THE EFFECT OF INCLUDING SPOUSE SUPPORT IN FATIGUE MANAGEMENT PROGRAM ON FATIGUE OF A WIFE WHO RECEIVED CESAREAN SECTION

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF NURSING SCIENCE (MIDWIFERY)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2015

Thesis
entitled

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was submitted to the Faculty of Graduate Studies, Mahidol University
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ACKNOWLEDGEMENTS

This thesis was successfully completed with great kindness and support from Asst. Prof. Jaratsri Theerakulchai, major advisor and Asst. Prof. Chantima Khanobdee, co advisor; who kindly guided and advised throughout the research process. The researcher was impressed very much for their generosity and compassion. In addition, the researcher would like to thank Asst. Prof. Srisamorn Phumonsakul, chairperson of the committee of thesis defense and Assoc. Prof. Poonsuk Hingkanont, committee; who gave suggestion and comment to refine this thesis.

Thank for all of the experts for their suggestion to improve the research instruments, the Director of Ramathibodi Hospital, the Director of Nursing in Obstetric Division and the head nurse of postpartum unit, private Obstetric and Gynecologic unit, postpartum check-up unit, and the officers who kindly supported and facilitated during the research process. Moreover, the researcher would like to thank all of the postpartum mothers and their husbands who participated in this study.

Finally, I am grateful thank to my parents, relatives, and classmates of the Master of Nursing Science Program (Midwifery) at Faculty of Medicine, Ramathibodi Hospital, Mahidol University for their helpful encouragement. Last but not least, my deep appreciation is conveyed to Mae Fah Luang University for the scholarship in persuing the Master degree.

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ABSTRACT

This quasi-experimental research aimed to study the effect of including spouse support in fatigue management program on fatigue of a wife who received cesarean section. The study was based on a conceptual framework of Pugh & Milligan (1993) about factors contributing to fatigue. The sample were 40 postpartum mothers who underwent cesarean section and stayed in the postpartum unit, the private obstetric and the gynecologic unit of Ramathibodi Hospital in Bangkok, Thailand from January 2015 to May 2015. The samples were divided into a control group and an experimental group. The control group received conventional health education program whereas the experimental group received conventional health education program combined with fatigue management program. The data were collected by using Demographic Data Questionnaire and The Modified Fatigue Symptom Checklist (MFSC).

Results of the study showed that the postpartum mothers in the experimental group had a mean fatigue score at 6 weeks postpartum significant less than the postpartum mothers in the control group ($p < .05$).

Based on the results of the study, including spouse support in fatigue management program, it was beneficial to reduce fatigue in the postpartum mothers who underwent cesarean section. Therefore, the program should be utilized as a guideline in the nursing care plan of postpartum mothers who received cesarean section to reduce fatigue during postpartum period.

KEY WORDS: POSTPARTUM FATIGUE/ FATIGE MANAGEMENT/ SPOUSE SUPPORT

92 pages

ผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้อง

THE EFFECT OF INCLUDING SPOUSE SUPPORT IN FATIGUE MANAGEMENT PROGRAM ON FATIGUE OF A WIFE WHO RECEIVED CESAREAN SECTION

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บทคัดย่อ

การวิจัยนี้เป็นงานวิจัยกึ่งทดลอง เพื่อศึกษาผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้อง โดยใช้กรอบแนวคิดปัจจัยที่เกี่ยวข้องกับความเหนื่อยล้าของพิวฮ์และมิลลิแกน (Pugh & Milligan, 1993) เป็นแนวทางในการศึกษา กลุ่มตัวอย่างประกอบด้วยมารดาหลังผ่าตัดคลอดทางหน้าท้องจำนวน 40 ราย ที่พักฟื้น ณ หอผู้ป่วยสูติกรรม 2 และหอผู้ป่วยพิเศษสูติ-นรีเวชกรรม โรงพยาบาลรามาธิบดีระหว่างเดือนมกราคมถึงเดือนพฤษภาคม 2558 โดยกลุ่มควบคุมได้รับการพยาบาลตามปกติและกลุ่มทดลองได้รับการพยาบาลตามปกติร่วมกับได้รับโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้า เก็บรวบรวมข้อมูลโดยใช้แบบสอบถามข้อมูลส่วนบุคคลและแบบประเมินความเหนื่อยล้าของมารดาหลังคลอด (MFSC) วิเคราะห์ข้อมูลโดยใช้สถิติบรรยายและสถิติอ้างอิง

ผลการวิจัยพบว่า ระยะหลังผ่าตัดคลอด 6 สัปดาห์ กลุ่มทดลองมีคะแนนเฉลี่ยความเหนื่อยล้าต่ำกว่ากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ ($p < .05$)

จากผลการวิจัยนี้แสดงให้เห็นว่าโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าเป็นประโยชน์ต่อการลดความเหนื่อยล้าในมารดาหลังคลอด จึงควรมีการนำโปรแกรมดังกล่าวไปใช้วางแผนการดูแลมารดาหลังผ่าตัดคลอดทางหน้าท้องเพื่อลดความเหนื่อยล้าต่อไป

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CHAPTER I
INTRODUCTION

Significance of the study

Pregnancy and childbirth bring about a pleasure time to a family. However, physical and psychological changes during pregnancy lead to fatigue in postpartum mothers. The postpartum mothers who received cesarean section have to face with many kinds of discomfort, for instance wound pain, uterine pain, and flatulency. The discomforts along with transition to new maternal roles make women who received cesarean section feel more fatigue and require much more energy to resume their health in the postpartum period. The mothers who underwent cesarean section are recognized as living in crisis and require assistance (Theerakulchai, Khanobdee, & Vongnipon, 2011).

The rate of cesarean section is increasing worldwide, including Thailand. Statistics from the Ministry of Public Health in 2001 revealed that the cesarean section rate was 17.40 percent and increased to 23.25 percent in 2007. Furthermore, the rate of cesarean section in private hospitals was higher than 50 percent (Taneepanichakul et al., 2008-2009). Likewise, the cesarean section rate at Ramathibodi Hospital, Bangkok, Thailand has been increasing. Data demonstrate that in 2001 the cesarean section rate was 47.2 percent and increased to 55.3 and 58.6 percent in 2012 and 2013 respectively (Ramathibodi Hospital Annual reports 2011-2013). As mentioned above, the postpartum mothers with cesarean section experienced more fatigue than the mothers who had vaginal birth, as a result of increasing cesarean section rate the postpartum mothers with more fatigue increased.

Fatigue is a common discomfort occurred among postpartum mothers, both nulliparous and multiparous (Harrison & Hicks, 1983; Pritchard & McDonald, 1980; Reeder, Mastroianni, & Martin, 1983; Smith, 1989). NANDA defined fatigue as “an overwhelming sustained sense of exhaustion and decreased capacity for physical and mental work” (North American Nursing Diagnosis Association, 1989:

453). There are three factors associated fatigue, it include physiological factors such as energy and blood loss from labor, breastfeeding; psychological factors such as anxiety and stress; and situational factors such as child care, sleep, socioeconomic status, family income, social support and parity etc. (Pugh & Milligan, 1993). Fatigue is a negative feeling for the postpartum mothers. The postpartum mothers who experience fatigue will feel tired, inert, uncomfortable, lack of concentration, inattention and want to sleep all time (Hart, Freel, & Milde, 1990). Moreover, fatigue affects quality of life of the postpartum mothers and families (Pugh & Milligan, 1993).

Fatigue in postpartum mothers can occur since early period of postpartum (Theerakulchai, Kowatanakul, Sangwarn, & Wangkam, 2000; Troy, 2003). Review of literature revealed that the level of fatigue in the mothers who had vaginal birth is high in the first two weeks after childbirth (Troy & Dalgas-Pelish, 1997) and gradually decline until the period of postpartum ended (Gardner, 1991; Theerakulchai, 2004; Webster, 1994). It could be explained that the bodily functions of postpartum mothers resumed. However, fatigue in the postpartum mothers who had cesarean section still in moderate level by the end of postpartum period (Theerakulchai, Khanobdee, & Vongnipon, 2011). A study comparing fatigue in the postpartum mother revealed that the postpartum mother who underwent cesarean section had fatigue more than the postpartum mother who had vaginal delivery (Thompson, Roberts, Currie, & Ellwood, 2002). Since fatigue is a negative feeling; therefore, it will interfere with quality of life of the postpartum mothers and their families whether it happened in the short or long period of time.

The effects of fatigue on postpartum mothers are numerous, for instance impact on resumption to normal health, maternal role performance, relationship with others, and problem-solving skills mother (Pugh & Milligan, 1993; Troy, 2003). If the fatigue persists for a long period of time it will deteriorate both physical and mental health of postpartum mothers, ultimately leads to postpartum depression (Corwin, Brownstead, Barton, Heckard, & Morin, 2005). Fatigue in postpartum mothers also impacts the child's health. The child may delay development. Some mothers could not breastfeed and look after their children because the fatigue made them feel unready to perform maternal roles (Milligan, Flenniken, & Pugh, 1996; Park, Lentz, Milligan, & Han, 1999; Tulman, Fawcett, Groblewski, & Silverman, 1990). In summary,

postpartum fatigue impairs health and quality of life of postpartum mothers and families.

Review of literature indicated that the postpartum mothers try to manage fatigue by themselves, such as think positively, arrange time for napping during the day while infant sleep and set priority to do the task (Taylor & Johnson, 2010; Theerakulchai, 2004). However, after childbirth the mothers have multiple roles; therefore, they need assistance from the family members such as husband or other relatives. There are some study found that the postpartum mothers viewed assistance from their spouses is the most important to reduce physical and psychological fatigue (Harrison & Hicks, 1983; Taylor & Johnson, 2013; Theerakulchai, 2004; Theerakulchai & Tiansawad, 2004). The postpartum mothers would like their spouse help them to do household jobs and child care, for instance provision of food, laundry, cleaning the house, changing diaper and so forth (Mc Veigh, John, & Cameron, 2005; Redshaw & Henderson, 2013; Warren, 2005). Mental support is the other need that the postpartum mothers would like to have from their spouse. Nowadays, Thai government allow a husband who is a government officer request leave of absence to support his wife and child care for 15 days after childbirth (Thai government gazette, 2013). Therefore, the spouse should be strongly encouraged to help the postpartum mothers reduce fatigue (Taylor & Johnson, 2010). In Thai society, the postpartum mothers usually get help from closed relatives during four weeks after childbirth (Theerakulchai, 2004). However, family members cannot fulfill all aspects of needs of the postpartum mothers, especially psychological and emotional support. Study revealed that only verbal support from husband could make the postpartum mothers feel comfortable and happy and results in decreasing fatigue (Theerakulchai, 2004).

From literature review, there are several methods use to manage postpartum fatigue such as aromatherapy (Udumsuk, Khanobdee, & Theerakulchai, 2009), position setting for breastfeeding (Pochaiqoupt, 2000). Such the methods were mentioned, fatigue was managed by the postpartum mothers themselves. There is no study about including spouse to manage fatigue in postpartum mothers, especially in postpartum mothers with cesarean section, while review of literature indicated that the postpartum women need help from their husbands (Harrison & Hicks, 1983; Taylor & Johnson, 2010; Theerakulchai, 2004). Therefore, the researcher is interested to

develop the program which including spouse to manage fatigue in postpartum mothers who had cesarean section. The program developed was based on Pugh & Milligan's conceptual framework of fatigue in postpartum mother (1993) which emphasized on 3 factors contributed to fatigue: physiological factors, psychological factors, and situational factors.

Conceptual framework

This study was based on Pugh and Milligan's conceptual framework of fatigue (1993). Pugh and Milligan defined fatigue follow the NANDA (North American Nursing Diagnosis Association, 1989) as "An overwhelming sustained sense of exhaustion and decrease capacity for physical and mental work". The symptom could occur throughout pregnancy, during and after childbirth. There are three factors contributing to fatigue during postpartum period. These factors are physiological factors, psychological factors, and situational factors. The physiological factors are factors related to normal physiological changes, pathological conditions, and factors related to energy substrate. Examples of normal physiological changes are loss of blood and body fluid, reduction in weight, and decreased level of hormones whereas examples of pathological conditions are anemia, infection and postpartum hemorrhage. The factors associated with energy substrate are the replacement of energy that loss during childbirth and after childbirth. The psychological factors are factors related to anxiety, negative feeling, body image change, maternal role adaptation, and postpartum depression. The situational factors are factors associated with personal factors, for instance age, parity, socioeconomic status, working conditions, difficulty in raising a child, social support, sleep, and exercise. A combination of the three factors mentioned will result in fatigue and ultimately to role performance in postpartum mothers as illustrated in figure 1.1.

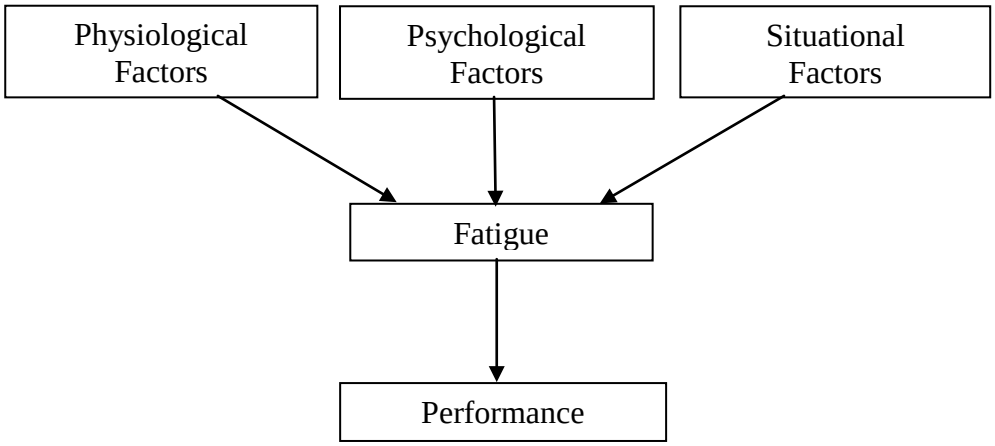

Figure 1.1 Conceptual framework of fatigue in postpartum mother (Pugh & Milligan, 1993: 61)

In this study, the researcher developed a program based on Pugh & Milligan's conceptual framework (1993) and included spouse support in the program. The program aimed to decrease fatigue in postpartum mothers with cesarean section. The reason to include spouse support in the program because it was shown in review of literature that spouse was the most significant person whom the postpartum mothers needed support from. Therefore, the program developed emphasized on three contributing factors of fatigue as the following:

1. Physiological factors

The major cause of postpartum fatigue due to physiological factor is depletion of energy from childbirth. After childbirth, the women have to regain energy to resume their health; therefore, replacement of energy and maintain hydration are the priority of actions to alleviate postpartum fatigue (Pugh & Milligan, 1993). However, exhaustion from childbirth could make postpartum mothers tent to sleep and rest. They have limitation of self-care; therefore, assistance from others is required. Review of literature indicated that the postpartum mothers viewed support from their spouses was the most important support that they needed. Therefore, the researcher included spouse support in the program by encouraging the spouse to help preparing food and drinking fluid for the mothers during postpartum period. Moreover, comfort position while breastfeeding is another strategy to help the lactating mothers decrease

energy used while breastfeeding. In the program, the researcher advised the spouse to use pillow support mother's arm while breastfeeds the baby.

2. Psychological factors

Psychological factors that contribute to fatigue in postpartum mother include negative feeling, anxiety, depression, and stress from maternal role adaptation (Pugh & Milligan, 1993). Such conditions could occur to all postpartum mothers but vary from person to person. Support from closed person such as spouse could help the postpartum mothers reduce negative feeling, feel happy, encourage, and resulted in reduce fatigue (Theerakulchai & Tiansawad, 2004). In this study, the researcher included spouse support in the program. The spouses were given information about psychological needs of the postpartum mothers, for instance the need to be loved, cared, and accepted as important person. The spouses were advised to give motivation and encouragement to the postpartum mothers, being with the mother for child care and allowing her to express concerns or anxiety. Being consistency by spouse was the highlight that the researcher focused in the program. In doing so, it could reduce fatigue in the postpartum mothers (Hattakitpanichakul, Phahuwatanakorn, Serisathien, & Boriboonhirunsarn, 2012; Angkanawattananon, 1997).

3. Situational factors

Situational factors that contribute to postpartum fatigue include personal factors and environmental factors (Pugh & Milligan, 1993). In Thai society, childbirth brings about pleasure time to the family. Child care is mostly viewed as a mother's tasks, not for the parent; therefore, fatigue in postpartum mothers always overlooked (Theerakulchai & Tiansawad, 2004). Beside maternal roles, the postpartum mothers have to finish their household chores, results in accumulation of fatigue. The spouse could help the postpartum mothers for daily activities, household tasks, including child care. In doing so, the postpartum would have more leisure time and sleeping hour; ultimately reduce fatigue (Theerakulchai, Khanobdee, & Vongnipon, 2011; Lee & Dejoseph, 1992). In this study, the researcher included spouse support in the program by giving instruction about child care, such as helping the mothers to bathe the baby, to hold the baby, and changing diaper. Moreover, the child's father was given information about child development to bring about the developmental needs of his baby (Mc Veigh, John, & Cameron, 2005; Redshaw & Henderson, 2013; Warren,

2005). The benefit of including spouse support for child care is not only for helping the mothers but also promoting attachment and bonding between father and child (Barclay & Luptons, 1999; Montigny & Lacharite, 2003).

In this study, the researcher developed a fatigue management program based on Pugh and Milligan (1993), which focused on the contributing factors of postpartum fatigue. The program which including spouse support aimed to help postpartum mothers who underwent cesarean section reduces fatigue. The program was started with giving instruction through the video CD by the researcher about causes of fatigue, effects of fatigue, and strategies to alleviate fatigue in postpartum mothers with cesarean section. Following the instruction, the researcher demonstrated to the spouse of the postpartum mother about child care and let him practice. A booklet about fatigue management was given to each spouse to ensure continuous practice. The effectiveness of the program was evaluated by assessing the fatigue in postpartum mothers at the sixth week after the program was started. The conceptual framework of this study was illustrated in figure 1.2.

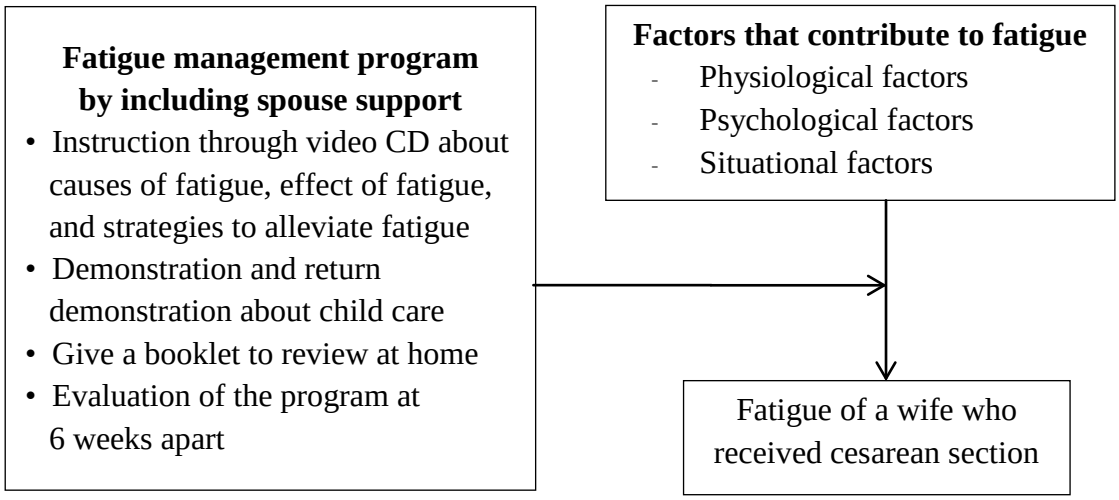

Figure 1.2 Conceptual framework of the study

Research Objective

The objective of this study was to study the effect of fatigue management program by including spouse support on fatigue of a wife who received cesarean section.

Research question

Could the fatigue management program by including spouse support reduce fatigue in a wife who received cesarean section?

Research Hypothesis

The postpartum mothers with cesarean who received conventional health education program combined with fatigue management program by including spouse support had less fatigue than those who received only conventional health education program.

Scope of the Study

This quasi-experimental research was conducted in postpartum mothers who received cesarean section. These women gave birth at Ramathibodi Hospital, Bangkok, Thailand, stayed at opened postpartum unit, private obstetric and gynecologic unit, and came to postpartum check-up clinic from January 2015 to May 2015.

Expected Beneficial Outcomes

1. Nursing service. Results of the study can be used as the guidelines for nurse-midwives and health care team to include spouse in providing care for the postpartum mothers who received cesarean section.

2. Nursing education. Knowledge gained from this study can be utilized to develop nursing instruction in school of nursing, in regard to include spouse support in the care for postpartum mothers with cesarean section.

3. Nursing research. Results of the study can be used as the guidelines for further research and develop other effective program to decrease fatigue in postpartum mothers with cesarean section.

Definition of terms

Including spouse support in fatigue management program refers to the nursing intervention program developed by the researcher, based on Pugh and Milligan's conceptual framework of fatigue (1993). The program composed of 1) verbal instruction using instruction CD by the researcher about causes, contributing factors, and strategies to alleviate fatigue in postpartum mothers; 2) demonstration and return demonstration about child care; and 3) giving booklet of "Management of fatigue in postpartum mothers" to review at home. Strategies which the researcher introduced to the spouse in order to help reduce fatigue in the postpartum mother are followed through the three main predisposing factors of postpartum fatigue as follows: physiological factors by replacement of energy and fluid spent during childbirth, setting comfort position while breastfeeding to decrease the energy used; psychological factors by giving mental support and encouragement to the mother, being with the mother to solve any problems related to child care and household management; and situational factors by helping the mothers to do household tasks and daily activities. The program was introduced to the spouse of postpartum mothers who received cesarean section at the second day after childbirth. Evaluation of the effectiveness of the program was done at 6 weeks after the program was initiated by assessing fatigue score of postpartum mothers.

Fatigue is defined as the feeling of tired, exhausted, and decrease in both physical and mental capability of the postpartum mother who received cesarean section. In this study, fatigue was evaluated by the Modified Fatigue Symptoms Checklist which developed by Pugh et al. (1999) and translated into Thai language by Theerakulchai (2004). High scores mean a postpartum mother has high level of fatigue and low scores mean a postpartum mother has low level of fatigue.

Conventional health education program is group instruction routinely given by staff nurse to postpartum mothers. The contents in the program are maternal self-care during postpartum period such as adequate dietary intake, sleep, rest, exercise, and so forth; and child care including giving bathe, holding a baby, changing diaper, and so forth.

CHAPTER II
LITERATURE REVIEW

This research is a quasi-experimental research aimed to study the effect of including spouse in fatigue management program on fatigue of a wife who received cesarean section. The researcher had reviewed the literature and related research to this study, which covered the following topics:

Fatigue in the postpartum mothers

Factors contributing to fatigue in the postpartum mothers

Management of fatigue in postpartum mothers

Spouse support

Development of fatigue management program

Fatigue in the postpartum mothers

Fatigue is a non-desirable symptom among postpartum mothers. Piper (1993) define fatigue as adverse reactions that occurred with mental and physical exhaustion. It is not related to intensity or the use of physical force. Potempa et al. (Potempa, Lopez, Reid, & Lawson, 1986) and Elnicki et al. (Elnicki, Shockcor, Brick, & Beynon, 1992) described fatigue as a condition which decreased a person's ability to work both physically and mentally. Moreover, NANDA defined fatigue as "an overwhelming sustained sense of exhaustion and decreased capacity for physical and mental work" (North American Nursing Diagnosis Association, 1989; 453). In this study, the researcher described fatigue based on the definition stated by NANDA (1989) which was mentioned in the Pugh and Milligan's framework of fatigue (Pugh & Milligan, 1993).

Major characteristic of fatigue in postpartum mothers include exhaustion, non-energetic, lack of sleep, and weakness. On the other hand, minor characteristic of

fatigue are giddy, somnolent, lack of interest in surroundings, social isolation, decrease sexual interest, and inability to maintain role function (Capenito, 1993; North American Nursing Diagnosis Association, 1989).

Level of fatigue in postpartum mothers

Level of fatigue in postpartum mothers varies from low to high level, which is exhaustion. It depends on the period of time after childbirth (Lee, Lentz, Taylor, Mitchell, & Fugate, 1994). Review of literature found that there are many researchers conducted research regarding postpartum fatigue and described level of fatigue in the following:

Gardner studied fatigue in 68 postpartum mothers who had normal delivery and found that during early postpartum period level of fatigue was higher than during late postpartum period. The mean scores of fatigue at 2 days, 2 weeks, and 6 weeks were 4.60, 3.96 and 3.51 respectively. Gardner described that the level of fatigue was low at all of three periods. However, it could be seen that the mean scores of fatigue gradually decreased until the period of postpartum ended (Gardner, 1991).

Taylor and Johnson (2010) conducted a study in 59 postpartum mothers. Twenty-seven mothers were first-time mothers whereas thirty-two mothers were non first-time mothers. Most of the sample (80 percent) had vaginal delivery. Results of the study indicated that about half of the sample (50.8 percent) had moderate level of fatigue at 6 weeks of postpartum period and declined to low level at 12 weeks. However, within this study, there were at least three mothers (5 percent) still had moderate level of fatigue and four of them had high level of fatigue at 24 weeks after childbirth. Further investigation of this study revealed that the mothers whose fatigue still remained did not get any assistance from their spouses (Taylor & Johnson, 2010).

Troy and Dalgas (1997) studied fatigue in 36 first-time postpartum mothers who had vaginal delivery. The sample mothers were asked to record fatigue 6 times per weeks during 6 weeks; starting from Tuesday evening until Friday morning. Results of the study indicated that morning fatigue and evening fatigue of the sample was gradually increase from the first week after childbirth and morning fatigue began to decline at the forth weeks of postpartum. Moreover, both morning and evening

fatigue persisted in low level when the postpartum period was end (Troy & Dalgas, 1997).

Wambach (1998) explored fatigue in 41 first-time postpartum mothers who had vaginal delivery and breastfed their babies. Data was gathered since day 3 to 9 weeks after childbirth. It was found that at day 3 the postpartum mothers had moderate level of fatigue. Peak of fatigue was at the third week of postpartum. Finally, level of fatigue was gradually decreased and reduced to the minimum level by the end of 9 weeks after childbirth (Wambach, 1998).

Thompson et al., (Thompson, Roberts, Currie, & Ellwood, 2002) studied health status and fatigue in 1,295 postpartum mothers who had vaginal delivery and had cesarean section from the 4th day after birth to 6 month. It was found that the postpartum mothers who underwent cesarean section had fatigue more than the postpartum mothers who had vaginal delivery from early period of postpartum until 6 month (OR 1.45 [95% CI 1.07-1.98]).

In Thailand, Theerakulchai and colleagues (Theerakulchai, et al., 2000) studied fatigue in 200 postpartum mothers who had vaginal delivery. Fatigue was assessed at 12 hours, 24 hours, and 48 hours after childbirth. Results of the study revealed that at 12 hours and 24 hours fatigue was in moderate level and then decreased to low level at 48 hours. In addition, fatigue of first-time mothers was significantly difference from fatigue of non-first-time mothers at 24 hours after childbirth; but not difference at 12 and 48 hours. Four years later, Theerakulchai conducted a study in 230 postpartum mothers. Findings of the study indicated that 72.7 percent of the sample still had low level of fatigue while 27.3 percent of them reported of having fatigue in moderate level, and only 0.1 percent high level of fatigue was remained at 6 weeks of postpartum (Theerakulchai, 2004). Furthermore, Theerakulchai, Khanobdee, and Vongnipon (2011) studied fatigue in 120 postpartum mothers who underwent cesarean section during 1-3 days after cesarean section and found that fatigue in this group of population was remained in moderate level until the period of postpartum ended.

In summary, most of the postpartum mothers experienced fatigue in moderate level during the early period of postpartum. By the end of six weeks the

level of fatigue in the mothers who had vaginal delivery was in low level while the fatigue in postpartum mothers who underwent cesarean section still remained in moderate level. The fatigue which persists in postpartum mothers affects both maternal health and the health of the newborn which will be described in the following section.

Effect of fatigue on the postpartum mothers

The postpartum fatigue effects quality of life in postpartum mothers and their families, particularly the mothers who underwent cesarean section (Jansen et al., 2007). The mothers who experienced moderate to high level of fatigue will feel non energetic and have difficulty to enter the maternal role (Tulman & Fawcett, 1988). Long term effect of extreme fatigue was reported, for instance postpartum depression. Corwin et al. (2005) studied in 31 postpartum mothers and found that 91 percent of the mothers with high level of fatigue during two weeks after childbirth developed postpartum depression within one month after delivery. Fatigue in postpartum mothers also affects the baby. The mother with moderate to high level of fatigue usually lack of physical strength and have low motivation to perform maternal roles. They wean breastfeeding within the first month after birth (Bourgoin et al., 1997). Short duration of lactation due to maternal fatigue directly impact on the baby's health (Wambach, 1998). Moreover, fatigue in the postpartum not only impacts maternal life but also the infant's life. The mothers may have difficulty in making good relationship with others, including their babies (Pugh & Milligan, 1993; Troy, 2003). The children whose mothers had persistent fatigue more than one year were reported of having delayed development in bodily movement, communication skill, interaction with the environment, and the coordination of muscle in hand and eyes (Parks, Lenz, Milligan, & Han, 1999).

In summary, fatigue in postpartum mothers begins to occur within the early period of postpartum and persists for a long time, which affect well-being of the mothers, infants, and family members. The occurrence of fatigue in the postpartum mothers depend on several predisposing factors as will be discussed further.

Factors contributing to fatigue in postpartum mothers

Pugh and Milligan (1993) described three main factors predisposing to fatigue in postpartum mothers. These factors are physiological factors, psychological factors, and situational factors. Details of each factor will be presented in the following:

1. Physiological factors are factors related to normal physiological changes, pathological changes, and energy substrate.

1.1 Normal physiological changes are the changes resulting from blood and body fluid loss during and after childbirth, weight loss due to resumption of the body to pre-pregnancy period, and the change in hormonal level.

Loss of blood volume and electrolytes during and after childbirth is a major physiological factor contributing to fatigue in postpartum mothers. Normally, the amount of blood loss from vaginal delivery is about 300-500 milliliter whereas the amount of blood loss from cesarean section is approximately 500-1,000 milliliter (Sawaspanich, 2011). The loss of blood and body fluid as mentioned results in the function of circulatory system, which will return to normal function within 1-2 weeks after childbirth. Additional explanation is that the loss of blood 250 milliliter will make the hematocrit drop 4 percent. For example, if a mother has 34 percent of hematocrit and loses the blood 250 milliliter, it will result in decreasing the level of hematocrit into 30 percent. The direct effect of blood loss on postpartum mothers is decreased tissue perfusion and ultimately results in fatigue. Moreover, the mothers who have severe blood loss will face with long term effect, such as anemia and prolonged fatigue (Lee & Zaffke, 1999).

Weight loss during postpartum period is a physiological factor predisposing to fatigue in postpartum mothers. The rapid weight loss about 5-6 kilograms usually occur in immediate postpartum period and the additional of 2-4 kilograms will be lost within one week postpartum due to diuresis and excretion of waste product. By the end of postpartum period, maternal weight will usually return to pre-pregnancy weight (Sawaspanich, 2011).

1.2 Pathological changes are the changes related to abnormal function of the body. Examples of pathological changes which contribute to postpartum fatigue include postpartum hemorrhage, anemia, and infection.

Postpartum hemorrhage and anemia can lead to postpartum fatigue. Lee and Zaffke (1999) conducted a study in postpartum mothers who had vaginal delivery and found that the mothers who had hemoglobin less than 12 mg/dl at one month after childbirth experienced significantly prolong fatigue until three months after delivery. Moreover, literature review indicated that the postpartum mothers with illness, such as upper respiratory tract infection, breast abscess, tended to experience fatigue longer than those who were healthy (Wambach, 1998).

1.3 Energy substrate is a physiological factor contributing to fatigue in postpartum mothers. The energy substrate is the matter related to food, fluid, and energy replacement.

Breastfeeding is one of the factors causing fatigue in postpartum mothers (wambach, 1998). Both lactation process and the process of breastfeeding require additional energy of the mothers. Evidence was found in the study conducted by Milligan, Flenniken, & Pugh (1996). Twenty postpartum mothers were included in the study; fourteen mothers had vaginal delivery whereas six mothers underwent cesarean section. The results showed that side lying position during breastfeeding could reduce fatigue because the mothers could take a nap while breastfed. Moreover, using side lying position in breastfeeding could reduce the energy used to carry the baby. However, the authors pointed out that diet and fluid replacement must sufficient for the lactating mothers otherwise they may end up with fatigue. Further explanation was that the lactating mothers required at least 800 Kcal a day for the production of breast milk 850 milliliters during 6 months postpartum. (Leelahakul, Puttathachakum, & Taweeboon, 2002). Therefore, getting enough food and water is essential for lactating mothers.

2. Psychological factors. Review of literature revealed that psychological factors predisposing to fatigue in postpartum mothers include anxiety, negative feeling, towards pregnancy and childbirth, pregnancy-related stress, depression,

change of body image, maternal role adaption, difficult labor, prolonged labor, and fear of childbirth (Pugh & Milligan, 1993).

The acquired new role as a mother brings about changes in daily life. The mothers who can adjust to the new roles will feel happy in becoming a mother, on the other hand, if the mothers have difficulty in adjusting to the new roles they might have negative feeling to become a mother and result in mental fatigue (Affonso, 1990; Gardner, 1991).

Anxiety is another factor related to fatigue in the postpartum mothers. This evidence is shown in the study of Taylor and Johnson (2013) about fatigue in 504 postpartum women at 1 week, 6 weeks, 12 weeks, and 24 weeks after birth. Results of the study showed that anxiety was statistically significant correlated with fatigue every period ($r = .47, .59, .57$ and $.62$ respectively) ($p < .001 - < .05$), and anxiety with other factors could predict the fatigue at every period which accounted for 28, 38, 36 and 41 percent of the variance of fatigue respectively.

Stress and depression are other factors that associated with fatigue in postpartum mother. Wambach (1998) conducted a study in 41 first-time mothers who had vaginal delivery. Fatigue was assessed at 3 days, 3 weeks, 6 weeks, and 9 weeks after birth. It was found that maternal stress and depression were significantly related to postpartum fatigue.

3. Situational factors

The situational factors which related to fatigue in postpartum mothers include personal factors and environmental factors. Personal factors consist of age and number of pregnancy while environmental factors compose of lifestyles, socioeconomic status, employment status, social support, sleep and exercise (Pugh & Milligan, 1993).

From literature reviewed of Taylor & Johnson (2013) about the role of anxiety and other factors in predicting the fatigue; such as parity, postpartum hemorrhage and sleep in 504 postpartum mothers. The study found that parity was significantly negative correlated with postpartum fatigue during 1 week postpartum ($r = -.18, p < .05$) . Moreover anxiety was significantly positive correlated with

postpartum fatigue during 6 and 12 weeks postpartum ($r = .11$, $p < .05$). However, this study found that parity was not correlated with postpartum fatigue during 24 weeks after birth. It could explain that both primiparous and multiparous mother had high level of anxiety and did not get enough sleep which resulting in postpartum fatigue.

Lack of sleep is one of the factors predisposing to fatigue in postpartum mothers. A study conducted by Wambach in 41 postpartum mothers who continuously breastfed the babies during two months and found that insufficient sleep was the important factor of fatigue among the samples (Wambach, 1998). This is consistent with the study of Lee and Zaffke in 60 postpartum mothers and found that sleep disturbance during 1 month to 3 month after childbirth was significant associated with fatigue (Lee & Zaffke, 1999). The explanation is that sleep can reduce fatigue especially deep sleep, so call non rapid eye movement (NREM) by making the body's tissue repaired particularly in the central nervous system and resuming the physical health. In addition, it is noted that when the people experience fatigue or used a lot of energy, sleep is required to restore the energy (Hartman, 1973).

Child care is another situational factor of fatigue. Gardner (1991) studied about fatigue in 68 postpartum mothers during 2 days, 2 weeks, and 6 weeks after birth and found that child care was a significant factor of fatigue in the early postpartum period. Moreover, the younger mothers experienced more fatigue than the older mothers by the end of postpartum period. It could explain that the younger mothers usually had low education, less experienced of child care, and had less chance to get healthy diet during pregnancy that the older mothers. Likewise, Lee and Zaffke's study about fatigue in 45 postpartum mothers found that the mothers who were younger than 27 years old experienced more fatigue than the mothers who were older than 36 years old. The young mother tend to unplanned for pregnancy, receive less social support, and have difficulty to make good relationship with other; including their babies.

The factors discussed above are major predisposing factors of fatigue in postpartum mothers. As was mentioned, fatigue affects not only well-being of the mothers but also the well-being of the baby and family. Therefore, finding the suitable strategies to manage fatigue in postpartum mothers is necessary.

Management of fatigue in postpartum mothers

Review of literature showed that there were many strategies used to reduce fatigue in postpartum mothers. Details of literature reviewed will be presented in this session.

Namrodphai (2008) studied about the effects of fatigue management program on fatigue of 58 first-time postpartum mothers who had vaginal delivery and found that the mothers who received the program had significantly less fatigue than the mothers who did not receive the program ($p < .05$). Within the study, the program was introduced to the mothers since the last few weeks of pregnancy. Strategies used in the program were based on the three predisposing of fatigue proposed by Pugh and Milligan (1993). Additional emotional support was made in the following 12 hours after birth. Finally, evaluation of the program by assessing fatigue at 2 days postpartum was done.

Liamtrirat (2009) studied about the effect of giving information regarding fatigue and strategies to reduce fatigue in 50 postpartum mothers who had vaginal delivery. The information was given to the experimental group on the second day after childbirth. A sequential of telephone calls was made once a week until the period of postpartum ended to assure the consistency of using strategies introduced. Results of the study indicated that the postpartum mothers who received information and continuous support had less fatigue than the mothers who did not receive the intervention with statistical significant at .05.

Further literature review found that aromatherapy has been used as a strategy to reduce fatigue in postpartum mothers. For instance, a study conducted by Udumsuk, Khanobdee, & Theerakulchai in 2009 which studied the effects essential oils massage on fatigue and quality of sleep in postpartum mothers at 12-24 hours after birth. Results of the study revealed that the mothers who received essential oils massage had significantly less fatigue than the mothers who did not receive the intervention ($p < .01$). However, the effect essential oils massage on quality of sleep was not found in the study (Udumsuk, Khanobdee, & Theerakulchai, 2009). Likewise, Saejiaw (2004) investigated the effect of compression with Thai herb-ball on fatigue in 40 first-time postpartum mothers who had normal delivery. Within the

study, compression with Thai herb-ball was introduced to the sample for 45 minutes and fatigue was measure at 8 hours after childbirth. Results of the study found that compression with Thai herb-ball could significantly reduce fatigue ($p < .01$).

Comfort position for breastfeeding is another strategy used to reduce fatigue in lactating mothers. A study regarding the effect of breastfeeding position on fatigue was conducted by Miligan, Flenniken and Pugh in 20 postpartum mothers; 14 mothers had vaginal delivery and the rest of them underwent cesarean section. Results of the study indicated that side lying position could help the mothers reduce fatigue (Milligan, Flenniken, & Pugh, 1996). Similar finding was found in the study of Pochaiqoupt (2000) which compared breastfeed position between side lying and sitting position in 30 postpartum mothers and found that side lying position could help the mothers reduce fatigue. Within the study, during the first day each subject was introduced to breastfeed the infant in sitting position for 4 hours and changed to side lying in the following 4 hours. For the next day the side lying was firstly introduced and followed by the sitting position. Fatigue was measured after each position changed.

As was mentioned above, strategies used to reduce fatigue were introduced by nurse, however, the self-strategies used to reduce fatigue among postpartum mothers were cited in the literature review.

From the study of Threerakulchai (2004) about factors that contributed to fatigue and strategies used by the mothers to reduce fatigues in 230 postpartum mothers. Results of the study revealed that self-strategies used by the postpartum mothers to reduce fatigue were management of work load, self-empowerment, and the use of relaxation techniques. Details of each strategy will be described in the next session.

Management of workload included management with household work and getting assistance for child care. The postpartum mothers usually used self-strategies to manage household workload in order to reduce fatigue. For examples using washing machine and laundry service instead of hand washing, using disposable diaper, eating ready cooked meal, and setting priority of the work to have time for napping. Some mothers used combined feeding instead of exclusive

breastfeeding or kept breast milk in refrigerator and gave to the infant during night time, so they would have longer sleeping hours. However, the self-strategies mentioned would create problem for the mothers who could not afford and had low socioeconomic level. Moreover, the alternative method of feeding would oppose to the policy of exclusive breastfeeding. Getting help from others for childcare was another self-strategies used by the postpartum mothers to reduce fatigue. The assistance for childcare was come from their mothers and for household work was from their spouses.

Self-empowerment was one of the self-strategies used by the postpartum mothers to reduce fatigue. To increase physical strength, the mothers arranged their time for napping while the babies were sleeping, eat nutritious food, and exercise. For mental empowerment, the mothers self-motivated and tried to have positive thinking about maternal roles and felt challenge in becoming mothers.

Relaxation technique was one of the strategies the postpartum mothers used to reduce fatigue. Some mothers prayed for good, watching television, listening to music, reading favorite books, or chatting with other people, similar finding was found in the research of Taylor and Johnson (Taylor & Johnson, 2010) about self-strategies used by 59 postpartum mothers to reduce fatigue during 6 weeks, 12 weeks, and 24 weeks after birth. In the study, most of the postpartum mothers went to bed early, took a nap during the day, and found time for personal relax, such as exercise etc.

Review of the literature shows that strategies used to reduce postpartum fatigue usually were initiated by nurses and cooperation with the postpartum mothers. However, family members such as their mothers and their spouses were persons living closed to the postpartum mothers and were mentioned as significant others who could help them reduce fatigue. Therefore, the researcher included spouse support in the fatigue management program in this study.

Spouse support

Spouse support is a crucial to help restore physical health and promote psychological well-being in postpartum mothers. It also helps the mothers to better adapt to maternal role. Review of literature obviously showed that support from spouse is essential and valuable for the mothers during transitional period of postpartum, which is a crisis period in life time. Research regards spouse support on postpartum mothers will be presented in this session.

Angkanawattananon (1997) found that spouse support was significant for the postpartum mothers. The study was conducted in 200 postpartum mothers who were first-time mothers, and found that the mothers who received support from their spouses had lower maternal role stress than those who did not receive spouse support with a statistical significant at $p < .05$. The author pointed out that the postpartum mothers had to merge the new maternal roles to the role as a wife; therefore, role stress might occur if they did not received enough support, especially emotional support. In addition, husband was viewed as a significant person for the new mother to help them pass the crisis period of postpartum. The support which most received from spouses included financial and material support, time, and followed by psychological and emotional support. The support which was viewed less received from spouses was informational support.

Wongvisetsirikul (1997) study the relationship between personal factors, marital relationship, social support, self-esteem, role adaptation, anxiety, and postpartum depression in 200 postpartum mothers who had vaginal birth and cesarean section at 6 weeks postpartum. The study found that getting more support from spouse could help the postpartum mothers adjust to maternal role and the role of a wife better than less support from their spouse. The postpartum mothers who received high support from spouses had significantly less anxiety and depression in the postpartum period than those who received less support ($p < .01$). The most postpartum support from spouse was mental and emotional support ($M = 3.10$, $SD = 0.53$), followed by provision of information and appraisal support ($M = 3.08$, $SD = 0.64$ and $M = 2.99$, $SD = 0.77$ respectively). The least support was financial support and material support ($M = 2.89$, $SD = 0.74$). Evidence from the study assured that

mental and emotional support from spouses was the best support that could help the postpartum mothers adapt to the new maternal roles.

Likewise, Gerdprasert (1998) studied relationship between personal factors, spouse support, role adaptation, and postpartum depression in 160 postpartum mothers who had vaginal delivery at 6 weeks postpartum. The study found that the postpartum mothers who received more support from husbands had less postpartum depression than those who received less support from the husbands. The most support that the mothers received from the husband was an instrumental support ($M = 4.05$, $SD = 0.77$) , followed by emotional support ($M = 3.75$, $SD = 0.76$) and appraisal support ($M = 3.44$, $SD = 0.80$) respectively. The least support that the mothers received from the husband was an information support ($M = 3.12$, $SD = 0.97$) . Considering the top three supports received were assistance in child care, financial support, and affection. In contrary, the least three support received were information regarding self-care and child care, and appraisal support. It was evidence that spouse support was essential for well-being of the postpartum mothers.

Redshaw and Henderson studied about involving the husband during pregnancy until the fourth weeks postpartum in 4,616 cases. The results indicated that the spouse support which was most described from the postpartum mothers was assistance with child care; for instances changing diapers, bathing the baby, helping during breastfeeding, comforting the baby, playing with the baby, and raising the baby when postpartum mothers went back to work (Redshaw & Henderson, 2013).

Mc Veigh, John, and Cameron investigated paternal role during 6 weeks postpartum in 165 fathers by using Inventory of Functional Status-Fathers (IFS-F). The study found that the most things that the father had done during 6 weeks postpartum consisted of helping on the housework, food preparation, provision of necessary things, and taking care of the former baby. The least thing that the fathers had done was helping for newborn care (Mc Veigh, John, & Cameron, 2005).

Further literature review found that Sevil and Ozkan studied about the role of husband while a wife had been pregnant and in the postpartum period (6-8 weeks postpartum). The sample included 275 couples. Results of the study revealed that support from husband during and after pregnancy was not different. Factors which

influenced support from husbands were educational level, income, and health insurance. The husbands who had high educational level, high income and had health insurance gave more support to the postpartum mothers than those in the lower group. Moreover, the working mothers received more support from husbands that the unemployed mother. From the result of the study, the researcher discussed that the support from husbands could improve well-being of the postpartum mothers; however, the expectant fathers should be prepared to help the mothers before birth. In practical, preparation for child care and parenting usually emphasizes on the expectant mothers, not on the expectant fathers. As a result, the study found that the assistance about child care and housework which the postpartum mothers received from their husbands during pregnancy was not different from the period after birth (Sevil & Ozkan, 2009).

Similar finding was found by Harrison and Hicks who conducted a study in 158 postpartum mothers. The study found that seventy percent of the sample viewed support from spouse was the most need during postpartum period. Details of support needed were physical and mental support including doing the house chores, helping restore the health, food preparation, emotional tension reduction, assistance with child care, and being loved and cared for (Harrison & Hicks, 1983).

According to the study mentioned above, spouse support is a significant factor contributed to maternal health during postpartum period by reducing fatigue. Besides eating nutritious foods, getting enough rest, having a good mental state; receiving assistance about child care and emotional support from husbands are necessary for the postpartum mothers. Lack of these kinds of support can lead to postpartum fatigue.

In Thailand, the policy regarding promoting husband involvement in childcare has been stated by law since 2012. According to the Government gazette volume 129, the special episode 22, permission for leave of absent for consecutive 15 days will be granted for the husband who is a government official and wishes to help the wife for childcare (Thai government gazette, 2012).

Development of fatigue management program

Postpartum fatigue occurs since early postpartum period and continues if does not have proper management. Especially in postpartum mothers who received cesarean section, which have more factors contribute to fatigue, then this group of mothers will experience more fatigue. Fatigue management is an essential to reduce fatigue for physical and mental health recovery as well as performance effectively. Fatigue management have to start from early postpartum period which the postpartum mothers stay in the hospital. So, the nurse is a person who can manage postpartum fatigue in this time such as ensuring mothers to have adequate rest, support of daily activity living, child care, take care for comforting, and encourages the postpartum mother for self-management of fatigue. However, fatigue does not end when the postpartum mothers had discharged from the hospital, but also increased when the postpartum mothers returned to the house because they have to face with the factors inducing fatigue alone is in excess of its own. Thus, family member especially her husband has a key role to help the postpartum mothers deal with fatigue. Support from husband is sentimental value and benefit to restore physical health in the postpartum mothers, which is a key to manage fatigue. So, the researcher developed fatigue management program by including spouse support because the husband has a deep understanding about the postpartum mothers needs as well as manage fatigue of his wife during 6 weeks after cesarean section effectively.

This including spouse support in fatigue management program of a wife who received cesarean section were developed based on the conceptual framework of Pugh & Milligan (1993) with a review of the relevant literature. They mentioned factors contribute to fatigue include physiological factors, psychological factors and situational factors. Such program include educating the husband of postpartum mothers about postpartum fatigue and teaching with demonstrate how to manage fatigue of a wife. The researcher describe via video that the researcher developed by individual teaching. Because a person have a different in background, ability, and interest. Individual teaching will help the learner more understanding and develop follow the capacity of that person into action (Khammanee, 2014). Educating by individual also has a positive effect on the listener because they can ask a question

while listening and practice until understand and confidence in practice. However, lecture via video to the audience can make the audience awareness and remember only 10 percent, but lecture combined with demonstration can let the audience awareness and remember up to 30 percent. Not only that, if the participant can practice by themselves, they will able to learn up to 75 percent (Dale, 1969). So, the researcher set the program including lecture, demonstration and return demonstration. In addition, the researcher also provide a booklet in fatigue management which have the content congruent with educated and demonstrated for the husband can help manage fatigue effectively. In order to educate and demonstrate are as a following.

1. **Education** : education about postpartum fatigue will make the husband understand and awareness about fatigue of the postpartum mothers which will lead to support his wife properly. Because knowledge is an important part that helping the people change their behavior or action (Khammanee, 2014). For knowledge about fatigue include the definition of fatigue, effect of postpartum fatigue, and factors that contribute to fatigue in postpartum mothers.

1.1 Fatigue means feeling of weak to exhausted resulting in the ability to work of physical and mental decline. Fatigue occur with every postpartum mothers, especially postpartum mothers who underwent cesarean section will experience fatigue more than who vaginal delivery.

1.2 Effect of postpartum fatigue are:

1.2.1 The behavioral effect: fatigue in postpartum mother cause to the mother have slowed behavior, weak, cannot do the daily activity fluently. Especially, the postpartum mothers who underwent cesarean section will have more factors contributing to fatigue which will more effect to the postpartum behavior. As a result in decline the quality life of them.

1.2.2 The adaptation: fatigue in postpartum mother resulting in a negative sense, hinders to the maternal role adaptation. This makes it the duty of the mother is not perfect. The postpartum mother with high level of fatigue will lack of strength and encouragement to child care as well as a key to weaning breastfeed the baby during 1 month after labor. In addition, fatigue will reduce the motivation of postpartum mothers do not want to do any activities including

interaction with the baby result in developmental of the baby slower. These are movement, coordination between hand and optical, communication, interaction with the people, and compliance activities.

1.2.3 Psychological effect: the postpartum mothers with high level of fatigue can lead to postpartum depression.

1.2.4 Relationship with family members : fatigue in postpartum mothers will reduce the relationship between postpartum mothers and family members because fatigue make the postpartum mother absence the need to interact with anyone, which result in decreasing the happiness of postpartum mothers and family members.

1.3 Factors that contribute to fatigue follow the conceptual framework of Pugh & Milligan (1993) include 3 factors are physiological factors, psychological factors, and situational factors. The researcher will describe.

1.3.1 Physiological factors are blood loss during labor and after childbirth, postpartum hemorrhage, weight loss, internal organ revolution, hormonal change, inadequate receive of food and water, and breastfeeding. Therefore, the researcher educated the husband of postpartum mother to add strength to the physical of his wife, which was reducing factor that contribute to fatigue. By teach the husband to provide enough food and water to a wife, it is provide the postpartum mother receive food that give energy not less than 2,600 kilocalories per day and receive water at least 8-10 cup of glass. For the amount of food in each group should be provided below (Osodsatean, 2009; Pongpaiboon, 2011; Sawaspanich, 2011).

1.3.1.1 Increase nutritious from protein at least 20 grams per day. For example; the milk 1-2 glass, the egg 1-2 egg, the Tilapia a half of fish, a yellow or a white tofu and so on.

1.3.1.2 Increase some nutritious that give energy in order to get enough of energy to restore the health, process of lactation and infant feeding such as eat some rice increase from pre-pregnancy a half of plate per meal, or add 1 slide of bread per meal and so on.

1.3.1.3 A group of food that is fat or oil is a food that provides energy and essential fatty acid to the body and also help in the absorption of fat-soluble vitamins. The postpartum mothers can eat it not over 3 teaspoon per day because each type of food often contains fat already.

1.3.1.4 Vegetable are food that provide vitamins and minerals which repair the psychical health. The postpartum mothers can eat unlimited green vegetables.

1.3.1.5 The postpartum mothers should eat fruit every day in appropriately. For example; an orange per meal, papaya 6-7 pieces per meal, an apple in medium size per meal, 1 banana per meal, and other fruit in each seasonal.

The husband should provide many foods that have different characteristics such as vegetable, fruit, many type of meat alternate at each meal for the mothers not bored and attract appetite.

Moreover, the process of breast feeding is another factor that cause to physical fatigue. So, the researcher teach the husband of postpartum mothers about how to provide assistance by support positioning during breastfeeding for the mothers feel the most comfortable while breastfeeding (Troy & Dalgas-Pelish, 2003) such as supply cushion or a pillow cradle the arm, care to sit in a chair with a backrest, accommodation foot in the chair if the chair is too high, and took the baby to burp after feeding for the mother have more time to rest or relax, thereby reducing fatigue of postpartum mother.

1.3.2 Psychological factors include maternal role adaption, anxiety, stress, negative feeling etc. (Pugh & Milligan, 1993). The husband is a key person to reduce such factor which contribute to reduce fatigue of the postpartum mothers. So, the researcher teach the spouse of the postpartum mothers to expressed concern, ask about the well-being of the mothers, ask about fatigue or discomfort of the mothers, talk or counseling about the problem, ask about the difficulties of raising a child, sympathy and expressed willingness to help child care including encouraging that the postpartum mothers can play a role as a mother as well (Theerakulchai, 2004) . These activity will make the postpartum mothers decrease

anxiety and more confident in their role (Sawaspanich, 2011) and receiving care and talked deliberately with the husband consequence to the mothers feel she always receive some help from her husband when she run into the problem (Gerdprasert, 1998; Gruis, 1977). Because the first-time postpartum mothers experience stress and anxiety in adapting to a new role which is a role that has never been experienced before, the multiparous postpartum mothers also found the stress on the role as well because there are several roles that need to be done (McQueen & Mander, 2003). So, getting support and care from the husband is an important which help the postpartum mothers have more confidence in infant care and reduce stress with anxiety in the maternal role adaption (Harrison, 1983; Warren, 2005). As a result to reduce psychological fatigue.

1.3.3 Situational factors that contribute to fatigue by conceptual framework of Pugh & Milligan (1993) are social support, rest, sleep, and exercise etc. Especially, support from family member according to the study that found the postpartum mothers who lack of support in child care, work load management are the factor that contribute to fatigue in postpartum mothers (Gardner, 1991; Taylor & Johnson, 2010). Therefore, the researcher encourage the spouse of postpartum mother including in reduce situational fatigue by providing knowledge via video about newborn care such as how to hold the baby, changing diaper, bath to the baby, cleaning after the baby excrete, warming, play with the baby or help when the baby cry, decrease the burden in children care in the case of multipara, shifting to care the baby. The husband can help in house chores such as cleaning the house, washing and help manage the workload (Mc Veigh, John, & Cameron, 2005; Redshaw & Henderson, 2013; Sevil & Ozkan, 2009). Including to help the postpartum mother have a time in longer sleep at night. The first postpartum mothers should get sleep at least 12 hours and at least 8 hours in multipara mothers because of adequate sleep or ongoing deep sleep are essential to restore energy of the postpartum mothers (Theerakulchai & Tiansawad, 2004). In addition, the researcher also educated the husband to set the time for the postpartum mother can faith-based philanthropy, relax, exercise, watching television or doing other activities that they want to do which resulting in a wife have energy from rest or relax to baby care and to do other

functions. As a result decreased situational fatigue (Gardner, 1991; Gerdprasert, 1998; Taylor & Johnson, 2010).

2. Demonstration : in addition to educate the husband of postpartum mothers followed the program, the researcher also demonstrated about how to holding the baby, cleaning after defecation, changing diaper, warming, monitoring and comforting when a baby is crying. Because the person will be good in practice something when they have skill. Especially in the context of Thai social, the husband does not have a role in such activities, most of him lack of knowledge with skill and confidence to care an infant. So, the researcher demonstrated how to care the baby in all the activities mentioned above for supplement the skills and confident to the husband of postpartum mothers, including let him practice in real situation. The researcher suggested amendments if he had done wrong, focused on what to look out for each step, praised and encouraged whenever he did better. The researcher also provided an opportunity for the husband of postpartum mother to ask what the suspect during demonstration and practice. This practice had done until the husband had confidence in practice.

The researcher provided fatigue management program to the spouse of postpartum mothers who received cesarean section during the day when the mothers stayed in the hospital, at the time that the husband convenient. By providing knowledge through video that were developed. After education completed, the researcher demonstrated how to care the baby and let him practice with asked the question that he wanted. In addition, gave a booklet to the husband of postpartum mother to review at home for more understanding, better remember and could practice when discharged from the hospital (Bloom, 1956). The researcher evaluated the effectiveness of fatigue management program when the postpartum mothers came to check up at 6 weeks after labor.

CHAPTER III
MATERIALS AND METHODS

Research Design

This quasi-experimental research was two groups pre-posttest design aimed to study the effect of including spouse support in fatigue management program on fatigue of a wife who received cesarean section. The research design of this study was illustrated below.

Experiment group	E1	X	E2
Control group	C1		C2

E1 mean Assessment of postpartum fatigue in the experimental group before entering the program

C1 mean Assessment of postpartum fatigue in the control group before entering the program

X mean Fatigue management program

E2 mean Assessment of postpartum fatigue in the experimental group at the end of the program

C2 mean Assessment of postpartum fatigue in the control group at the end of the program

Population and Sample

Population

The target population in this study was the postpartum mothers who underwent cesarean section.

Sample

The sample in this study consisted of 40 postpartum mothers who underwent cesarean section and received support from spouse to reduce fatigue. These mothers stayed at postpartum unit and private obstetric unit, Ramathibodi Hospital, Bangkok, Thailand from January 2015 to May 2015. In addition, these mothers came for postpartum check-up at postpartum check-up clinic. The samples were selected by purposive sampling, based on the inclusion criteria.

Inclusion criteria

The inclusion criteria to recruit the sample were:

1. The postpartum mothers did not have chronic disease such as anemia, heart disease, hypertension, and did not have obstetric complication in pregnancy, labor, and postpartum period such as anemia, postpartum hemorrhage etc.
2. The babies were normal and did not have complication during 6 weeks after birth.
3. The postpartum mothers living with her husband and children during the first 6 weeks after birth.
4. Both the postpartum mother and the husband can read, write, and verbal communicate in Thai language.
5. The postpartum mothers came to check-up at postpartum check-up clinic, Ramathibodi Hospital, six week after birth.
6. The postpartum mothers did not work outside the house during 6 week of postpartum period.
7. The postpartum mothers and the husband were willing to participate in this study.

Exclusion criteria

1. The postpartum mothers or the baby had complicate during postpartum period.
2. The samples were rejected or withdraw from the study.

Sample size

A sample size in this study was calculated according to Cohen (Cohen, 1988) by determining the effect size (as shown in the appendix J) from the similar research of Namrodphai (2008). The effect size from calculation was .86, which is the large effect size. After setting alpha = .05, power = .80, significant level = .05, and using one-tailed hypothesis testing, the minimum sample size was 40 (Cohen, 1988). Twenty postpartum mothers were assigned to the control group and the other twenty cases were assigned to the experimental group. The matched pair technique was used to select the sample. The variables that were used to match the sample in each group were number of pregnancy, age, educational level, infant feeding, and the main source of postpartum support.

Setting

This study was conducted at the postpartum unit and the private Obstetric-Gynecologic unit, Ramathibodi Hospital. Data collection took place on Monday to Sunday from 9.00 a.m. to 4.00 p.m. The policy of postpartum care in both units was that the postpartum mothers who underwent cesarean section were usually stayed in the hospital at least four days after surgery. Conventional health education program was delivered by a nurse as group education. Contents delivered included self-care; such as nutrition, activity and rest, exercise, breast care, abnormal symptom that should come to the hospital and newborn care, such as holding the baby, bathing, keep warm, changing diaper, breastfeeding, and observing abnormal signs in the baby. After discharge from the hospital, the postpartum mothers would have six week appointment for postpartum check-up clinic on Tuesday or Thursday, 8.00-12.00 a.m.

Instruments

The research instruments of this study composed of 2 parts; instrument for implementing the study and instrument for data collection as the following:

1. Instrument for implementing the study was fatigue management program by including spouse support, developed by the researcher based on the conceptual framework of fatigue proposed by Pugh and Milligan (Pugh & Milligan, 1993) and related literature review. Components of the program included 1) verbal instruction using instruction CD, demonstration and return demonstration by the researcher, and 2) giving booklet entitled "fatigue management in postpartum mothers" for reviewing at home.

1.1 Lesson plan for fatigue management program by including spouse support (Appendix D) was used as guidance for delivering knowledge to the husbands of postpartum mothers in the experimental group. Contents included in the lesson plan were the meaning of fatigue, causes of fatigue, factors contributing to fatigue, effects of fatigue, and strategies used to reduce fatigue in postpartum mothers.

1.2 Instruction CD (Appendix E) was used to provide the knowledge for husbands of postpartum mothers in the experimental group; contents in the CD were congruent with the lesson plan. The contents were retrieved from textbooks and related literature review which related to the lesson plan. The time used in each instruction was around 40 minutes. After instruction was given, the researcher demonstrated about child care, for example holding the baby, changing diaper, keep warm to the husbands of postpartum mothers and let them return demonstration.

1.3 Booklet entitled "fatigue management in postpartum mothers" (Appendix F) was a printed matter to offer knowledge about strategies used to help postpartum mothers reduce fatigue. The contents put in the booklet were similar to that in CD which the husbands of postpartum mothers were able to review at home.

Quality of the instruments

The lesson plan, the instruction CD, and the booklet were reviewed by a panel of three experts: two instructors in midwifery and one registered nurse in a postpartum clinic (Appendix K) for content validity. The researcher revised the instruments according to the experts' recommendation and tried out with two husbands of postpartum mothers who underwent cesarean section. After trying out,

the instruments were refined for better understanding and more readability before using them in the study.

2. Instruments for data collection

The instruments used to collect data in this research were as follows:

2.1 Demographic Data questionnaire (Appendix A) was developed by the researcher to gather data regarding age, educational level, occupation, family income, infant feeding, number of pregnancy, estimated blood loss from cesarean section, and the person who mainly support during postpartum period.

2.2 The Modified Fatigue Symptom Checklist (MFSC) (Appendix B) was originally developed by Yoshitake (1971) to study fatigue of the factory's employees in Japan, named Fatigue Symptom Checklist (FSC). The FSC contained 30 item-dichotomous scales. In 1993, the FSC was modified by Pugh to be 4-point Likert scales; which 1 mean not fatigue to 4 mean extremely fatigue (Pugh et al., 1999). After using factor analysis, it was found that the items included in The Modified Fatigue Symptom Checklist (MFSC) covered both physical fatigue and psychological fatigue. The item number 1, 11, 12, 13, 14, 15, 16, 17, 18, 20, 24, 27 reflect psychological fatigue whereas the rest of items reflect physical fatigue. The MFSC have been used to evaluate fatigue in childbearing women, which the Cronbach alpha coefficient obtained were .91-.94.

The Modified Fatigue Symptom Checklist (MFSC) was translated into Thai language by Theerakulchai (2004) and the back translation was done to verify the accuracy of the scale (Theerakulchai, 2004). After the tool had been used in thirty postpartum mothers at six week postpartum, the Cronbach alpha coefficient obtained was .89. Then, the MFSC was used to study fatigue of postpartum mothers in many studies, for example Namrodphai (2008), Udumsuk, Khanobdee, & Theerakulchai (2009), and Theerakulchai, Khanobdee, & Vongnipon, (2011); which the Cronbach alpha coefficient obtained were .93, .96, and .94 respectively.

In this study, the researcher used the Thai version of MFSC that was translated by Theerakulchai (2004). There are 30 items included in the scale. Each item was a 4-point Likert scale. The details for scoring and interpretation of each item are as follows:

1 point	means	not fatigue
2 points	means	mild fatigue
3 points	means	moderate fatigue
4 points	means	extreme fatigue

The possible scores ranged from 30 to 120 score. High scores indicated that the postpartum mothers who underwent cesarean section had high level of fatigue whereas low scores indicated that the postpartum mothers had low level of fatigue.

Quality of the instruments

Reliability of the tool was tested in 8 postpartum mothers who underwent cesarean section. The Cronbach alpha coefficient obtained was .97. After the tool was used in the sample of 40 postpartum mothers, the Cronbach alpha coefficient obtained was .91.

2.3 Spouse Support Questionnaire (Appendix C) was an open-ended question developed by the researcher based on review of literature, to ask the postpartum mothers who underwent cesarean section filled about the physical support, psychological support, and situational support received from husbands during six weeks postpartum period.

Protection of the human subject rights

The researcher asked for approval from the Committee on Human Right related to Researcher Involving Human Subjects at Faculty of Medicine, Ramathibodi Hospitals, Mahidol University before conducting the research. The approval was granted, with the approval from number 2014/712 (Appendix I). The eligible participants and their husbands were approached and informed about the purpose of the study, the expected beneficial outcomes, and their rights to participate or withdraw from the study at any time without any impact on postpartum care they would receive. The subjects were ensured that the data received from this study will be analyzed and presented as group data. In addition, information regarding privacy of the subjects will be kept confidentially. Finally, both couples who agreed to participate in the study were requested to sign the consent form (Appendix G).

Data Collection

After the researcher had prepared the fatigue management program by including spouse support, the interventions and data collection were as follows:

1. The formal letter from the Faculty of Graduate Studies, Mahidol University, was submitted to the Director of Ramathibodi Hospital to ask permission to implement the study at postpartum unit, private Obstetric and Gynecologic unit, and postpartum check-up clinic.

2. After getting the permission from the director, the researcher met with the Director of Nursing in Obstetric Division and head nurse of postpartum unit, private Obstetric and Gynecologic unit, and postpartum check-up clinic, to inform them about the purpose of research, the study procedures, and the data collection.

3. The sample postpartum mothers who underwent cesarean were selected based on the inclusion criteria.

4. The selected samples were assigned into two groups, twenty mothers in the control group and the other twenty mothers in the experimental group.

5. Data collection took place every day, Monday to Sunday. For equality of the samples in the experimental group and the control group, matched pair technique was used to recruit the sample, in term of age, educational level, family income, number of pregnancy, the main supporter during postpartum period, and type of infant feeding. Moreover, the postpartum mothers who underwent cesarean section and stayed at private Obstetric and Gynecologic unit were assigned into the control group and the mothers who stayed at postpartum unit were assigned into the experimental group. The purposes of separating the samples were to prevent intermingling of the samples. The procedures for data collection in each group were as follows:

Control Group: Received conventional health education program. The interventions in the control group were composed of two steps as follows:

Step 1. After recruitment, the first data collection took place on the same day as the mothers were discharged from the hospital. The researcher met with the postpartum mothers who underwent cesarean section, to introduce herself, explain the purpose and the benefits of the study, the research process, the length of time to complete the questionnaires, and the right to participate in the study. Finally,

the eligible participants who were willing to participate in the study were asked to sign the consent from (Appendix G). Data regarding personal characteristics; including age, educational level, career, family income, number of pregnancy, amount of blood loss, type of infant feeding, and the main supporter during postpartum period was gathered. Finally, the MFSC was administered to the participant to assess about postpartum fatigue. The time spent in this session was about 15 minutes.

Step 2. The researcher met the participants 6 weeks after the program was started at the postpartum check-up clinic. The second data collection took place using the MFCS as same as that used in the first data collection. In addition, the Spouse Support Questionnaire was administered to the participants to gather data regarding physical support, psychological support, and situational support received from the husbands. Lastly, the researcher thanked the participants for their cooperation in the study. The time spent in this session was about 20 minutes.

Experimental Group: Received conventional health education program combined with the fatigue management program by including spouse support. The intervention in the experimental group consisted of three steps as follows:

Step 1. The researcher met with the postpartum mothers who underwent cesarean section. The details of intervention in this step were similar to the details in step 1 of the control group that was mentioned above. Additional invention in this step was that the eligible postpartum mothers were asked permission to give opportunity to the researcher in making appointment in the following day with the samples' husband to introduce the instruction regarding assistance to reduce fatigue. The appointment time depended on the couple' convenience, might be after lunch (11.00 a.m. -1.00 p.m.) or in the evening (3.00 p.m. – 5.00 p.m.).

Step 2. The researcher gave individual instruction using instruction CD to the husband of postpartum mother who underwent cesarean section about the meaning of fatigue, causes of postpartum fatigue, impacts of postpartum fatigue, and strategies to help the mother reduce postpartum fatigue; based on predisposing factors of fatigue proposed by Pugh and Milligan (1993), which were physical factors, psychological factors, and situational factors. After the instruction was ended, the researcher demonstrate about childcare, for instance holding baby, changing diaper, how to keep warm and let them return demonstration. Finally, the

booklet entitled “fatigue management in postpartum mothers” was given to the postpartum mother’s husband to review at home. The time spent in this session was around 40 minutes.

Step 3. The researcher met with the postpartum mothers who underwent cesarean section at the sixth week after the program was initiated. The second data collection (post-test) took place using the MFSC as same as that used in the first data collection. Moreover, the Spouse Support Questionnaire was administered to the participants to gather data regarding physical support, psychological support, and situational support received from the husbands. Finally, the researcher thanked the participants for their cooperation in the study. The time spent in this session was around 20 minutes.

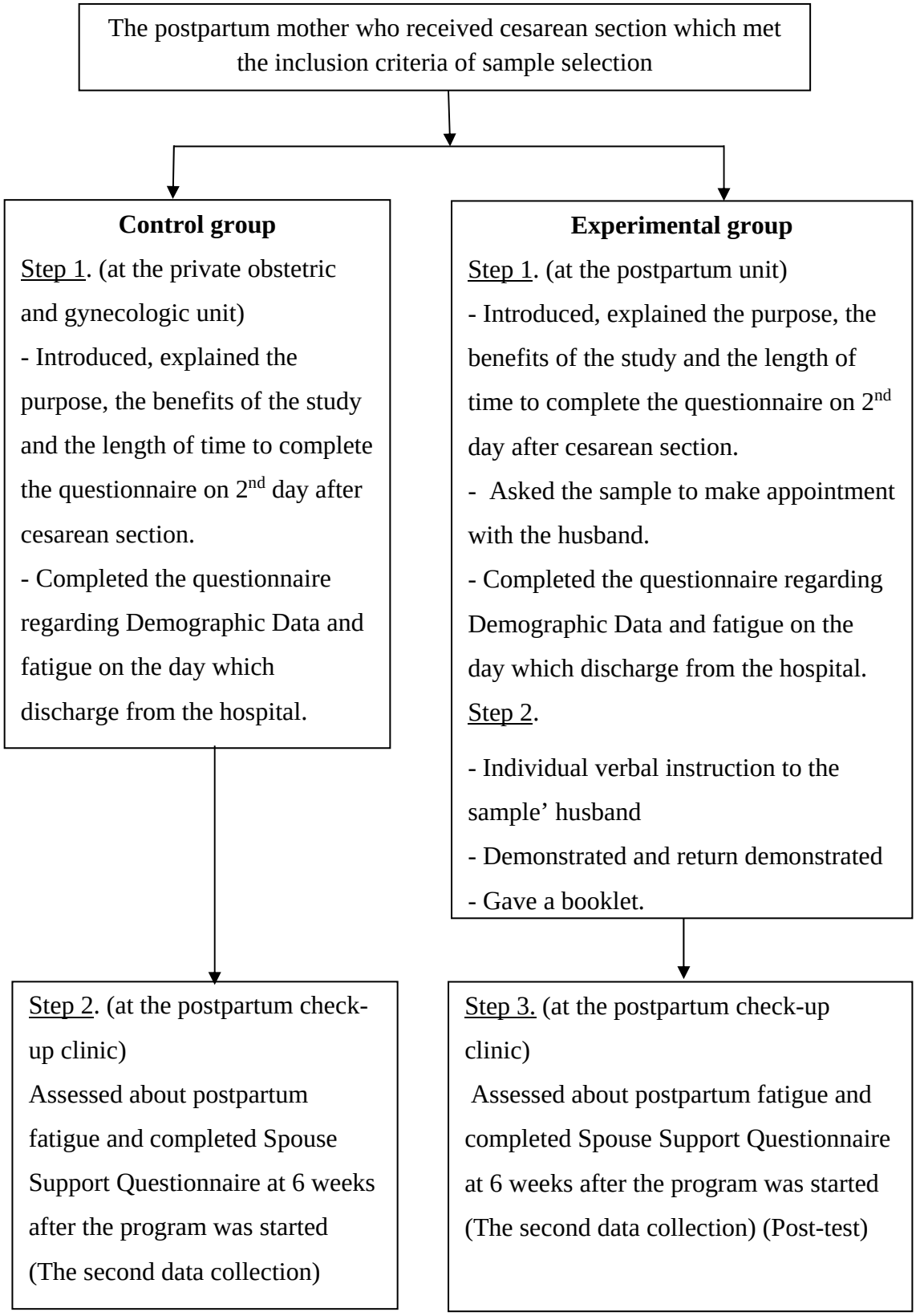

Figure 3.3 The process of data collection in this study

Data Analysis

Data were analyzed by using the computer program. The 95 percent confident was set. The analyses were as follows:

1. Descriptive statistics: frequency, percentage, rang, means, and standard deviation was used to describe the sample personal characteristics; including age, educational level, occupation, family income, number of pregnancy, amount of blood loss, infant feeding, and the main supporter during postpartum period.

2. The difference of personal characteristics between the control group and experimental group was examined by using the Chi-square test, Mann-Whitney U test and the independent t-test.

3. The difference of mean scores of the fatigue in the control group and in the experimental group was examined by using the independent t-test.

4. The data regarding spouse support during six week postpartum was categorized using frequency and percentage.

Prior to the use of independent t-test, assumptions of the test were verified. Normality of the fatigue scores was proved by using the Kolmogorov-Smirnov Test (as show in appendix L). Therefore, the independent t-test was used to compare fatigue scores of the samples between groups.

CHAPTER IV
RESULTS

This quasi-experimental research aimed to study the effect of including spouse support in fatigue management program on fatigue of a wife who received cesarean section. The data was collected in 20 postpartum mothers in the control group and 24 postpartum mothers in the experimental group. During the research, subjects in the experimental group had been excluded from the study due to one infant had jaundice, one infant dead, one postpartum mother had wound infection, and one postpartum mother did not come to postpartum check-up. Finally, there were 20 subjects in each group. Results of the study will be presented in the following: a) characteristics of the sample and b) results of hypothesis testing.

Characteristics of the sample

Majority of the subjects in the control group (65 percent) was between 20-35 years, a minor (35 percent) was older than 35 years. Most of the subjects (55 percent) had a bachelor's degree or higher, followed by less than bachelor's degree (45 percent). All of the postpartum mothers in the control group had career. Majority of the samples (65 percent) were primiparous, and the rest of them (35 percent) were multiparous. Most of the samples (60 percent) in the control group had exclusive breastfeeding and the rest of them (40 percent) had breastfeeding combined with bottle-feeding. Major support (65 percent) during postpartum period in the control group was the husband and a minor (35 percent) was the mother.

Majority of the subjects in the experimental group (85 percent) was between 20-35 years, a minor (15 percent) was older than 35 years. Most of the subjects (70 percent) had less than bachelor's degree, followed by a bachelor's degree or higher (30 percent). Most of the subjects (75 percent) had career, followed by did not have career (25 percent). Majority of the samples (65 percent) were multiparous,

and the rest of them (35 percent) were primiparous. Most of the samples (80 percent) in the experimental group had exclusive breastfeeding and the rest of them (20 percent) had breastfeeding combined with bottle-feeding. Major support (80 percent) during postpartum period in the experimental group was the husband and a minor (20 percent) was the mother.

After the researcher compared the characteristics regarding age, educational level, breastfeeding, main support during postpartum period and number of pregnancy between the control group and the experimental group, it was found that no statistically significant different among both groups ($p > .05$). After comparing the characteristics regarding career between the control group and the experimental group, it was found that there was a significant different between the two groups regarding this variable ($p < .05$) as shown in table 4.1.

Table 4.1: Comparison of personal characteristics of the sample by Chi-Square test and Fisher's Exact Test (N = 40)

Characteristics	Control group(n=20)		Experimental group (n=20)		χ^2
	Number	Percent	Number	Percent	
Age					.273[2 ns]
- between 20-35 years	13	65	17	85	
- more than 35 years	7	35	3	15	
Educational level					.201[1 ns]
- less than bachelor's degree	9	45	14	70	
- bachelor's degree or Higher	11	55	6	30	
Career					.047[2] *
- have career	20	100	15	75	
- do not have career	0	0	5	25	
Infant feeding					.301[2 ns]
- exclusive breastfeeding	12	60	16	80	
- breastfeeding combined with bottle-feeding	8	40	4	20	
Main support					.480[2, ns]
- husband	13	65	16	80	
- mother	7	35	4	20	
Number of pregnancy					.113[2 ns]
- primipara	13	65	7	35	
- multipara	7	35	13	65	

ns = $p > .05$, * = $p < .05$, 1 = Chi-square test, 2 = Fisher's exact test

For the data about family income, it was found that the postpartum mother in the control group had family income between 20,000-60,000 Bath, the mean was 34,200 Bath per month. Family income of the postpartum mother in the experimental group was between 15,000-70,000 Bath, the mean was 33,050 Bath per month. After testing the assumption of the t-test by Kolmogorov-Smirnov test, it was found that the data was normal distributed. So, the researcher used independent t-test to analyzed the different of family income between the control group and the experimental group. The analysis found that there was no statistically significant different regarding family income among both groups ($p > .05$) as shown in table 4.2.

Table 4.2: Comparison of personal characteristics of the sample by Independent t-test (N = 40)

Variable	Control group (n=20)		Experimental group (n=20)		t
	Mean	SD	Mean	SD	
family income (Bath)	34,200 Median=32,500	10226.90 Mode=30,000	33,050 Median=32,500	14901.34 Mode=20,000	.285 ns

ns = $p > .05$

For the data about the estimated blood loss in cesarean section, it was found that the postpartum mothers in the control group had estimated blood loss between 200-800 milliliters, the mean was 510 milliliters. The estimated blood loss of the postpartum mothers in the experimental group was between 300-900 milliliters, the mean was 495 milliliters. After testing the assumption of the t-test by Kolmogorov-Smirnov test, it was found that the data was not normal distributed. So, the researcher used Mann-Whitney U test to analyze the different of estimated blood loss between the control group and the experimental group. The analysis found that there was no statistically significant different regarding estimated blood loss between both groups ($Z = -.609$, $p > .05$) as shown in table 4.3.

Table 4.3: Comparison of personal characteristics of the sample by Mann-Whitney U Test (N = 40)

Variable	Control group (n=20)		Experimental group (n=20)		Z
	Mean-Rank	Sum of Ranks	Mean-Rank	Sum of Ranks	
estimated blood loss (milliliter)	21.60	432.00	19.40	388.00	-.609 ns

ns = p > .05

Results of hypothesis testing

The postpartum mothers with cesarean section who received conventional health education program combined with fatigue management program by including spouse support had less fatigue than those who received only conventional health education program.

The researcher tested the assumption of t-test before comparing the mean score of fatigue between the control group and the experimental group (between groups) by Kolmogorov-Smirnov test, normality of the data was found. So, the researcher analyzed the data between groups by Independent t-test.

The study found that the mean score of fatigue before starting the program in the control group was 48.90 scores (SD = 9.73), whereas the mean score of fatigue before starting the program in the experimental group was 49.00 scores (SD = 12.31). After comparing the fatigue scores between the control group and the experimental group before starting the program, it was found that there was no significant different (p > .05). After completion the program, the mean score of fatigue in the control group was 49.80 scores (SD = 10.90), whereas the mean score of fatigue in the experimental group was 38.40 scores (SD = 6.48). After comparing the mean scores of fatigue between the control group and the experimental group after completion the program, it was found that there was a different between the two groups (p < .05) as shown in table 4.4. Therefore, the research hypothesis was accepted.

Table 4.4: Comparison of the fatigue score between groups (N = 40)

variable	control group (n=20)			experimental group (n=20)			t
	Min-Max	Mean	SD	Min-Max	Mean	SD	
- fatigue (before starting the program)	36-66	48.90	9.37	34-74	49.00	12.31	-.028 ns
- fatigue (after completion the program)	37-77	49.80	10.90	30-56	38.40	6.48	4.019 *

ns = p > .05, * = p < .05

CHAPTER V
DISCUSSION

This quasi-experimental research aimed to study the effect of including spouse support in fatigue management program on fatigue of a wife who received cesarean section. Forty purposive postpartum mothers who underwent cesarean section were included in the study. The samples were divided into two groups; the control group and the experimental group. Each group consisted of twenty postpartum mothers. The control group received conventional health education program whereas the experimental group received conventional health education program combined with fatigue management program developed by the researcher. All of the samples came for postpartum check-up at postpartum clinic, Ramathibodi Hospital. Discussion of the study will be presented in the following:

Characteristics of the sample

Results of the study found that the age of the sample in the control group and the experimental group was not significant different ($p > .05$). Majority of the samples was between 20-35 years which similar to the study of Theerakulchai, Khanobdee, & Vongnipon (2011) which found that the majority of postpartum mothers who underwent cesarean section was 20-34 years old. This range of age is appropriate to become pregnant because the women in this age have mature physical and psychological development which necessary for the new maternal role. The mothers with advanced age (more than 35 years old) tend to have a risk for complication during pregnancy, labor, and postpartum period. On the other hand, the young age mothers (less than 20 years old) are considered a risk group for pregnancy as well because of their physical and psychological immature (Lawaratanakorn, 2012), resulting in postpartum fatigue. Analysis of the results in this study showed that the age of the control group and the experimental group was not significant

different; therefore, age was not differently affected the fatigue in the samples of this study.

Regarding educational level, the majority of the samples in the control group earned bachelor's degree and the experimental group finished high school. After comparing the educational level, it was found that there was no significant different ($p > .05$). Review of literature showed that education affect fatigue in the postpartum mother. The mothers with high education experienced less fatigue than the mother with low education because high educated mothers could easily access to health care, more well-prepared for pregnant, and could better solve problem than the mothers with low education (Gardner, 1991). According to data analysis, educational level in the control group and the experimental group was not significant different ($p > .05$); therefore, educational level was not differently affected fatigue of the samples in the study.

For family income, it was found that the sample in the control group had family monthly income between 20,000-60,000 Bath, the mean was 34,200 Bath (SD = 10226.90) whereas family monthly income of the sample in the experimental group was between 15,000-70,000 Bath, the mean was 33,050 Bath (SD = 14901.34). During postpartum period, the family had to pay extra money for raising a child. The postpartum mothers who had low family income will have more stress, anxiety, and made them experience more fatigue than the mother with high income (Gardner & Campbell, 1991). However, data analysis of this study revealed that the family income in the control group and the experimental group was not significant different ($p > .05$); therefore, family income was not a major significant variable affected fatigue in the samples of the study.

For career, the result of the study found that all of the postpartum mothers in the experimental group had career (100 percent), some of the postpartum mothers in the control group had career (75 percent). After comparing the different of career between the experimental group and the control group, it was found statistically significant different regarding career among both groups ($p < .05$). However, both the postpartum mothers in the experimental group and the control group did not work outside the house during 6 week of postpartum period. Moreover, considering the family income between both groups was found that no statistically significant

different. Thus, personal characteristic regarding career resulting in fatigue was not different in both groups of the postpartum mother.

In term of infant feeding, the result of the study found that the majority of the subjects in the control group (60 percent) and the majority of the subjects in the experimental group (80 percent) had exclusive breastfeeding. After comparing the characteristics regarding feeding during 6 weeks postpartum, it was found no statistically significant different among both groups ($p > .05$). Breastfeeding is one of the factor that resulting in postpartum fatigue because the mothers have to use more energy in the process of breastfeeding and lactation; the mothers have to breastfeed every 2-3 hours throughout the 24 hours period (Wijitsucon, Sangperm, Watkyu, Ruangjirattean, & Payakruang, 2012). Therefore, the postpartum mothers who give breastfeeding will experience more fatigue than the mothers who do not give breastfeeding (Pugh, Milligan, Parks, Lenz, & Kitzman, 1999; Wambach, 1988). According to data analysis, infant feeding in the control group and the experimental group was not significant different ($p > .05$); therefore, infant feeding was not differently affected fatigue of the samples in the study.

In term of main support, the result of the study found that the husband was the main support of the subjects in the control group and the experimental group (65 percent and 85 percent respectively). Currently the nuclear family in Thailand is increased. Especially the urban area which this study was carried out. Family members include in the postpartum mother's family are the husband and the child. Thus, the husband was the main support during 6 weeks postpartum of the samples in this study. After comparing the characteristics regarding main support, it was found that there was no significant different among both groups ($p > .05$); therefore, main support was not differently affected fatigue of the samples in the study.

In term of number of pregnancy, the results of the study found that the majority of the subjects in the control group (65 percent) were primiparous mothers and the majority of the subjects in the experimental group (65 percent) were multiparous mothers. Both primiparous and multiparous mothers have anxiety and stress which resulting in fatigue, but different in the cause. The primiparous mothers have anxiety and stress from role adaption which difficult for the first-time mother, and the multiparous mothers have anxiety and stress from multiple roles after child

birth (Taylor & Johnson, 2013). After comparing the number of pregnancy between both groups, it was found no statistically significant different among both groups ($p > .05$); therefore, number of pregnancy was affected fatigue of the samples not differently in the study.

In term of estimated blood loss, the results of the study found that the control group had estimated blood loss 200-800 milliliters, the mean was 510 milliliters (SD = 161.90). The experimental group had estimated blood loss 300-900 milliliters, the mean was 495 milliliters (SD = 170.83). The estimated blood loss of the subjects in both groups was normal amount of blood loss and possible in cesarean section, which are between 500-1,000 milliliters. However, such blood loss was greater than blood loss from the postpartum mother who had vaginal birth, which is less than 500 milliliters (Sawaspanich, 2011). The estimated blood loss effects to postpartum fatigue (Jansen et al., 2007) because when the body has blood loss, it will result in lower tissue perfusion (Saladin, 2012). So, the postpartum mothers who underwent cesarean section have fatigue more than the mothers who have normal vaginal delivery (Sresuying & Anusornteerakul, 2014; Milligan, Parks, & Lenz, 1990). After comparing the estimated blood loss between both groups, it was found that no statistically significant different among both groups ($p > .05$) and still was normal for estimated blood loss of the postpartum mothers who received cesarean section. Therefore, estimated blood loss was not differently affected fatigue of the samples in the study.

Results of hypothesis testing

The postpartum mothers with cesarean section who received conventional health education program combined with fatigue management program by including spouse support had less fatigue than those who received only conventional health education program.

Result of the study indicated that the mean score of fatigue in the control group before starting the program was 48.90 score (SD = 9.73) while the mean score of fatigue in the experimental group was 49.00 score (SD = 12.31); which was

congruent with the study of Theerakulchai, Khanobdee, & Vongnipon (2011) conducted in the postpartum mothers who underwent cesarean section. After comparing the mean score of fatigue before starting the program in both groups, it was found that there was no significant different ($p > .05$). Therefore, the score of fatigue prior to the program in both groups did not impact the score after completion the program. The husband of postpartum mother in the experimental group received fatigue management program and resulting in the postpartum mothers in the experimental group had significant less fatigue score than the postpartum mothers in the control group ($p < .05$), it could explain that the fatigue management program by including spouse support could effectively reduce fatigue in the postpartum mothers who underwent cesarean section because the program was developed based on the conceptual framework of Pugh and Milligan (1993) which focused on three main contributing factors of fatigue; physiological factor, psychological factor and situational factor. It means that when the predisposing factors of fatigue are managed the fatigue will decrease.

Physiological factors: the researcher gave instruction regarding diet and fluid replacement to the husband of postpartum mother in the experimental group. Food and water are essential for health restoration after surgery (Cunningham, Leveno, Bloom, Hauth, Rouse, & Spong, 2012; Rhoten, 1982). Replacement of fluid and energy should be done as soon as the postpartum mothers could take. Usually, the postpartum mothers who underwent cesarean section had spent a lot of energy during operation and early postpartum period (Cunningham et al, 2012) and resulting in increasing physiological fatigue (Jansen et al, 2007). Therefore, management of fatigue by the husband, for example providing enriched soft drink could help the postpartum mother regained energy. Besides, the husband was advised about arranging the comfort position for the mother while breastfeeding, and took the baby to burp after feeding, so the mothers would spent less energy and could have more time to rest, ultimately reduced fatigue (Troy & Dalgas-Pelish, 2003) . Similar finding was found in the study of Namrodphai (2008) which indicated that the postpartum mothers who had enough rest and sleep and had more time to relax would have less fatigue. In the present study all of the samples in the experimental group received assistance from husband during six weeks postpartum, which was physiological

support by providing nutritious food and encouraging the postpartum mother to drink a lot of water. On the other hand, only 80 percent of the samples in the control group received physiological support from the husband (as show in the appendix M).

Psychological factors: the researcher advised the husband of the postpartum mother who underwent cesarean section to comfort, encourage, ask about daily living and concern, and show the manner that the mothers were cared for and loved. Counseling, listening, and giving time to the postpartum mothers would help them reduce stress and tense, get more relax, and feel worth. At least a mother would feel that not only her faced the problem alone, still had someone always be there for her, resulting in decreased fatigue (Rhoten, 1982). Results of this study were congruent with the study previously conducted, which found that the postpartum mothers would like to have the husband care for her and the child, just only a word concerning about her well-being could make the mother feel good and reduce fatigue (Theerakulchai, 2004; Theerakulchai & Tiansawad, 2004). Similar finding also had been found in the literature reviewed, the postpartum mothers who received support from spouse had low level of stress (Leenatham & Julwanitpong, 2014) and contributed to reduction of fatigue. However, the husband usually did not know about psychological need of the postpartum mothers and most of them had overlooked the mothers' concern. The fatigue management program developed in the present study emphasized the participation of husband in helping the postpartum mothers, especially psychological support. The evidence was shown that ninety-five percent of the samples in the experimental group received psychological support from the husband and only twenty-five percent of the samples in the control group received psychological support from the husband (as show in the appendix M); ultimately, less fatigue was found in the postpartum mother in the experimental group comparing to the control group.

Situational factors: The researcher gave advice to the husband of the postpartum mother in the experimental group about child care such as holding the baby, bathing the baby, and changing the diaper, as well as helping his wife to relief workload in the household tasks. In doing so, the postpartum mothers would have free time to do other activities as they needed. It also helped the postpartum mother to have time for napping during the day. The husband also received advice to

help the postpartum mothers taking care the baby during the night, thus allowing time for the mother to have longer consecutive hours to sleep at night, which could reduce fatigue. Getting enough sleep is essential for the postpartum mothers to restore health and release tension from stress (Hart, Freel, & Milde, 1990). Therefore, the postpartum mother who had enough sleep will feel less fatigue (Lee-Shin & Lee-Kathryn, 2007; Rychonovsky & Hunter, 2009). Review of literature was found that support from spouse was a significant situational factor during postpartum period to reduce fatigue in the postpartum mother (Liamtrirat, 2009). Likewise, results of the present study confirmed that support from spouse could help reduce fatigue in the postpartum mother who underwent cesarean section. Ninety percent of the sample in the experimental group received situational support from the husband regarding child care and household chore and only seventy percent of the sample in the control group received situational support from husband (as show in the appendix M).

The husband of the postpartum mother in the experimental group received fatigue management program from the researcher, which consisted of individual instruction via video, demonstration, and return demonstration. This individual instruction through visual aids made the husband understand, remember and also provide knowledge specific to the individual (Khammanee, 2014). The husband of the postpartum mother could ask the questions or thoroughly reviewed the instruction with the researcher. The researcher also demonstrated to the husband of the postpartum mother and let them returned demonstration, provided further guidance in practice and allowed them ask what the suspect. These activities enhanced the understanding and confidence about child care when his wife discharged from the hospital. In addition, the researcher also gave a booklet to the husband of postpartum mother for review whenever they wanted. This program helped the husband of postpartum mother brought about knowledge and techniques necessary to take care his wife and child. As a result to decrease fatigue of the postpartum mother who underwent cesarean section.

CHAPTER VI
CONCLUSION

This quasi-experimental research aimed to study the effect of including spouse support in fatigue management program on fatigue of a wife who received cesarean section. The program was developed based on a conceptual framework of Pugh & Milligan (1993) with a review of the relevant literature.

The samples in this study were 40 postpartum mothers who received cesarean section and received support from spouse to reduce fatigue, stayed at postpartum unit and private obstetric unit, and came for postpartum check-up at postpartum check-up clinic, Ramathibodi Hospital, Bangkok, Thailand from January 2015 to May 2015. The samples were selected by purposive sampling, based on these inclusion criteria:

1. The postpartum mothers did not have chronic disease such as anemia, heart disease, hypertension, and did not have obstetric complication in pregnancy, labor, and postpartum period such as anemia, postpartum hemorrhage etc.
2. The babies were normal and did not have complication during 6 weeks after birth.
3. The postpartum mothers living with her husband and children during the first 6 weeks after birth.
4. Both the postpartum mothers and the husband could read, write, and verbal communicate in Thai language.
5. The postpartum mothers came for check-up at postpartum check-up clinic, Ramathibodi Hospital, at six week after birth.
6. The postpartum mothers did not work outside the house during 6 week of postpartum period.
7. The postpartum mothers and the husband were willing to participate in this study.

Instruments in this study composed of 2 parts:

1. Instrument for implementing the study
2. Instrument for data collection

1. Instrument for implementing the study was a fatigue management program by including spouse support which composed of:

1.1 **Lesson plan** for delivering knowledge to the husbands of postpartum mothers about postpartum fatigue and how to manage fatigue in the postpartum mother who received cesarean section.

1.2 **Instruction CD** for providing knowledge which had content congruent with the lesson plan.

1.3 **Booklet entitled "fatigue management in postpartum mothers"** which had content congruent with the lesson plan.

2. Instrument for data collection included

2.1 **Demographic Data questionnaire** to collect data regarding age, occupation, educational level, family income, infant feeding, the person who mainly support during postpartum period, parity, and estimated blood loss from cesarean section.

2.2 **The Modified Fatigue Symptom Checklist** (MFSC) that was translated into Thai language by Theerakulchai (2004). This instrument consisted of 30 items, which was a 4-point Likert scale. High scores indicated that the postpartum mothers who underwent cesarean section had high level of fatigue. After the tool was used in the sample of 40 postpartum mothers, the Cronbach alpha coefficient obtained was .91.

2.3 **Spouse Support Questionnaire** during six weeks postpartum period. It was an open-ended question about spouse support which the postpartum mother received during 6 weeks postpartum.

After the Committee on Human Right related to Researcher Involving Human Subjects at Faculty of Medicine, Ramathibodi Hospital, Mahidol University approved to conduct research, the researcher conducted and collected data in the experimental group at the postpartum unit, and collected data in the control group at the private obstetric and gynecologic unit. The data collection procedures were described as follow:

Control group: the researcher recruited the samples from the medical record. After that, the researcher met the sample to introduce herself, stated the purpose of the study, and asked for cooperation in the research. The first data collection took place on the same day that the mothers were discharged from the hospital by asking the sample filled up the MFSC. The second data collection took place at the day that the postpartum mothers came for postpartum check-up at postpartum check-up clinic by asking the sample filled up the MFSC and the Spouse Support Questionnaire.

Experimental group: the researcher recruited the samples from the medical record. After that, the researcher met the sample to introduce herself, stated the purpose of the study, and asked for cooperation in the research. Then, the researcher asked the postpartum mothers for appointment with her husband to invite into the program, and delivered knowledge to the husbands of postpartum mothers followed through the lesson plan. The first data collection took place on the same day that the mothers were discharged from the hospital by asking the sample filled up the MFSC. The second data collection took place at the day that the postpartum mothers came for postpartum check-up at postpartum check-up clinic by asking the sample filled up the MFSC and the Spouse Support Questionnaire.

The data gathered was analyzed by a computer program. Significant level was set at .05. Results from data analysis by t-test statistic was found that the postpartum mothers in the experimental group had mean fatigue score after completion the program significant less than the postpartum mothers in the control group ($p < .05$).

Limitation of research

1. This study selected the sample by purposive sampling; therefore, generalization of the result to other groups of postpartum mothers who underwent cesarean section is limited.

2. This study could not determine the inclusion criteria regarding personal characteristics of the husband due to a limit on the number of the sample.

Recommendations and Implications

Nursing service

1. Nurse-midwife should educate the husband of postpartum mothers who received cesarean section about postpartum fatigue, effect of postpartum fatigue, and how to management fatigue in the postpartum mothers who underwent cesarean section by including 3 predisposing factors of fatigue, especially psychological support, for the husband be able to take care his wife to reduce fatigue when the postpartum mothers discharge from the hospital.

2. Nurse-midwife should provide a booklet regarding fatigue management for the husband of postpartum mother who received cesarean section to review at home, so the husband can be able to reduce fatigue of the postpartum mother who received cesarean section.

Nursing education

Knowledge gained from this study can be utilized to develop nursing instruction in school of nursing, in regard to include spouse support in fatigue management of postpartum mothers who received cesarean section.

Nursing research

1. For further study, research regarding fatigue management program by including spouse support should be conducted in other group such as the postpartum mother with complication.

2. Personal characteristics of the samples' husbands should be considered and included in further research. Since personal characteristics of the spouse might affect the manner of support given to the postpartum mothers.

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APPENDICES

APPENDIX A
DEMOGRAPHIC DATA QUESTIONNAIRE (THAI)

วันที่.....

คำชี้แจง

กรุณาเติมข้อมูลตามความเป็นจริงในช่องว่าง หรือทำเครื่องหมาย ✓ ลงใน ☐(ช่องสี่เหลี่ยม)

แบบสอบถามข้อมูลส่วนบุคคล

1. อายุ……..ปี
2. ระดับการศึกษา
   - ☐ ประถมศึกษา ☐ มัธยมศึกษา/ปวช.
   - ☐ ปริญญาตรีขึ้นไปหรือสูงกว่า
3. อาชีพ
   - ☐ รับราชการ, รัฐวิสาหกิจ ☐ รับจ้างทั่วไป
   - ☐ ธุรกิจส่วนตัว ☐ เกษตรกรรม
   - ☐ ไม่ได้ประกอบอาชีพ ☐ อื่นๆ.....
4. รายได้เฉลี่ยต่อเดือน……บาท
5. วิธีการให้นม ในระยะ 6 สัปดาห์แรกหลังคลอด
   - ☐ นมแม่อย่างเดียว
   - ☐ นมผสมร่วมกับนมแม่
   - ☐ นมผสมอย่างเดียว
6. บุคคลที่ให้การช่วยเหลือเป็นหลักในระยะหลังคลอด คือ ……

แบบบันทึกข้อมูลเกี่ยวกับการตั้งครรภ์และการคลอด

1. คลอดครรภ์ที่ .....
2. ปริมาณเลือดที่สูญเสียในการผ่าตัดคลอด……..มิลลิลิตร

APPENDIX B
THE MODIFIED FATIGUE SYMPTOM CHECKLIST (THAI)

<u>คำชี้แจงในการตอบแบบสอบถาม</u>

วัตถุประสงค์ของการใช้แบบสอบถามนี้เพื่อประเมินความรู้สึกเหนื่อยล้าของท่านในช่วง 1 สัปดาห์หลังคลอดที่ผ่านมา ข้อมูลที่ได้จากท่านจะนำมาวิเคราะห์และนำเสนอในภาพรวมและถือเป็นความลับเพื่อการวิจัยนี้เท่านั้น ผลการวิจัยนี้จะนำไปเป็นแนวทางในการให้การวางแผนให้การพยาบาลแก่มารดาหลังคลอดต่อไป

<u>คำอธิบายวิธีการตอบแบบสอบถาม</u>

แบบสอบถามนี้ประกอบด้วยคำถาม 30 ข้อ แต่ละข้อมีคำถามให้เลือกตอบ 4 ข้อ โปรดเลือกคำตอบที่ตรงกับความรู้สึกของท่านมากที่สุดในระยะ 1 สัปดาห์ที่ผ่านมา โดยขีดเครื่องหมาย √ ลงในคำตอบที่ตรงกับความรู้สึกของท่านมากที่สุด เพียงข้อละ 1 คำตอบเท่านั้น เกณฑ์คำตอบมีดังนี้

ไม่รู้สึกเลย	หมายถึง	ไม่เคยมีอาการนั้นๆเกิดขึ้นกับท่านเลย
รู้สึกเล็กน้อย	หมายถึง	มีอาการนั้นๆเกิดขึ้นกับท่านเพียงเล็กน้อย
รู้สึกปานกลาง	หมายถึง	มีอาการนั้นๆเกิดขึ้นกับท่านมากปานกลาง
รู้สึกมาก	หมายถึง	มีอาการนั้นๆเกิดขึ้นกับท่านในระดับสูง

โปรดขีดเครื่องหมาย √ ลงในคำตอบที่ตรงกับความรู้สึกของท่านมากที่สุด เพียงข้อละ 1 คำตอบเท่านั้น สิ่งที่ท่านตอบจะไม่มีถูกหรือผิด โปรดตอบให้ครบทั้ง 30 ข้อ

ท่านรู้สึกอย่างไรในระยะ 1 สัปดาห์ที่ผ่านมานี้

ลำดับ	ข้อความ	ไม่รู้สึกเลย	รู้สึกเล็กน้อย	รู้สึกปานกลาง	รู้สึกมาก
1.	ฉันรู้สึกว่าศีรษะของฉันหนักอึ้ง				
2.	ฉันรู้สึกล้าไปทั้งตัว				
3.	ฉันรู้สึกล้าที่ขาทั้ง 2 ข้าง				
4.					
5					
6.					
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30.	ฉันรู้สึกไม่สบาย				

APPENDIX C
SPOUSE SUPPORT QUESTIONNAIRE (THAI)

วันที่.....

<u>คำชี้แจง</u> กรุณาเติมข้อมูลตามความเป็นจริงในช่องว่าง

ในระยะ 6 สัปดาห์หลังคลอดที่ผ่านมา ท่านได้รับความช่วยเหลืออะไรบ้างจากสามี

1) ด้านการส่งเสริมความแข็งแรงทางร่างกายของท่าน

……

……

2) ด้านการส่งเสริมทางจิตใจของท่าน

……..……..…..

…….

3) ด้านการช่วยดูแลบุตรและงานบ้าน

…….

……..…….

APPENDIX D
LESSON PLAN FOR FATIGUE MANAGEMENT IN POSTPARTUM MOTHER (THAI)

แผนการสอน

เรื่อง	การมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าในมารดาหลังคลอด
ผู้สอน	นางสาวอมรรัตน์ ดีบุญโณ
ผู้เรียน	สามีของมารดาหลังผ่าตัดคลอดทางหน้าท้อง
สถานที่สอน	หอผู้ป่วยสูติกรรม 2 โรงพยาบาลรามาธิบดี
เวลาที่สอน	40 นาที
วัตถุประสงค์ทั่วไป	1. สามีของมารดาหลังผ่าตัดคลอดทางหน้าท้องมีความรู้เกี่ยวกับความเหนื่อยล้าในมารดาหลังคลอด 2. สามีของมารดาหลังผ่าตัดคลอดทางหน้าท้องสามารถนำความรู้ที่ได้รับไปใช้ในการดูแลภรรยาในระยะหลังคลอดได้
เนื้อหาในการสอน	ความเหนื่อยล้าในมารดาหลังคลอด ปัจจัยที่ทำให้เกิดความเหนื่อยล้าในมารดาหลังคลอด ผลกระทบของความเหนื่อยล้าในมารดาหลังคลอด และการจัดการความเหนื่อยล้าโดยสามี

APPENDIX E
INSTRUCTION CD (THAI)

ซีดีประกอบการสอนเรื่อง

การมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าในมารดาหลังคลอด

จัดทำโดย

นางสาวอมรรัตน์ ดีบุญโณ

นักศึกษาพยาบาลศาสตรมหาบัณฑิต

สาขาวิชาการผดุงครรภ์ โรงเรียนพยาบาลรามาธิบดี

คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล

อาจารย์ที่ปรึกษา ผศ.ดร. จรัสศรี ธีระกุลชัย

ผศ.ดร. จันทิมา ขนบดี

APPENDIX F

BOOKLET ENTITLED "FATIGUE MANAGEMENT IN POSTPARTUM MOTHERS" (THAI)

(Full version at the end of this book)

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คู่มือ
การมีส่วนร่วมของสามีในการจัดการ
ความเหนื่อยล้าในมารดาหลังคลอด

จัดทำโดย
อมรรัตน์ ดีบุญโณ
นักศึกษาพยาบาลศาสตรมหาบัณฑิต
สาขาการผดุงครรภ์
โรงเรียนพยาบาลรามาธิบดี คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี
มหาวิทยาลัยมหิดล

อาจารย์ที่ปรึกษา ผศ.ดร. จรัสศรี ธีระกุลชัย
ผศ.ดร. จันทิมา ขนบดี

APPENDIX G
INFORMED CONSENT FORM (THAI)

หนังสือยินยอมโดยได้รับการบอกกล่าวเต็มใจ

การวิจัยเรื่อง "ผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้อง"

ผู้วิจัย นางสาวอมรรัตน์ ดีบุญโณ

*ชื่อผู้เข้าร่วมการวิจัย ----------

อายุ ----------เลขที่เวชระเบียน ----------

คำยินยอมของผู้เข้าร่วมการวิจัย

ข้าพเจ้า นาย/นาง/นางสาว ---------- ได้ทราบรายละเอียดของโครงการวิจัยตลอดจนประโยชน์ และข้อเสี่ยงที่จะเกิดขึ้นต่อข้าพเจ้าจากผู้วิจัยแล้วอย่างชัดเจน ไม่มีสิ่งใดปิดบังซ่อนเร้นและยินยอมให้ทำการวิจัยในโครงการที่มีชื่อข้างต้น และข้าพเจ้ารู้ว่าถ้ามีปัญหาหรือข้อสงสัยเกิดขึ้นข้าพเจ้าสามารถสอบถามผู้วิจัยได้ และข้าพเจ้าสามารถไม่เข้าร่วมโครงการวิจัยนี้เมื่อใดก็ได้ โดยไม่มีผลกระทบต่อการรักษาที่ข้าพเจ้าพึงได้รับ นอกจากนี้ผู้วิจัยจะเก็บข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าเป็นความลับและจะเปิดเผยได้เฉพาะในรูปที่เป็นสรุปผลการวิจัย การเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ลงชื่อ……(ผู้เข้าร่วมการวิจัย)

……..(พยาน)

……..(พยาน)

วันที่ ……

คำอธิบายของแพทย์หรือผู้วิจัย

ข้าพเจ้าได้อธิบายรายละเอียดของโครงการ ตลอดจนประโยชน์ของการวิจัย รวมทั้งข้อเสี่ยงที่อาจจะเกิดขึ้นแก่ผู้เข้าร่วมการวิจัยทราบแล้วอย่างชัดเจนโดยไม่มีสิ่งใดปิดบังซ่อนเร้น

ลงชื่อ……(แพทย์หรือผู้วิจัย)

วันที่ ……

หมายเหตุ : กรณีผู้เข้าร่วมการวิจัยไม่สามารถอ่านหนังสือได้ ให้ผู้วิจัยอ่านข้อความในหนังสือยินยอมฯ นี้ให้แก่ผู้เข้าร่วมการวิจัยฟังจนเข้าใจดีแล้ว และให้ผู้เข้าร่วมการวิจัยลงนามหรือพิมพ์ลายนิ้วหัวแม่มือรับทราบในการให้ความยินยอมดังกล่าวข้างต้นไว้ด้วย * ผู้เข้าร่วมการวิจัย หมายถึง ผู้ยินยอมตนให้ทำวิจัย

APPENDIX H
PATIENT/PARTICIPANT INFORMATION SHEET (THAI)

เอกสารชี้แจงข้อมูล/ คำแนะนำแก่ผู้เข้าร่วมวิจัยสำหรับกลุ่มควบคุม

(Patient/Participant Information Sheet)

หัวข้อเรื่องการวิจัย "ผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้อง"

ผู้วิจัย นางสาวอมรรัตน์ ดีบุญโณ

สถานที่วิจัย

1. หอผู้ป่วยพิเศษสูตินรีเวชกรรม โรงพยาบาลรามาธิบดี
2. หน่วยตรวจผู้ป่วยนอก แผนกสูติกรรม โรงพยาบาลรามาธิบดี

บุคคลและวิธีการติดต่อเมื่อมีเหตุฉุกเฉินหรือความผิดปกติที่เกี่ยวข้องกับการวิจัย

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   E-mail address: amornrat.dee@student.mahidol.ac.th หรือ
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2. ผศ.ดร. จรัสศรี ธีระกุลชัย หมายเลขโทรศัพท์ 02-2010746 หรือ 086-5260091
   E-mail address: jaratsri.the@mahidol.ac.th
3. ผศ.ดร. จันทิมา ขนบดี หมายเลขโทรศัพท์ 02-2010743 หรือ 085-1587630
   E-mail address: chantima.kha@mahidol.ac.th

ความเป็นมาของโครงการ

การตั้งครรภ์และการคลอดเป็นเรื่องปกติธรรมดาในวิถีชีวิตสตรี แต่เนื่องจากผลของการตั้งครรภ์ กระบวนการคลอด และการเปลี่ยนแปลงของร่างกายและจิตใจในระยะหลังคลอดจะส่งผลให้เกิดความเหนื่อยล้าในมารดาหลังคลอดตามมา โดยเฉพาะอย่างยิ่งในมารดาที่ได้รับการ

ผ่าตัดคลอดทางหน้าท้อง ถึงแม้จะไม่ใช่ผู้ที่เจ็บป่วยก็ตาม แต่ก็อยู่ในสภาวะที่ได้รับการผ่าตัด อีกทั้งยังต้องดูแลทารกแรกเกิดและสมาชิกในครอบครัว ซึ่งเป็นบทบาทเดิมที่ตนดำรงอยู่ ส่งผลให้มารดาหลังผ่าตัดคลอดต้องใช้พลังงานเป็นอย่างมากกับการเปลี่ยนผ่านดังกล่าว ทำให้มารดาหลังผ่าตัดคลอดมีความเหนื่อยล้ามากกว่ามารดาหลังคลอดปกติทางช่องคลอด จึงถือว่าอยู่ในภาวะวิกฤตและต้องการความช่วยเหลือดูแลในระยะหลังคลอด

ความเหนื่อยล้าเป็นความรู้สึกอ่อนเพลีย หมดแรง หากเป็นมากจะทำให้มารดาหลังคลอดไม่อยากทำสิ่งใดๆ แม้แต่กิจวัตรประจำวัน โดยความเหนื่อยล้าของมารดาสามารถเกิดขึ้นได้ตั้งแต่ระยะแรกหลังคลอด ซึ่งความเหนื่อยล้าที่เกิดขึ้นจะส่งผลกระทบต่อมารดาหลังคลอดและครอบครัว เช่น ส่งผลกระทบต่อการฟื้นฟูสุขภาพของมารดาหลังคลอด ส่งผลต่อความสามารถในการแก้ปัญหาและการทำหน้าที่ของมารดาหลังคลอด หากความเหนื่อยล้าที่เกิดขึ้นคงอยู่เป็นระยะเวลานานจะยิ่งส่งผลให้สุขภาพของมารดาทรุดโทรมลงทั้งด้านร่างกายและจิตใจ และนำไปสู่ภาวะซึมเศร้าหลังคลอดได้ นอกจากนี้ยังส่งผลกระทบให้ทารกมีพัฒนาการช้าลงอีกด้วย ซึ่งสามีเป็นบุคคลใกล้ชิดและมีความสำคัญสำหรับมารดาหลังคลอด มีหลายงานวิจัยพบว่ามารดาหลังคลอดต้องการได้รับความช่วยเหลือจากสามี ผู้วิจัยจึงสนใจที่จะศึกษาถึงผลของการส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าที่เกิดขึ้นในระยะหลังคลอด เมื่อกลับไปอยู่ที่บ้านว่าจะสามารถช่วยลดความเหนื่อยล้าของภรรยาหลังคลอดได้หรือไม่ ซึ่งผลการศึกษาที่ได้รับจะทำให้สามารถใช้เป็นแนวทางในการช่วยลดความเหนื่อยล้าของมารดาหลังคลอด เพื่อให้มารดาหลังคลอดมีการฟื้นฟูสภาพร่างกายให้กลับมาสมบูรณ์แข็งแรงดังเดิมทั้งร่างกายและจิตใจตามระยะเวลาที่เหมาะสม และทำให้มารดาหลังคลอดมีการดำเนินชีวิตได้อย่างมีความสุขกับครอบครัวต่อไป

วัตถุประสงค์

เพื่อเปรียบเทียบผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้องระหว่างกลุ่มที่สามีได้รับโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้ากับกลุ่มที่ได้รับการพยาบาลตามปกติ

รายละเอียดที่จะปฏิบัติต่อผู้เข้าร่วมการวิจัย

การศึกษาวิจัยครั้งนี้เป็นการวิจัยกึ่งทดลอง แบบสองกลุ่มวัดก่อนและหลังการทดลองในมารดาหลังผ่าตัดคลอดทางหน้าท้องที่ไม่มีภาวะแทรกซ้อนทั้งในระยะตั้งครรภ์ ระยะคลอดและระยะหลังคลอด ผู้วิจัยคัดเลือกกลุ่มตัวอย่างมารดาหลังคลอดที่มีคุณสมบัติตามเกณฑ์ที่กำหนด

โดยแบ่งกลุ่มตัวอย่างออกเป็นกลุ่มควบคุมจำนวน 20 ราย และกลุ่มทดลองจำนวน 20 ราย รวมทั้งสิ้น 40 ราย จับคู่กลุ่มควบคุมและกลุ่มทดลองในเรื่องอายุของมารดาหลังคลอด ระดับการศึกษา วิธีการให้นมในระยะ 6 สัปดาห์แรกหลังคลอด บุคคลหลักที่ให้การช่วยเหลือในระยะหลังคลอด และจำนวนครั้งที่คลอด ซึ่งผู้วิจัยจะดำเนินการวิจัยในกลุ่มควบคุมดังนี้

1. ผู้วิจัยศึกษาประวัติเกี่ยวกับการคลอดจากเวชระเบียนของท่าน จากนั้นผู้วิจัยจะเข้าแนะนำตัวและสร้างสัมพันธภาพเพื่อสอบถามข้อมูลทั่วไป และคัดเลือกท่านเข้ากลุ่มควบคุมตามเกณฑ์กำหนดไว้

2. ผู้วิจัยแนะนำตัว สร้างสัมพันธภาพ อธิบายวัตถุประสงค์และวิธีการดำเนินการวิจัย อย่างละเอียด รวมทั้งอธิบายถึงการพิทักษ์สิทธิผู้เข้าร่วมวิจัยและขอความร่วมมือในการเข้าร่วมการวิจัย หากท่านสนใจและยินดีเข้าร่วมการวิจัยในครั้งนี้ ขอให้ท่านลงลายมือชื่อไว้เป็นลายลักษณ์อักษรในหนังสือยินยอมให้ทำการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ

3. ผู้วิจัยขอให้ท่านตอบแบบสอบถามข้อมูลส่วนบุคคลโดยใช้เวลาในการตอบประมาณ 5 นาที และผู้วิจัยบันทึกข้อมูลเกี่ยวกับการตั้งครรภ์และการคลอดจากเวชระเบียนผู้ป่วย

4. ท่านจะได้รับการพยาบาลตามปกติจากเจ้าหน้าที่ในหอผู้ป่วยและผู้วิจัยจะพบท่านอีกครั้งในวันที่ท่านได้รับการจำหน่ายออกจากโรงพยาบาล และขอให้ท่านตอบแบบสอบถามความเหนื่อยล้าในมารดาหลังคลอด โดยใช้เวลาในการตอบประมาณ 15 นาที

5. ผู้วิจัยนัดพบกับท่านและขอให้ท่านตอบแบบสอบถามความเหนื่อยล้าครั้งที่ 2 และแบบสอบถามความช่วยเหลือที่ท่านได้รับจากสามี ในวันที่ท่านมาตรวจตามนัด 6 สัปดาห์หลังคลอดที่หน่วยตรวจผู้ป่วยนอก แผนกสูติกรรม โรงพยาบาลรามาธิบดี โดยใช้เวลาในการตอบแบบสอบถามรวมทั้งสิ้นประมาณ 20 นาที ซึ่งถือว่าสิ้นสุดการเข้าร่วมโครงการวิจัย

ประโยชน์และผลข้างเคียงที่จะเกิดแก่ผู้เข้าร่วมการวิจัย:

ประโยชน์ที่คาดว่าจะเกิดขึ้นต่อผู้เข้าร่วมการวิจัย และต่อผู้อื่น

การศึกษาในครั้งนี้เป็นการศึกษาในขณะที่ท่านเข้ารับการรักษาอยู่ที่หอผู้ป่วยหลังคลอด โดยท่านจะได้รับการดูแลรักษาตามปกติจากแพทย์ พยาบาล และเจ้าหน้าที่หอผู้ป่วย ซึ่งผลการศึกษาที่ได้รับจะสามารถใช้เป็นแนวทางในการดูแลเพื่อช่วยลดความเหนื่อยล้าของมารดาหลังผ่าตัดคลอดทางหน้าท้องต่อไป

ผลข้างเคียงที่อาจเกิดขึ้นกับผู้เข้าร่วมการวิจัย

ในการศึกษาวิจัยครั้งนี้จะไม่เกิดผลข้างเคียงใดๆ กับท่าน เนื่องจากท่านยังคงได้รับการดูแลตามปกติจากเจ้าหน้าที่ในหอผู้ป่วย แต่อาจทำให้ท่านต้องใช้เวลาในการอ่านและตอบ

แบบสอบถามในขณะอยู่โรงพยาบาลรวมทั้งสิ้นประมาณ 15 นาที และวันที่มาตรวจ 6 สัปดาห์หลังคลอดประมาณ 20 นาที

การเก็บข้อมูลเป็นความลับ

ในการศึกษาวิจัยครั้งนี้ผู้วิจัยจะเก็บรักษาข้อมูลของท่านเป็นความลับ ในการนำเสนอข้อมูลจะนำเสนอข้อมูลในภาพรวม และไม่ระบุชื่อท่านลงในแบบสอบถาม และผู้ที่จะสามารถรับรู้ข้อมูลเหล่านี้นอกจากผู้วิจัยและอาจารย์ที่ปรึกษาแล้วต้องได้รับความยินยอมจากท่านก่อน

ถ้าท่านมีปัญหาข้องใจหรือรู้สึกกังวลใจกับการเข้าร่วมในโครงการวิจัยนี้ ท่านสามารถติดต่อกับประธานกรรมการจริยธรรมการวิจัยในคน สำนักงานวิจัยคณะฯ อาคารวิจัยและสวัสดิการ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี โทรศัพท์ 02-2011544

เอกสารชี้แจงข้อมูล/ คำแนะนำแก่ผู้เข้าร่วมวิจัยสำหรับกลุ่มทดลอง (ภรรยา)

(Patient/participant information sheet)

หัวข้อเรื่องการวิจัย "ผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้อง"

ผู้วิจัย นางสาวอมรรัตน์ ดีบุญโณ

สถานที่วิจัย

1. หอผู้ป่วยสูติกรรม 2 โรงพยาบาลรามาธิบดี
2. หน่วยตรวจผู้ป่วยนอก แผนกสูติกรรม โรงพยาบาลรามาธิบดี

บุคคลและวิธีการติดต่อเมื่อมีเหตุฉุกเฉินหรือความผิดปกติที่เกี่ยวข้องกับการวิจัย

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ความเป็นมาของโครงการ

การตั้งครรภ์และการคลอดเป็นเรื่องปกติธรรมดาในวิถีชีวิตสตรี แต่เนื่องจากผลของการตั้งครรภ์ กระบวนการคลอด และการเปลี่ยนแปลงของร่างกายและจิตใจในระยะหลังคลอดจะส่งผลให้เกิดความเหนื่อยล้าในมารดาหลังคลอดตามมา โดยเฉพาะอย่างยิ่งในมารดาที่ได้รับการผ่าตัดคลอดทางหน้าท้อง ถึงแม้จะไม่ใช่ผู้ที่เจ็บป่วยก็ตาม แต่ก็อยู่ในสภาวะที่ได้รับการผ่าตัด อีกทั้งยังต้องดูแลทารกแรกเกิดและสมาชิกในครอบครัว ซึ่งเป็นบทบาทเดิมที่ตนดำรงอยู่ ส่งผลให้มารดาหลังผ่าตัดคลอดต้องใช้พลังงานเป็นอย่างมากกับการเปลี่ยนผ่านดังกล่าว ทำให้มารดาหลังผ่าตัดคลอดมีความเหนื่อยล้ามากกว่ามารดาหลังคลอดปกติทางช่องคลอด จึงถือว่าอยู่ในภาวะวิกฤตและต้องการความช่วยเหลือดูแลในระยะหลังคลอด

ความเหนื่อยล้าเป็นความรู้สึกอ่อนเพลีย หมดแรง หากเป็นมากจะทำให้มารดาหลังคลอดไม่อยากทำสิ่งใดๆ แม้แต่กิจวัตรประจำวัน โดยความเหนื่อยล้าของมารดาสามารถเกิดขึ้นได้ตั้งแต่ระยะแรกหลังคลอด ซึ่งความเหนื่อยล้าที่เกิดขึ้นจะส่งผลกระทบต่อมารดาหลังคลอดและครอบครัว เช่น ส่งผลกระทบต่อการฟื้นฟูสุขภาพของมารดาหลังคลอด ส่งผลต่อความสามารถในการแก้ปัญหาและการทำหน้าที่ของมารดาหลังคลอด หากความเหนื่อยล้าที่เกิดขึ้นคงอยู่เป็นระยะเวลานานจะยิ่งส่งผลให้สุขภาพของมารดาทรุดโทรมลงทั้งด้านร่างกายและจิตใจ และนำไปสู่ภาวะซึมเศร้าหลังคลอดได้ นอกจากนี้ยังส่งผลกระทบให้ทารกมีพัฒนาการช้าลงอีกด้วย ซึ่งสามีเป็นบุคคลใกล้ชิดและมีความสำคัญสำหรับมารดาหลังคลอด มีหลายงานวิจัยพบว่ามารดาหลังคลอดต้องการได้รับความช่วยเหลือจากสามี ผู้วิจัยจึงสนใจที่จะศึกษาถึงผลของการส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าที่เกิดขึ้นในระยะหลังคลอด เมื่อกลับไปอยู่ที่บ้านว่าจะสามารถช่วยลดความเหนื่อยล้าของมารดาหลังคลอดได้หรือไม่ ซึ่งผลการศึกษาที่ได้รับจะทำให้สามารถใช้เป็นแนวทางในการช่วยลดความเหนื่อยล้าของมารดาหลังคลอด เพื่อให้มารดาหลังคลอดมีการฟื้นฟูสภาพร่างกายให้กลับมาสมบูรณ์แข็งแรงดังเดิมทั้งร่างกายและจิตใจตามระยะเวลาที่เหมาะสม และทำให้มารดาหลังคลอดมีการดำเนินชีวิตได้อย่างมีความสุขกับครอบครัวต่อไป

วัตถุประสงค์

เพื่อเปรียบเทียบผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้องระหว่างกลุ่มที่สามีได้รับโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้ากับกลุ่มที่ได้รับการพยาบาลตามปกติ

รายละเอียดที่จะปฏิบัติต่อผู้เข้าร่วมการวิจัย

การศึกษาวิจัยครั้งนี้เป็นการวิจัยกึ่งทดลอง แบบสองกลุ่มวัดก่อนและหลังการทดลองในมารดาหลังผ่าตัดคลอดทางหน้าท้องที่ไม่มีภาวะแทรกซ้อนทั้งในระยะตั้งครรภ์ ระยะคลอดและระยะหลังคลอด ผู้วิจัยคัดเลือกกลุ่มตัวอย่างมารดาหลังคลอดที่มีคุณสมบัติตามเกณฑ์ที่กำหนด โดยแบ่งกลุ่มตัวอย่างออกเป็นกลุ่มควบคุมจำนวน 20 ราย และกลุ่มทดลองจำนวน 20 ราย รวมทั้งสิ้น 40 ราย จับคู่กลุ่มควบคุมและกลุ่มทดลองในเรื่องอายุของมารดาหลังคลอด ระดับการศึกษา วิธีการให้นมในระยะ 6 สัปดาห์แรกหลังคลอด บุคคลหลักที่ให้การช่วยเหลือในระยะหลังคลอด และจำนวนครั้งที่คลอด ซึ่งผู้วิจัยจะดำเนินการวิจัยในกลุ่มทดลองดังนี้

1. ผู้วิจัยศึกษาประวัติเกี่ยวกับการคลอดจากเวชระเบียนของท่าน จากนั้นผู้วิจัยจะเข้าแนะนำตัวและสร้างสัมพันธภาพเพื่อสอบถามข้อมูลทั่วไป และคัดเลือกท่านเข้ากลุ่มทดลองตามเกณฑ์กำหนดไว้

2. ผู้วิจัยแนะนำตัว สร้างสัมพันธภาพ อธิบายวัตถุประสงค์และวิธีการดำเนินการวิจัยอย่างละเอียด รวมทั้งอธิบายถึงการพิทักษ์สิทธิผู้เข้าร่วมวิจัยและขอความร่วมมือในการเข้าร่วมการวิจัย หากท่านสนใจและยินดีเข้าร่วมการวิจัยในครั้งนี้ ขอให้ท่านลงลายมือชื่อไว้เป็นลายลักษณ์อักษรในหนังสือยินยอมให้ทำการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ

3. ผู้วิจัยขอให้ท่านตอบแบบสอบถามข้อมูลส่วนบุคคลโดยใช้เวลาในการตอบประมาณ 5 นาที และผู้วิจัยบันทึกข้อมูลเกี่ยวกับการตั้งครรภ์และการคลอดจากเวชระเบียนผู้ป่วย

4. ท่านจะได้รับการพยาบาลตามปกติจากเจ้าหน้าที่ในหอผู้ป่วย

5. ผู้วิจัยขอความร่วมมือท่านในการติดต่อให้สามีเข้าร่วมโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าของภรรยาหลังคลอด โดยจะนัดหมายพบกับสามีที่หอผู้ป่วยสูติกรรม 2 โรงพยาบาลรามาธิบดี ขณะที่ท่านยังพักรักษาตัวอยู่ที่โรงพยาบาล ในช่วงเวลา 11.00-13.00 น. และ 15.00-17.00 น. ตามที่สามีของท่านสะดวกเพื่อให้โปรแกรมแก่สามีของท่านดังนี้

5.1 ให้ความรู้เป็นรายบุคคล โดยให้ความรู้เกี่ยวกับความหมายของความเหนื่อยล้า ปัจจัยที่ทำให้เกิดความเหนื่อยล้าในมารดาหลังคลอด ผลกระทบของความเหนื่อยล้าในมารดาหลังคลอดและครอบครัว รวมทั้งวิธีการที่สามีจะช่วยลดความเหนื่อยล้าในมารดาหลังคลอดที่เกิดขึ้นตามปัจจัยที่ทำให้เกิดความเหนื่อยล้าทั้งทางด้านร่างกาย ทางด้านจิตใจ และทางด้านสถานการณ์

ในขณะที่ให้ความรู้ผู้วิจัยเปิดโอกาสให้สามีของท่านถามหรือตอบคำถามเกี่ยวกับเนื้อหาและสิ่งที่สามีปฏิบัติ เพื่อให้สามีเกิดความเข้าใจ และเห็นความสำคัญของความเหนื่อยล้าในมารดาหลังคลอด และนำความรู้ที่ได้รับไปใช้ในการดูแลมารดาหลังคลอด นอกจากนี้ผู้วิจัยจะทำการสาธิตการดูแลทารก ได้แก่ การอุ้ม การเปลี่ยนผ้าอ้อม การทำความสะอาดร่างกายหลังขับถ่าย ภายหลังการสาธิตผู้วิจัยจะให้สามีฝึกปฏิบัติในสิ่งที่ผู้วิจัยสาธิตแล้วนั้น เพื่อให้สามีของมารดาหลังคลอดสามารถปฏิบัติได้จริง (การทำความสะอาดหลังขับถ่ายปัสสาวะและอุจจาระจะใช้ตุ๊กตายางทารกแรกเกิด) รวมทั้งเปิดโอกาสให้สามีซักถามในสิ่งที่สงสัยโดยเวลาที่ใช้ในการสอนทั้งสิ้นประมาณ 40 นาที

5.2 ผู้วิจัยแจกคู่มือการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าของมารดาหลังผ่าตัดคลอด ซึ่งมีความสอดคล้องกับสิ่งที่ผู้วิจัยได้ให้ความรู้แก่สามีของท่านเพื่อนำไปทบทวนที่บ้าน

5.3 ผู้วิจัยประเมินความเหนื่อยล้าครั้งที่ 1 ในวันที่ท่านได้รับการจำหน่ายออกจากโรงพยาบาล ใช้เวลาในการตอบแบบสอบถามความเหนื่อยล้าประมาณ 15 นาที

5.4 ผู้วิจัยนัดพบกับท่านและขอให้ท่านตอบแบบสอบถามความเหนื่อยล้าครั้งที่ 2 และแบบสอบถามความช่วยเหลือที่ท่านได้รับจากสามี ในวันที่ท่านมาตรวจตามนัด 6 สัปดาห์หลังคลอด ที่หน่วยตรวจผู้ป่วยนอก แผนกสูติกรรม โรงพยาบาลรามาธิบดี โดยใช้เวลาในการตอบแบบสอบถามรวมทั้งสิ้นประมาณ 20 นาที ซึ่งถือว่าสิ้นสุดการเข้าร่วมโครงการวิจัย

ประโยชน์และผลข้างเคียงที่จะเกิดแก่ผู้เข้าร่วมการวิจัย:

ประโยชน์ที่คาดว่าจะเกิดขึ้นต่อผู้เข้าร่วมการวิจัย และต่อผู้อื่น

การศึกษาในครั้งนี้เป็นการศึกษาในขณะที่ท่านเข้ารับการรักษาอยู่ที่หอผู้ป่วยหลังคลอด โดยท่านจะได้รับการดูแลรักษาตามปกติจากแพทย์ พยาบาล และเจ้าหน้าที่หอผู้ป่วย ร่วมกับสามีของท่านจะได้รับโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าในมารดาหลังคลอด ซึ่งจะทำให้สามีของท่านมีความรู้ความเข้าใจและตระหนักถึงความเหนื่อยล้าในมารดาหลังคลอด และสามารถให้การช่วยเหลือดูแลท่านเพื่อช่วยลดความเหนื่อยล้าของท่านในระยะหลังคลอด

ผลข้างเคียงที่อาจเกิดขึ้นกับผู้เข้าร่วมการวิจัย

ในการศึกษาวิจัยครั้งนี้อาจทำให้ท่านต้องใช้เวลาในการอ่านและตอบแบบสอบถามในขณะอยู่โรงพยาบาลรวมทั้งสิ้นประมาณ 15 นาที และวันที่มาตรวจ 6 สัปดาห์ หลังคลอดประมาณ 20 นาที

การเก็บข้อมูลเป็นความลับ

ในการศึกษาวิจัยครั้งนี้ผู้วิจัยจะเก็บรักษาข้อมูลของท่านเป็นความลับ ในการนำเสนอข้อมูลจะนำเสนอข้อมูลในภาพรวม และไม่ระบุชื่อท่านลงในแบบสอบถาม และผู้ที่จะสามารถรับรู้ข้อมูลเหล่านี้นอกจากผู้วิจัยและอาจารย์ที่ปรึกษาแล้วต้องได้รับความยินยอมจากท่านก่อน

ถ้าท่านมีปัญหาข้องใจหรือรู้สึกกังวลใจกับการเข้าร่วมในโครงการวิจัยนี้ ท่านสามารถติดต่อกับประธานกรรมการจริยธรรมการวิจัยในคน สำนักงานวิจัยคณะฯ อาคารวิจัยและสวัสดิการ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี โทรศัพท์ 02-2011544

เอกสารชี้แจงข้อมูล/คำแนะนำแก่ผู้เข้าร่วมการวิจัย สำหรับกลุ่มทดลอง (สามี)

(Patient/participant information sheet)

หัวข้อเรื่องการวิจัย "ผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้อง"

ผู้วิจัย นางสาวอมรรัตน์ ดีบุญโณ

สถานที่วิจัย

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2. หน่วยตรวจผู้ป่วยนอก แผนกสูติกรรม โรงพยาบาลรามาธิบดี

บุคคลและวิธีการติดต่อเมื่อมีเหตุฉุกเฉินหรือความผิดปกติที่เกี่ยวข้องกับการวิจัย

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ความเป็นมาของโครงการ

การตั้งครรภ์และการคลอดเป็นเรื่องปกติธรรมดาในวิถีชีวิตสตรี แต่เนื่องจากผลของการตั้งครรภ์ กระบวนการคลอด และการเปลี่ยนแปลงของร่างกายและจิตใจในระยะหลังคลอดจะส่งผลให้เกิดความเหนื่อยล้าในมารดาหลังคลอดตามมา โดยเฉพาะอย่างยิ่งในมารดาที่ได้รับการผ่าตัดคลอดทางหน้าท้อง ถึงแม้จะไม่ใช่ผู้ที่เจ็บป่วยก็ตาม แต่ก็อยู่ในสภาวะที่ได้รับการผ่าตัด อีกทั้งยังต้องดูแลทารกแรกเกิดและสมาชิกในครอบครัว ซึ่งเป็นบทบาทเดิมที่ตนดำรงอยู่ ส่งผลให้มารดาหลังผ่าตัดคลอดต้องใช้พลังงานเป็นอย่างมากกับการเปลี่ยนผ่านดังกล่าว ทำให้มารดาหลังผ่าตัดคลอดมีความเหนื่อยล้ามากกว่ามารดาหลังคลอดปกติทางช่องคลอด จึงถือว่าอยู่ในภาวะวิกฤตและต้องการความช่วยเหลือดูแลในระยะหลังคลอด

ความเหนื่อยล้าเป็นความรู้สึกอ่อนเพลีย หมดแรง หากเป็นมากจะทำให้มารดาหลังคลอดไม่อยากทำสิ่งใดๆ แม้แต่กิจวัตรประจำวัน โดยความเหนื่อยล้าของมารดาสามารถเกิดขึ้นได้ตั้งแต่ระยะแรกหลังคลอด ซึ่งความเหนื่อยล้าที่เกิดขึ้นจะส่งผลกระทบต่อมารดาหลังคลอดและครอบครัว เช่น ส่งผลกระทบต่อการฟื้นฟูสุขภาพของมารดาหลังคลอด ส่งผลต่อความสามารถในการแก้ปัญหาและการทำหน้าที่ของมารดาหลังคลอด หากความเหนื่อยล้าที่เกิดขึ้นคงอยู่เป็นระยะเวลานานจะยิ่งส่งผลให้สุขภาพของมารดาทรุดโทรมลงทั้งด้านร่างกายและจิตใจ และนำไปสู่ภาวะซึมเศร้าหลังคลอดได้ นอกจากนี้ยังส่งผลกระทบให้ทารกมีพัฒนาการช้าลงอีกด้วย ซึ่งสามีเป็นบุคคลใกล้ชิดและมีความสำคัญสำหรับมารดาหลังคลอด มีหลายงานวิจัยพบว่ามารดาหลังคลอดต้องการได้รับความช่วยเหลือจากสามี ผู้วิจัยจึงสนใจที่จะศึกษาถึงผลของการส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าที่เกิดขึ้นในระยะหลังคลอด เมื่อกลับไปอยู่ที่บ้านว่าจะสามารถช่วยลดความเหนื่อยล้าของมารดาหลังคลอดได้หรือไม่ ซึ่งผลการศึกษาที่ได้รับจะทำให้สามารถใช้เป็นแนวทางในการช่วยลดความเหนื่อยล้าของมารดาหลังคลอด เพื่อให้มารดาหลังคลอดมีการฟื้นฟูสภาพร่างกายให้กลับมาสมบูรณ์แข็งแรงดังเดิมทั้งร่างกายและจิตใจตามระยะเวลาที่เหมาะสม และทำให้มารดาหลังคลอดมีการดำเนินชีวิตได้อย่างมีความสุขกับครอบครัวต่อไป

วัตถุประสงค์

เพื่อเปรียบเทียบผลของโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าต่อความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอดทางหน้าท้องระหว่างกลุ่มที่สามีได้รับโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้ากับกลุ่มที่ได้รับการพยาบาลตามปกติ

รายละเอียดที่จะปฏิบัติต่อผู้เข้าร่วมการวิจัย

การศึกษาวิจัยครั้งนี้เป็นการวิจัยกึ่งทดลอง แบบสองกลุ่มวัดก่อนและหลังการทดลองในมารดาหลังผ่าตัดคลอดทางหน้าท้องที่ไม่มีภาวะแทรกซ้อนทั้งในระยะตั้งครรภ์ ระยะคลอดและระยะหลังคลอด ผู้วิจัยคัดเลือกกลุ่มตัวอย่างมารดาหลังคลอดที่มีคุณสมบัติตามเกณฑ์ที่กำหนด โดยแบ่งกลุ่มตัวอย่างออกเป็นกลุ่มควบคุมจำนวน 20 ราย และกลุ่มทดลองจำนวน 20 ราย รวมทั้งสิ้น 40 ราย จับคู่กลุ่มควบคุมและกลุ่มทดลองในเรื่องอายุของมารดาหลังคลอด ระดับการศึกษา วิธีการให้นมในระยะ 6 สัปดาห์แรกหลังคลอด บุคคลหลักที่ให้การช่วยเหลือในระยะหลังคลอด และจำนวนครั้งที่คลอด ซึ่งผู้วิจัยจะดำเนินการวิจัยในกลุ่มทดลองดังนี้

1. ผู้วิจัยศึกษาประวัติเกี่ยวกับการคลอดจากเวชระเบียนของภรรยาท่าน จากนั้นผู้วิจัยจะเข้าแนะนำตัวและสร้างสัมพันธภาพเพื่อสอบถามข้อมูลทั่วไป และคัดเลือกภรรยาของท่านเข้ากลุ่มทดลองตามเกณฑ์กำหนดไว้

2. ผู้วิจัยแนะนำตัว สร้างสัมพันธภาพ อธิบายวัตถุประสงค์และวิธีการดำเนินการวิจัยอย่างละเอียด รวมทั้งอธิบายถึงการพิทักษ์สิทธิผู้เข้าร่วมวิจัยและขอความร่วมมือในการเข้าร่วมการวิจัย หากภรรยาของท่านสนใจและยินดีเข้าร่วมการวิจัยในครั้งนี้ ผู้วิจัยจึงขอให้ภรรยาของท่านลงลายมือชื่อไว้เป็นลายลักษณ์อักษรในหนังสือยินยอมให้ทำการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ

3. ภรรยาของท่านจะได้รับการพยาบาลตามปกติจากเจ้าหน้าที่ในหอผู้ป่วย

4. ผู้วิจัยขอความร่วมมือภรรยาของท่านในการติดต่อให้ท่านเข้าร่วมโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอด ขณะที่ภรรยาของท่านพักรักษาตัวอยู่ที่โรงพยาบาลในวันที่ท่านสะดวก ช่วงเวลา 11.00-13.00 น. และ 15.00-17.00 น.

5. ผู้วิจัยพบกับท่านตามเวลาที่นัดหมาย ชี้แจงวัตถุประสงค์และขั้นตอนการดำเนินโปรแกรมโดยละเอียด เมื่อท่านสนใจและยินดีเข้าร่วมการวิจัยในครั้งนี้ ผู้วิจัยจึงขอให้ท่านลงลายมือชื่อไว้เป็นลายลักษณ์อักษรในหนังสือยินยอมให้ทำการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ

6. ผู้วิจัยเริ่มดำเนินโปรแกรมกับท่าน ดังนี้

7.1 ให้ความรู้แก่ท่านเป็นรายบุคคล โดยให้ความรู้เกี่ยวกับความหมายของความเหนื่อยล้า ปัจจัยที่ทำให้เกิดความเหนื่อยล้าในมารดาหลังคลอด ผลกระทบของความเหนื่อยล้าในมารดาหลังคลอดและครอบครัว รวมทั้งวิธีการที่สามีจะช่วยลดความเหนื่อยล้าในมารดาหลังคลอดที่เกิดขึ้นตามปัจจัยที่ทำให้เกิดความเหนื่อยล้าทั้งทางด้านร่างกาย ทางด้านจิตใจ และทางด้านสถานการณ์

ในขณะที่ให้ความรู้ผู้วิจัยเปิดโอกาสให้ท่านถามหรือตอบคำถามเกี่ยวกับเนื้อหาและสิ่งที่ท่านปฏิบัติ เพื่อให้ท่านเกิดความเข้าใจ และเห็นความสำคัญของความเหนื่อยล้าในมารดาหลังคลอด และนำความรู้ที่ได้รับไปใช้ในการดูแลภรรยาของท่าน นอกจากนี้ผู้วิจัยจะทำการสาธิตการดูแลทารก ได้แก่ การอุ้ม การเปลี่ยนผ้าอ้อม การทำความสะอาดร่างกายหลังขับถ่ายแก่ท่าน ภายหลังการสาธิตผู้วิจัยจะให้ท่านฝึกปฏิบัติในสิ่งที่ผู้วิจัยสาธิตแล้วนั้น เพื่อให้ท่านสามารถปฏิบัติได้จริง (การทำความสะอาดหลังขับถ่ายปัสสาวะและอุจจาระจะใช้ตุ๊กตายางทารกแรกเกิด) รวมทั้งเปิดโอกาสให้ท่านซักถามในสิ่งที่สงสัยโดยเวลาที่ใช้ในการสอนทั้งสิ้นประมาณ 40 นาที

7.2 เมื่อเสร็จสิ้นการสอนผู้วิจัยแจกคู่มือการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าของภรรยาหลังผ่าตัดคลอด ซึ่งมีความสอดคล้องกับสิ่งที่ผู้วิจัยได้ให้ความรู้แก่ท่านเพื่อนำไปทบทวนที่บ้าน

ประโยชน์และผลข้างเคียงที่จะเกิดแก่ผู้เข้าร่วมการวิจัย:

ประโยชน์ที่คาดว่าจะเกิดขึ้นต่อผู้เข้าร่วมการวิจัย และต่อผู้อื่น

การศึกษาในครั้งนี้เป็นการศึกษาในขณะที่ภรรยาของท่านเข้ารับการรักษาอยู่ที่หอผู้ป่วยหลังคลอด โดยภรรยาท่านจะได้รับการดูแลรักษาตามปกติจากแพทย์ พยาบาล และเจ้าหน้าที่หอผู้ป่วย ร่วมกับท่านจะได้รับโปรแกรมส่งเสริมการมีส่วนร่วมของสามีในการจัดการความเหนื่อยล้าของมารดาหลังคลอด ซึ่งจะทำให้ท่านมีความรู้ความเข้าใจและตระหนักถึงความเหนื่อยล้าในมารดาหลังคลอด และสามารถให้การช่วยเหลือดูแลภรรยาของท่านเพื่อช่วยลดความเหนื่อยล้าของภรรยาในระยะหลังคลอดได้เมื่อกลับไปอยู่ที่บ้าน

ผลข้างเคียงที่อาจเกิดขึ้นกับผู้เข้าร่วมการวิจัย

ในการศึกษาวิจัยครั้งนี้อาจทำให้ท่านต้องใช้เวลาในการเข้าร่วมการดำเนินโปรแกรมตามที่ได้นัดหมายไว้ รวมทั้งสิ้นประมาณ 40 นาที

การเก็บข้อมูลเป็นความลับ

ในการศึกษาวิจัยครั้งนี้ผู้วิจัยไม่ได้เก็บรวบรวมข้อมูลใดๆ จากท่านทั้งสิ้น

ถ้าท่านมีปัญหาข้องใจหรือรู้สึกกังวลใจกับการเข้าร่วมในโครงการวิจัยนี้ ท่านสามารถติดต่อกับประธานกรรมการจริยธรรมการวิจัยในคน สำนักงานวิจัยคณะฯ อาคารวิจัยและสวัสดิการ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี โทรศัพท์ 02-2011544

APPENDIX I

HUMAN SUBJECTS APPROVAL DOCUMENT

คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล
๒๗๐ ถนนพระราม ๖ แขวงทุ่งพญาไท เขตราชเทวี กทม. ๑๐๔๐๐
โทร. (๐๒) ๒๐๑-๑๐๐๐

Faculty of Medicine Ramathibodi Hospital, Mahidol University.
270 Rama VI Road, Ratchathewi, Bangkok 10400, Thailand
Tel. (662) 201-1000

Documentary Proof of Ethical Clearance
Committee on Human Rights Related to Research Involving Human Subjects
Faculty of Medicine Ramathibodi Hospital, Mahidol University

No MURA2014/712

Title of Project	The Effect of Including Spouse Support in Fatigue Management Program on Fatigue of A Wife Who Received Cesarean Section
Protocol Number	ID 12 – 57 – 15
Principal Investigator	Miss Amornrat Deeboonno
Official Address	Ramathibodi School of Nursing Faculty of Medicine Ramathibodi Hospital Mahidol University

The aforementioned project has been reviewed and approved by the Committee on Human Rights Related to Research Involving Human Subjects, based on the Declaration of Helsinki.

Signature of Chairman
Committee on Human Rights Related to Research Involving Human Subjects
Pratak Oprasertsawat
Prof. Pratak O-Prasertsawat, M.D.

Date of Approval	December 26, 2014
Duration of Study	5 Months

APPENDIX J
SAMPLE SIZE ESTIMATION

Effect size calculation for sample size

This study estimated the sample size from similar study of Kamolwan Namrodphai (2008) who conduct the research "The effects of a fatigue management program on the level of fatigue in first-time mothers who had vaginal delivery"

Table 3. Comparison of the mean score of fatigue after completion the program between the experimental group and the control group

Variable	Group	Number (N)	Mean (M)	Standard deviation (SD)	t
Fatigue score	Control	28	63.14	9.73	2.32*
	experimental	30	56.43	12.08	

*P< .05

$$\text{Effect size (d)} = \frac{M_1 - M_2}{\sigma} = \frac{63.14 - 56.43}{7.75} = 0.86$$

$$\sigma_{pooled} = \sqrt{[(\sigma 1^2 + \sigma 2^2)/2]}$$

$$= \frac{\sqrt{(12.08)^2 + (9.73)^2}}{2}$$

$$= \frac{\sqrt{(145.9264 + 94.6729)}}{2}$$

$$= \frac{\sqrt{240.5993}}{2}$$

$$= 7.75 \quad \text{(instead in the formula of effect size)}$$

Note : $\sigma^2 = SD^2$

: Effect size = .8 (Large effect size) (Cohen, 1988: 26)

APPENDIX K
LIST OF EXPERTS

1. Assistant Professor. Pornsri Ditsaratetiwat
   Department of Maternal-Newborn Nursing and Midwifery,
   School of Nursing, Faculty of Medicine Ramathibodi Hospital,
   Mahidol University.

2. Lecturer Dr. Tadsuang Punyatalung
   Department of Maternal-Newborn Nursing and Midwifery,
   School of Nursing, Faculty of Medicine Ramathibodi Hospital,
   Mahidol University.

3. Mrs. Pitima Chaiopad (Registered Nurse)
   Acting Head Nurse of Postpartum unit of Ramathibodi
   Hospital

APPENDIX L
THE TESTING OF THE NORMAL DISTRIBUTION

The table show verification of t-test assumptions by Kolmogorov- Smirnov Test (pretest in the control group)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of sum score of fatigue is normal with mean 48.900 and standard deviation 9.73.	One-Sample Kolmogorov-Smirnov Test	.066[1]	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1] Lilliefors Corrected

The table show verification of t-test assumptions by Kolmogorov- Smirnov Test (pretest in the experimental group)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of sum score of fatigue is normal with mean 49.000 and standard deviation 12.31.	One-Sample Kolmogorov-Smirnov Test	.200[1,2]	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1] Lilliefors Corrected

[2] This is a lower bound of the true significance.

The table show verification of t-test assumptions by Kolmogorov- Smirnov Test (post-test in the control group)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of sum is normal with mean 49.800 and standard deviation 10.90.	One-Sample Kolmogorov-Smirnov Test	.067[1]	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1] Lilliefors Corrected

The table show verification of t-test assumptions by Kolmogorov- Smirnov Test (post-test in the experimental group)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of sum is normal with mean 38.400 and standard deviation 6.48.	One-Sample Kolmogorov-Smirnov Test	.200[1,2]	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1] Lilliefors Corrected

[2] This is a lower bound of the true significance.

APPENDIX M

THE RESULTS OF SPOUSE SUPPORT QUESTIONNAIRE

The table show frequency and percentage of support from spouse in the control group and the experimental group

support	Control group (n=20)		Experimental group (n=20)	
	amount	percent	amount	percent
Physiological				
- Not received	4	20	0	0
- Received (The most was prepared nutritious food and encouraged to drink water. The next was help during breastfeeding)	16	80	20	100
Psychological				
- Not received	15	75	1	5
- Received (The most was expressed concern, asked about the well-being, and encouraging. The next was set more time to living with the postpartum mother and child)	5	25	19	95
Situational				
- Not received	6	30	2	10
- Received (The most was help in child care, the next was help in house hold tasks)	14	70	18	90

BIOGRAPHY

NAME	Miss Amornrat Deeboonno
DATE OF BIRTH	January 21, 1988
PLACE OF BIRTH	Uttaradit, Thailand
INSTITUTIONS ATTENDED	Mae Fah Luang university, 2007-2011 Bachelor of Nursing Sciene Faculty of Medicine, Ramathibodi Hospital Mahidol University, 2013-2015 Master of Nursing Science (Midwifery)
HOME ADDRESS	123 Moo 7, Namkhum district, Muang Srinakhon, Sukhothai 64180 Tel. 087-7395021 E-mail: amornrat_deeboonno@hotmail.com
EMPLOYMENT ADDRESS	Department of Maternal-Newborn Nursing and Midwifery, Mae Fah Luang University, Chiang Rai, 57100