THE EFFECTS OF SUPPORTTIVE EDUCATIVE NURSING SYSTEM ON MATERNAL BEHAVIORS IN CARING FOR INFANTS WITH RESPIRATORY INFECTIONS

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WANTANEE THONGMEE : THE EFFECTS OF SUPPORTTIVE EDUCATIVE NURSING SYSTEM ON MATERNAL BEHAVIORS IN CARING FOR INFANTS WITH RESPIRATORY INFECTIONS. THESIS ADVISORS : KAIMOOK WICHIENCHAROEN, Ed.D. (CURRICULUM RESEACH & DEVELOPMENT), RASHANEE SEEDA, M. Ed. (MEASUREMENT & EVALUATION), SASITHORN WANNAPONG, M.S. (PHYSIOLOGY) 114 P. ISBN 974-664-918-3.

The purpose of this study was to identify the effects of supportive educative nursing system on maternal behavior in caring for infants with respiratory infections under the application of nursing system by Orem as a guideline for this study. The sample population were the mothers who had infants aged 0-12 months with respiratory infection, and were admitted to the pediatric department, Ratchaburi hospital during May-October, 1999. In this study an accidental sampling technique was employed for a selection of 40 simple cases. There were two population groups, a control group and an experimental group. As for the experimental group, they were given the supportive educative nursing system while the control group received a normal nursing service. Data were collected using an interview questionnaire, which was constructed based on Orem's self-care model. Data were compared of infant care behavior's scores between the control group and experimental group at the end of experimental procedure by using ANCOVA, and frequency, and percentage, and standard deviation.

The findings of this study showed that the scores related to maternal behavior in caring for infants with respiratory infections of the group with a provision of supportive educative nursing system was statistically, significantly higher than the group with normal nursing service from health team at the level .0001. When the researcher compared average scores on self-care requisites behaviors in caring for infants with respiratory infections for the items at pre and post intervention stages, it was found that they had significantly improved with Universal self- care requisites that showed average scores of 13 items. Health-deviation self-care requisites disclosed average scores of 8 items. As for Developmental self-care requisites, the pre and post intervention showed a behavioral change, but not statistically significant.

These findings suggest that the pediatric nurse as supportive educative nursing system on maternal behavior in caring for infants with respiratory infections can be used as a prevention of maternal behavior in caring for infants; and to prevent complications and repetition of the disease among the group of infants with respiratory infections, and to decrease the cost of care.

4037119 NSMC/M :สาขาวิชา :การพยาบาลแม่และเด็ก ; พย.ม.(การพยาบาลแม่และเด็ก)

วัลทณี ทองมี :ผลการพยาบาลระบบสนับสนุนและให้ความรู้ต่อพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ (THE EFFECTS OF SUPPORTTIVE EDUCATIVE NURSING SYSTEM ON MATERNAL BEHAVIORS IN CARING FOR INFANTS WITH RESPIRATORY INFECTIONS) คณะกรรมการควบคุมวิทยานิพนธ์ : ไข่มุกข์ วิเชียรเจริญ, กศ.ด.(การวิจัยและพัฒนาหลักสูตร)., รัชนี สีดา, ค.ม. (การวัดและประเมินผล)., ศศิธร วรรณพงษ์, วท.ม. (สรีรวิทยา) 114 หน้า.ISBN 974-664-918-3

การวิจัยกึ่งทดลองครั้งนี้มีวัตถุประสงค์ เพื่อการศึกษาผลการพยาบาลระบบสนับสนุนและให้ความรู้ต่อพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ โดยใช้ทฤษฎีระบบการพยาบาลของโอเรมเป็นแนวทางในการศึกษากลุ่มตัวอย่างเป็นมารดาที่ดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ รับการรักษาที่ตึกผู้ป่วยใน ตึกกุมาร 1 และกุมาร 2 แผนกกุมารเวชกรรม โรงพยาบาลศูนย์ราชบุรี จำนวน 40 ราย เลือกกลุ่มตัวอย่างแบบบังเอิญ โดยจับคู่กลุ่มตัวอย่างที่มีคุณสมบัติคล้ายคลึงกันเป็นคู่ ๆ ได้กลุ่มตัวอย่างทั้งสิ้น 20 คู่ สุ่มกลุ่มตัวอย่างแต่ละคู่ให้เป็นกลุ่มทดลอง 1 คน กลุ่มควบคุม 1 คน กลุ่มควบคุมคือกลุ่มที่ได้รับการพยาบาลตามปกติ ส่วนกลุ่มทดลองได้รับการพยาบาลระบบสนับสนุนและให้ความรู้ เก็บรวบรวมข้อมูลโดยใช้แบบสัมภาษณ์พฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจระหว่างเดือน พฤษภาคม – ตุลาคม 2542 วิเคราะห์ข้อมูลโดยคำนวณ แจกแจงความถี่ และหาค่าร้อยละ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน และวิเคราะห์ความแตกต่างของพฤติกรรมในการดูแลบุตรของมารดากลุ่มควบคุมและกลุ่มทดลอง หลังการทดลองด้วยการวิเคราะห์ความแปรปรวนร่วม (ANCOVA)

ผลการศึกษาพบว่า หลังการทดลองพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกด้วยโรคติดเชื้อระบบหายใจ ที่ได้รับการพยาบาลระบบสนับสนุนและให้ความรู้ ดีกว่าพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจที่ได้รับการพยาบาลตามปกติจากเจ้าหน้าที่ทีมสุขภาพอย่างมีนัยสำคัญทางสถิติที่ระดับ .0001 สำหรับกลุ่มทดลอง เมื่อพิจารณาพฤติกรรมเป็นรายข้อ พบว่า ด้านพฤติกรรมการดูแลบุตรที่จำเป็นโดยทั่วไป จำนวน 13ข้อ และพฤติกรรมการดูแลบุตรที่จำเป็นตามภาวะเบี่ยงเบนทางสุภาพ จำนวน 8 ข้อ มีการเปลี่ยนแปลงอย่างมีนัยสำคัญ ส่วนพฤติกรรมการดูแลบุตรที่จำเป็นตามระยะพัฒนาการมีการเปลี่ยนแปลงอย่างไม่มีนัยสำคัญทางสถิติ

จากผลการศึกษา ผู้วิจัยเสนอแนะว่าพยาบาลควรนำการพยาบาลระบบสนับสนุนแล้วให้ความรู้มาใช้กับมารดาของบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ เพื่อส่งเสริมให้มารดามีพฤติกรรมการดูแลบุตรด้วยตนเองอย่างถูกต้อง จะช่วยลดการกลับเป็นซ้ำของโรค การกลับมานอนพักรักษาในโรงพยาบาล และลดค่าใช้จ่ายของมารดา

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CHAPTER I

INTRODUCTION

Background and Significance of the Study

Acute respiratory infection in children is a disease with global incident and being a very significant cause of illness and death in children under 5 years of age. At the same time, it is considered as a major health problem found in various developing countries. Within this group of disease, common cold or nasopharyngitis is indicated as the major cause of illness while pneumonia is the major cause of death (WHO, 1990 cited by Sorasak Lojindarat, Thipaporn Appasorn-tanasombat & Bussabong Kodwichien, Editors, B.E. 2534: 26). In many developed countries, it illustrated that only 2 % of children with respiratory infection were dead. As for Thailand, among all causes of death in a group of children under 1 year, it indicated that 25 % of them died from acute respiratory infection (Suparee Suwanjootha, B.E. 2528: 851- 852).

In Thailand, the morbidity and mortality rate of an acute respiratory infection in children are found as very high. When considering to the statistical data presented at various hospitals in Bangkok, about 40-60 % of their out-patients were children with respiratory infection. So far, 10-25 % of all child cases who were admitted at the in-patient ward were children with respiratory infection. Among the group of children with respiratory infections, 70 % of them were common cold cases and 10% pneumonia cases with a discovery of higher incident in their first year of age. Interestingly, the morbidity rate of children with respiratory infection who living in rural areas has shown as higher than the rate found in urban settings (Pramual Sunakorn, et.al., B.E. 2533: 132). Precisely, the mortality rate of children with respiratory infection was highly detected in a group of children under five years. However, the incident of this disease trending to be changed as well as its mortality rate was gradually decreased from 15/100,000 population in 1990 to be less than 10/100,000 population in 1995 and then. As the data shown 70% of the children

who died from respiratory infections become the ones under 1 year of age with the major caused by different risk factors such as malnutrition, low birth weight and so on (Tuberculosis Division, Department of Communicable Disease Control, Ministry of Public Health, B.E. 2542: 23).

According to the statistical data concerning the numbers of children with respiratory infection, it reported that there were totally 603 cases or 23.8% of all child cases who were admitted at the in-patient pediatric ward of Ratchaburi hospital in 1996. Afterwards, 540 cases or 25.2% and 576 or 20.0 % were reported in 1997 and 1998 respectively.

Obviously, acute respiratory infection is instantly recognizable as it easily and repeatedly occurring in children as well as usually accompanied by a severe symptom. Particularly, this disease could lead the infants to be easily died that caused by some significant leading factors. Those are referred to both infant factor and environmental factor. In term of infant factors composed of such body's structure and function especially concerning to the respiratory and immune systems of which still not be well developed. This is considered as a motive factor causing such the occurrence of this disease. In addition to this, the abnormality appeared in each child such as mental retardation, congenital heart disease and low birth weight are also acceptedly recognized as a leading factor and enable to encourage more severity of this disease in children. As for the environmental factor, it mainly relevant to maternal child care behavior whether the mothers are lacking of knowledge and understanding towards child care practice, therefore absolutely children may receive an insufficient amount and less nutrient of food that can cause malnutrition in children. This is assumable as a leading factor enables to occur such a respiratory infection and it could encourage more severity of this disease as well. Without taking children for immunization as a standard criteria, no breast-feeding, let the children down to be affected with cold weather, children breathing in smokes from cooking or cigarette, staying in congested areas and crowded or let children having a close contact with patients with respiratory infections such as common cold or pneumonia, these are accepted as factors leading

children to be easily sick from respiratory infections (Sriphan Kanthawang, B.E.2533: 4-5).

Certainly, it can be concluded that the occurrence of respiratory infections in children is partially caused by mother's poor perception and practice on giving care when children got sick and also the mother could not protect them away from a repetition of illness especially during the beginning of infection. Those mal-practices such as incorrect tepid sponge, insufficient water drinking and improper food feeding (Yomsiri Nawanurak, B.E. 2535: 2). So far, Songphol Tornee, et. al., (B.E. 2542: 143) conducted a study on "Mother's Knowledge, Perception, and Practice in Caring for Children under Five Years with Respiratory Infections", it revealed that the mother's knowledge and perception concerning acute respiratory infections was a significant factor affecting to maternal behavior and practice in caring for their children.

A solution of respiratory infections situation certainly requires such a cooperation from different sectors that included both health team and people. Consequently, nurses could help and encourage the mothers to have a correct perception and practice in caring, preventing and curing for children with respiratory infections, accordingly nurses employed a supportive educative nursing system. At the same time, the mothers would be provided with instruction and individual guidance by nurses as well as encouragement and mental support that could help to maintain their attemp on self-care requisites for maternal behaviors in caring for infants with respiratory infections (Somjit Hanucharoenkul, B.E. 2537: 42-43). With a strong effort and ability, nurses assist the mothers attainable to the goal of providing a correct maternal behaviors caring for infants, so a good relationship and communication skill that nurses given to the mothers is accounted as an important and useful technique for effective treatment purpose. This action could encourage the mothers to be perceived that nurses always pay attention, accept, understand and have a wish to help them with sincerity. As a result, the mothers feel of trust to nurses and to be realized in the usefulness of the practice, so they willing to give the information, cooperation in caring a continuous self-care for their infants with respiratory infections (Boonsri Prabnasak & Siriporn Jirawatanakul, B.E. 2531: 87-88).

Ultimately, nurses could see a direction for possible and effective performance on supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections.

Evidently, in case that nurse could be able to effectively manage the supportive educative nursing system as an individual guidance under the utilization of relationship building technique together with providing of physical and mental support, instruction and demonstration on maternal care including to arrange such as a motive environment for improvement of knowledge and caring in self-care for infants with respiratory infections to the mothers, then nurses will receive trust from the mothers, while the mothers themselves would be capable to select the most proper method for caring of infants with respiratory infections.

Accordingly, the researcher pays a special attention to study the effects of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections. With a crucial expectation upon a possible result of this study as it can be brought in use as a guideline for nurses to recognize and apply this mentioned model system in their works with an ultimate goal for protection of complication and repetition of the disease among the group of infants with respiratory infections.

Purpose of the Study

To compare the score of maternal behaviors in caring for infants with respiratory infections between the mothers who received supportive educative nursing system and the mothers who received normal nursing service from health team.

Conceptual Framework

Orem, she made a strong effort on upgrading this concept to be one of the nursing theory so called "Orem's General Theory of Nursing" as well as it comprised of the three sub-theories with a presence of their mutual association those are Theory of Nursing, Theory of Self-Care Deficit and Theory of Self-Care (Orem, 1991: 117).

This intervention uses the Theory of Nursing. Orem, (Orem, 1985 cited by Somjit Hanucharoenkul, B.E. 2536: 39-44) classified of the Theory of Nursing into 3 system; Wholly Compensation Nursing System, Partly Compensation Nursing System and Educative Supportive Nursing System. This study was designed under the implication of supportive educative nursing system as a guideline for conducting the research.

The supportive educative nursing is well accepted as an essential system with an emphasis is placed upon the encouragement given to the mothers for their learning and practicing what the extent of infant self-care. By this way, infant patients, their mothers and also significant others are required to be included under this learning and teaching procedure. On otherwards, nurses' performance were not included only teaching guiding but also to promote and offering mental support that could help the mothers maintaining their attempt on self-care practicing for infants as well (Somjit Hanucharoenkul, B.E. 2534: 13). Again, this nursing system is also referred to a provision of support, guidance, instruction and environmental arrangement that could lead the patients or their guardians having such a progress and development of ability of which focusing on ability to serve their own needs in infant self-care practice (Somjit Hanucharoenkul, B.E. 2534: 25-27; Orem, 1991: 255) as the following details;

A foundation of relationship : nurse was the one who initiated such a good relationship with the mothers that certainly it could encourage the mothers to believe and trust them. As a result, it came up with a decrease of mother's stress as well as cooperation on self-care practice for their infants have been crucially given (Boonsri Prabnasak & Siriporn Jirawatanakul, B.E. 2531: 78).

Management on nursing practice : At the meantime most of the mothers have given a well trust to nurses, then it is a must that nurses try to make an effort in motivating the mothers to make a choice and assessing what the extent of proper infants care method and practice they require. This is absolutly considered as a major

component of self-care practice for caring of their infants, however it must be based on an intentionary support provide by nurses as following details;

Provision of Support : is an important technique that nurses usually apply for strengthening the effort and capability of the mothers in practicing self-care for caring of their infants, eventhough nurses realized that they had been feeling of stress. In this situation , it is an unavoidable that nurse must carefully select the most proper choice of support as well as it must be matching with each mother too. Consequently, this technique enables the mothers initiating and making an effort on conducting a very essential activity that is a self-care maternal behaviors in caring for their infant. (Somjit Hanucharoenkul, B.E. 2537: 14).

Guiding : is a method of help that nurses need to apply with the mothers who were already agreed with the usefulness of self-care practice. Afterwards, a crucial communication between nurses and the mothers have to be made. At the same time, an integration of both guidance and support should be done by nurses in order that it could strengthen the mothers to be alert in practicing self-care activity in caring for their infant.(Somjit Hanucharoenkul, B.E. 2537: 14)

Teaching & Demonstration : This is a very important method conducted by nurses for enhancing knowledge and skill of the mothers particulary it could empowering the capability of the mothers regarding self-care maternal behaviors in caring of their infants (Somjit Hanucharoenkul, B.E. 2537: 14). As it is indicated that teaching is a very useful method as it could help individual to be able to perform whatever correct activities and finally such a good health behaviors would be rendered to individual as well (Suree Chantaramolee, B.E. 2521: 83). Absolutely, a correct perception and practice in term of self-care maternal behaviors in caring for infants can be occurred in the mothers at all.

Arrangement of environment that contributes to building self-care capability : This is a method of motivation need to delivered to the mothers with

aimimg to drive them to be alert in setting an acquired and proper goal and changing their behaviors until they could gain the result as they set (Orem, 1991: 286; Somjit Hanucharoenkul, B.E. 2537: 15). In addtion, if the mothers are allowed to have any sources of information such as they could bring home some documents, this directly affecting to the mothers having an initiation of idea as well as a continuous self-care maternal behaviors in caring for infants. (Orem, 1980: 83).

Termination of nursing practice :nurses informed the termination (Lucsana Tamapiroj, B.E. 2540: 134)of nursing practice to the mothers in advanced (Boonsri Prabnasak & Siriporn Jirawatanakul, B.E. 2531: 79) including to summarize whatever substances of conversation and to revise some acquired regulations and directions.

If the group of mothers who having infants with respiratory infections are provided with the supportive educative nursing system as mentioned earlier, this is believed as affecting to a presence of correct perception in the mothers and also distinctive ability to select what the most appropriate method for caring of infants with respiratory infections.

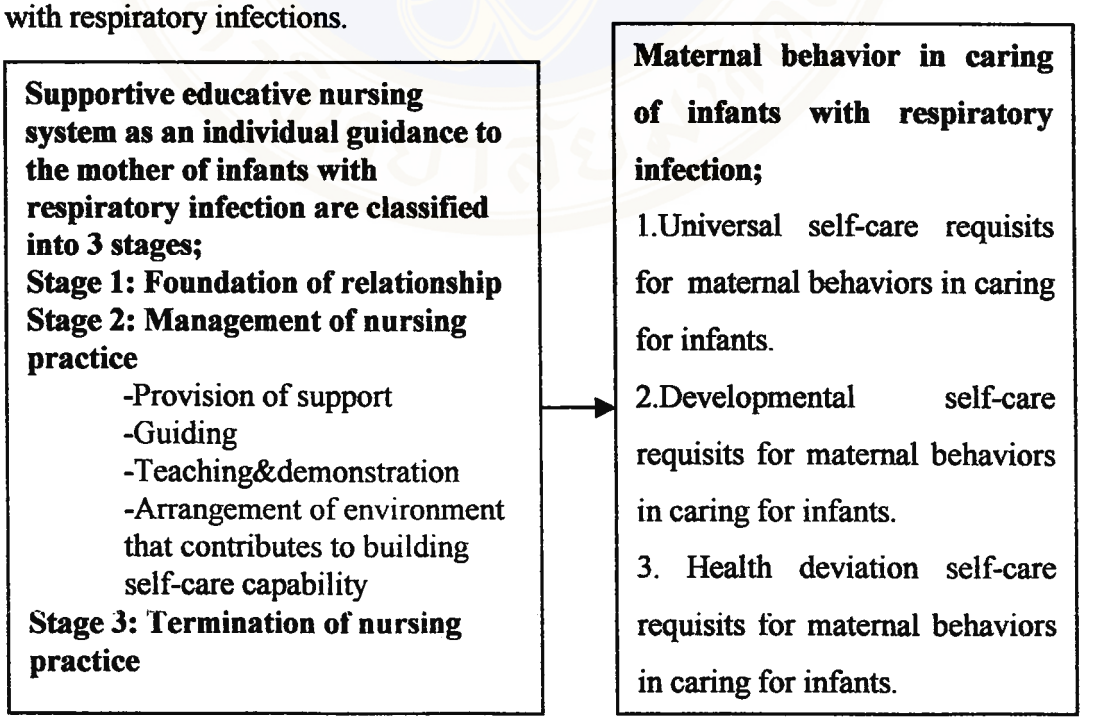

Diagram 1 Conceptual Framework

Hypotheses

The score of maternal behaviors in caring for infants with respiratory infections of the mothers who received supportive educative nursing system is higher than the behaviors of the mothers who received normal nursing service from health team.

Scope of the Study

This research was an attempt to study the effects of supportive educative system on maternal behaviors in caring for infants with respiratory infections. Hence, this study was conducted with the group of mothers who having and brought their children of age between 1-12 months with respiratory infections to receive treatment at the in-patient pediatric ward 1 and ward 2. pediatric department of Ratchaburi hospital.

Expected Outcomes and Benefits

1. To be a guideline for nurses to utilize in nursing practice providing to the mothers in caring for infants with respiratory infections.

2. To be a guideline for nurses enable to apply the supportive educative nursing system for the mothers of others patients.

Definition of Terms

1. Maternal behaviors in caring for infants with respiratory infections refers to the mother's action or practice in conducting various activities but must be relevant to the care for infants with respiratory infections only. And the mothers aiming to bring such a good health and ability to be survival to their children. This kind of behaviors can be assessed by using a questionnaire to inquire maternal behaviors in caring for infants as it was classified into 3 major parts as followings;

1.1 Universal self-care requisits for maternal behaviors in caring for infants

1.2 Developmental self-care requisits for maternal behaviors in caring for infants.

1.3 Health deviation self-care requisits for maternal behaviors in caring for infants.

2. **Supportive educative nursing system** refers to the method and activity arranged by the researcher with a special purpose to help the individual mother in caring for infants with respiratory infections as well as it based on the implication of Orem's conceptual model. From this system, the mother could learn how to determine their self-needs and taking an action on caring for infants as a whole. There are comprised of 3 stages of nursing performance as follows;

2.1 Stage 1: A foundation of relationship: A participation and agreement have been made between the researcher and the selected mothers. This stage showed the emphasis on building a good relationship and trust.

2.2 Stage 2: The management on nursing practice: is a stage focusing on giving a chance to the mothers for releasing their tension towards any problems concerning infant care practice. At the same time, the researcher has sincerely provided assistants to the mothers in term of;

- Provision of support
- Guiding
- Teaching and demonstration
- arrangement of environment that contributes to building self-care capability

After delivered these 4 methods of assistants, then the researcher distributed a nursing instruction entitled self-care maternal behaviors in caring for infants with respiratory infections to the mothers, so that the mothers could revise their knowledge.

2.3 Stage 3 : The termination of nursing practice is a stage to inform the mothers to know about a period of nursing termination, a summary of conversation, and revision of regulations on child care practice.

3. **Normal nursing service** refers to a method of caring for infants with respiratory infections that given to the mothers by any responsible health team of Ratchaburi hospital.

CHAPTER II

LITERATURE REVIEW

A review of relevant literature was crucially conducted in this research, while a definite direction of the study was set and sequentially classified as followings;

- Caring for infant with respiratory infections
- Supportive educative nursing system
- Related Research

Caring for infant with respiratory infections:

Respiratory infections means to a disease with an inflammation of respiratory system as it affected since nasal cavity, sinus, otitis, neck, epiglottis, pharynx, bronchile till the alveoli and pulmonary. Those diseases comprise such as common cold, bronchitis, Pneumonia etc. while they caused by different kind of germs that is virus, bacteria, fungus or protozoa. Whenever there is an occurrence of respiratory infections, then will be also detected a varity of sign and symptom such as fever, cough, neck pain, running nose, dyspnea, ear pain, swollen and pain at the back of ear with some discharges from ear-tube (Mark, M.G., 1994: 210).

Classification of Respiratory Infection Disease

By WHO, the classification of respiratory infection diseases was conducted through a special consideration is placed at the physiological sciences (WHO, 1978: 283-287 cited by Supharee Suwanjootha, B.E. 2528: 858-859) as following details;

1. Diseases of respiratory infection comprises of;
    1.1 Upper respiratory infections
        1.1.1 Common cold, Rhinitis, Coryza, Influenza
        1.1.2 Pharyngitis
        1.1.3 Tonsillitis

1.1.4 Adenoid hypertrophy and adenoiditis

1.1.5 Otitis media

1.1.6 Sinusitis

1.1.7 Acute epiglottitis

1.2 Upper respiratory infections that caused the upper respiratory obstruction such as Croup syndrome of which always accompanied by a lower respiratory infections.

1.3 Lower respiratory infections

1.3.1 Acute bronchitis

1.3.1 Acute bronchiolitis

2. Diseases with an inflammation of lung such as Pneumonia

Risk factors to the occurrence of respiratory infections in children

Respiratory infections which is susceptible to be occurred with a repetition of incidence. At the same time, the occurrence of this disease always come up with a severity of symptom especially in a group of infants and children. This has resulted to a number of child death. It due to there are so many significant risk factors pertaining to that included both children factor and environmental factor, these are considered as the affect of maternal care behavior.

Children factor

Children is acceptably different from adult in many aspects especially in term of physiology and anatomy with respect to respiratory system. The structure and function of organs in children is considered as still not well developed. Particularly in infants and babies, their organs related to the respiratory system and immune system are not completely developed, so that respiratory infection will be easily occurred and advanced with a severity of symptom. Those factors are ;

1. The respiratory tract in infants is rather smaller and shorter than of adult. Whenever there is the incidence of such inflammation, swollen, stasis of phlegm or contraction of bronchile, these could be easily leading to an appearance of respiratory stenosis at all (Supharee Suwanjootha, B.E. 2524: 1107).

2. Cough reflex in infants or babies is accountedly not sufficiently effective for excreting all pending phlegm or diseases that existing in the respiratory tract, thus leading to a presence of infection.

3. Mucociliary clearance in infants and babies is not also sufficiently effective. This could bring about germs being behind in the respiratory tract. At the same time, it found the growth of germs around the membrane surface of respiratory tract that finally such a respiratory infections would be occurred.

4. Macrophages of pulmonary in infants and babies could not be effectively functioning on catching and kill most of the germs when they reached to the area of lung, so that infections will be easily appeared.

5. The immunity, by the type so called ImmunoglobulinA (IgA)appears in the respiratory tract in infants and babies could not be produced completely, so that it would be easily brought about respiratory infections caused by virus. It is because of the IgA is one of significant substances that is capable to kill virus in the respiratory tract as well.

6. The immune in infants and babies can not be possibly produced at the amount equal to in infant and adult. At the stage of new born, the most of infants certainly received the immune from their mothers at an equal amount. However, when they reached 3 months of age, it found a decrease of their immunity level. This meant that the most of infants could have more chance to be infected (Prakrit Rachawat, B.E. 2536 : 17).

Environmental factor comprises of;

Infants

1. Malnutrition status: Presently, there is a great number of malnourished infants particularly in developing countries. Malnutrition is perceived as intensively associated with infections. This meant that whenever each of these

condition was presented, so that such a fortified conditions would be occurred with a higher rate of severity too. So far, malnutrition can encourage the most of infants to be easily infected such an acute disease particularly respiratory infections. In Philippines, it was revealed that a higher mortality rate was found in a group of 3rd, 2nd and 1st degree of malnourished children with a lower respiratory infections when compared to the group of normal infants of which it can be illustrated as 27, 11 and 4 times respectively (Tupasi, et al., 1988: 619-620).

2. Non-breast feeding : breast milk is considered as very useful for a prevention of infections in digestive system as well as it was assumed to prevent the infections in respiratory system too. It due to breast milk is contained with a higher degree of both immunoglobulin A and immunoglobulin G that are accepted as very effective to prevent the infection caused by virus and bacteria, however a distinct conclusion of this subject could not be made. The finding on relationship between breast feeding and the incidence of lower respiratory infections in the most of developing countries has shown that breast feeding capable to prevent such a severe respiratory infections. For instances, the study in Rwanda revealed that the mortality rate of a group of weaned infants with a lower respiratory infections was higher than the group of suckling infants. On the other hand, most of the studies in developed country found that there was no direct relationship between breast feeding or modified milk feeding and the incidence of a lower respiratory infections, while there were some other significant factors affecting to this relationship as well such as educational level of the mothers, infant care method and interior environment. Surprisingly, the finding in England is agreed with the others developing country that is the incidence of a lower respiratory infections in infants with breast feeding is less than in infants with modified milk feeding (Pio, et al., 1985: 7-8).

3. Passive smoking : In a group of infants and babies who were always inhale especially the cigarette smoke from their mothers/ other family member or smoke from cooking for a long time, then they are risky to be sick from the respiratory infections. It was assumed that any smoke inhaled by whoever enable to

damage the respiratory membrane, decrease the function of oscillating hair and it is a risk to be easily sick from respiratory infections (Standfield, 1987: 624; Pio, et al., 1985: 8-9). In addition to this, infants whose parent have been smoking cigarette, unfortunately more opportunity they could fall sick from respiratory infection when compared to the family with only one smoker. (Robin & Lee, 1991: 219).

Besides, in a group of infants with low birth weight and congenital deformation such as harelip, retarded, congenital heart malfunction or other chronic diseases. Accordingly, the immunity of those infants would be decreased. As in the study of Nuanchan Prabparn, Supattha Limudomporn, & saowanee Jumderm-phadetsuk (B.E. 2536: 14) indicated some of risky factors to reinforce infants become sick from acute respiratory infections such as there is at least one family member getting a cold, there are more than 10 family member living in the same house, that infants could not receive a complete doze of vaccine by age, there is some stagnant water under the house, using a smoke mosquito killer, poor hygiene in the house, low family income, and below standard weight. Moreover, it was found that many of infants and babies could easily take a cold by infected from their older brother or sister who received its germ from school. As for infants who were brought up at any day care center they would be more often getting a cold when compared to the group of infants who only stayed at homes (Marlow & Reeding, 1986: 605).

Mother

1. Education and income: In the most of developing countries where are really poor, at the same time infant mortality rate caused by respiratory infections is considered as higher than other developed countries. Coincidentally, poverty of a number of families could be affecting to their living condition that fortified to the incidence of acute respiratory infections because of their jammed living and poor personal hygiene as well. Regarding to the studies carried out in India and Haiti, it was found a higher incidence of respiratory infections in poor families with many member (Stanfield, 1987: 624) due to the mothers had no time to take care their infants they had to work somewhere to earn money for their living. This result is quite

in accordance with the study done by Prakrit Rachawat (B.E. 2536: 71 - 72) as his special attention is to study whatever factors relevant to maternal behaviors in caring for infants with or without acute respiratory infections. It was discovered that the mothers with higher education and higher family income could provide a better and more correct care when compared to the group of mothers with a lower education and lower family income. Its reason is deal with the usefulness of education as it could produce such an intellectual growth, outstanding and reasonableness as well as finally the mothers will be able to make a good decision and perform a good health behavior at all. Undoubtedly, any individuals with a higher family income could have more chance to communicate with different social groups so that their knowledge and experiences will be enhanced while their higher income could be facilitating in health care concerned in including enable to be accessible to a proper health care services. Furthermore, it was revealed that family types such as nuclear family and extended family were not associated with maternal care behavior. However, particularly in Thai society, family member is a significant factor influencing to personal health care behavior because of the most of Thai people have to follow the Thai culture and tradition (Chatkaew Prawahanawin, B.E. 2538: 723 - 724). As for the study of Kasl and Cobb (1966: 250) indicated that the parents with higher education and higher income always practice a better child care behavior when compared to the group of parents with a lower education and income.

2. Age : This factor is affecting to maternal behaviors in caring for infants with respiratory infections. PrakRit Rachawat (B.E. 2536: 71) conducted the study on factors relevant to health care behavior of the mothers who are caring and are never caring for infants with acute respiratory infections. As it was discovered that the older mothers could provide a better care to their children when compared to the mothers of younger age. This is evident as accordant to Hurlock (1980: 271) said in his study that the group of younger mothers absolutely lost of readiness in caring for their infants, however this kind of function could be developed when they become older as well as at the stage of late adult their infant care capability will be ultimately enhanced. In the study of Harris and Guten (Harris & Guten cited by Brown &

McGeedy, 1986: 318) found that the preventive behavior could be increased when anyones become older. Jariyawat Khompayak & Udom Khompayak (B.E. 2525: 43) said that any mother should have the first child when her body was perfectly developed with an existence of maturity and readiness to become a mother. From the findings in many countries, a range of 20-30 years of age was suggested as being the most appropriate period the mother should have a baby. All this due to ladies whoever 20 years of age certainly has became enough mature both in term of physically and mentally till they are capable to encounter with especially the family burden. In this case, the most crucial point is a lesser risk of the mothers to have complications or problems during pregnant and child delivery period. Although the ladies of age less than 20 years usually are possessing such a physical maturity to adopt a child, but less of emotional maturity and responsibility are obviously existed.

In a usual situation, help concerned with self-care activity is really required by infant due to they are still at the initial stage of growth development both physically, mentally and socially (Somjit Hanucharoenkul, B.E. 2537: 23; Orem, 1985: 85). Accordingly, infants's care takers who are mostly their mothers must be functioning on caring for their infants in order to bring about good health to their infants. Interestingly, a definition of the term "care" is given in various natures as followings;

Blattner (1981: 10) explained that "care" is a process of interaction between a provider and a recipient when they agree to build up the prosperity, satisfaction in their lives, lift up their healthiness with a special aim to be able to perfectly response their needs.

Leininger (1987: 9) explained that "care" is a kind of activity mainly deal with a provision of help, support and facilitation to the individual or groups when they intentionally expose or search whatever their needs with a special aim to create or improve the human being's their way of life and other conditions.

Orem (1991: 361 - 362) said about the care for dependent persons that refers to various activities initiated by anyone who are the adult. Therefore, the adult really pay a special attention to carry out those activities for the ones who are under their responsibility with aimed to save or maintain their lives, including to promote their better health and security as well.

According to all definitions as mentioned above, only the focal points of health care behavior were drawn out as it implies whatever the extent of practices for helping, supporting, promoting, and maintaining the individual's lives, health and security.

Orem, he is broadly accepted as a leader who firstly introduced such a self-care concept to be applied for a development of nursing practices. Hence, he made a strong effort on upgrading this concept to be one of the nursing theory so called "Orem's General Theory of Nursing" as well as it comprised of the three sub-theories with a presence of their mutual association those are Theory of Nursing, Theory of Self-Care Deficit and Theory of Self-Care (Orem, 1985 ; 1991).

To understand all these three theories, it requires such a distinct recognition on a particular concept relevant to self-care need as the whole.

The entire self-care need means to all of self-care activities of which must be carried out at a period of time by each individual in order to respond his/her need in self-care requisites. Three aspects of self-care need are classified on the basis of consideration to particularly the health status and developmental stage (Somjit Hanu-charoenkul, B.E. 2537: 27 - 31; Orem, 1991: 125 - 134) as follows;

1. **Universal Self-Care Requisites** implies to the care for individuals while it will be distinctively involved with a promotion and maintaining of individual health and security. This is considered as an essential element for everybody, but it requires some adjustment to be fitting to all ages, developmental stage and environment. Those activities are such as 1) maintaining of sufficient air, water and

food 2) maintaining of normal excretion and water drainage 3) maintaining of balance between doing exercises and taking rest 4) maintaining of balance between isolated stay and to interact with others people 5) prevention of dangers that might be affecting to life, duty and security and 6) provision of promotion for doing the duty and development in the extreme under a social system and self-competency.

2. **Developmental Self-Care Requisites** implies to the care for individuals according to each stage of developmental process deal with human lives including other concerned development. Those activities are comprised such as 1) development and maintaining of available living conditions that could help to support the whole living process and development. This enables to promote the individuals progress to a maturity since the stage of living in the womb, delivery, being infants, baby, teenager, adult and aging. 2) caring for prevention of losses in development, then it is a must to cope with a stress or to conquer any obstacles derived when facing with different situations such as lacking of education, problems related to social adaptation, a loss of some relative's lives, illness, injury, disability, changes caused by life events, terminal stage of illness and going to be dead.

3. **Health-Deviation Self-Care Requisites** implies to the care for individuals when any malfunction of their body build, disability are presented or because of doctor's diagnosis. Those activities are comprised such as 1) seeking or maintaining of help received from any health personnel. 2) perceiving and interested in the danger and losses that might be occurred when getting sick. 3) To follow the treatment plan, diagnosis, and doing the rehabilitation and prevention of any existed pathologies effectively. 4) realize and pay attention to all of unhappiness or side effect of illness and then adjust them. 5) adjustment of self-perspective and self-image till enable to confess whatever their own health status and requisites for helps from particularly the health service system and 6) learn to live with the pathological effects or the existing situation including the result of diagnosis and treatment. As their living pattern must be helping to promote their self-development under a limit of their remained ability.

As mentioned earlier that infants are still unable to fully perform the self- care due to a limitation of growth and level of development especially the group of infants with respiratory infections who mostly require a special assistance for self-care practicing. As a result, mother is accountable as the most significant person who are playing a role of helper or care giver of their infants by using different approaches such as controlling, caring, guiding and training of their children till they will be able to carry out the most of self-care activities, however, must be in accordant to the capability of each infants and of each specific age. These are accepted as very helpful in promoting such a health survival and security of their children at all (Somjit Hanucharoenkul, B.E. 2537: 22 - 23). Absolutely, maternal behaviors in caring for infants with respiratory infections need to be intentionally initiated by the mothers themselves under a systematic approaches as well as try to distinguish only meaningful things for their infants. Whenever the entire needs of infants with respiratory infections are responded, therefore, very useful in preventing such a harmful complications and revision of sickness as well. There are 3 major aspects of maternal behavior in caring for infants with respiratory infections as followings;

1. Universal Self-Care Requisite for Maternal Behaviors in caring for infants.

1.1 Caring for sufficient oxygen given

1.2 Caring for sufficient food and drinking water given

1.3 Caring for normal excretion and water releasing

1.4 Caring by producing a balance between doing exercises and taking rest

1.5 Caring by producing a balance between personal activities and interaction with other persons by considering at their right age.

1.6 Caring for a prevention of dangers to their lives, their duties and security.

2. Developmental Health-Deviation Self-Care Requisites for Maternal Behaviors in caring for infants.

3. Health-Deviation Self-Care Requisites for Maternal Behaviors in caring for infants.

Behavior

3.1 Seeking or maintaining of help received from health team such as medical doctor, nurse or health officer

3.2 Realizing, pay attention and considering what the extent of pathological effect.

3.3 To follow the treatment plan, practicing the rehabilitation and prevention of any complications.

3.4 Realizing and pay attention to all of unhappiness or side effect of illness and then adjust them.

Precisely, all the three aspects of maternal behaviors in caring for infants with respiratory infections is contained with the following details;

1. Universal self-Care Requisites for Maternal Behaviors in caring for infants.

It is a kind of care responds to the basic needs of infants with respiratory infections in term of;

1.1 Caring with sufficient oxygen provided, arrangement of home environment with a presence of good ventilation, free of dust and smoke including avoid to bring the infants to any congested areas such as trade fair, market, department store or other places with polluted air like a smoky area. In addition to this, a wind or electric fan blowing directly to the infants are prohibited.

1.2 Caring for the infants receiving a proper and sufficient food and water. During the first year of age, only milk; breast milk or modified milk will be fed as the main food. Since the fourth month and then, any infants should be given a proper supplementary food for his/her sufficient nourishment (Kraisitti Tantasirin, et. al., B.E. 2531: 43) as the following details;

4 months of age	Breast feeding and to supplement with some grained rice mix to a quarter of 1 egg boiled yolk and soup, then alternate with a grained-ripe banana 1 time daily
5 months of age	Breast feeding and to supplement with some grained rice mix to a cooked grained fish and soup, then alternate with 1 egg boiled yolk 1 time a day and follow by breast feeding again till the child is full.
6 months of age	Breast feeding with some of grained rice mix to a cooked grained fish and boiled yolk. Thus, 1 meal of breast feeding will be replaced by some cooked-grained vegetable and supplement with some fruits as a snack for 1 meal.
7 months of age	Breast feeding together with 1 meal of food instead of breast feeding. Food should be the same kind provided during the sixth month of age but need to add the other kind of grained meat such as chicken, pork and cooked-grained liver or alternate with grained rice mix to a boiled yolk or boiled white mix to cooked-grained vegetable. And 1 meal fruits will be provided as a snack
8-9 months of age	Breast feeding together with 2 meals of food instead of breast feeding. Food should be the same kind provided during the seventh month of age but to grain it more crude and 1 meal fruits will be provided as a snack
10-12 months of age	Breast feeding together with 3 meal of food instead of breast feeding. Food should be the same kind provided during the 8-9 month of age but to increase more amount of food.

1.3 Caring for a normal excretion and water releasing. Infants are considered as very often to loosen their bowels because they could not control

themselves. Therefore, it is necessary to keep their bodies and environment clean, to observe a number of excretion and urination. By this way, another approach that could help the infants able to do the excretion as usual is to provide them with food and water such as vegetables and fruits.

1.4 Caring by producing a balance between doing exercises and taking rest. As it was suggested that infants should sleep both day and night as following details (Gulanick, Meg, 1994: 290)

1-2 months of age	To sleep 20 hours a day
2-4 months of age	To sleep 16-20 hours a day
4-6 months of age	To sleep 15-16 hours a day
6-8 months of age	To sleep 14 hours a day
8-12 months of age	To sleep 12 hours a day

Besides, it is no exception that all infants should take different actions according to their capability and age. As when they are able to hold such a milk bottle, let them do it. Playing is perceived as a valuable and essential activity, thus try to get only suitable toys and games for infants particularly at their right age as followings (Division of Family Health, Department of Health, B.E. 2534: 141 - 142)

New born - 3 months of age	Stimulation of eye, ear and body's perceptual by let them looking at a mobile toys. Try to select a colorful bed sheetwith different pictures or any colorful mobile such as hanging fish.
3-6 months of age	A child begins to move. For development of a large muscle with a handful practice, try to arouse the children to play only a toy with handle, sound, shakable, colorful and big enough in order to prevent them.putting in their mouths. Those toys

	aresuch as a pinchable bubble doll with sound or tinkles.
6-12 months of age	To stimulate by using a different kinds of children's games and provide them with mobile toys such as a colorful ball, spring doll or other toys to play during taking a bath such as am floating boat or a plastic glass, so that the children will be better in using their fingers and like to imitate whatever they have seen.

1.5 Caring by producing a balance between personal activities and interaction with other persons by considering at their right ages. While the most of children are requiring both love and kindness, therefore try to provide them with a warm and soft embrace, talking with a gentle and soft voice. Moreover, Infants should have a chance to interact not only their mothers but also some other persons for instances to play with the father and other family members or able to see and making a friend with some neighboring infants.

1.6 Caring for a prevention of dangers to life, duty and security of which particularly caused by accidents. It due to children are possessing much of energy and always like to do examine whatever the objects they have seen, thus they may be at great risk to be injured from accidents at any time such as falling, scald, choke, drowning and so on. Accordingly, it is a must to look out for infants as don't let them stay alone or try to arrange a clear area and do carefully keeping such as sharpen things, poisoning substances or some small objects to be far away from children because they might pick and put it in their mouth or nose. To build up the immunity is accepted as an essential thing need to be done for a prevention of many infectious diseases which are considered as preventable diseases by using vaccine. Furthermore, the body should be kept clean and always wearing clothes for making a warmth. Whenever there is an alteration of weather such as raining, cold weather or

there is a rapid alteration of weather, should wear or cover the children with thick clothes, to put gloves, sock, hat and don't let them to touch with a cold weather. In a day with cold weather, bathing them with warm water especially at late morning while such a hair cleaning may be spaced out to the other day but not do it everyday as usual. Try to scrub and dry the infant's body and hair after a shower at least 2 times a day. To give them some water after milk and supplementary food. Additionally, housing and environment surrounding the infants should be kept clean too.

2. Developmental Self-Care Requisites for Maternal Behaviors in caring for infants.

Infant, certainly will be grown up continuously. The existence of illness in children could be extremely affecting to their growth and development. To let the complications and a reverse of infections frequently occurred, then infants will be slowly grown up. As for infants with respiratory infections who have no other abnormality their intellectual will be normal or approximate normal. As a result, a promotion for infants's extreme functioning and development is really needed because it will be resulted in a presence of their life development till it progress to a presence of maturity as well. Anyway, a prevention of losses in infant development should be taken into the account by trying to provide only a suitable care and be in conformity with child development at the right age as the followings details;

2.1 Physical Development

2.1.1 The first month of age : The neck muscle is still not so strong, able to see a mobile object near to them but don't snatch, able to see clearly at 8-10 inches far, begin to smile but no destination, like to do a handful but when we give any toy they will suddenly snatch it (Sucha Chaname, B.E. 2538: 27; Srireon Khewkungwan, B.E. 2538: 181) Development should be supplemented because it could help the infants practicing especially arm and leg exercises as well as to lie on the face upward, hold the back of the knee and elbow and then stretch out or lift up and down, let the infants to lie on the face downward 2 -3 times a day for

strengthening their neck muscle. Probably to do a leaning out of our fingers or a colorful toy within the area they can see, so the children will turn their heads and follow that movement. At this moment, stimulation should be given by the mothers in order to loosen their grips as to help them move fingers and toes and then stretch it out one by one and meanwhile the mothers may also sing a song.

2.1.2 The second months of age : arms and legs still twitching likely to getting frightened but their movement in general is more gentle, knee and waist become stronger, neck muscle not so strong, begin to snatch something and can hold it for 2-3 minutes, no tighten finger holding as a new born (Sriroen Kaewkungwan, B.E. 2538: 200) To strengthen the development is to stimulate the children lifting up their heads so that lying on their face downward on a fairly hard bed, play with them by hanging some colorful objects far away from the door about 2 cubitus and let them see it. To assist the infants stretch out their arms and legs, to stimulate for recognizing their own fingers by using a soft-cloth toy, water or a body powder in poking a palm of the hand and sole.

2.1.3 The third months of age: neck muscle becomes stronger, able to lift up both of arms and legs at the same time or each arm or leg, toss and turn, make a nod, turn left and right, to look following the movement of a mobile, perceive and snatch somethings with both hands as probably they touch the things beside and then pull it to them, like to touch the face of somebody get acquainted with hands in order to examine such different parts of the body (Srroen Kaewkungwan,B.E. 2538: 201). To strengthn the development by holding a infants in arms with sitting position and then putting such a sound toys in his/her hand or to find some soft doll or cloth, putting such a colorful toy around children and use a similar stimulation as used in the first two months.

2.1.4 The fourth months of age : the most of muscle becomes stronger, head up right, able to turn neck to different directions, sit and lean for 10-15 minutes with up right head and back, able to turn upside-down by themselves, to lift

the head up at right angle, sometimes lifting their hips or arms to act like a plane, always swinging the legs likely to pedal a bicycle. like to keep a toe in mouth (Sriroen Kaew-kungwan, B.E. 2538: 209) To strengthen the development by trying to arrange such a safty area or environment to prevent them from falling during a period of turn over, to hold up a toy and let them try to catch it then give them a crap, to find a safe rubber for infants can bite it.

2.1.5 The fifth months of age : a strong muscle with a very frequent movement, able to sit upright for haft an hour but have to lean on somethings . If lying with downward face, so the infants can lift their heads and chests at a higher level, and whenever pull them to stand they can easily stand, like to shake their bodies, the function of eyesight and hands could go along very well as they able to alternate hands when holding somethings, like to put things in their mouths as they can do accurately (Sriroen Kaewkungwan, B.E. 2538: 209). To strengthen the development by holding infants in arms and also frequently shaking them, to provide such a big colorful toys and safe or infants to hold or turn it, play a game of throwing toys, talking about what we are doing with that child and to find a safe rubber for infants can bite it.

2.1.6 The sixth months of age : to be nimble in turn upside-down and progress to be a semi-sitting position, able to do wriggle ahead and backward, when post the child to sit they can maintain balance very well, but if post them to stand they will pedal their legs, be nimble and fast in move, lke to put somethings in the mouths, holding a toy so well, able to hold milk bottle by themselves with both hands so that they are successfully practicing on drinking milk or fruit juice from a cup with both hands, started to be teethed (Sriroen Kaewkungwan, B.E. 2538: 186; Sucha Chaname, B.E. 2538: 27). To strengthen the development by stimulating them to play a game or pull them to stand up, to play with a mobile, practicing on using a spoon and taking up food with putting in the mouth and to train the child use a cup for drinking.

2.1.7 The seventh months of age : able to be nimble in crawling, actively learning to know new things, the infants lifting themselves to sit on one leg and able to stand with straight legs if someone help them up, to hold somethings in order to pull themselves to stand, able to hold a toy in each hand and then knock one against the other, like to use hands for examining their bodies and the others, be more nimble and accurate in scooping up food, start to use the thumb and index finger to pick up a small things (Sriroen Kaewkungwan, B.E. 2538: 216). To strengthen the development by trying to train them to help themselves such as to spoon the food and put in their mouths alternate with the use of only hand without spoon, train them to be able to drink water or milk from a cup and to be familiar with toothbrush as to stimulate the infants to hold, keep in mouth and play with a soft hair toothbrush.

2.1.8 The eighth months of age : be nimble in crawling, practise standing for a moment, able to sit up themselves, holding a toy tightly, to make a noise by hitting a thing, be nimble in using fingers, able to pick a string or small bead, started to be teethed, like to examine a utencil (Sriroen Kaewkungwan, B.E. 2538: 220). To strengthen the development by preparing the infants's readiness for walking practice as try to stimulate the child to move and to encourage them to create voice and picking up a block wood to make a shelf.

2.1.9 The ninth months of age : be nimble in crawling, crawl upthe staires naugthy, long standing and stoop down to sit when getting tired, be more nimble in using fingers as they like to put in holes with eager to know, crab hands, hold a thing and then knock one against the other, hold a cup with loop and drink, most of infants started to be teethed (Sriroen Kaewkungwan, B.E. 2538: 220). To strengthen the development by motivating the infants to lift the furnitures and hand over it for walking, playing a block wood with the same size and to make a shelf or row, to allow the infants to walk and pushing foreward a moderate heavy box.

2.1.10 The tenth-eleventh months of age : To catch things near by for standing, try to walk, like to climb up, able to sit after standing, muscle beside the

body become stronger, can use hands better, able to throw things away as they want, to use thumb and index finger pick up a small thing from a floor (Sriroen Kaewkungwan, B.E. 2538: 207). To strengthen the development by stimulating a infant to leave and put things down as putting many of toys in infants's hands and let them throw it away, to do rolling a ball and let a infant try to catch it and roll it back, to teach a infant practicing on making a step, pushing forward a box likely to the 9 months of age and to be still playing a toothbrush as the 7 months of age.

2.1.11 The twelfth months of age : self-standing up, to make a step without holding anything, able to hold things or waving their hands when they are walking, able to open such a box and bottle's cover, eager to know and see, able to touch and stop a ball which is rolling to him/hers including be able to roll it back, able to drink water or milk from a cup by themselves, like to spoon the food for eating and take off clothes by themselves (Sriroen Kaewkungwan, B.E. 2538: 186). To strengthen the development by allowing the infants to play alone, walking by themselves but under the mother's care, to support a child practicing on holding 2 pieces of block wood in one hand, and to play a soft-hair tothbrush.

2.2 Emotional and Mental Development of Children

2.2.1 The first month of age : moving the lip, imitate a speech, adjusting of behavior to conform with the care taker's practice, smiling, able to recognize their parent's sound, to cry when need any help and will stop crying when the mothers looking their eyes and smile (Charongrat Inthee, B.E. 2522: 10; Sriroen Kaewkungwan, B.E. 2538: 181). To strengthen the development by holding an infant in arms together with talking or sing a song this is a way to respond such a sign or sound like Uh Or and should allow an infant to see the mother's lip, as for an infant will try to make a nod, waving hands to greet an infant.

2.2.2 The second months of age : smile, making a nod, making a sound of Uh -Or when the mothers talk with, be more interested in various things, like to look at someone's and resent his/her emotion such as getting fretful and so a child

prefers to keep clam with sucking his/her fingers. like to see following a person's movement.(Sriroen Kaewkungwan, B.E. 2538: 186).To strengthen an infant development by allowing the mothers talking and sing a lullaby, taking the action when talking and trying to have the most of eye contact with an infant.

2.2.3 The third months of age : showing the emotion through his/her face, showing the against reaction when left to be alone, intendtionally listen to a sound, to pay attention to one thing for a maximum of 45 minutes, to know the difference between a sound of speech and the other sound(Sriroen Kaewkungwan, B.E. 2538: 216). To strengthen the development by giving a response to the infant's manifest with a presence of over-acting such as make a nod, widely smile, taking action along with a lullaby, frequently talking with an infant and holding in the lap so that an infant will be able to see his/her mother clearly, however we have to do such a time spacing as to wait for a response from an infant.

2.2.4 The forth months of age : extremely eager to see and learn, pay more attention to a new toy, new place, and new voice, an infant can recognize the objects and places he/she got used to very well, be afraid of the strangers or new place, understood what the extent of daily activity and will be excited when he/she saw such a breast or milk bottle, raising a voice of talk or cry to show his/her unsatisfaction, smile and raise a voice when seeing someone, to show a sign of laugh, like to have somebody talking with (Sriroen Kaewkungwan, B.E. 2538: 216). To strengthen the development by providing an infant with a stimulation of pleasantry, allow to play only his/her favourite game, make a reply and smile with an infant, talk only a thing being with an infant, frequently showing an infant the exceed expression.

2.2.5 The fifth months of age : like to smile, know to get angry and fussy when is displeased, looking for a lost thing, able to distinguish the parent from other strangers, like to take a repetition of action that can affecting to the change of surroundings, begin to raise a voice like his/her talk or reply to somebody, to move arms and legs, like to make an appeal for attention able to play a game and toy more

longer (Sriroen Kaewkungwan, B.E. 2538: 186). To strengthen the development by giving a response such as talking, reading or speaking out a poem with an infant, to introduce someone for his/her knowing, frequently calling the infant's name, to play only a game he/she liked with smiling.

2.2.6 The sixth-seventh months of age : try to imitate the emotional expression on face, turning the face when heard someone calling his/her name, able to distinguish who is adult or an infant, searching for a thing to play, to be crazy in the mother, begin to dip up food by himself/herself, to have a feeling of anger, begin to raise a voice likely to a sound of vowel and consonant particularly M and P (Sriroen Kaewkungwan, B.E. 2538: 211). To strengthen an infant development by trying to be more frequently calling the infant's name, explain an infant to understand a difference of events such as the mothers do pushing a ball and explain an infant that a ball is moving away. To respond an infant's appeal for attention by holding him/her in arms and calling his/her name, playing such a hide-and-seek game, see a mirror, tell a story, and sing a song.

2.2.7The eighth months of age : able to find a thing,understanding the meaning of "No" that is to stop or prohibit, to show the intention when doing anything, to be crazy in the mother and afraid of a stranger, like to imitate the adult's characters (Sucha Chaname,B.E. 2538: 105-106; Sriroen Kaewkungwan, B.E. 2538: 207). To strengthen the development by introducing a new game particularly dealing with the body movement such as clapping hands, bye bye, or sending a kiss, the mother should provide an infant with a cup for pouring water in and out, to stimulate a child attempting to bring a toy which is out of his/her reach.

2.2.8 The ninth months of age : to make a sound when determine something, know to reject, able to remember various games and songs, laughing when he/she liked, to join a fun with showing actions, to imitate the sound he/she heard, to use a tongue for making a different sound, understanding only easy commands and able to follow some, be interested in listening to a conversation and music, know to

do a self-protection and showing the possessiveness such as to fight when something is grabbed (Sriroen Kaewkungwan, B.E. 2538: 211). To strengthen the development by providing an infant with explanation about a daily life process for instances brushing the teeth, playing a funny music and allow an infant to crap hands or moving the body along with the music.

2.2.9 The eleventh -twelfth months of age : start to be familiar with a daily activity, recognized whatever were taught, able to find something that was tightly closed, able to indicate some of simple body's organs (Sriroen Kaewkungwan, B.E. 2538: 186). To strengthen the development by allowing an infant to play a hide-and-seek and throw-and-pick up things in order to recall his/her memory, to play a floating toy and a sink toy, searching for a colorful picture book for reading together.

2.2.10 The twelfth months of age : know to show a variety of emotion, know to kiss the cheeks, waving hands for a goodbye, able to say a few words that he/she knew its meaning, the pronunciation when calling "father" and "mother" is clear, able to remember more events and longer, like to see the adult's manner and trying to imitate, know to play with more infants (Sucha Chaname, B.E. 2538: 28; Sriroen Kaewkungwan, B.E. 2538: 186). To strengthen the development by reading such a short story for an infant in order to urge especially a intangible imagination and idea, to stimulate an infant expressing his/her love such as stroking a doll, kissing the parent, necessary to explain all the process of daily activity while practicing with an infant.

3. Health-Deviation self-care Requisite for Maternal Behaviors in caring for infants.

When a child was correctly diagnosed as being ill with respiratory infections, therefore the mother should provide him/hers with a special care as followings;

3.1 Seeking and maintaining of help from a health team which include medical doctor, nurses and other health personnel. At the same time, the mother should be taught about health education or keep asking whatever her suspicious issues

concerning the illness of an infant such as cause of illness, symptom, treatment, severity of the disease including a suitable method for caring of her infant. These information will be useful for the mother to know and understand what the extent of illness condition of her infant.

3.2 Recognition, attention and caring for the appeared pathology: The mother should recognize and pay attention to the essense of prevention against any complications that might be occurred with her child. So far, it is also necessary to control whatever the effects derived from infant's illness as well as attempting to conduct a crucial observation of abnormal symptoms such as try to observe such a respiration rate in the infants under 2 months of age with a need to be measured at least 2 times per minute. Whether the respiration rate indicated since 60 times per minute or more, so it refers to a presence of Tachypnea. Similarly, to observe the respiration rate in the infants 2-12 months of age if it indicated since 50 times per minute or more, so it refers to a presence of Tachypnea too. As for another sign and symptom should be observed is an infant's inspiration manner with an apperance of gasp and chest retraction as it can be interpreted that an infant has to make a powerful inhale till his/her lower part of chest was pushed in. If only the intercostal is only dimpled it doesn't mean to a retraction. The mother should try to listen a sound when an infant makes a inhalation as well as to close the ear to an infant 's mouth for hearing of his/her inhaled voice, accordingly it was suggested to listen during a none of crying. A voice of grunting to be known as caused by the infant's inhalation passed through a narrow path that is the area of inflammating larynx and broncus. In an infant who having a sign of nasal obstruction would be also showing such a sound of obstructed respiration, thus necessary to detect the stupor, difficulty awaken, and never looking to the mother's face during a time taking off his/her cloth. On the other hand, in the most of normal infant can be seen that they always awaken, if they always feel asleep that means to the stupor. An infant with respiratory infections always getting a fever, so that the mother should pay a special attention to observe a fibrile by using a thermometer or touching his/her body. When the infant's temperature was measured through the rectum and to be found at 38 degree celcius, it

meant to an incident of fibrile as well as may be come up with convulsion. In case the temperature is below 35.5 degree celcius it indicated an abnormal body's temperature, accordingly a child probably refuses to suck both milk and water as well as loss of weight. At the same time, ear syndrome might be occurred such as otitis which caused an infant much crying. Besides, such a coincidence of sore throat can be found whereas the mother possibly can examine that is no sucking milk and water, reject any of food and slobber (Department of Communicable Disease Control, Ministry of Public Health, B.E. 2538: 6-7; Lois, K.B. et al., 1995: 11-13 & Martha J.C., & Janice, A.D., 1996: 639 - 641). By mean of this, the mother must be in a hurry to bring an infant to see the doctor immediately whether these symptoms were detected.

3.3 Practicing according to the plans for treatment, rehabilitation, and prevention of complications. In this case the mothers have to provide care for their infant by following the medical advices strictly in order to prevent the complications and a repetition of disease. In addition to this, the infant with respiratory infections will be recovered till being healthy as usual. The significance of infant care by following the treatment plan can be identified as followings;

3.3.1 When having a fever try to give an infant tepid sponge for a reduce in temperature, drink more water, wear only a thin cloth, don't wrap an infant too much and give antipyretic (a group of paracetamol as doctor recommended). In case the temperature is higher than 38.5 degree celcius in infants aged below 2 months with a fever or cool body, so need to bring them to the hospital and should not give such an antipyretic drug by yourself because it probably harmful to an infant. In infants with over 3 days getting a cold, then have to bring them to the hospital and avoid to use antibiotic drug due to not only it is not effective but also may causing drug allergy or drug resistant in infants as well. Wabbing an infant's throat should not provide to an infant but bring them to see the doctor when the temperature can not be reduced.

3.3.2 While the most of infant always having a running nose or nose stuffinesso, thus have to use a clean cloth or cotton bud dipping in warm water and take all out throughly or sucking out with a rubber pump and should not buy an antipyretic drug for a child personally but try to observe a feature of snot such as color, amount including to observe a feature of respiration as well.

3.3.3 When an infant got coughing, this is considered as the body's interaction to refuse such a foreign, therefore drink warm water more often in order to release the sputum. And you should not buy any other anti-coughing drug for a child if without the suggestion from doctor, nurse or pharmacist due to it probably harmful to an infant if use it a wrong direction and some drugs contain with the opposite effect ingredients and certainly observation of sputum is needed.

3.3.4 Caring with allowing an infant taking more rest till he/she recovers and don't bring to any infant care center because he/she cannot take a rest especally the disease will be disseminated to other persons.

3.3.5 Caring with a provision of sufficient milk, water, food. If an infant do vomited, try to give an infant some soft food with a small amount each time but more frequency such as milk, boiling rice, rice porridge, anyway all kinds of food should not be stopped. Allow an infant sleep on one side during vomiting and after vomited.

3.3.6 Keeping the body warm. If the weather is rather cool, try to wear an infant a thick coth, gloves, socks, and hat. On the other hand, if the weather is hot, then wear an infant with soft and comfortable cloth without a direct blow from electric fan.

3.3.7 Should bring an infant to stay in only a place with good ventilation and sunshine while keep avoiding to go to any congested areas or with crowded people because the disease will be disseminated to other persons.

3.3.8 To drop the snot in a container with entirely covered, close both mouth and nose when coughing and sneezing, separate a sick infant away from a well being infant including to separate the appliances.

3.3.9 When the symptoms become more serious such as a high fever, retraction, febrile convulsion then bring a child to seethe doctor imediately (Chaowarit Tassanasawang, B.E. 2535: 26-28; Pramual Sunakorn, et al., B.E.2533: 2; Steele, et al., 1989: 486; Whaley & Wong, 1989: 695). Additionally, the mother should bring her infant to see a doctor according to the medical appointment and for receiving a health check up service as well.

3.4 Recognition and pay attention to the essence of behavioral adaptation and prevention of unhappiness derived from side effect of treatment given to an infant with respiratory infections. As when he/she has a rising in temperature, severe infected condition or difficult breathing thus an infant will be given some drug. Accordingly, the mother must know about the dose of drug, time for taking drug as well as to observe whatever the side-effect of those drug that may be occurrred such as rash, Apnea-Dyspnea, or unconciousness. If these mentioned symptom to be discovered, then immediately stop giving drug and bring to see a doctor. In case of an infant could not be detected any side-effect, so that give a drug to him/her as the doctor recommended. If an infant do a vomit after taking some of drug, so that drug has to be given again within half an hour.

According to infant care behavior as mentioned earlier is seen as a distinct action taken by the mother with aim to help her infant with respiratory infections become healthy without any complications and a repetition of illness. Actually, all these expectation can be fulfilled whether the mother tries to conduct infant care behavior correctly and suitably, however, it requires a dependent care agency (Orem, 1991: 145) which is considered as a complicated capability of especially the adult who has determined to carry out whatever activities for responding self-care need of

an infant (Orem, 1991 : 175 - 176). In this situation, nurse is the most available resource capable to give a help, mental support, and teaching a correct method of infant self-care practice. Development of maternal capability on infant care practice under a particular goal for prevention of complications and repetition of illness, certainly it requires the nurses to be involved in management of nursing system. Here, a supportive educative nursing system is the most appropriate nursing system for the mother applying for caring of infant with respiratory infections.

Supportive educative nursing system

Supportive educative nursing system is accounted as an innovative method and activity initiated by the researcher with a particular aim to help each mother who having infant with respiratory infections, however based on Orem's Nursing Theory. This system allows the mothers to learn about how to determine the need on infant self-care practice as a whole as well as the performance pertaining infant care activity comprises 3 stages of nursing care as followings;

1. Foundation of relatiionship: This must be based on relationship between nurses and patients or other care takers. The dimension of this relationship refers to an agreement for attaining to the goal of self-care. Certainly, the relationship can be occurred whether meeting, communication and strong intention of nurses and patients or other care takers need to be initiated by emphasizing on building and maintaining the interpersonal relationship. Moreover, motivation, ultimate goa, a formulation of working plan and definite procedure are also required by a manner of slow and sure operation (Nongkran Phasuk, B.E. 2528: 54-55)

The relationship between nurses and patients or other care takers according to Orem's conceptualization has some of specific characteristics as follows (Somjit Hanucharoenkul, B.E. 2536: 83-84)

1. Relationship of help : Nurse is preferable to make an effort on providing assistant to the patients or other care takers for their recognition in function and responsibility of self-care or caing for the others in term of health issue. Beyond this, nurses will take actions as followings;

1.1 Help in compensage the extent of deficient self-care capability to be found in a group of patients at the moment

1.2 Help in adjusting, adding and developing self-care capability or caring for the others who are under responsibility in order to be survival and recover from the illness or help in promoting the best functioning of various activities.

2. Relationship of agreement: When nurses initiated the first contact with the patients or other care takers under a time limit, therefore such a distinct agreement between nurses and patients or other care takers should be made. As nurses have to explain how can they offer help to the patients or other care takers ? At the same time, the patients and other care takers should realize what are their needs and changes on health care requisites at that moment. Furthermore, they have to realize their own role and function as well as of the nurses in order to respond the health needs of the patients or other care takers.

3. Initiation of good mutual relationship between nurses and the patients or other care takers. This certainly requires an attempt and communication skill. The other care takers are sometimes rather weak or feel too stress to make a contact and building relationship with nurses. In the situation like this, nurses have to act as an initiator for making a contact and to maintain such a good relationship with the patients or other care takers.

The initiation of relationship for helping or a remedy purpose is accountable as one kind of communication skill based on the initiator who is nurse and receiver who is a patient or other care taker. An essential component for an existence of good relationship is a self-recognition of nurses as to help the most of nurses be able to communicate or take any actions with the patients or other care takers under a sense of consciousness as well as to realize what is that situation, what are they doing for ? and showing their feeling toward that situation including to be skillful in communication with the patients or other care takers for realizing their understanding and accept. By this way, a strong wish of nurses for a provision of help, care and

attention with a sincerity and belief, therefore could produce a result of better and more effective nursing practice at all. As for the effect of relationship with the ultimate goal for derivering the patients and other care takers with good help, so it can be identified as in the following figure (Boonsri Prabnasak & Siriporn Jirawatkul, B.E. 2531: 87 - 88)

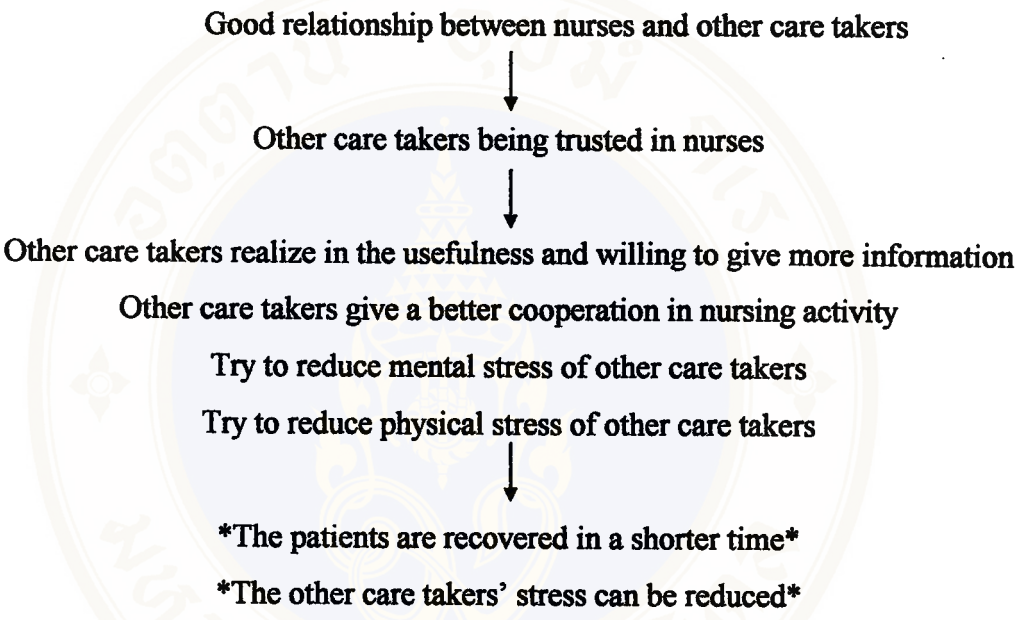

Diagram 2 The effect of relationship between nurses and patients or other care takers
(Boonsri Prabnasak & Siriporn Jirawatkul, B.E. 2531: 88)

Development of relationship for the advantage of treatment can be effectively organized however it requires the potential of nurses in term of making a contact and initiate relationship with the patients or other care takers who are under responsibility. With a definite purpose and good planning for properly help delivery to particularly each patient or other care taker under the ultimate goal for a smooth process in founding of relationship with a quick achievement, then some techniques are needed as the following details;

1.1 Silence and listening is an essential technique as nurse should be trained because it enable to encourage the mothers become trusting, dare to release the

depressed and able to make a connection of all unhappiness till telling to a nurse. This has resulted in motivating the patients recognizing in nurse's feelling of understanding and strong attention to deliver help to the patients. This produces the effect in a presence of better relationship. As for nurses have to show their intention expression and follow all the story the patient keep telling that probably to make a nod or reply including try to observe the patients' interaction for a better understanding.

1.2 To approach the mothers with a confront of speech and body action such as when saying the words such as sympathize or understanding, so it also determining some actions like touching in order that the patients will be realized whatever the actual feeling of nurses. Accordingly, the mothers will be more friendly, believed, and trust in nurses.

1.3 Open and statement : Nurses won't be monopolized in having a dialog but open for the mother's expression. In case of the mothers are monopolized in periodically talking or pausing sometimes when didn't know what to say, then nurses will intervein some saying till the mothers able to further their stories.

1.4 Comment : Nurses won't keep quiet and listening only, but sometimes trying to make a comment to the mother's speech or answering their questions, otherwise the mothers may be suspicious or unsure that they should continue telling the story or not because of nurse has never exposed her story.

1.5 Questioning : Actually, asking questions requires such a carefulness and more concern because sometimes questions raised by nurses are considered as very complicated, so that it is difficult to reply or too much interfere the mother's personal affairs untill spoiling the relationship. Consequently, nurses should conderately select the most of questions of which matching to time, place and the individual.

So far, the mother can take some advantage from a presence of good relationship such as learn how to initiate the relationship with other people, to be realized that they are more valuable and being accepted by other people, receiving kindness because of friendship and trust, to be felt of having mental support, and able to release their tension and troublesome. Finally, feeling of loneliness in the mothers will be gradually disappeared.

2.Management of nursing practice: When the mothers feel relieved and be at ease with nurses, thus they expressed and reveal whatever about unhappiness, problems, oppressive atmosphere and secret. In case of the nurses try to keep a sincerely contact with the mothers either concentrate their attention to help the mothers, afterwards the belief in idea and suggestion will be given to nurses. This is good for starting the cooperation on assessing the existing problems and needs with the use of motivation technique in order that the mothers become alert to search for information and alternative, assessing and selecting a strategy for application. This is recognized as the principle components of infant self-care practice, however it must be based on the assistance of nurses as followings;

2.1 Provision of Support : is an essential method for promoting the mothers to be able to practice self-care for infants while they are getting sick with respiratory infections or already recovered as it is beneficial to prevent the complication and repetition of illness. The support probably is a speech or action of nurse such as a manner of looking, touching or physical assistance, however, nurses have to choose the most appropriate approach of which confront to each situation and each mother as well. Accordingly, the mothers are capable to initiate with a strong effort to conduct infant self-care activity including to recall whatever the situation they encountered and then making a decision. Support is also included the other assistance to facilitate the mothers can receive some of articles from the social worker who are working for any institutes or organizations.

2.2 Guiding : is another appropriate method should be applied when the mothers already made decision to choose one available self-care method and being

practicing the self-care activity for caring of their infants under the advise and inspection of nurses. The application of this method can respond to the need of mother in caring for infant with respiratory infections.

2.3 Teaching & demonstration: This is a very appropriate method for enhancing knowledge and skill of the mothers and is very essential for building the self-care capability in caring for infant of the mothers. The way to teach the mothers need to hold on the principle as to increase a sense of dignity and self-extreme in caring for their infants. Problem sometimes to be occured whether the mother's attitude and belief is quite different from of nurses. However, nurses have to be recognized that the mothers only who will decide what and how to do for caring of their infants when they go back home so that, they probably choose to do whatever activities that make them feel happy rather than pay attention to health activity. As a result, teaching technique by emphasizing on giving an honor and accept to the mothers as they are an individual and being involve in the decision making process on self-care practice for their infants. This will be helpful for the mothers able to learn and having a better attitude towards heath service system. The principle of teaching are as follows;

2.3.1 Teaching only the subjects that the mothers want to learn while nurses have to make an inquiry and listening what is the mother's perception.This can encourage the mothers realize themselves as one of participant who involve in the control and care of their infants and finally they attention to learn will be exactly increased.

2.3.2 The contents of learning must be top up from the previous knowledge.

2.3.3 The readiness of the mothers is an essential component for learning progress especially if they are rather weak, limitation of learning will be occurred.

2.3.4 The mothers should be allowed for fully participating in the learning and teaching process with a crucial practicing on various child care activities.

2.3.5 Content and teaching method need to be modified as well as in accordant to the learning capability of each mother that is considered quite different. And it is necessary to assess the mother's understanding and acceptance.

2.3.6 Learning environment should be well arranged such as to build a rome or make partition when providing teaching to the mothers.

2.3.7 To promote the mothers recognizing their self-value. Motivation for learning should be strengthen by giving them an authority for making decision about their lives. As for planning, making contact and selection of infant self-care method should be carried out under the cooperation between nurses and the mothers.

2.4 Arrangement of environment to promote the mothers having a chance to develop their self-care capability. This is a motivation method need to deliver to the mothers with aimimg to drive them to be alert in setting an acquired and proper goal as well as changing their behavior until they could gain the result as set. Environment probably refers to development, change of attitute, and value of applying ability for management of creative activity, change of vision and physical development. Nurses have to provide a chance for the mothers having interaction with other people, thus they could obtain advise and support.

3. Termination of nursing practice : Nurses have to inform the mothers about the relationship termination in advanced and trying to summarize what are the contents of previous conversation, what did they do, and what they have to do further? The termination of relationship is occured when the provision of suppative educative nursing system was come to the end so that nurses have to support the mothers to be ready to express their feeling about this condition. Anyways, nurses also have to express their feeling towards the same condition and try to convince the mothers to be understood as nurses still pay attention to them. In this phase, revision of the directions is needed as well as the mothers can use it for practicing infant self-care during getting treatment and stay at home.

Related Research

There are many research papers while some of them are selected to be used as a guideline for this study those are composed of research concerning respiratory infections, research concerning the care for infants with respiratory infections and research concerning the supportive educative nursing system model as the following details;

Research concerning respiratory infections

Arjaree Inkavanit, et al., (B.E. 2542: 67-68) studied about drug consumption behavior of children with acute respiratory infections before visit the hospital, as it was discovered that 38.6 % of the patients had the history of consuming the antibiotic before come to the hospital. The most of antibiotic can be known its name is Ampicillin when did the culture from nose it gave S. pneumoniae, H. influenzae and receive got the germ which is distinctly found a stronger resistant to a basic antibiotic those are Penicillin, Ampicillin, Chloramphenicol and Cotrimoxazole. This group of patientis was compared to the group with no history of antibiotic consumed. As for the other kind of drugs, 55.7 % of the patients consumed antipyretic, 25.9 % consumed cough syrup, and 7.8 % consumed antihistamine or chropheniramine

Research concerning the care for infant with respiratory infections

Darunee Phosri, et al., (B.E. 2542: 126) studied on knowledge and practice of care takers for caring of infants and child pre-school with acute respiratory infections in Roi-ed province, 1995. It found that most of care taker were the father and mother of children. They experienced with common cold averagely 7 times per year. When they got a cold, they were brought to the community hospital . Related to Pnuemonia, they were brought to medical clinic or community hospital. Vaccinating history, the most could receive the complete dose by ages. Cigarette smoking, there were both smoking outside the house and inside. Sleeping behavior showed the behavior on usually shutting the windows when gone for sleeping. It indicated no separated room for them when some of family member got sick from common cold.

Songpol Tornee & Prathin Jadtarn (B.E. 2542: 143) studied on knowledge, perception and maternal self-practice on caring for children below 5 years old with acute respiratory infections who are receiving the treatment at Ratchaburi hospital. It was discovered that most of the mothers had a goog knowledge about acute respiratory infections at the moderate level and perceived on the opportunity that is risky to get a disease, severity of disease, and perceive on the usefulness of practice, however perception on obstacles for practicing was lower. Furthermore, it found that maternal self-practice on child care was at a satisfied level as discovered that knowledge and perception of the mothers concerning acute respiratory infections are factors statistically significant affecting to maternal self-practice behavior on child caring .

Research concerning the supportive educative nursing system model

Supha Sirisonthi (B.E. 2535: i) studied the effects of supportive educative nursing system provided to the guardians towards self-care practice of students with chronic otitis media of primary school affiliated to B.M.A. It was discovered that the guardians who receive the supportive educative nursing system were statistically significant possessing an increasing means scores on the topic of chronic otitis media and means scores of supportive behavior for self-care practice of the children after intervention.

Orathai Sonjaiyuth (B.E. 2539: ii) studied the effects of supportive educative nursing system towards anxiety and self-care practice in lung cancer patients who received chemotherapy. It was found that the lung cancer patients who received chemotherapy were statistically significant less worried after given the supportive educative nursing system when compared to the feeling before given the system. The lung cancer patients with chemotherapy after given the supportive educative nursing system had statistically significant better behavior when compared to the behavior before given the system.

From all the above mentioned, it can be seen that the utilization of supportive educative nursing system owned by Orem can help most of the nurses having such a clear target for giving care to the patients and their families. Roles of nurses in term of provision of guidance, support, mental encouragement throughout being a consultant of the patients will be more distinct but not taking action instead of the patients only. Knowledge and information given to the patient's mother will be very specific and right to the problem and need of the mother. This contribute to the mother recognize the way for appication of this system. The mother's roles began to change from being a receiver and follower of the doctor's advise to be a participant in determining the problem, need of self-care for children and method of child self-care including evaluation that will help the mother and their family come to know how to set the actual target and know how to use all available source from the health care service. This is a way to economize. Moreover, it could help to promote the relationship among nurses, patients and families become better (Somjit Hanucharoenkul, B.E. 2536: 78-79).

CHAPTER III

METHODOLOGY

This research is a Quasi Experimental study to identify the effects of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections

Population and Sampling

The population of this study are the mothers who having infant of aged 0-12 months with any respiratory infections; Tonsilitis, Pharyngitis, Bronchitis, Bronchiolitis, Pneumonia Croup Syndromes and HIV negative or no high risk are given treatment at the Pediatric inpatient ward 1 and ward 2, Pediatric department of Ratchaburi hospital.

In this research, an accidental sampling technique was employed for selection of 40 subjects and then to regulate matching among them on the basis of similarity of individual characteristics that can be identified as follows;

1. Same range of ages that is between 20-30 years or more than 30 years old.
2. Same educational attainment as categorized in several groups; no Education, primary education, secondary education, diploma/certificated, bachelor degree or equal
3. Same average family income per month that is categorized as less than or equal to 5,000 baht, 5,001- 10,000 baht, 10,001-15,000 baht, 15,001-20,000 baht and more than 20,000 baht.

By this way, 20 pairs of samples were drawn and then to proceed on sampling 1 of each pair to be 1 experimental case and 1 control case. Absolutely, there are two groups of population: experimental group and control group. As for the experimental

group, they would be provided with supportive educative nursing while the control group has received a normal nursing service.

Setting

Ratchaburi hospital is located in Muang district, Ratchaburi province. It is a kind of 750 beds hospital under a systematic and distrinct management of the two major infrastructure those are curative care division and administrative division. In addition, the accreditation of ISO 2000 was already given to out-patient department of the hospital while the other departments are making a request for further accreditation as well. As for the pediatric department has clearly shown such a good cooperation among doctors and nurses in term of service delivery and regularly organized the academic training especially the establisment of acute respiratory infection in infants training unit since 9 years ago. Also there is an implementation of international medical project by Mahidol university, training on nursing standard initiation such as management of intravascular fluid, caring for Dengue Hemorrhagic Fever's patients including a preparation and distribution of documents such as brochure for caring of children with various diseases to any patients or interested persons.

Instrumentation

There are two major types of instruments used in this study;

1. Intervention comprises of:

1.1 Instruction for Provision of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections. This kind of research instrument is designed on the basis of Orem's Nursing System Theory, however in this study has given a special attention to a core concept so called "Nursing System No. 3" In addition, reviewing of textbooks, journals, and various research papers concerning the care for infants with respiratory infections are also taken into consideration. Certainly, the application of this nursing instruction requires such the initiation of good relationship together with a regular performance on providing of mental

support, advices, training and demonstrating how to give care to infants with respiratory infections. Also, a termination of nursing care practice that refers to a stage set for revising the regulations or directions, undoubtedly it needs to be clearly described as well.

1.2 Instruction on maternal self-practice for caring of infants with respiratory infections : This instrument will be utilized by the mothers of infants with respiratory infections. Its content is relevant to the method of delivering proper care to infants with respiratory infections including normal infants. Interestingly, the researcher produced this instruction based on the implication of Orem's conceptual model of which it explains about the needs of self-care as a whole, while revision of textbooks, journals, and various research papers concerning the care for infants with respiratory infections was imported for a completetion of the instruction as well.

2. Instruments for data collection comprises of;

2.1 Questionnaire for demographic data comprises of;

The mothers' information i.e. age, educational attainment, occupation, marital status, number of children, family income, personal infection, ill-infant care takers, supportive factors affecting to infants' etiology such as smoking behavior of family members, types of fuel used in family, ill-persons in each family and present residence.

Infant's information i.e.age, diagnosis, numbers of hospital admission caused by respiratory infectious disease. This tool was constructed by the researcher through the process of literature review based on self-care need conceptualized model that initiated by Orem (Orem, 1991).

2.2 Questionnaire on maternal behaviors in caring for infants with respiratory infections: This type of questionnaire was produced by the researcher

through a review of many relevant documents and it crucially based on the Orem's conceptualization. All of 58 items of questions are constructed for inquiring information about infant care behaviors of the mothers with a specific aimed to respond their need relevant to the self-care practice of infant with respiratory infection, as well as it was classified into 3 major parts as follows;

1. Universal self-care requisits for maternal behaviors in caring for infants composed of 22 open-ended questions ranging from No.1- No. 22.

2. Developmental self-care requisits for maternal behaviors in caring for infants composed of 3 close-ended questions ranging from No.23- No.25.

3. Health deviation self-care requisits for maternal behaviors in caring for infants composed of 33 close-ended questions as followings;

3.1 A total of 5 close-ended questions namely the items no. 26, 28, 33, 34, and no. 35

3.2 A total 5 close-ended questions with some sub-items namely;

No. 27 is composed of 7 sub-items

No. 29 is composed of 9 sub-items

No. 30 is composed of 5 sub-items

No. 31 is composed of 4 sub-items

No. 32 is composed of 3 sub-items

Both positive and negative meanings are included in this questionnaire.

There are totally 10 negative questions i.e. item no. 4, 14, 17, 22, 29.5, 29.6, 29.8,30.2, 30.3, 31.2

Totally 48 remained items are positive questions

The specific characteristic of questions is a foundation of "Rating Scale" as it was classified into 3 levels while each question requires only one choice of answer as the following details;

Daily Practice	means to	the mothers would be frequently taking action in any designated events.

Occasionally Practice	means to	the mothers would be occasionally taking action in any designated events.
Never Practice	means to	the mothers would never take action in any designated events.

In the remark column of a record form, the researcher would record whatever activities of which the mothers practiced irrelevant to the set of questions and then to write a marker like a / in the designated column.

Scoring criteria

Positive sentences or information would be agreed for the score as follows;

3 scores	for	Every time practice
2 scores	for	Occasionally practice
1 scores	for	Never practice

Negative sentences or information would be agreed for the score as follows

1 scores	for	Every time practice
2 scores	for	Occasionally practice
3 scores	for	Never practice

Information concerning infant care behavior identified in the remark column would not be calculated for scoring.

Criteria for interpretation of score:

The score of maternal behaviors in caring for infant with respiratory infections which is ranging from 136-174 meant that the mothers could provide the most correct behaviors in caring for their infants with respiratory infections.

The score of maternal behaviors in caring for infant with respiratory infections which is ranging from 97-135 meant that the mothers could provide a moderate correct behaviors in caring for their infants with respiratory infections.

The score of maternal behaviors in caring for infant with respiratory infections which is ranging from 58-96 meant that the mothers could provide the least correct behaviors in caring for their infants with respiratory infections.

Content Validity testing

1. The instruction for provision of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections is tested on its content validity, sequences and language by the three experts in the field of nursing care for infants with respiratory infections. Afterwards, the verification of this instrucion was done according to the comments given by those experts.

Crucially, after a revision and improvement of the instruction according to the expert's advices, then try out this developed instruction with the 2 mothers of ill infants with respiratory infections who having a similar characteristic as the designed sample group. So far, this method is useful for time management in conducting activities and knowing a proper period for starting supportive and educative nursing procedure as well.

2. Instruction on maternal self-practice for caring of infants with respiratory infections. And an questionnaire for investigating maternal behaviors in caring of infants with respiratory infections. The researcher submited these 2 kinds of research tool to experts comprising 1 specialist, 3 nursing instructors, and 1 nurse who are skillful in caring of children with respiratory infections in order that they would examine and verify the accuracy and consequence of contents. Afterwards, a revision of instruction and questionnaire will be conducted on the basis of the experts' advises.

Reliability

After tested and correction of content validity of the questionnaire under a special attention to investigate maternal behaviors in caring for infants with respiratory infections, the researcher brought this revised tool in use for trying out with 10 selected mothers who having children with respiratory infections and are possessing similar characteristics when compared to the sample group. Then, the coefficient alpha method was employed for calculating the reliability of the questionnaire. (Cronbach, 1984 cited by Polit & Hungler, 1991 : 372)

The reliability of this questionnaire = 0.67

Data Collection

At the stage of experiment, the researcher proceeded several activities as follows;

1. To submit a formal letter issued by the faculty of Graduate Studies of Mahidol University to the director of Ratchaburi hospital for asking his permission and participation to carry out a research and collecting data.

2. With aim to obtain collaboration in conducting the research, therefore the researcher explain the objectives and details of research operation to the director of Ratchaburi hospital, head nurses, head of technical division, head of nursing service division, head of pediatrics nursing unit, head of pediatrics inpatient ward.

3. Collecting data from 20 respondents of the control group by following steps as following;

3.1 The control group with specific characteristics as designed is chosen by the researcher. So far, the researcher went to meet, introduced herself, explained the research objectives and asking for participation to the patients of control group who were particularly first day admitted in the hospital. Then, those selected patients were invited to visit the place prepared for interviewing. Here, a questionnaire for demographic data and questionnaire on maternal behaviors in caring for infants with respiratory infections

are used with the control group for gathering pre-test data while about 10 minutes are taken for this procedure.

3.2 Afterwards, such a usual treatment would be given by health team to the control group. While distribution of the instruction for maternal practice on caring of infants with respiratory infections and making appointment for home visit and conducting evaluation had been made to this group of sample on the third day of study.

3.3 One month later, the researcher visited the control group at home with a special aim to conduct post-intervention for investigating and collected using questionnaire on maternal behaviors in caring for infants with respiratory infections.

4. Collecting the data from 20 respondents of experiment group based on the following process;

4.1 Firstly, the experiment group who possessing specific characteristics as designed was chosen by the researcher. Then, the researcher went to meet, introduce herself, explain objectives of this study and asking for participation to the group whose their children were just first day admitted in the hospital. Afterwards, these selected cases were invited to visit a place prepared for interviewing purpose. Here, a questionnaire for demographic data and questionnaire on maternal behaviors in caring for infants with respiratory infections are used with the experiment group for gathering pre-test data while about 10 minutes are taken for this procedure.

4.2 Another step to be taken was a management on supportive and educative nursing system that exactly given to the experiment group according to the respective stages of nursing procedures as follows;

Stage 1 : A foundation of relationship under collaboration and agreement between the researcher and the mothers who are caring for infants with

respiratory infection. This stage showed the emphasis on building a good relation, familiarity and trust with the mothers.

Stage 2 : The management on nursing practice

First Day : The researcher allowed the mothers to express whatever their feeling and worries towards the illness of their children such as problems concerning child care practice. Certainly, the researcher has made a strong effort on suggesting and encouraging the mothers to be patient and continuing on child caring function by themselves.

Afterwards, with a utilization of constructed nursing instruction, therefore, the researcher has tried to demonstrate on a management of essential child care function under the consideration on health deviation status and also to educate the mothers on the content of respiratory infection diseases. This performance lasting 20 minutes only. Then, some additional clarification and helping has given to the mothers who didn't really understand or they still performing incorrect child caring while this activity lasting 40 minutes.

Second Day : Again, with a utilization of constructed nursing instruction, the researcher has made an effort on educating the mothers on the content of general child care practice by taking about 20 minutes to complete this activity. Then, some additional clarification and helping has given to the mothers who didn't really understand or they still performing incorrect child caring while this activity lasting 40 minutes.

Third Day : At a moment, the constructed nursing instruction was used as a guidelines for education of the mothers concerning the matter of essential child care practice under the specific consideration on growth development, accordingly this procedure was taken 20 minutes. Then, some additional clarification and contribution has given to the mothers who didn't really understand or they still had incorrect practiced on

child caring task of which this activity lasting 40 minutes. In addition, the instructions were distributed to the mothers of infants with respiratory infections for their information in infants care practice.

When the clarification and contribution for the mothers who didn't really understand or unable to practice child caring task correctly are definitely completed, then the researcher has started the supportive educative nursing system with this group.

Stage 3 : Termination of Nursing Practice is considered a stage of revising some regulations or matters for practice so that the mothers capable to provide caring to their children at home. Furthermore, at this stage the researcher had to inform the mothers about a period of nursing termination as planned.

4.3 One month later, the researcher visited the experiment group at home with a special aim to conduct post-intervention for investigating and collected using questionnaire on maternal behaviors in caring for infants with respiratory infections.

Accordingly, all collected data were calculated on the basis of standard criteria as set, and then brought it for analysis through the use of statistics process.

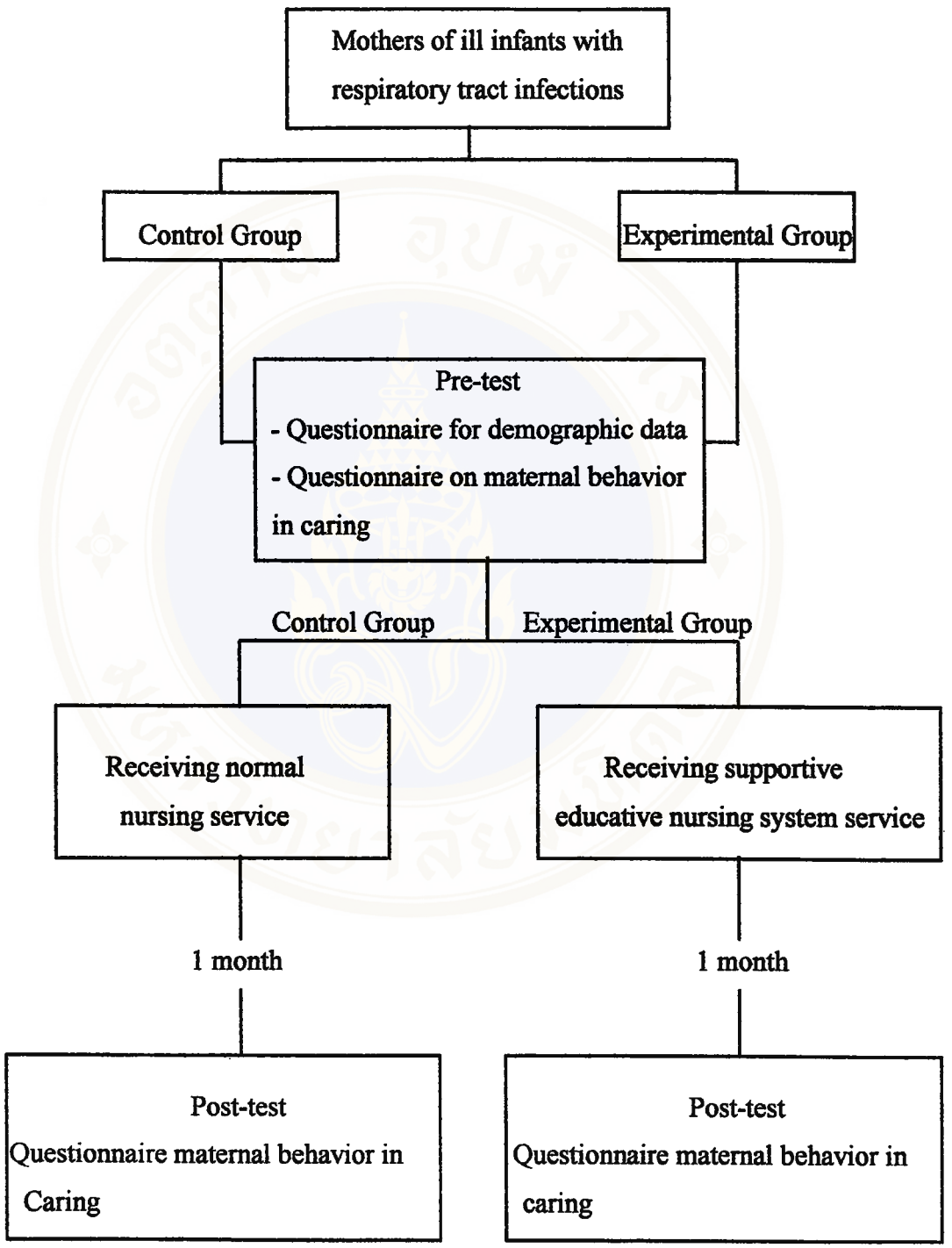

Diagram 3 : The process of data collection

Data Analysis

The analysis of all collected information was done through the application of SPSS / PC+ (statistical Package for the Social Science / Personal computer plus) as to show a significance of data in term of;

1. Frequency and percentage of demographic data

2. Mean and standard deviation of scores related to maternal behaviors in caring for infants with respiratory infections of control group and experimental group before and after intervention

3. The comparison of infant care behavior's scores between the control group and experimental group at the end of experimental procedure by using ANCOVA method together with the utilization of pre-intervention score of maternal behaviors in caring for infants with respiratory infections as covariate variable.

CHAPTER IV

RESULTS

This research has determined to study the effects of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections. By this way, the population of this study was a group of mothers whose their children were admitted at the pediatric inpatient ward 1 and ward 2, pediatric department of Ratchaburi hospital totally 40 cases. The findings of this study are presented in tables with a description below as the following sequences;

Part 1 : The analytical result of demographic data of the sample group as shown in table 1-8

Part 2 :The analytical result of differential comparison between the control group and experimental group regarding the score of maternal behavior in caring for infants with respiratory infections as shown in table 9-11

Part 3 :The analytical result of differential comparison among the control group, experimental group, pre-intervention and post- intervention regarding the score item by item of maternal behavior in caring for infants with respiratory infections as shown in table 12-14

Part 1 :The Demographic data of the sample group

Table 1: Number and Percentage of the Samples classified by Age, Educational Attainment and Family Income

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group (n = 20)		Total	
	No.	%	No.	%	No.	%
Age (year)						
Between 20-30	12	60	12	60	24	60
Over 30	8	40	8	40	16	40
Educational Attainment						
Non-education	1	5	1	5	2	5
Primary education	11	55	11	55	22	55
Secondary education	5	25	5	25	10	25
Diploma	1	5	1	5	2	5
Bachelor degree or equivalent	2	10	2	10	4	10
Family income						
Below 5,000 baht	12	60	12	60	24	60
5001 - 10,000 baht	6	30	6	50	12	30
10001 - 15,000 baht	1	5	1	5	2	5
15,001 - 20,000 baht	0	0	0	0	0	0
Over 20,000 baht	1	5	1	5	2	5

From table 1, it indicated that the most of both control group and experimental group or 60% of respondents were 20-30 years old. As for their educational status, 55 % could finish the primary education while 60 % could earn the family income lower or equivalent to 5,000 baht per month.

Table 2: Number and Percentage of the Samples classified by Occupations and Marital Status

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group (n = 20)		Total	
	No.	%	No.	%	No.	%
Occupation:						
Indoor-work or housewife	6	30	10	50	16	40
- Housewife	6	30	7	35	13	32.5
- Merchant	0	0	2	10	2	5
- housekeeper	0	0	1	5	1	2.5
Outdoor-work	14	70	10	50	24	60
- labor	10	50	8	40	18	45
- employee	2	10	1	5	3	7.5
- government officer	2	10	1	5	3	7.5
Marital Status						
- couple	19	95	19	95	38	95
- widow, divorced	1	5	1	5	2	5

From table 2, it indicated that most of respondents or 70% from the control group have been working outdoor while the majority or 50% worked as a labor. As for the experimental group, indoor-work and outdoor-work were found equivalently or at 50%. Accordingly, housewife was discovered at 35 % as an indoor-work while 40 % of the group of out-door work were labor. The most of respondents both from the control group and experimental group or 95 % of them have a couple marital status.

Table 3: Number and Percentage of the Samples classified by Number of infant and the Mother's Personal Illness

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group (n = 20)		Total	
	No.	%	No.	%	No.	%
Number of children						
1 person	7	35	6	30	13	32.5
2 person	8	40	10	50	18	45
3 person	5	25	3	15	8	20
4 person and more	0	0	1	5	1	2.5
Personal illness						
None of personal illness	16	80	17	85	33	82.5
Some personal illness	4	20	3	15	7	17.5

From table 3, it indicated that 40 % and 50% of respondents from control group and experimental group respectively have the maximum 2 children. Besides, none of personal illness was detected in both groups or 80% of control group and 85 % of experimental group.

Table 4 : Number and Percentage of the Samples classified by the smoker in family and Infant Care Helpers

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group (n = 20)		Total	
	No.	%	No.	%	No.	%
Helper for infant care						
No helper	3	15	3	15	6	15
Some helper	17	85	17	85	34	85
- husband	8	40	13	65	21	52.5
- grandfather /grandmother	8	40	4	20	12	30
- brother /sister	1	5	0	0	1	2.5

From table 4, it indicated that the most of respondents from both control group and experimental group or 85% equivalently have some of helpers while husband was a significant helper as to be found in the control group at 40% and in the experimental group at 65%.

Table 5: Number and Percentage of the Samples classified by the use of fuel for family cooking

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group (n = 20)		Total	
	No.	%	No.	%	No.	%
Smoker in family						
No	10	50	5	25	15	37.5
Some ; smoking area	10	50	15	75	25	62.5
- in the house close to infants	2	10	5	25	7	17.5
- in the house and far from infants	2	10	0	0	2	5
- outside the house	6	30	10	50	16	40
Using fuel for family cooking						
- Gas	13	65	9	45	22	55
- Wood / charcoal	7	35	11	55	18	45

From table 5, it indicated that a half of the control group or 50% were taken some of risk factors from any of family member who smoked cigarettes, thus it could bring about respiratory infections in the infants. By this, 30% of them smoked outside their houses. As for the experimental group, it also showed that the family member who smoked were the most significant risk factor causing the incidence of respiratory infections as found at 75% while 50% of them smoked outside their houses. In term of smoke from other sources, gas was the most popular fuel used for family cooking in the control group or found at 65 % whereas 55% of the experimental group used firewood or charcoal for family cooking purpose.

Table 6: Number and Percentage of the Samples classified by concerned persons in the family who got fever, coughing and running nose

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group (n = 20)		Total	
	No.	%	No.	%	No.	%
Concerned persons with a symptom of fever, cough and running nose						
No	5	25	5	25	10	25
Some	15	75	15	75	30	75
- husband	1	5	0	0	1	2.5
- brother /sister of the infants	7	35	9	45	16	40
- grandmother	1	5	1	5	2	5
- cousin	5	25	3	15	8	20
- neighborhood	1	5	1	5	2	5
- mother	0	0	1	5	1	2.5

From table 6, it indicated that 75% of respondents from each group; the control group and experimental group have some of concerned persons in their families got a fever, coughing and running nose. When brother and sister of the infants from the control group and experimental group were mostly detected as they got a fever, coughing and running nose or found at 35% and 45% respectively.

Table 7: Number and Percentage of Infants with Respiratory Infections classified by Age and Types of Disease

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group(n = 20)		Total	
	No.	%	No.	%	No.	%
Age						
1-3 months	5	25	2	10	7	17.5
4-6 months	2	10	6	30	8	20
7-9 months	7	35	10	50	17	42.5
10-12 months	6	30	2	10	8	20
Types of diseases						
Pharyngitis	2	10	4	20	6	15
Bronchitis	3	15	3	15	6	15
Bronchiolitis	3	15	0	0	3	7.5
Pneumonia	12	60	11	55	23	57.5
Croup syndrome	0	0	2	10	2	5

From table 7, it showed that the most of infants with respiratory infections from both control group and experimental group were 7-9 months of age or amount to 35% and 50% respectively while pneumonia was mostly found in both groups or amount to 60% and 55% .

Table 8: Number and Percentage of Infant with Respiratory Infections classified by Number of Admission

Sample Group's Characteristics	Control Group (n = 20)		Experimental Group(n =20)		Total	
	No.	%	No.	%	No.	%
Number of admission						
No admission	16	80	16	80	32	80
1 visit	3	15	2	10	5	12.5
2 visits	0	0	0	0	0	0
3 visits	1	5	2	10	3	7.5

From table 8, it indicated that both control group and experimental group comprised the most of children with respiratory infections who never admitted in any hospitals or equals to 80 %

Part 2 : The Differential Comparison of score between control group and experimental group regarding maternal behaviors in caring for infants with respiratory infections

Table 9: Means and Standard Deviation of Scores related to Maternal Behaviors in Caring for infants with respiratory infections at Pre-intervention of control group and experimental group

Sample Group	n	$\bar{X}$	SD	t-value
Control Group	20	153.350	7.541	.794[NS]
Experimental Group	20	155.100	6.340	

NS = not statistically significant at the level .05

From table 9, it indicated the difference of scores regarding maternal behavior in caring for infants with respiratory infections at pre-intervention between the control group and experimental group. As a result, that difference was not statistically significant at the level .05

Table 10: Means Standard Deviation and t-value of Scores related to Maternal Behavior in caring for Infants with respiratory infections at Pre and Post Intervention of Control Group and Experimental Group

Sample Group	n	Pre-intervention		Post-intervention		T-value
		$\overline{X}$	SD	$\overline{X}$	SD	
Control Group	20	153.350	7.541	159.900	7.820	4.004***
Experimental Group	20	155.100	6.340	168.250	5.025	8.821****

*** $p < .001$

**** $p < .0001$

From table 10, it found that means score of maternal behavior in caring for infant with respiratory infections of the control group between pre intervention and post intervention is significantly different at the level of .001 whereas of the experimental group was approved at the level .0001.

Table 11 : The Comparison of Means between the control group and experimental group regarding maternal behaviors in caring for infants with respiratory infections after intervention by using ANCOVA and pre-intervention score of maternal behaviors in caring for infants with respiratory infections as a covariate.

Source of Variance	df	SS	MS	F	P
Co-variance	1	489.813	489.813	14.116***	.001
inter-group variance	1	565.082	565.082	16.285****	.000
intra-group variance	37	1283.880	34.699		
Total	39	2338.776	59.969		

From table 11, it was found that the score of maternal behaviors in caring for Infants with respiratory infections at pre-intervention stage (covariate) could be affecting to the score of maternal behaviors in caring for infants with respiratory infections at post-intervention stage ($p < .001$). As when attempted to adjust the influence derived from some errors caused by covariate, it was discovered that the means score maternal behaviors in caring for infants respiratory infections at post-intervention stage of the experimental group was statistically significantly higher than the control group at a level .0001 .

Part 3 : The Comparison of scores the control group and experimental group regarding maternal behavior in caring for infants with respiratory infections between pre and post-intervention of the control group and the experimental group classified by items of statement

Table 12 : Means and Standard Deviation of Scores related to Universal Self-Care Requisites for maternal behavior in caring for infants with respiratory infections at Pre and Post-intervention and t-value of the Control Group and Experimental Group classified by items of statement (Normal letter means to statistical values of the control group and bold letter means to statistical values of the experimental group)

Statement	Pre		Post		t-value
	$\bar{X}$	SD	$\bar{X}$	SD	
1. At present, how do you feed your infant ?	2.65	.489	2.7	.470	.33
(to choose only 1 choice according to	**2.9**	**.308**	**3.00**	**.000**	**1.45**
your infant's age)					
- only breast feeding since newborn till 4 months					
- 4 months up to 12 months provide breast milk together with supplementary food such as grained-rice, grained-banana, cooked yolk, cooked fish					
2. Did you arrange the circumstances in a	2.45	.510	2.6	.754	.90
good ventilation and without dust, smoke	**2.5**	**.688**	**3.00**	**.000**	**3.25****
from cooking or mosquito coils ?					

Statement	Pre		Post		t-value
	$\bar{X}$	SD	$\bar{X}$	SD	
3. Did you avoid to allow your infant to	2.3	.733	2.2	.768	-.81
stay in the air-polluted area such as temple	**2.00**	**.725**	**2.95**	**.244**	**5.60****
trade fair, market, theatre, department store or other places with polluted air as cigarette smoky area and so on ?					
4. Did you ever let the electric fan blow	2.15	.671	2.5	.510	201.*
directly to your infant in hot weather ?	**1.8**	**.616**	**2.8**	**.410**	**6.89****
5. You keep your infant and the	2.95	.224	3.00	.000	1.00
circumstance clean every time after	**3.00**	**.000**	**3.00**	**.000**	**-**
he/she do urinate and evacuate the bowels.					
6. You always observe when your infant	2.22	.696	2.4	.75	1.7
do urinate and evacuate the bowels with	**2.7**	**.47**	**3.0**	**.000**	**2.85****
trying to consider its amount and feature.					
7. You provide your infant with a bath at	3.00	.000	3.00	.000	-
least 2 time daily.	**3.00**	**.000**	**3.00**	**.000**	**-**
8. You provide your infant a hair clean at	2.25	.444	2.2	.410	-.33
least 1 time daily.	**2.45**	**.510**	**2.75**	**.444**	**2.35***
9. You use a clean cloth to clean both	2.05	.887	2.45	.510	1.57
teeth and gum of your infant at least 2	**1.95**	**.759**	**2.7**	**.470**	**4.27****
times daily.					
10. At present, how do you care your	2.3	.733	2.45	.759	.72
infant for sleeping ? (to choose only 1	**2.6**	**.503**	**2.85**	**.366**	**2.52***
choice according to your infant's age)					

Statement	Pre		Post		t-value
	$\overline{X}$	SD	$\overline{X}$	SD	
- An infant of age 1-2 months should sleep 20 hours a day					
- An infant of age 2-4 months should sleep 16-20 hours a day					
- An infant of age 4-6 months should sleep 15-16 hours a day					
- An infant of age 6-8 months should sleep 14 hours a day					
- An infant of age 8-12 months should sleep 12 hours a day					
11.You always put a woolen coat and cover your infant with the blanket when the weather is rather humid and cold.	2.9	.308	2.9	.308	.00
	3.00	**.000**	**3.00**	**.000**	-
12. You always prepare a warm water for bathing your child when the weather is rather cold.	2.65	.587	2.7	.470	.27
	2.9	**.308**	**2.95**	**.224**	**.57**
13. You immediately rub your infant body and hair after cleaning.	2.9	.308	2.95	.224	1.00
	2.85	**.489**	**3.00**	**.000**	**1.37**
14. You allow your infant to play with water or keep sitting in the basin ?	2.35	.489	2.45	.605	.70
	2.45	**.510**	**2.9**	**.308**	**3.94****
15. You avoid to bring your infant for playing or to be close to any persons with fever and coughing.	1.85	.671	2.45	.510	3.27**
	2.4	**.821**	**3.00**	**.000**	**3.27****
16. You will separate your infant belongings from the others such as towel, glass, spoon, food container etc.	2.9	.308	2.75	.444	-1.14
	2.95	**.224**	**3.00**	**.000**	**1.00**

Statement	Pre		Post		t-value
	$\overline{X}$	SD	$\overline{X}$	SD	
17. When you got a cold, having a	2.2	.523	2.3	.571	.57
running nose, or coughing, then you still	**2.25**	**.851**	**2.9**	**.308**	**3.58****
hugging and kissing your infant?					
18. You cleaned your hands before	2.55	.510	2.7	.470	1.14
holding, preparing milk and food for	**2.6**	**.503**	**2.9**	**.308**	**2.35***
your infant.					
19. At the time you feeding milk, you	2.5	.513	2.75	.444	1.56
let your infants lying with raising	**2.55**	**.686**	**2.9**	**.308**	**3.20****
his/her head up.					
20. You always bring your infant for	2.75	.444	3.0	.000	2.52*
vaccination following the medical	**3.00**	**.000**	**2.95**	**.224**	**-1.00**
appointment.					
21. You keep organizing the circumstance	2.6	.503	2.8	.410	2.18*
of your house in a perfect order.	**2.7**	**.47**	**2.9**	**.308**	**2.18***
22. You allow your infant to play such a	2.9	.447	3.0	.000	1.00
sharpen, poisoning and small things.	**2.8**	**.523**	**3.00**	**.000**	**1.71**

* $p < .05$, ** $p < .01$

From table 12, it indicated the average score on universal self-care requisites behaviors in caring for infants of the mothers according to the item no. 5,7,11,13,16 and 22 of the control group at pre-intervention stage was very high. The item no 4, 15, 20 and 21 of the control group at post-intervention stage was significantly higher than of the pre intervention stage at a statistical level of .05. As for the other items the difference was found but not statistically significant at a level .05. The experimental group, average score on universal self-care requisites behaviors in caring for infants

of the mothers for the item no.5,7,11,12and 16 at pre-intervention stage was very high. The item no. 20 of the experimental group at pre-intervention stage was higher than of the post intervention. The item no. 2, 3, 4, 6, 8, 9, 10, 14, 15, 17, 18, 19 and 21 when measured at post-intervention stage was statistically significant higher than of the pre intervention stage at a level of .05 while the other item the difference was also found but not statistically significant at the level .05.

Table 13 : Means and Standard Deviation of Scores related to Developmental Self-Care Requisites for maternal behaviors in caring for infants with respiratory infections at pre and post-intervention and t-value of the control group and experimental group classified by items of statement (Normal letter means to statistical values of the control group and bold letter means to statistical values of the experimental group)

Statement	Pre		Post		t-value
	$\bar{X}$	SD	$\bar{X}$	SD	
1. You stimulate your infant to do	2.35	.489	2.5	.513	1.14
Exercise the neck muscle, arm muscle and	**2.7**	**.470**	**2.95**	**.224**	**2.03**
leg muscle as to let him/her looking,					
waving his/her hands and stretch out the					
legs.					
2. You talk and smile with your infant	2.45	.510	2.75	.444	2.04
during carry out the activities for him/her.	**2.9**	**.308**	**3.00**	**.000**	**1.45**
3. You allow your infant to play with	2.85	.366	2.7	.470	-1.83
other persons such as father, cousin and	**3.00**	**.000**	**2.95**	**.224**	**-1.00**
friends.					

From table 13, it indicated that the average score of every item concerning the developmental self-care requisites behavior in caring for infants of the mothers that derived from the control group at pre-intervention stage and post-intervention stage was almost the same but not statistically significant at the level .05. As for the experimental group, it indicated the average score on developmental self-care requisites behaviors in caring for infants of the mothers according to the item no. 2 and 3 at pre-intervention stage was very high. The item no. 3 of the experimental group at pre-intervention stage was higher than of the post intervention. The average score on developmental self-care requisites behavior in caring for infants of the mothers for all item when compared between pre and post-intervention was almost the same but again not statistically significant at the level of .05.

Table 14 : Means and Standard Deviation of Scores related Health Deviation Self-Care Requisites for maternal behaviors in caring for infants with respiratory infections at pre and post-intervention and t-value of the control group an experimental group classified by items of statement. (Normal letter means to statistical values of the control group and bold letter means to statistical values of the experimental group)

Statement	Pre		Post		t-value
	$\bar{X}$	SD	$\bar{X}$	SD	
1. You keep asking the doctor, nurse or	2.35	.813	2.7	.733	2.67*
other health personnel when you have	**2.7**	**.571**	**2.85**	**.366**	**1.00**
problems or suspect whatever relevant to the symptom, treatment and advice for infant care practice.					
2. You ever observed various signs and Symptoms					
2.1 Fever	2.85	.366	3.0	.000	1.83
	2.89	**.315**	**2.95**	**.224**	**.57**
2.2 Cough	2.9	.308	2.65	.489	-2.03
	2.85	**.366**	**2.95**	**.224**	**1.00**
2.3 Obstructive respiration	2.55	.510	2.8	.41	2.52*
	3.00	**.000**	**2.95**	**.224**	**-1.00**
2.4 Nose stuffiness	2.6	.503	2.65	.489	1.00
	2.85	**.366**	**3.00**	**.000**	**1.83**
2.5 don't sucking milk	3.00	.000	3.00	.000	-
	3.00	**.000**	**3.00**	**.000**	-
2.6 Stupor and difficulty to be woke up	2.25	.910	2.65	.745	1.57
	3.00	**.000**	**3.00**	**.000**	-
2.7 Getting thin	2.55	.510	2.7	.733	1.00

Statement	Pre $\bar{X}$	Pre SD	Post $\bar{X}$	Post SD	t-value
3. When your infant got fever and coughing, then you bring him/her to see the doctor?	2.95	.000	3.00	.000	1.00
	2.95	**.224**	**2.95**	**.224**	**.000**
4. When your infant got fever, what did you do ?					
4.1 provide a tepid sponge	3.00	.000	3.00	.000	-
	3.00	**.000**	**3.00**	**.000**	-
4.2 allow to drink more water	2.75	.444	2.85	.366	.70
	2.95	**.224**	**3.00**	**.000**	**1.00**
4.3 to feed more milk or soft food such as rice soup rice porridge	2.55	.510	3.00	.000	3.94**
	2.8	**.41**	**3.00**	**.000**	**2.18***
4.4 allow to sleep more than usual	2.75	.44	2.65	.587	-.52
	2.75	**.444**	**2.9**	**.308**	**1.83**
4.5 to wear many pieces of clothes	2.2	.834	1.95	.605	-1.31
	1.75	**.786**	**2.7**	**.571**	**4.79****
4.6 covered with a thick blanket	2.1	.641	1.85	.745	-1.42
	1.5	**.607**	**2.45**	**.759**	**4.79****
4.7 giving an antipyretic with a dose recommended by medical doctor (paracetamol group)	2.95	.224	3.00	.000	1.00
	2.9	**.308**	**2.9**	**.308**	**.000**
4.8 use a finger to put medicine in the throat	2.1	.308	2.25	.444	1.83
	2.05	**.510**	**2.7**	**.470**	**4.95****
4.9 bring a child to see a doctor if the temperature could not be reduced	3.00	.000	3.00	.000	-
	2.95	**.224**	**2.95**	**.224**	**.000**

Statement	Pre		Post		t-value
	$\bar{X}$	SD	$\bar{X}$	SD	
5. When your infant had a running nose or snort obstructed, what did you do ?					
5.1 to dip a cotton bud in boiled water	1.95	.826	2.35	.813	2.18*
and use it for cleaning or using a rubber	**2.45**	**.887**	**2.90**	**.308**	**2.27***
pump sucking out					
5.2 to buy a nose-drop drug and gave to	2.95	.224	2.85	.366	-1.45
an infant	**3.0**	**.000**	**3.0**	**.000**	-
5.3 to buy an antipyretic drug and gave	2.75	.639	2.85	.366	.62
to an infant	**2.8**	**.616**	**2.9**	**.308**	**.81**
5.4 to observe a feature of snort such as	2.7	.470	2.8	.410	.70
color, amount	**2.75**	**.639**	**2.95**	**.224**	**1.29**
5.5 to observe a feature of respiration	2.7	.470	2.9	.308	1.45
	2.75	**.55**	**2.95**	**.224**	**1.45**
6. When your infant got a cough or having a sputum or obstructive respiration, what did you do ?					
6.1 allow to drink more	2.9	.308	3.00	.000	1.45
	2.9	**.308**	**3.0**	**.000**	**1.45**
6.2 bought an anti-coughing drug and	2.85	.366	.28	.410	-.44
sputum-release drug then give to an	**2.7**	**.733**	**2.9**	**.308**	**1.29**
infant					
6.3 observed the respiration	2.8	.410	2.65	.489	-1.00
	2.70	**.47**	**3.0**	**.000**	**2.85****
6.4 observed sputum	2.8	.410	2.85	.366	.37
	2.80	**.523**	**3.0**	**.000**	**1.71**

Statement	Pre $\overline{X}$	Pre SD	Post $\overline{X}$	Post SD	t-value
7. When your infant vomited, what did you do ?					
7.1 After a vomited, to give an infant some soft food with a small amount each time but more frequency such as milk, boiling rice, rice porridge	2.15	.875	2.55	.510	1.71
	2.7	**.571**	**2.85**	**.489**	**1.00**
7.2 to allow an infant sleep on one side during vomiting and after vomited	1.75	.444	2.35	.813	3.04**
	2.65	**.587**	**2.95**	**.224**	**2.04**
7.3 to clean in the oral cavity after vomited	2.65	.489	2.8	.410	1.00
	2.05	**.887**	**2.95**	**.224**	**4.72****
8. You give your infant a correct dose of drug and at a correct by following the doctor recommended.	2.95	.224	2.95	.224	-
	3.00	**.000**	**3.00**	**.000**	**-**
9. After drug given as the doctor recommended, you observed and tried to detect a sign and symptom that might be harmful to your infant such as redden spot, abnormal aspiration and unconsciousness.	2.6	.754	3.00	.000	2.37*
	2.95	**.224**	**3.00**	**.000**	**1.00**
10. If your infant didn't swollen or vomitted the drug, so you give him/her some drug again within haft an hour.	2.15	.813	2.4	.681	1.42
	2.3	**.865**	**2.9**	**.308**	**3.04****

* $p < .05$, ** $p < .01$

From table 14, it indicated that the average score on health deviation self-care requisites behavior of the mothers according to the item no.2.2,2.5,3,4.1,4.7,4.9,5.2,6.1 and 8 of the control group at pre-intervention stage was very high. The item no.1,2.3,4.3,5.1,7.2 and 9 of the control group at post-intervention stage was significantly higher than of the pre intervention stage at a statistical level of .05. As for the other items the difference was found but not statistically significant at a level .05. The experimental group, average score on health deviation self-care requisites behaviors in caring for infants of the mothers for the item no. 2.3,2.5,2.6,2.7,3,4.1,4.2,4.7,4.9,5.2,6.1,8 and 9 at pre-intervention stage was very high. The average score of item no.2.3 at pre-intervention stage was higher than of the post intervention. The item no. 4.4, 4.5, 4.6, 4.8, 5.1, 6.3, 7.3 and 10 when measured at post-intervention stage was statistically significant higher than of the pre intervention stage at a level of .05 while the other item the difference was also found but not statistically significant at the level .05.

CHAPTER V

DISCUSSION

This is a study on the effects of supportive educative nursing system on maternal behavior in caring for infants with respiratory infections with a special attention to compare maternal behavior in caring for infants with respiratory infections of the two group of population as one is the mothers with a provision of supportive educative nursing system and another group is the mothers who received a usual nursing service from health team. The findings of this study showed that the scores related to maternal behavior in caring for infants with respiratory infections of the group with a provision of supportive educative nursing system is statistically significant higher than the group with usual nursing service from health team at the level .0001. Absolutely, the research results support the hypothesis as can be explained as follow;

It due to the researcher applied the supportive educative nursing system (Orem, 1991) for being a guideline of this study as well as this type of nursing system is also included the support, guidance, teaching, arrangement of environment to promote the patients or care takers capable to develop their self-care capability (Somjit Hanucharoenkul, B.E. 2534: 25-27; Orem 1991: 225). Accordingly, the mothers learned to determine the need on self-care practice for caring of infants by their own under the individual guidance and instruction of nurses. So far, the contents of individual instruction will be included only specific information that is to provide knowledge and guidance only for specific problem the mother encountered, since the mothers can learn about the things they need and then they will be able to understand and cooperate with doctors in the treatment process. In addition to this, maternal behavior in caring for the sick infants can be appropriately changed and also complications and dangers will be reduced (Noparat Rasanui,B.E. 2538: 44). Moreover, individual differences will be taken under the consideration while

relationship is beneficial for effective treatment and is perceived as a kind of communication skill that should be applied with the patients or care takers for their trust, feel ease, recognize in the usefulness and willing to give information. At the same time, the researcher could understand the problem and know the direction to give the guidance and consultation for the patients. Then the patients or care takers can take the advantage as they can follow the medical treatment plan correctly, give a better cooperation in various activities, practicing a continuous follow up (Boonsri Prabsak and Siriporn Jirawatanakul, B.E. 2531: 87-88)

Additionally, this system is useful for the mothers practicing how to think reasonably and systematically so that they learn to find the reason for themselves by making an attempt to assess the critical thinking and select to receive only the useful information. As Levin (Levin, 1987: 170-175) said that knowledge is an essential component to the success of self-care promotion including the others. And Cohen (Cohen, 1991 cited by Gilbert, Glen G. & Sawyer, Robin G., 1995: 77) believed that learning has an association with the selection of any method that affecting to the learning progress of the learner as well as a combination of different activities are needed. This can encourage the learner likes and wants to learn. Furthermore, it was found that only giving the guidance can produce 5 % of learning certainty, but if encourage them to read some relevant books together with providing of guidance so 10% of learning certainty was found. From this study, the mothers were provided with the instruction on maternal self-practice for caring of infants with respiratory infections for revising about the direction for child care practice. This could make the mothers better recognizing and use it easier including more convenient for self-study at home as well. As Orem (Orem 1980: 89) showed his support to build up such an information source that is to have documents in hands at home will influence the mother want to initiate and conduct child care activity continuously and by themselves. Consequently, the mothers who were provided with supportive educative nursing system together with receiving the instruction have a better child care behavior when compared to the mothers who received only a usual nursing service from health team. This is in accordant with the study of Supha Sirisonthi (B.E. 2535: 63) as they discovered that the guardians who received supportive educative nursing

system have a better supportive behavior on child care practice at pre-intervention stage and they also have a better behavioral change when compared to the group with a provision of usual nursing service. Again, it is rather conformed to the study of Sunan Sungong (B.E. 2530: 13) as mentioned that the instruction should be given together with systematic provision of knowledge because it it could promote a better learning. And also in accordant to the study of Duangkhae Ammarapitakn (B.E. 2537: i-ii) and Sunee Suntornmeesatien (B.E. 2537: i-ii) as they discovered that the sample group who were provided with a systematic teaching and the instruction had a better self-care behavior when compared to the group without the instruction provided.

From this study ,the average scores of both the control group and experimental group after intervention was statistically significant higher than average scores at the period before intervention. When considering the content of each item, it discovered that the average scores of 21 items of the experimental group after intervention was statistically significant higher than the scores before intervention while the average scores of only 10 items of the control group after intervention was statistically significant higher than the scores before intervention. It was found that the control group could gain a high behavioral score from 14 items of the pre- experiment started at a range of average 2.90-3.00 while the experimental group received from 19 items at the same average score of 2.90-3.00. At the same time, the experimental group have a higher average score at the pre- intervention when compared to the post-intervention totally 3 items. Interestingly. Accordingly, it can be seen that the experimental group and the control group had some change as follows;

Universal self-care requisites for maternal behaviors in caring for infants was changed as following details;

Universal self-care requisites: it was found that the control group could gain a very high average score in some items. It indicated the difference of scores regarding maternal behavior in caring for infants with respiratory infections at pre-intervention and post-intervention in the control group. As a result, that difference was not statistically significant at the level .05. Those were the practice on keeping a infant's body and environment clean every times after urinated and evacuate the bowels,

bathing the infant at least 2 times daily, putting on a woolen coat or covered an infant with the blanket when the weather was rather humid and cold , don't allow to play a sharpen, poinsoning and small things, separate the infant's personal belongings from other others such as towel, glass, spoon, food container etc. Furthermore, it was discovered that the control group at the pre and post intervention had been statistically significant found the behavioral change as in the details as during the pre-intervention the control group allow the electric fan blow directly to an infant when the weather was hot, let an infant to play or to be close to any persons with fever or coughing, never realized in the significance of health check up and receiving the vaccination according to the medical treatment, disorder of housing articles. The information received from the mothers shown that they did not know they have to do about these. At the period after intervention, the average scores of 4 items of the control group related to universal self-care requisites was statistically significant higher than of before intervention at the level of .05. This may be due to the control group gained the knowledge from health personnel when they brought their children to the hospital or other health agencies including they could learn from a Instruction on maternal self-practice for caring of infants with respiratory infections distributed by the researcher as well.

As for the experimental group, it was found that the experimental group could gain a very high average score in some items. It indicated that the difference of scores regarding maternal behavior in caring for infants with respiratory infections at pre-intervention and post-intervention in the experimental group. As a result, that difference was not statistically significant at the level .05. Those were the practice on keeping an infant's body and environment clean every times after urination and evacuate the bowels, bathing the infant at least 2 times daily, putting on a woolen coat and covered an infant with the blanket when the weather was cold or humid, A warm water for bathing an infant when the weather is rather cold, separate the infant's personal belongings from others such as towel, glass, spoon, food container etc., This indicated that the experimental group also gained the knowledge from health personnel when they brought their infants to any hospitals or other health agencies before their infants were admitted in this hospital. Particularly the item about taking

infants for vaccination following the medical appointment that its average score at pre-intervention stage was higher than the average score at post-intervention stage. This illustrated that the infant with respiratory infections were admitted at the hospital, so they could not receive vaccination following the medical appointment, or it was not the schedule for receive vaccination.

when considering to the period pre intervention the experimental group never arranged the circumstances in a good ventilation and without dust, smoke from cooking or mosquito coils, always bring an infant to the placed with air pollution such as department stores, never observed how their infant do urinate and evacuate the bowels , provide an infant's hair clean 1 time every 2-3 or 7 days.. Most of the mothers didn't clean an infant's gum and teeth, always caring for infants for sleep, always prepare a warm water for bathing an infant when the weather is rather cold, the mothers still hugging a infant eventhough during they got a fever, have a running nose, coughing, never washed hands before preparing milk and cooking, and the most stay in the environment with disorder of housing articles. These because of most of the experimental group worked outdoor so that they had no time to clean their houses everyday and their houses were close to the roads that bring about a lot of dust, to allow the wind from electric fan blow directly to an infant for chasing the mosquitoes and release the hot weather. And the mother didn't know of self-care requisites for maternal behaviors in caring for infant. At the post-intervention, the average scores of each items of the experimental group related to universal self-care requisites was statistically significant higher than of pre- intervention at the level of .05 And post-intervention, the average scores of each item with a presence of statistical significance in the experimental group to be found more than a half of the control group post-intervention. This meant that the experimental group realized in the significance and usefulness of correct infant self-care practice as it helps in reducing the risk factors and the mothers accepted that the correct self-care practice could bring about the advantage to their infants. As a result, the universal self-care requisites for maternal behavior in caring for infants care practice became better because of the effects of supportive educative nursing system implementation while the researcher is the one

who provided support and guiding the mothers how to choose the most appropriate infant care method.

Health-deviation self-care requisites for maternal behaviors in caring for infants was changed as following details;

Universal self-care requisites : it was found that the control group could gain a very high average score in some items. It indicated the difference of scores regarding maternal behavior in caring for infants with respiratory infections at pre-intervention and post-intervention in the control group. As a result, that difference was not statistically significant at the level .05. Those were related to coughing observation, didn't suck milk, taking the children to see a doctor when they got a cold and coughing, the mothers could practice tepid sponge when a child got a cold or giving paracetamol as a doctor recommended and bring them to the hospital if the temperature had never reduced, giving more water when they cough and having sputum. Moreover, the control group at the pre and post- intervention had been statistically significant found the behavioral change in term of pre- intervention the mothers dare not to ask the doctors or nurses some questions about symptom and treatment or advise for infants care practice. As when the infants got sick from respiratory infections, the mothers never observed the feature of respiration. And in infants aged over 4 months were never given such a soft food when they got fever but gave them only milk. From the inquiry, it was discovered that the mothers did not know it is necessary to practice about this At the post intervention, the average scores of 6 items of the control group related to health-deviation self-care requisites behavior was statistically significant higher than of pre-intervention at the level of .05 These probably because the control group was given the knowledge from health personnel when they visited hospital.

As for the experimental group, health deviation self-care requisites behavior in caring for infants was discovered that this group could gain a very high average score in some items those were related to coughing observation, didn't suck milk, stupor and difficult to wake them up, became thiner, taking the infant to see a doctor when they got a cold and coughing, the mothers could practice tepid sponge when a child

got a cold or giving paracetamol as a doctor recommended and bring them to a hospital if the temperature had never reduced, didn't buy nose-drop drug to be applied with an infant, giving more water when they cough and having sputum, the mothers do the observation for whatever abnormal symptoms that might be harmful to their infants after they provided their infants with drug prescribed by a doctor. This indicated that the experimental group have a higher behavioral score for theses items because of they gained knowledge from health personnel when they brought their children to any hospitals or other health agencies before were admitted at this hospital. Regarding to the item concerning the observation of obstructive respiration of an infant, it was found that its average score at pre-intervention stage was higher than the average score at post-intervention stage. This illustrated that an infant got be well respiratory infections and did not have dyspnea for a month after post intervention, so the mother did not realize of the important of observation of obstructive respiration in an infant.

At the period of pre-intervention and post-intervention, health deviation self-care requisites for maternal behaviors in caring for infants of the experimental group was statistically significant changed particularly in term of such at the pre-intervention the mothers who had infants aged over 4 months with respiratory infections as when their children got sick from respiratory infections, the mothers never gave them such a soft food but gave them only milk, wear many pieces of clothes and cover them with a thick blanket. From the inquiry, it was discovered that the mothers were afraid their infants feel cold. At the post-intervention, the average scores of each items of the experimental group related to health deviation self-care requisites for maternal behavior was statistically significant higher than of pre-intervention at the level of .05 And post-intervention, the average scores of each item with a presence of statistical significance in the experimental group to be found more than of the control group after intervention. This meant that knowledge of the experimental group was enhanced and they realized in the significance and usefulness of correct infant self-care practice as it helps in reducing the risk factors and the mothers accepted that the correct self-care practice could bring about the advantage to their infants. As a result, the health deviation self-care requisites behavior for infant

because of the effects of supportive educative nursing system implementation while the researcher is the one who provided support and guiding the mothers how to choose the most appropriate infant care method.

Developmental self-care requisites for maternal behaviors in caring for infants was changed as following details;

Developmental self-care requisites :it was found that the experimental group could gain a very high average score in some items those were related to the practice about talking and smiling with an infant during conducting infant care activities, and allowing an infant to play with other persons. This indicated that the experimental group have a higher behavioral score for these items because of they gained knowledge from health personnel when they brought their infants to any hospitals or other health agencies before were admitted at this hospital. Pertaining to the item about allowing an infant to play with other persons, it was found that its average score at pre-intervention stage was higher than the average score at post-intervention stage. In addition to this, the control group and experimental group at the pre and post intervention were found the behavioral change but not statistically significant. From this study, the mothers thought that stimulation of development with allowing an infant to use the muscle around neck, arms and legs, talking and smiling with an infant when conducting activities for him/hers, and allow to play with others persons these are considered as normal behaviors. As an infant can do all of these activities without any stimulation or special care and never recognized in the significance and usefulness of these behavior because they thought that this type of infant care behavior never related with the care for infants with respiratory infections.

However, from all reasons as mentioned above it can be seen that infants self-care capability of the experimental group was improved and leading to the initiation of infants self-care practice. Thus, a better infants self-care practice was emerged as in the whole picture. Consequently, it can be concluded that the experimental group of which is provided with supportive educative nursing system was statistically significant found a better infant care behavior at the level .0001 when compared to the control group with a provision of usual nursing care by health team. Regarding the

finding of this study, it could reflect the feature of supportive educative nursing system as it is a systematic, orderly and quality nursing service delivery that has an effect on the behavioral change as well as the mothers have the correct infants care behavior.

CHAPTER VI

CONCLUSION

Summary of the Study

This research is a Quasi Experimental study to identify the effects of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections.

The sample groups of this study are the mothers who having infant aged 0-12 months with respiratory infections; Tonsilitis, Pharyngitis, Bronchitis, Bronchiolitis, Pneumonia and Croup Syndromes are given treatment at the pediatric inpatient ward 1 and ward 2, Pediatric department of Ratchaburi hospital.

In this research, the researcher employed such an accidental sampling technique for selection of 40 subjects and then to regulate matching among them on the basis of similarity of individual characteristics that is age, education and income. By this way, 20 pairs of samples were drawn and then to proceed on sampling 1 of each pair to be 1 experimental case and 1 control case. The experimental group, they would be provided with supportive educative nursing system while the control group has received a usual nursing from the health team.

Instruments to be used in this study comprise of;

1.Instruction for Provision of supportive educative nursing system on maternal behaviors in caring for infants with respiratory infections.

2.Instruction on maternal self-practice for caring of infants with respiratory infections

3. Questionnaire for demographic data contains with maternal information and children information

4. Questionnaire on maternal behavior in caring for infants with respiratory infections

In this study, data collection was crucially conducted by the researcher herself whereas the control groups were selected by following the standard criteria as set. The participation in conducting the research was exactly required as well as the researcher asked from the samples. Then, all respondents of the control group were interviewed with the utilization of questionnaire for demographic data and questionnaire on maternal behavior in caring for infants with respiratory infections. At the 3rd day, the researcher distributed the instruction on maternal self-practice for caring of infants with respiratory infections, while one month later the researcher has visited the control group's home with a special aim to investigate maternal behaviors on caring of infants with respiratory infections.

As for the experimental group, respondents were selected according to the standard criteria as set as well as the participation from all of them is needed for gathering information with the use of questionnaire for demographic data and questionnaire on maternal behavior in caring for infants with respiratory infections. At the 1st day to 3rd day, most of activities to be taken was a management on supportive and educative nursing system. Particularly, the 3rd day the researcher distributed the instruction on maternal self-practice for caring of infants with respiratory infections, whereas one month later, the researcher went to meet the samples at their home with aimed to interview them about maternal behavior in caring for infants with respiratory infections.

Data analysis All of scores related to maternal behavior in caring for infants with respiratory infections derived from the control group and experimental group at the end of experimental procedure was analyzed in order to compare the difference of

means between this two groups by using ANCOVA method together with the utilization of infant care behavior's scores as covariate variable.

Characteristics of the sample mother

The mothers belong to the control group and experimental group were aged 20-30 years. Most of the respondents from this two groups have been possessing almost the same characteristics absolutely in term of qualification of primary education, couple marital status, working outdoor, worked as the labor and having an average of two children. So far, both of the groups showed a lower family income which is about 5,000 baht or below. Most of them had no any personal illness and child care helpers were their husbands. A group of concerned persons who smoked outside the houses were found more in the experimental, while the control group comprised an equal number of non-smokers and smokers who smoking outside their houses. Regarding to fuel consumption for preparing the family meal, it can be concluded that the most of respondents from the experimental group were preferred to use firewood and charcoal while the most from control group used gas. When considered to the group of concerned persons, most of brother and sister of the child were detected as got a fever, coughing and running nose.

Characteristics of the sample children

The majority of infants from both of the control group and experimental group were 7-9 months old. Pneumonia was detected as the major cause of admission and most of the samples from both groups were never admitted in the hospital.

The result of this study can be concluded as knowledge of mothers who were given the supportive educative nursing system on caring for infants with respiratory infections was statistically higher than of the mothers who received a normal nursing service from health personnel at the level of significance .0001. When the researcher compared average score on self-care requisites behaviors in caring for infants with respiratory infections for the major aspects and the items at pre and post intervention stage, it was found that the of universal self-care requisites had the average score of

maternal behaviors in caring for infants statistically significant different in 13 items. Those were the practice on arranged the circumstances in a good ventilation and without dust, smoke from cooking or mosquito coils, always bring an infant to the placed with air pollution such as department stores, observed how their infant do urinate and evacuate the bowels etc., The aspect of health-deviation self-care requisites had the average score of maternal behaviors in caring for infants statistically significant different in 8 items. Those were the practice on her infant got fever. She feed more milk or soft food such as rice soup rice porridge, used a finger to put medicine in the throat etc. As for the aspect of developmental self-care requisites had the average score of maternal behaviors in caring for infants, the control group and experimental group at the pre and post intervention showed a behavioral change, but not statistically significant.

Implications and Recommendations

Implications and Application of Research Findings

Nursing Action Dimension

From this study could illustrated the effect of supportive educative nursing system on maternal behavior in caring for infants with respiratory infections that it has resulted in an existence of better maternal behavior in caring for infants with respiratory infections when compared to the group with a provision of usual nursing care. Accordingly, the researcher has attempted to propose some recommendations particularly for the nurses on active service who are mostly deal with a provision of nursing care for infants with respiratory infections in 3 stages as follows;

1. Stage 1 : A foundation of relationship. As this stage showed the emphasis on building a good relation, familiarity and trust with the mothers who are caring for infants with respiratory infections.

2. Stage 2 : The management on nursing practice

2.1 With the attempt to assess the existing problems and need for child care support.

2.2 Knowledge was given to the mothers who didn't really understand or they still had incorrect practiced on child caring task as well as the emphasis was placed at the arrangement of home's circumstances to be in perfect order, having a good ventilation, not bring an infant to any placed with polluted air, not let electric fan blow directly to an infant, need to observe a child's faeces and urine every time, to wash an infant's hair at least 1 time daily, to clean an infent's teeth and gum at lease 2 time daily, let an infant to sleep sufficiently, avoid to let an infant to play water or to be soaked with, should not bring an infant to play or to be close to any people with fever or cough. Whenever the mothers have a running nose, coughing and sneezing, then to avoid hugging and kissing an infant. At the time of milk feeding, necessary to place his/her head up and high. When an infant get a cold avoid to put him/her many pieces of clothes or covered with a thick blanket, and should not use a finger to put medicine in the throat whether he/she got coughing, having the phlegm or obstructive respiration so that should teach the mothers to know how to observe the respiration. When an infant got vomiting, the mothers should be educated on how to clean an infant's an oral cavity after vomited. In case an infant had spited out the drug or vomiting, thus the mother must give him/her with drug again within haft an hour. When the education had already given to the mothers who didn't really understand or unable to practice infant caring task , then provided them with the maternal instruction for a revision of knowledge as well.

3. Stage 3 : Termination of nursing practice is a stage to prepare the mothers recognizing and accepting the termination of nursing practice including to encourage them in revising whatever the matters of infant self-care practice.

Nursing Administration Dimension

1.The supplementary teaching on the topic of supportive educative nursing system on maternal behaviors in caring for infant with respiratory infections should be provided to clinical nurses. It due to respiratory infections is considered as a major problem of infant particularly in infants has shown its higher mortality rated. This

strategy certainly enable the nurses to realize what the extent of maternal behavior in caring for infant with respiratory infections as well as to be recognized all existing problems encountered by the mothers. As a result, nurse will be capable to adjust the maternal behavior on infant care to be more suitable and effective.

2.The instruction on maternal self-practice for caring of infants with respiratory infections should be distributed to all of the mothers who bring their infants with respiratory infections to the hospital for treatment, and also give them the advises on the usefulness of this instruction. This is helpful to encourage the mothers practicing infant care activity correctly when they go back their home as well as a repetition of this disease and admission rate will be obviously reduced.

Implications for Further Studies

1. As for testing the effectiveness of supportive educative nursing system on maternal behavior in caring for infant with respiratory infections, a quasi-experimental research on the old topic should be conducted, however such an extension of research result and a long term monitoring and evaluation process should be added up for instance in term of home visit for assessing the problems and giving advises. Certainly, these significant intervention must be periodically carried out after 1 month, 3 months 6 months and 12 months of discharged. This approach is useful for a sustain of knowledge and the mothers will be able to provide such a suitable and correct care whether the emphasis is placed at the illustration of incorrect maternal practice in caring for infants.

2.The supportive educative nursing system should be operated not only relevant to respiratory infections but also other significant diseases which are considered as one of the curable diseases with a repeated incidences such as diarrhea,

Acute hemorrhagic fever. This idea is considered as useful for both the mothers and infants able to receive more effective health service. Certainly, the research results can be applied for more extensive nursing service with an expectation deliver to the mothers who having infants with respiratory infections.

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APPENDIX

APPENDIX A

List of experts consulted on validation of the questionnaire.

The following experts assisted the researcher in developing the questionnaire used in this study.

1. Dr.Sirilux Songsiticho. M.D.
   Expert of Preventive Paediatric
   Ratchaburi Hospital, Ratchaburi

2. Mrs. Sanjan Kansukorn. R.N.
   Department of Paediatric Services
   Ratchaburi Hospital, Ratchaburi

3. Assistant Professor Nongluk Chintanadilok. B.Sc. (Nsg), M.S.(Nsg), DNS,
   Department of Paediatric Nursing
   Faculty of Nursing, Mahidol University

4. Assistant Professor Srisomboon Musiksukont. B.Sc. (Nsg), M.S. (Nursing)
   Department of Paediatric Nursing
   Faculty of Nursing, Mahidol University

5. Assistant Professor Supawade Limpanatorn. B.Sc. (Pubic Health Nursing)
   M.N., Dip. In Applied Nutrition
   Department of Public Health Nursing
   Faculty of Nursing, Mahidol University

APPENDIX B

การพิทักษ์สิทธิ์ของกลุ่มตัวอย่าง (กลุ่มควบคุม)

การพิทักษ์สิทธิ์ของมารดาที่ดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจที่เข้าร่วมการวิจัยครั้งนี้

ดิฉัน นางสาววัลทณี ทองมี เป็นนักศึกษาปริญญาโท คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล มีความสนใจที่จะศึกษาผลการพยาบาลระบบสนับสนุนและให้ความรู้ต่อพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ และจะนำผลที่ได้ไปปรับปรุงการปฏิบัติการพยาบาลให้เหมาะสมและมีประสิทธิภาพยิ่งขึ้น ในการศึกษาครั้งนี้ใคร่ขอความร่วมมือจากมารดา โดยให้มารดาตอบแบบสัมภาษณ์ซึ่งจะสัมภาษณ์ถึง พฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ

ฉบับที่ 1 สัมภาษณ์ขณะอยู่โรงพยาบาล

ฉบับที่ 2 สัมภาษณ์ที่บ้านประมาณ 1 เดือน หลังออกจากโรงพยาบาล ตามวันและเวลาที่นัดกับดิฉัน

การตอบแบบสัมภาษณ์ครั้งนี้ จะไม่มีผลต่อการรักษาพยาบาลของบุตร ผลการสัมภาษณ์ที่ได้จะนำมาใช้เฉพาะการวิจัยครั้งนี้เท่านั้น

ขอขอบคุณที่ให้ความร่วมมือ

วัลทณี ทองมี

สำหรับผู้เข้าร่วมวิจัย

ข้าพเจ้าได้รับทราบรายละเอียดการพิทักษ์สิทธิ์ตามเนื้อหาข้างบน มีความเข้าใจและยินดีที่จะเข้าร่วมในการวิจัย

ลายเซ็น.....

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APPENDIX C

การพิทักษ์สิทธิ์ของกลุ่มตัวอย่าง (กลุ่มทดลอง)

การพิทักษ์สิทธิ์ของมารดาที่ดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจที่เข้าร่วมการวิจัยครั้งนี้

ดิฉัน นางสาววัลทณี ทองมี เป็นนักศึกษาปริญญาโท คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล มีความสนใจที่จะศึกษาผลการพยาบาลระบบสนับสนุนและให้ความรู้ต่อพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยโรคติดเชื้อระบบหายใจ และจะนำผลที่ได้ไปปรับปรุงการปฏิบัติการพยาบาลให้เหมาะสมและมีประสิทธิภาพยิ่งขึ้น ในการศึกษาครั้งนี้ใคร่ขอความร่วมมือจากมารดา โดยให้มารดาตอบแบบสัมภาษณ์ ซึ่งจะสัมภาษณ์ถึงพฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ

ฉบับที่ 1 สัมภาษณ์ขณะอยู่โรงพยาบาล

ฉบับที่ 2 สัมภาษณ์ที่บ้านประมาณ 1 เดือน หลังออกจากโรงพยาบาล ตามวันและเวลาที่นัดกับดิฉัน

และหลังจากตอบแบบสัมภาษณ์ฉบับที่ 1 ดิฉันใคร่ขอความร่วมมือจากมารดาให้เข้าร่วมการวิจัยซึ่งดิฉันเป็นผู้ให้การพยาบาลมารดาโดยการให้คำแนะนำและช่วยเหลือในการดูแลบุตรเป็นระยะเวลา 3 วันติดต่อกัน หากมารดามีข้อสงสัยให้สอบถามได้ เมื่อสิ้นสุดระยะการพยาบาล มารดายังคงสามารถสอบถามข้อสงสัยจากดิฉันหรือพยาบาลประจำตึกตามปกติได้

การตอบแบบสัมภาษณ์และการเข้าร่วมการวิจัยครั้งนี้ จะไม่มีผลต่อการรักษาพยาบาลของบุตร ผลการสัมภาษณ์และการเข้าร่วมการวิจัยที่ได้จะนำมาใช้เฉพาะการวิจัยครั้งนี้เท่านั้น

ขอขอบคุณที่ให้ความร่วมมือ

วัลทณี ทองมี

สำหรับผู้เข้าร่วมวิจัย

ข้าพเจ้าได้รับทราบรายละเอียดการพิทักษ์สิทธิ์ตามเนื้อหาข้างบน มีความเข้าใจและยินดีที่จะเข้าร่วมในการวิจัย

ลายเซ็น.....

( )

วันที่แจกแบบสัมภาษณ์

เลขที่แบบสัมภาษณ์

กลุ่มควบคุม

กลุ่มทดลอง

แบบสัมภาษณ์ข้อมูลส่วนบุคคลของมารดา

ข้อมูลของมารดา

1. อายุ.....ปี
2. ระดับการศึกษา.....
3. อาชีพ
   ( ) ทำงานในบ้านหรือแม่บ้าน ระบุ.....
   ( ) ทำงานนอกบ้าน ระบุ.....
4. สถานภาพสมรส.....
5. จำนวนบุตร.....คน
6. รายได้เฉลี่ยของครอบครัวต่อเดือน.....บาท
7. โรคประจำตัว
   ( ) ไม่มี
   ( ) มี ระบุ.....
8. ผู้ช่วยเหลือดูแลบุตร

   .

   .

   .

ข้อมูลเด็กป่วย

1.อายุ.....ปี

   .

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   .

แบบสัมภาษณ์พฤติกรรมของมารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ

คำชี้แจง

แบบสัมภาษณ์ชุดนี้มีวัตถุประสงค์เพื่อสัมภาษณ์พฤติกรรมของมารดา เกี่ยวกับการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ ผู้สัมภาษณ์เป็นผู้อ่านข้อความในแบบสัมภาษณ์ให้มารดาฟังทีละข้อ เพื่อให้มารดาพิจารณาว่าข้อความในประโยคนั้นตรงกับการปฏิบัติจริงมากน้อยเพียงใด ถ้ามารดาไม่เข้าใจข้อความใด ผู้สัมภาษณ์จะต้องอธิบายให้ละเอียด เพื่อให้มารดาเข้าใจและตอบได้ตรงกับความเป็นจริงมากที่สุด ผู้สัมภาษณ์เป็นผู้ทำเครื่องหมาย / ลงในช่องคำตอบที่ตรงกับการปฏิบัติจริงของมารดามากที่สุดเพียงคำตอบเดียว แต่ละข้อมีคำตอบให้เลือกดังนี้

ปฏิบัติทุกครั้งหรือทุกวัน	หมายถึง	มารดามีการกระทำ เมื่อมีเหตุการณ์เกิดขึ้นตามที่ระบุไว้อย่างสม่ำเสมอ
ปฏิบัติบางครั้งหรือบางวัน	หมายถึง	มารดามีการกระทำ เมื่อมีเหตุการณ์เกิดขึ้นตามที่ระบุไว้น้อยครั้ง หรือนาน ๆ ครั้ง
ไม่เคยปฏิบัติเลย	หมายถึง	มารดาไม่เคยมีการกระทำ เมื่อมีเหตุการณ์เกิดขึ้นตามที่ระบุไว้ และให้ระบุเพิ่มเติมในช่องหมายเหตุ

ในกรณีที่มารดาตอบนอกเหนือจากข้อคำถามในแบบสัมภาษณ์ ผู้สัมภาษณ์จะบันทึกลงในช่องหมายเหตุ

ข้อ	ข้อความ	ปฏิบัติทุกครั้งหรือทุกวัน	ปฏิบัติบางครั้งหรือบางวัน	ไม่เคยปฏิบัติเลย	หมายเหตุ
1.	ปัจจุบันท่านให้อาหารบุตรอย่างไร (เลือกตอบตรงตามอายุของบุตรเพียง 1 ข้อ) - ตั้งแต่แรกเกิดถึง 4 เดือน ให้บุตรกินนมมารดาอย่างเดียว				
	- บุตรอายุ 4 เดือนขึ้นไป-12 เดือน ให้บุตรกินนมมารดา และให้อาหารเสริม เช่น ข้าวบด กล้วยบด ไข่แดงสุก เนื้อปลาสุกบด				
2.	ท่านจัดสภาพแวดล้อมภายในบ้านให้มีอากาศถ่ายเทสะดวกและไม่มีฝุ่นละออง ไม่มีควันไฟจากการหุงต้ม ยากันยุง				
3.	ท่านหลีกเลี่ยงการให้บุตรอยู่ในสถานที่ที่อากาศไม่บริสุทธิ์ เช่น งานวัด ตลาด โรงภาพยนตร์ ห้างสรรพสินค้า เป็นต้น หรือสถานที่ที่อากาศไม่บริสุทธิ์ เช่น บริเวณที่มีควันบุหรี่ เป็นต้น				
4.	ท่านเปิดพัดลมโกรกตัวบุตรโดยตรงเมื่อมีอากาศร้อน				
5.	ท่านดูแลความสะอาดร่างกายและสิ่งแวดล้อมของบุตร หลังจากบุตรถ่ายปัสสาวะ อุจจาระทุกครั้ง				
.	.....				
.	.....				
35	ถ้าบุตรคายยาออกหรืออาเจียนภายในครึ่งชั่วโมงท่านให้รับประทานยาอีกครั้ง				

คู่มือการพยาบาลระบบสนับสนุนและให้ความรู้แก่มารดาในการดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจ

คู่มือการพยาบาลระบบสนับสนุนและให้ความรู้นี้สร้างขึ้นตามแนวคิดระบบการพยาบาลระบบที่ 3 ของโอเรม คือการพยาบาลระบบสนับสนุนและให้ความรู้ โดยมีวัตถุประสงค์เพื่อส่งเสริมให้มารดาที่ดูแลบุตรขวบปีแรกที่ป่วยด้วยโรคติดเชื้อระบบหายใจสามารถดูแลบุตรด้วยตนเองได้ พัฒนาความสามารถในการดูแลบุตรด้วยตนเอง ให้เพียงพอตอบสนองความต้องการดูแลตนเองทั้งหมดของบุตร ช่วยป้องกันภาวะแทรกซ้อนและการกลับเป็นซ้ำของโรคติดเชื้อระบบหายใจ ซึ่งการพยาบาลระบบนี้จะเริ่มทำตั้งแต่วันแรกที่มารดาพาบุตรเข้ามารับการรักษาอยู่ตึกผู้ป่วยใน แผนกกุมารเวชกรรม 1 โรงพยาบาลศูนย์ราชบุรี จนกระทั่งถึงวันที่ 3 ของการพยาบาล รวมทั้งหมด 3 วัน โดยมีขั้นตอนการให้การพยาบาลประกอบด้วย 3 ระยะดังนี้

ระยะที่ 1 การสร้างสัมพันธภาพ มีการตกลงร่วมกันระหว่างผู้วิจัยและมารดา เป็นระยะที่สร้างความเป็นกันเอง ความคุ้นเคยกับมารดา และความไว้วางใจ

ระยะที่ 2 การดำเนินการพยาบาล เป็นระยะของการให้มารดาระบายความไม่สบายใจเกี่ยวกับบุตร ปัญหาในการดูแลบุตร และให้การช่วยเหลือ โดยวิธีการดังต่อไปนี้

- การสนับสนุนให้มารดาคงความพยายามปฏิบัติกิจกรรมการดูแลบุตรด้วยตนเอง เช่น การให้ความสนใจมารดาอย่างจริงใจให้กำลังใจมารดา เปิดโอกาสให้มารดาซักถามสิ่งคับข้องใจ ไม่วิจารณ์หรือขัดแย้งกับมารดา
- การชี้แนะแนวทางในการดูแลบุตรด้วยตนเอง เช่น ให้ความกระจ่างในสิ่งที่มารดาไม่เข้าใจเกี่ยวกับการดำเนินของโรค ชี้แจงให้มารดาได้รับรู้ขั้นตอนและประโยชน์ของการรักษา ประคับประคองและสนับสนุนมารดาในการปฏิบัติกิจกรรมการดูแลบุตรด้วยตนเอง
- การให้ความรู้และมีการสาธิตเกี่ยวกับการดูแลบุตรด้วยตนเองเพิ่มเติม คือ การดูแลบุตรที่จำเป็นตามภาวะเบี่ยงเบนทางสุขภาพ การดูแลบุตรที่จำเป็นโดยทั่วไปและการดูแลบุตรที่จำเป็นตามระยะพัฒนาการ

- การจัดสิ่งแวดล้อมที่ส่งเสริมความสามารถในการดูแลบุตรด้วยตนเอง เช่น การแจกคู่มือการดูแลบุตรด้วยตนเอง โดยมีขั้นตอนการดำเนินการพยาบาล ดังนี้

วันที่ 1 ผู้วิจัยให้มารดาระบายความไม่สบายใจ ปัญหาในการดูแลบุตร โดยวิธีการสนับสนุนให้มารดาคงความพยายามปฏิบัติกิจกรรมการดูแลบุตรด้วยตนเอง พร้อมทั้งชี้แนะแนวทางในการดูแลบุตร

จากนั้นผู้วิจัยให้ความรู้และสาธิตในเรื่องการดูแลบุตรที่จำเป็นตามภาวะเบี่ยงเบนทางสุขภาพและให้ความรู้เกี่ยวกับโรคติดเชื้อระบบหายใจ ตามคู่มือการพยาบาลที่กำหนดไว้ เป็นเวลา 20 นาที จากนั้นอธิบายชี้แจงช่วยเหลือเพิ่มเติมในสิ่งที่มารดาไม่เข้าใจและให้การดูแลบุตรไม่ถูกต้อง เป็นเวลา 40 นาที

วันที่ 2 ผู้วิจัยให้ความรู้ในเรื่องการดูแลบุตรที่จำเป็นโดยทั่วไป ตามคู่มือการพยาบาลที่กำหนดไว้เป็นเวลา 20 นาที จากนั้นอธิบายชี้แจงช่วยเหลือเพิ่มเติมในสิ่งที่มารดาไม่เข้าใจและให้การดูแลบุตรไม่ถูกต้อง

วันที่ 3 ผู้วิจัยให้ความรู้เรื่องการดูแลบุตรที่จำเป็นตามระยะพัฒนาการ ตามคู่มือการพยาบาลที่กำหนดไว้ เป็นเวลา 20 นาที จากนั้นอธิบายชี้แจงช่วยเหลือเพิ่มเติมในสิ่งที่มารดาไม่เข้าใจ และให้การดูแลบุตรไม่ถูกต้อง เป็นเวลา 40 นาที และแจกคู่มือการดูแลบุตรด้วยตนเองสำหรับมารดาที่บุตรขวบปีแรกป่วยด้วยโรคติดเชื้อระบบหายใจไว้อ่านทบทวนข้อปฏิบัติใน การดูแลบุตร

ระยะที่ 3 ระยะสิ้นสุดการพยาบาล เป็นระยะที่ผู้วิจัยทบทวนข้อควรปฏิบัติบางประการ ซึ่งมารดาสามารถใช้ในการดูแลบุตรด้วยตนเองต่อไปในระหว่างการรักษาและบอกให้มารดาได้รับทราบการสิ้นสุดการพยาบาลตามแผนการที่วางไว้

คู่มือการดูแลบุตรด้วยตนเอง

สำหรับมารดาที่บุตรขวบปีแรกป่วยด้วยโรคติดเชื้อระบบหายใจ

จัดทำโดย

นางสาว วัลทณี ทองมี

นักศึกษาปริญญาโท

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