioned project has been reviewed and approved by Ethics Committee for Researches Involving Human Subjects, based on the Declaration of Helsinki.

.......Manoj Leethochawalit.......Chairman

(Mr. Manoj Leethochawalit)

Deputy Permanent Secretary for BMA

DATE OF APPROVAL 21 NOV 2006

APPENDEX C

วัน/เดือน/ ปี..... เลขที่แบบสอบถาม.....

แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง โปรดทำเครื่องหมาย X ลงในช่อง ( ) หน้าข้อความที่ตรงกับความจริง หรือเติมข้อความลงในช่องว่างให้สมบูรณ์

ข้อมูลของแม่

1. ชื่อ-สกุลแม่.....อายุ.....ปี
2. เบอร์โทรศัพท์ที่ติดต่อได้สะดวก.....
3. ระดับการศึกษาสูงสุด.....
4. อาชีพ
   - ( ) รับราชการ/รัฐวิสาหกิจ ( ) ธุรกิจส่วนตัว
   - ( ) รับจ้างทั่วไป ( ) อื่นๆ ระบุ.....
5. รายได้เฉลี่ยของครอบครัว(คิดรวมทั้งสามีและภรรยา).....บาท/เดือน
6. รายได้ของครอบครัวท่านเป็นอย่างไร
   - ( ) เพียงพอกับค่าใช้จ่าย ( ) ไม่เพียงพอกับค่าใช้จ่าย
7. ลักษณะครอบครัว
   - ( ) ครอบครัวเดี่ยว: อยู่สองนกับสามี
   - ( ) ครอบครัวขยาย : มีญาติพี่น้อง หรือบุคคลอื่นอยู่ด้วย (ระบุ).....
8. กำหนดคลอดวันที่.....
9. ท่านตั้งใจเลี้ยงลูกด้วยนมแม่ เป็นเวลานาน (ระบุ: สัปดาห์/เดือน).....
10. ระยะเวลาลาคลอดจริง.....สัปดาห์.....เดือน
11. ระยะเวลาตั้งใจลาคลอด.....สัปดาห์.....เดือน
12. สมาชิกในครอบครัวที่มีอิทธิพลต่อการเลี้ยงลูกด้วยนมแม่
    - ( ) ไม่มี
    - ( ) มี (ระบุ).....

APPENDEX D

แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง โปรดทำเครื่องหมาย X ลงในช่อง ( ) หน้าข้อความที่ตรงกับความจริง หรือเติมข้อความลงในช่องว่างให้สมบูรณ์

ข้อมูลของพ่อ

1. ชื่อ-สกุลพ่อ.....อายุ.....ปี
2. เบอร์โทรศัพท์ที่ติดต่อได้สะดวก.....
3. ระดับการศึกษาสูงสุด.....
4. อาชีพ
   ( ) รับราชการ/รัฐวิสาหกิจ ( ) ธุรกิจส่วนตัว
   ( ) รับจ้างทั่วไป ( ) อื่นๆ ระบุ.....
5. ท่านตั้งใจให้ภรรยาเลี้ยงลูกด้วยนมแม่ เป็นเวลานาน(ระบุ: สัปดาห์/เดือน).....

APPENDEX E

เลขที่แบบบันทึก.....

แบบสอบถามคุณพ่อสำหรับติดตามการเลี้ยงลูกด้วยนมแม่ทางโทรศัพท์

ชื่อ-สกุลมารดา.....

ชื่อ-สกุลสามี.....

หมายเลขโทรศัพท์ที่บ้าน.....มือถือ.....

น้ำหนักแรกเกิดของทารก.....

วันและเวลานัดที่ห้องตรวจเด็ก.....

เมื่อครบ 48 ชั่วโมง หลังออกจากโรงพยาบาล วันที่.....เวลา.....

1. ใน 24 ชั่วโมงที่ผ่านมานี้ภรรยาของท่านให้ลูกกินนมชนิดใด

( ) กินนมแม่อย่างเดียว

( ) กินนมแม่ร่วมกับน้ำ เมื่อลูกอายุ.....วัน

( ) กินนมแม่ร่วมกับนมผสม เมื่อลูกอายุ.....วัน

( ) กินนมผสมอย่างเดียว เมื่อลูกอายุ.....วัน

( ) อื่นๆ..... เมื่อลูกอายุ.....วัน

..

..

..

1. คำแนะนำจากผู้วิจัย.....

2. คุณพ่อ/คุณแม่ โทรศัพท์ขอคำแนะนำเรื่อง.....

APPENDEX F

แบบสอบถามการเลี้ยงลูกด้วยนมแม่

คำชี้แจง โปรดทำเครื่องหมาย x ลงใน ( ) หน้าข้อความที่ตรงกับความเป็นจริง หรือเติมข้อความลงในช่องว่างให้สมบูรณ์

ชื่อ-สกุลพ่อ.....

ชื่อ-สกุลแม่.....

ชื่อ-สกุลลูก.....อายุ.....

ใน 24 ชั่วโมงที่ผ่านมานี้ท่านให้ลูกกินนมชนิดใด

1. ( ) กินนมแม่เพียงอย่างเดียว

   สาเหตุที่ท่านเลี้ยงลูกด้วยนมแม่เพียงอย่างเดียว (ตอบได้มากกว่า 1 ข้อ)

   ( ) ได้รับคำแนะนำและการสนับสนุนจากบุคคลากรด้านสุขภาพ ระบุ.....

   ( ) ได้รับคำแนะนำและการสนับสนุนจากสามี

   ( ) ได้รับคำแนะนำและการสนับสนุนจากญาติ/สมาชิกในครอบครัวระบุ.....

   ( ) แม่ตั้งใจในการเลี้ยงลูกด้วยนมตนเอง

   ( ) อื่นๆ โปรด ระบุ.....

   ..

   ..

   ..

6. ปัจจุบันท่าน ( ) อยู่ในระหว่างลาคลอด

   ( ) กลับไปทำงานแล้ว ตั้งแต่ลูกอายุ.....

APPENDEX G

ตัวอย่างแผนการสอน

เรื่อง	การมีส่วนร่วมของสามีในโปรแกรมส่งเสริมการเลี้ยงลูกด้วยนมแม่ของหญิงครรภ์แรกที่ทำงานนอกบ้าน ต่อการเลี้ยงลูกด้วยนมแม่อย่างเดียวที่ 1เดือน
กลุ่มเป้าหมาย	สามีและหญิงตั้งครรภ์แรกที่ทำงานนอกบ้าน
วัตถุประสงค์	1. เพื่อใช้แผนการพยาบาลระบบสนับสนุนและให้ความรู้พร้อมการมีส่วนร่วมของสามี เป็นกลวิธีในการสร้างความตระหนักถึงประโยชน์และความสำคัญของการเลี้ยงลูกด้วยนมแม่ 2. เพื่อใช้แผนการพยาบาลระบบสนับสนุนและให้ความรู้พร้อมการมีส่วนร่วมของสามี ในการให้ความรู้ถึงวิธีการและการแก้ไขปัญหาการเลี้ยงลูกด้วยนมแม่ 3. สร้างแรงจูงใจในการเลี้ยงลูกด้วยนมแม่ และให้มารดาเลี้ยงลูกด้วยนมแม่เป็นระยะเวลานาน 4. ใช้การกระตุ้นเตือนและการแก้ไขปัญหาด้วยการเยี่ยมบ้านทางโทรศัพท์ เพื่อให้เกิดความคงทนถาวรของพฤติกรรมการเลี้ยงลูกด้วยนมแม่
สถานที่	ห้องตรวจครรภ์และ หอผู้ป่วยหลังคลอด ของวิทยาลัยแพทย์ศาสตร์กรุงเทพมหานครและวชิรพยาบาล
วิธีการ	ระยะที่ 1 การอภิปรายกลุ่มของสามีและมารดาระยะตั้งครรภ์ไตรมาสที่ 3 ระยะที่ 2 การสอนและสาธิตวิธีการเลี้ยงลูกด้วยนมแม่แก่มารดาและสามีภายใน 24 ชั่วโมงหลังคลอด ระยะที่ 3 การอภิปรายกลุ่มมารดาและสามีในระยะก่อนออกจากโรงพยาบาล ระยะที่ 4 การติดตามเยี่ยมบ้านทางโทรศัพท์ภายใน 48 ชั่วโมงหลังออกจากโรงพยาบาล 1 สัปดาห์หลังคลอด 2 สัปดาห์หลังคลอด และ 3 สัปดาห์หลังคลอด

ครั้งที่ 1 ระยะตั้งครรภ์ไตรมาสที่ 3 เป็นการอภิปรายกลุ่มมารดาพร้อมสามีใช้เวลาประมาณ 50 นาที

วัตถุประสงค์	เนื้อหา	กิจกรรมการสอน	สื่อการสอน	เวลา	ประเมินผล
เพื่อสร้างสัมพันธภาพภาพของสมาชิกภายในกลุ่มซึ่งประกอบด้วย สามี - ภรรยามารดาที่มีประสบการณ์และผู้วิจัย	ขั้นที่ 1 สร้างสัมพันธภาพและความคุ้นเคย	1. สมาชิกในกลุ่มนั่งเป็นคู่ สามี-ภรรยา หันหน้าเป็นครึ่งวงกลม สมาชิกทุกคนติดป้ายชื่อ 2. ผู้วิจัยกล่าวทักทาย แนะนำตัวและแนะนำมารดาหลังคลอดที่มีประสบการณ์การเลี้ยงลูกด้วยนมแม่กับสมาชิกภายในกลุ่ม 3. กระตุ้นสมาชิกภายในกลุ่มให้มีปฏิสัมพันธ์กัน โดยให้สมาชิกภายในกลุ่มได้แนะนำตนเอง พร้อมทั้งเปิดโอกาสให้ซักถามข้อมูลอื่นๆ เช่น อาชีพ อายุ เป็นต้น 4. ผู้วิจัยสรุปว่าขณะนี้สมาชิกรู้จักและคุ้นเคยกันพอสมควรแล้วจึงแจ้งให้สมาชิกทราบเกี่ยวกับ.....	1. เก้าอี้นั่งจัดเป็นครึ่งวงกลม ป้ายชื่อประมาณ 10 อัน	5 นาที	จากการสังเกตพฤติกรรมท่าทางความสนใจของคู่สามีและภรรยา

คู่มือคุณพ่อ
กับการเลี้ยงลูก
ด้วยนมแม่

BIOGRAPHY

NAME	Miss Chalermsri Kerdmakmee
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