

**THE EFFECT OF AN ADMISSION PROGRAM ON ANXIETY OF
MOTHERS OF HOSPITALIZED CHILDREN
WITH RESPIRATORY DISORDERS**

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF NURSING SCIENCE
(PEDIATRIC NURSING)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2005**

ISBN 974-04-6216-2

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RESPIRATORY DISORDER**

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

I would like to express my sincere gratitude and deep appreciation to Assoc. Prof. Rashanee Seeda, my major advisor and academic advisor, for her scholarly guidance, invaluable supervision, helpfulness and constant encouragement. I am deeply in debt to Assoc. Prof. Dr. Kaimook Wichiencharoen for her kindness, invaluable suggestion and encouragement throughout this master program. I would like to convey my sincere gratitude to Dr. Wanlaya Thampanichawat for her understanding, valuable advice and helpfulness. Further, grateful acknowledgment is also given to Asst. Prof. Dr. Waraporn Chaiyawat and Assoc. Prof. Dr. Saipin Gasemgitvatana, as the thesis committee for her constructive comments and valuable recommendation for this study.

I would like to acknowledge all my experts for their useful comments and valuable suggestion to improve the instruments. I wish to express my deep appreciation to Director of Inburi Hospital for permission to carry out this study. I would like to give special thanks to staff nurses for their great assistance during the collection of data.

Most of all, my deepest gratitude is expressed to my parents for their love and concern. The special appreciation is given to Dr. Jutti Rattanasiri, who never fails to provide strong support and assistance. Lastly, I feel indebted to my sister and my friends for their love, assistance, support and never ending encouragement.

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ABSTRACT

This quasi-experimental research was used to examine the effect of an admission program on anxiety of mothers who have a hospitalized child with respiratory disorders. Self-regulation theory was used as a framework for this study. The subjects were 60 mothers with hospitalized child with respiratory disorder. They were selected by convenient sampling and divided into 2 groups. The subjects were paired by age and education. The mothers in the experimental group were given an admission program while the control group received the usual nursing care. Used a Demographic Data Form, the State Anxiety Inventory (SAI Form Y-I) for data collection, the data were analyzed by paired t-test, independent t-test and ANCOVA with the pre-test score as a covariate.

The findings of this study showed that the mean anxiety scores of mothers who received the admission program were significantly lower than those of the control group who received usual nursing care ($p < 0.001$). For the experimental group, the post-test mean anxiety score was lower than the pre-test mean anxiety score with statistical significance at p-value 0.001.

This finding substantially shows the effectiveness of this admission program. Pediatric nurses can apply this program in their work to help the mothers or relatives of children hospitalized at pediatric wards to cope with their anxiety.

KEY WORDS : ANXIETY OF MOTHERS / ADMISSION PROGRAM / HOSPITALIZED CHILDREN / RESPIRATORY DISORDERS

100 P. ISBN 974-04-6216-2

ผลของโปรแกรมแรกรับต่อความวิตกกังวลของมารดาที่มีบุตรป่วยด้วยโรคระบบทางเดินหายใจที่เข้ารับการรักษาในโรงพยาบาล (THE EFFECT OF AN ADMISSION PROGRAM ON ANXIETY OF MOTHERS OF HOSPITALIZED CHILDREN WITH RESPIRATORY DISORDERS).

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บทคัดย่อ

การวิจัยกึ่งทดลองนี้เพื่อศึกษาผลของโปรแกรมแรกรับต่อความวิตกกังวลของมารดาที่มีบุตรเข้ารับการรักษาในโรงพยาบาลด้วยโรคระบบทางเดินหายใจ โดยใช้แนวคิดของทฤษฎีการควบคุมตนเอง (self-regulation theory) ในการให้ข้อมูลแก่มารดา เลือกกลุ่มตัวอย่างตามคุณสมบัติที่กำหนด จำนวน 60 ราย แบ่งเป็นกลุ่มทดลอง และกลุ่มควบคุมกลุ่มละ 30 ราย โดยการจับคู่ให้กลุ่มตัวอย่าง มีอายุ และระดับการศึกษาใกล้เคียงกัน กลุ่มทดลองได้รับโปรแกรมแรกรับจากผู้วิจัย ส่วนกลุ่มควบคุมได้รับการพยาบาลตามปกติ เก็บข้อมูลโดยใช้แบบสอบถามข้อมูลส่วนบุคคล และแบบวัดความวิตกกังวลขณะเผชิญของสปีลเบอร์เกอร์ ในการเก็บรวบรวมข้อมูลและนำมา วิเคราะห์ค่าที่ (paired t-test and independent t-test) และวิเคราะห์ความแปรปรวนร่วม (ANCOVA) โดยใช้คะแนนความวิตกกังวลก่อนการทดลองเป็นตัวแปรร่วม (covariate)

ผลการศึกษาพบว่า ภายหลังจากทดลอง ค่าเฉลี่ยคะแนนความวิตกกังวลของมารดาในกลุ่มที่ได้รับโปรแกรมแรกรับต่ำกว่ากลุ่มที่ได้รับการพยาบาลตามปกติอย่างมีนัยสำคัญทางสถิติที่ระดับ .001 และค่าเฉลี่ยคะแนนความวิตกกังวลหลังการทดลองของมารดาในกลุ่มที่ได้รับโปรแกรมแรกรับต่ำกว่าก่อนได้รับโปรแกรมอย่างมีนัยสำคัญทางสถิติที่ระดับ .001

จากผลการศึกษา มีข้อเสนอว่า เนื่องจากโปรแกรมแรกรับนี้สามารถลดความวิตกกังวลของมารดาได้ ดังนั้นพยาบาลจึงควรนำโปรแกรมแรกรับนี้ไปใช้กับมารดาผู้ป่วยเด็กที่มีปัญหาาระบบทางเดินหายใจ เพื่อลดความวิตกกังวลต่อไป

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CHAPTER I

INTRODUCTION

Background and Significance of the Study

The annual health status report of the Thai citizens in the year 2000 states that children suffer from respiratory diseases as often as 6 to 8 times a year (Chuprapawan, 2000) and this is the major reason for need of treatment at hospitals for children under the age of five. Respiratory diseases are the major cause of illness and death of children aged 1 month to 5 years (Suwanjutha, 1997). This information coincides with the statistic of the Inburi hospital's pediatric department during 2000-2002, which show that the number of patients aged 1 month to 5 years suffering from respiratory diseases treated at the hospital, is on the increase each year. There were 249, 269 and 304 patients in the years 2000, 2001 and 2002 respectively. The treatment of the pediatric patients with respiratory disorders at the hospital requires several procedures that may be invasive, painful or unpleasant, for example venopuncture, lung percussion, respiratory airway suction, nebulization, intravenous fluid administration and injections. Separation from the parents during the procedures and the unfamiliar environment may also affect the patient, especially the ones under 7 years of age because they are most dependent on their parents for protection from danger. When they undergo these procedures, they may perceive them as punishment for their misbehavior (Ziegler & Prior, 1994). The children may express their reaction to the hospitalization in different ways for example, behavioral regression, anger, aggressiveness, denial, isolation or show other psychosomatic symptoms such as sleeping, and eating problems, pain, and anxiety (Kotchaphakdee, 1998).

The children's expression and some procedures that they are receive not only impact to them but also the mothers. The child's hospitalization also causes tremendous amount of stress and anxiety for the mother (Melnyk, 2000). Especially, during the children are admitted to the pediatric ward, the admission period is cause to high stress for the mothers that first admission. The high stress and anxiety levels

result in decreased or altered perception of situations, reduced reasonability, confusion and lack of attention. These conditions may hinder the process of child care during the illness because the mother's abilities are reduced in various aspects including the ability to learn to care for the ill child (Farrell & Frost, 1992). Therefore, family-centered nursing intervention to reduce anxiety level of the mother prior admission is of utmost importance for efficient child care.

Giving information in the period of admission provide the mothers form unambiguous expectations about what will happen during the hospitalization. The information includes a description of the typical experience in term of physical sensations and symptoms, temporal characteristics, environmental features, and cause of sensations, symptoms, and other aspect of the mother's experience. When the mothers receive the information, they use their perceptions and interpretations of the health care experience to regulate their coping response and behavior. Then the information also enhances the mother's coping that cause to reduce maternal anxiety.

In addition, a study was also conducted by Chantana Pongkhamphan (Pongkhamphan, 1994) regarding the basic needs of the mothers of hospitalized children and their fulfillment. This study revealed that more than 50 percent of the mothers had five basic needs: 1.To know the effects of their child's illness, 2.To know the amount of expenses, 3.To be with the child during the treatment, 4.To be able to use facilities at the hospital ward, and 5.To be able to speak and share their experiences with other mothers and health care personnel. The number of mothers whose needs were fulfilled was less than 50 percent. This study is in agreement with another study by Puangpetch Yapwatanapan (Yapwatanapan, 1997) regarding the needs of the mothers of hospitalized children at the pediatric ward and their fulfillment. The study revealed that what the mothers need most was the assurance of their children's safety. More than half of the sample needed information on the mother's role in child care and convenience in visiting their children. It was also found that more than half of them had received responses to their basic needs at a low level or no response at all. Thus it may be concluded that the basic needs of the mothers of hospitalized children fall into 4 categories i.e. 1. Need for information regarding the illness and the treatment of the child, 2. Need for information on the role of the mother in caring for the ill child, 3. Need for information about the ward environment, the

accessibility to places, equipment and staff, and 4. Need for information regarding the treatment and hospitalization expenses.

The researcher studied the emotions and needs of a group of 10 mothers of children with respiratory disorders who were hospitalized and received treatment at the pediatric ward, Inburi Hospital, Singburi province during 13 April to 15 April 2002. It was found that all of mothers suffered from anxiety and all of them expressed the need for information about the condition and the treatment of their children on admission and the progress report on the children's condition periodically. They also needed to know what they were supposed to do during hospitalization, the environment in pediatric ward, the equipment that their children were used and how the approachability to the staff at the pediatric ward. The inability to fulfill these needs would lead to increased maternal anxiety to the degree that is critical (Krischbaum, 1990). Therefore, intervention to reduce the stress and anxiety is important (Schepp, 1991). Schepp studied the factors that influence the coping mechanism of the mothers of hospitalized children. It was found that the mothers who received information in advance regarding the situation and about the child's condition experienced lower level of anxiety as compared to the mothers who did not receive any information. Melnyk (1995a) also found that giving information to the mothers about their role in child care and about the child's behavior during the illness helped reduce their anxiety level.

Therefore, the researcher concluded that giving information according to integrate the typical information from self-regulation theory and the mothers' needs will help reduce their anxiety during their children's hospitalization. The information of an admission program can group in to 4 categories: 1.the role of mothers in children care, 2. the behavior of the children when hospitalization, 3. the environment in the pediatric ward, and 4. the rule of pediatric and the hospitalization expense.

In Thailand, no research studies the effectiveness of admission program that provides information to the mothers in order to reduce their anxiety levels regarding the hospitalization of their children. The researcher as a nurse responsible for care of pediatric patients and their families at Inburi Hospital is interested in studying the effectiveness of this program. The hypothesis of this research is that the admission

program can reduce the anxiety level of mothers of hospitalized children with respiratory disorders

Research Question

Can the admission program reduce anxiety level of mothers of hospitalized children with respiratory disorders?

Purpose of the Study

To study the effect of the admission program on anxiety of mothers of hospitalized children with respiratory disorders.

Conceptual Framework

Anxiety is an emotion that a person has towards certain situations that are perceived as threatening. The reduction of anxiety occurs when the person is able to cope with the situations. Seeking information is one of the effective coping methods (Lazarus & Folkman, 1984).

In this study, the Information Processing Theory and the Self Regulation Theory have been applied (Leventhal & Johnson, 1983). The Information Processing Theory states that providing information means to inform in advance the situation that may occur and to explain the abstract information in an objective sequential way pertaining to the situations. This will help the person take in the new information, store it in the memory and use it to plan actions when faced with the particular situations. The Self Regulation Theory is a cognitive theory that uses the concept of the Information Processing Theory to explain human behavior. The main focus is on the adjustments in accordance with the stressful situations. It explains that information helps a person to expect and predict the situations in advance and thus be able to adjust effectively. Providing information leads to 1. Decrease in the contradiction of a person's expectations and the real occurrence, 2. Increase the ability of the person to expect future situations, 3. Increase the ability of the person to understand an event. (Johnson & Lauver, 1989). A mother who can expect the situation about to occur with her child can respond to a negative situation better than a mother who has to face the situation unprepared (Laventhal & Johnson, 1983). Also, when the situation takes place

according to the given information, it is easier for the mother to understand (Johnson, 1984).

The intervention base on self-regulation theory consists of a description of the impending event at the experiential level using concrete, objective terms. The information includes a description of the typical experience in terms of physical sensations and symptoms, temporary characteristics, environmental features, and causes of sensations, symptoms and other aspects of the mother's experience.

In this study, the above mentioned studies have been used as guidelines to plan the program to provide information to the mothers of the pediatric patients so as to prepare them about the hospital experience prior admission.

In addition, the information that provided to the mothers was derived from the study by Melnyk (1994), regarding the effect of information on the coping abilities of the mothers of hospitalized children. The information given includes the role of the parents in the patients' care and the behavior of the hospitalized children. From the studies by Pongkhampan (1994), and Yapwatanapan (1997) about the needs of the mothers whose child is hospitalized, the information provided to the mothers may be grouped into 4 categories: 1. the role of mother in child care, 2. the behavior of the child, 3. the environment, and 4. the hospitalization expenses.

Therefore, the researcher integrate the information of self-regulation theory and the results of the above mentioned studies to developing the admission program to provide four types of information to the mothers so that they are able to interpret, understand, and cope with the situations more efficiently.

The admission program starts with the health care staff building relationship with the mother, giving information via videotape and giving pamphlets that provide information on how to care for children with respiratory disorders during hospitalization. The expected outcome is that the level of anxiety of the mothers participating in this program will reduce.

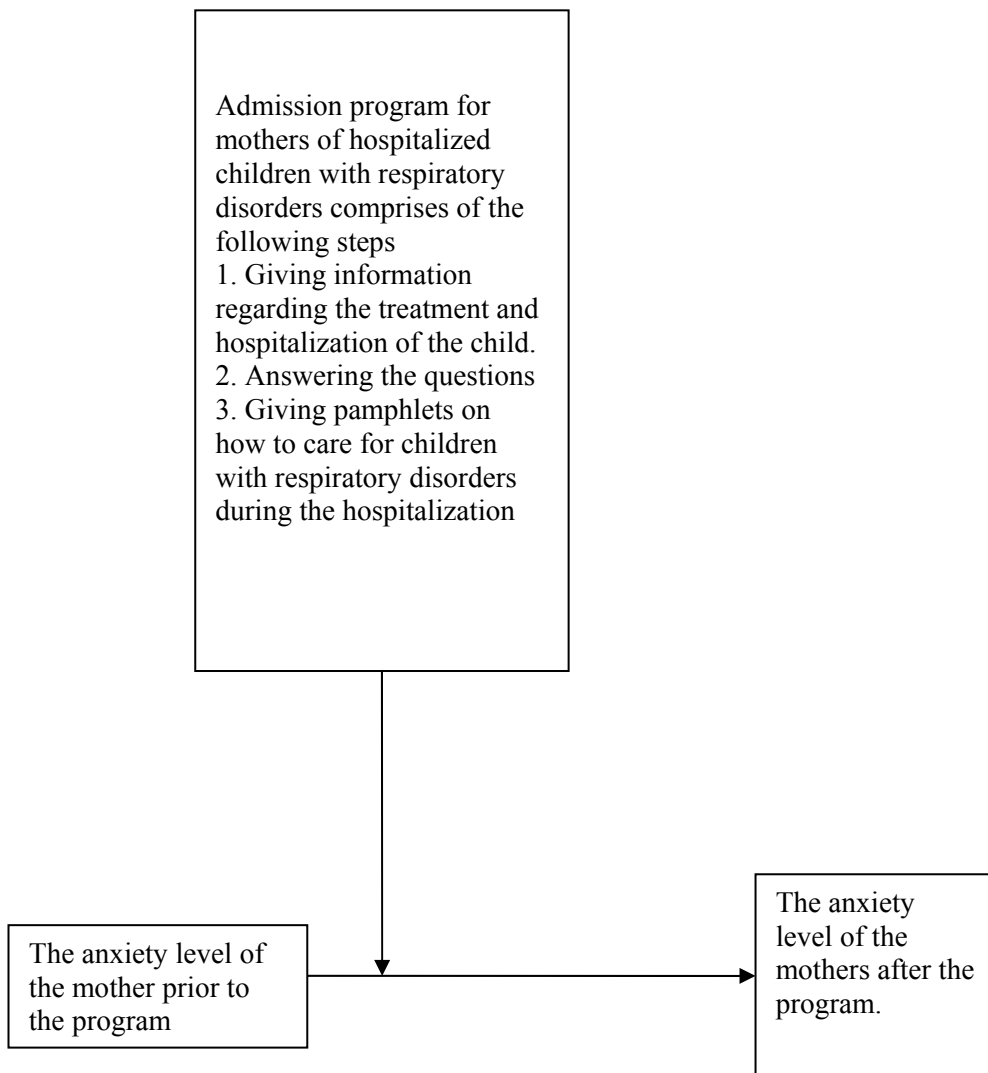


Figure 1. The Conceptual Framework of the Study

Research Hypothesis

1. The level of anxiety of mothers in the experimental group after the admission program is lower than the anxiety level of mothers before the program.
2. The level of anxiety of mothers who received the admission program in the experimental group is lower than the anxiety level of mothers in the control group.

Scope of the Study

This study was conducted with the mothers of children with ages ranging from 1 month to 5 years who suffered from respiratory disorders and were admitted to the pediatric ward of Inburi Hospital, Singburi province during August 2002 to January 2003.

Definition of Terms

1. Admission program for mothers of hospitalized children with respiratory disorders refers to a program comprising of 3 steps i.e. giving information via videotape, answering the mothers' questions and giving pamphlets on how to care for children with respiratory disorders during the hospitalization.

2. Anxiety means the emotional state of the mothers toward the hospitalization of their children. It includes the mother's feelings of apprehension, tension, concern and fear of the unknown when there are changes in the environment and changes in maternal role. The anxiety experienced by the mothers can be measured by using the Spielberger's State Anxiety Inventory: SAI form Y1 (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1977).

3. The usual nursing care means the standard nursing care that the mothers would normally receive from nurses and other health care personnel at the pediatric ward when their children are hospitalized.

Expected Outcomes and Benefits

1. To implement the admission program in order to reduce the anxiety levels of mothers of children hospitalized for treatment of respiratory disorders.

2. To provide basic information to help Inburi Hospital administration develop guidelines in improving the nursing care and services given to pediatric patients and their family.

CHAPTER II

LITERATURE REVIEW

In this chapter, the review of the literature concerning the effectiveness of admission on the anxiety level of the mothers of hospitalized children with respiratory disorders, is organized and presented as follows:

1. Effect of Hospitalization on Children and Family
 - 1.1. Effect of Hospitalization on Children
 - 1.2. Effect of Hospitalization on Family
 - 1.3. Anxiety and Anxiety Assessment
2. Nursing Strategies for Reducing Maternal Anxiety
 - 2.1. Information Processing Theory and Self-regulation Theory
 - 2.2. Effect of Information on Anxiety Reduction

Effect of Hospitalization on Children and Family

1.1. Effect of Hospitalization on Children

Children, especially during the early years, are particularly vulnerable to crises of illness and hospitalization. This is because stress represents a change from the usual state of health and environmental routine, and children have limited coping abilities to resolve stressful events. Children's reaction to these crises are influenced by their developmental age, previous experiences with illness, separation or hospitalization, innate and acquired coping skills, seriousness of illness, and the available support system. The major cause of stress in children from infancy throughout preschool years, especially for children aged 6 to 30 months, is separation anxiety. The manifestations of separation anxiety in young children are as follows: (Wong, 1993)

1.) Phase of protest

Behaviors observed during later infancy: cries, screams, searches for parents, clings to parents, avoids and rejects contacts with strangers, verbally attacks strangers (e.g. "go away"), physically attacks strangers (e.g. kicks, bites, hits, pinches),

attempts to escape to find parents, attempts to physically force parents to stay. These behaviors may last from hours to days. Protest such as crying may be continuous, ceasing only with physical exhaustion.

2.) Phase of despair

Behaviors observed: inactive, withdraws from others, depressed, sad, uninterested in environment, uncommunicative, regresses to earlier behaviors (e.g. thumb-sucking, bed-wetting, use of pacifier, use of feeding bottle). These behaviors may last for a varying length of time. The child's physical condition may deteriorate from refusal to eat, drink, or move.

3.) Phase of detachment

Behaviors observed: shows increased interest in surroundings, interacts with strangers or familiar caregivers, form new but superficial relationships, appears happy. Detachment usually occurs after prolonged separation from parents, rarely witnessed in hospitalized children. These behaviors represent superficial adjustments to loss.

One of the factors influencing the amount of stress imposed by hospitalization is the amount of control that persons perceive themselves as having. Lack of control increases the perception of threat and can affect a child's coping skills. Many hospital situations reduce the amount of control a child feels. Although the usual sensory stimulations are lacking, the additional hospital stimuli of sight, sound, and smell may be overwhelming. Without an insight into the type of environment conducive to children's optimum growth, the hospital experience can, at best temporarily slow development or at worst permanently retard it.

1.2. Effects of hospitalization on the family

The crises of childhood illness and hospitalization affect every member of the nuclear family and, to varying degrees, members of the extended family. Parents' reaction to their children's illness depends on a variety of influencing factors. Although the factors that are most likely to influence their responses cannot be predicted, a number of variables have been identified (Wong, 1993):

- a. Seriousness of the threat to the children
- b. Previous experience with illness or hospitalization
- c. Medical procedures involved in diagnosis and treatment

- d. Available support systems
- e. Personal ego strengths
- f. Previous coping abilities
- g. Additional stress on the family system
- h. Cultural and religious beliefs
- i. Communication patterns among family members

Most parents respond to their children's illness and hospitalization with remarkably consistent reactions. Initially, parents may react with disbelief, especially if the illness is sudden and serious. Following the realization of illness, parents react with anger or guilt, or both. They may blame themselves for the children's illness or become angry at others for some wrongdoing. Even in the mildest form of illness, parents may question their adequacy as caregivers and review any actions or omissions that could have prevented or caused the illness. When hospitalization is indicated, parental guilt is intensified because they feel helpless in alleviating the child's physical and emotional pain. (Wong, 1993)

Fear, anxiety and frustration are common feelings expressed by the parents.

Fear and anxiety may be related to the seriousness of the illness and the type of medical procedures involved. Often a great deal of anxiety is related to the trauma and pain inflicted on the child. Feelings of frustrations are often related to lack of information about procedures and treatments, unfamiliarity with hospitals rules and regulations, a sense of unwelcome from the staff or fear of inquiring their doubts from the staff. Much frustration can be alleviated in a pediatric unit when parents are aware of what is expected of them, are encouraged to participate in their children's care and are regarded as the most significant contributors to their children's health (Wong, 1993).

Parents may eventually react with some degree of depression. The depression usually occurs when the acute crisis is over, such as following hospital discharge or complete recovery. Mothers often comment on their feeling of physical and mental exhaustion after all the family members have adapted to the crisis. Parents may also worry about and miss their other children, who may be left in the care of the family, friends or neighbors. Other reasons for anxiety and depression are related to concerns

for the children's future well being, including negative effects produced by the hospitalization and any financial burden incurred from the hospitalization.

Mothers of hospitalized children not only feel separated from their children but also feel that other people are replacing them. They experience feelings of inadequacy as others provide care for their children. Anxiety during a children's illness not only interferes with the mothers' ability to provide support but may also be transmitted to the children. The anxious mothers can be recognized by trembling, coarse or wavering voice, restlessness, irritability, withdrawal or erratic body movements. Angry, hostile and aggressive behavior towards those caring for their children may be evident (Marlow, 1988). Reider (1994) found that maternal anxiety is crucial since the level of anxiety is relevant to learning and problem solving ability and stated that hospitalized children may bring serious anxiety to the family.

Mothers need to be introduced to the people who will be caring for their children, to the facilities available for their use, and to at least one mother of another child hospitalized at the unit. They also need information about the policies of the hospital or unit that affects them.

There are many studies that have been conducted regarding maternal needs during their children's hospitalization. Kristensson-Hallstrom and Elander (2001) studied the parents' needs during hospitalization. Twenty parents were interviewed and asked to define and describe their needs during hospitalization and to identify their actions in order to fulfill these needs. The result of this study is comprised of ten types of needs i.e. communication, basic care, contact with other people, staff's behavior, empathy, competent caregivers, continuity, integrity, participation in decision making, and pain relief. The descriptions given by the patients on how they ensured their needs were met could be divided into two groups: 1.) openly seeking attention or 2.) not wanting to disturb the staff.

In a study of twenty parents whose children were hospitalized for hypospadias repair in a pediatric surgical department in Sweden, Kristensson-Hallstrom, and Elander (1997) found that the most important issue for the parents was feeling secure at the hospital. Parents used one of the three different strategies that enable them to feel secure at the hospital: a) relinquishing the care of their children to the nursing staff, b) obtaining a measure of control over their children's care, and c) relying on

knowing the best for their children. The strategy parents adopted to help them feel secure were found to correspond with the ways parents experienced during hospitalization.

Kristjansdottir (1991) explored areas of needs among parents of 2-6 year old children who were hospitalized. Six kinds of needs were recognized: a) the need to be able to trust doctors and nurses, b) the need for information, c) the needs related to other family members, d) the need to feel that they are trusted, e) the needs related to human and physical resources and f) the need for support and guidance. A congruency is found between statements about the needs of parents of hospitalized children and the needs of the parents expressed by the parents themselves and the pediatric health care professionals.

A similar study was conducted by Yapwatanapan (1997) at the PICU of Nakorn Chiangmai Hospital. Yapwatanapan defined five kinds of needs including information, confidence regarding child safety, counseling, mother's role, and convenience when visiting their child. The confidence in the child's safety was the major needs of mother. Moreover, the mothers in the study also showed a high demand for information on mother's role.

Pongkhamphan (1984) conducted a study regarding the needs of the mothers of children hospitalized at Singburi Provincial Hospital. This study identified the maternal needs in five aspects including need for information, medical treatment, performing maternal role, mental support, privacy and physical response. Furthermore, 50 percent of the mothers in the study expressed some particular needs, while less than 50 percent had all their needs fulfilled.

The level of maternal anxiety varies depending on the level of the children's sickness. Maternal anxiety arises from five significant causes (Evans & Hansen, 1980)

- 1.) Ninety four percent of mothers whose children were hospitalized worried that their children might die (Etzler, 1987; Jay, 1977)

- 2.) Most mothers want to take care of their hospitalized children physically and mentally. However, they may have limited understanding of their children's sickness, symptoms and treatment (Jay, 1977). The mothers may be confused about their role and how to treat their children due to lack of self confidence.

- 3.) The hospital environment may be strange for the children and may make

them feel alienated. The children have to come in contact with the medical personnel, physicians and nurses. Azarnoff and Hardgrove (1981) stated that during the admission process, the hospital's staffs have the opportunity to create a good relationship with the family of the sick child. The noise created by medical devices may also be the cause of maternal anxiety (Halm & Alpen, 1993).

4.) When the children are hospitalized, other children in the family and the treatment expenses may also need to be monitored (Wong, 1993).

5.) Medical and daily expenses may cause a financial problem. Mothers with high anxiety level are likely to be less perceptive, and have poor attention. These mothers feel excited and powerless, and often speak loudly with high pitched tone (Srirenawat, 1987).

In addition, there are other factors which could also lead to anxiety of the mothers as follows:

1. Age of the mothers: According to Lazarus and Folkman (1984), when individuals get older, they have more experience of the crisis situation. They will be more mature in thinking, decision-making, and coping strategies than younger ones. Similarly, Mile (1989) reported that the older parents are less stressed than younger parents.

2. Educational level: A higher educational level may enable an individual to better realize whatever risk factors causing stress and anxiety. Moreover, it may help an individual to easier understand and enhance the utilization of previously successful experiences or her behaviors to solve the stressful situation reasonably (Jalowice & Powers, 1981)

3. Marital Status: When the mothers have to cope with an anxious event, the spouse is the most effective social support for them. Intarawichai's (1990) study showed that a coping behavior of mothers whose children have a chronic illness is positively related to social support.

4. Occupation: Occupation is a maternal resource beneficial when coping with stressors. Kongpan's study (1990) revealed that maternal occupation is positively related to coping methods. She explained that a mother who is a housewife uses less coping strategies than the one who is working outside the house. In other words, a housewife-mother has a little opportunity in problem management. In contrast, a

mother who is working outside has more experience in problem management gained from her job. Furthermore, she may receive social support from her co-worker, so she can cope with stress better.

5. Number of children: Lewandoski (1980) reported that when the children are hospitalized, the mothers who have several children have a higher level of anxiety. However, social support from the grandfather, grandmother, or other relatives in caring for the siblings can reduce the mothers' anxiety (Prodhoe & Peter, 1995). In contrast, some studies indicated that mothers with only one child have higher level of anxiety than mothers with several children, so they may appraise that the child's illness is severe and that the child might die.

6. Family income: Family income is one of the significant factors influencing maternal anxiety. Income is a means of financial support for several expenditures during a children's hospitalization, such as therapeutic cost, payment for travel, and food. Mothers who have less family income will have more anxiety than those who have higher family income. The study by Kongpan (1999) reported that there is a positive relationship between coping with the family's problems and family income of mothers.

7. Children's illness: Kongpan (1990) assessed the maternal perception of severity of children's illness on the mother's well-being. She found that the maternal perception of severity of the children's illness was negatively related to the maternal well-being. It can be explained that if the mothers perceive a high level of severity of the children's condition, they will have less maternal well-being. Moreover, most mothers determine the severity of the children's illness from the children's physical appearance such as beside monitors, the number of intravenous lines, and presence or absence of a respirator (Youngblut & Shiao, 1993). In particular, mothers will have a high level of anxiety if they see their children on a respirator (Halm & Alpen, 1993). Thus, if the mothers perceive that their children have a severe illness, their anxiety will be high (Srilanawat, 1987)

8. The age of the ill children: Since the development of children at different ages vary in much aspect; language, emotion, intellect, and a way to adapt themselves to the change of environments and to the strangers. For example, children at the age of 0-1 year would simply express themselves by crying, being afraid of strangers. They

have to depend mainly on adults both physical and mental. Adults feed them, and take care of cleanliness with affection. With restrictive communication may cause mothers with young children feel more anxious than those with older. Children at the age of 1-3 years do not understand the reason, they express their feelings openly, they cry if things they need are not fulfilled. They are afraid of losing, or separating. If the mothers with children at this age do not understand this emotional behavior, they may feel that their children are resistant to them and does not need them. The mothers may become anxious. In case ill children at young age, the mothers have increased difficulty caring of their ill children in promoting development, physical, mental, and society. In addition, the mothers find it hard to explain the things to their children. According to the study of McCubbin (1983) found that the age of children in relation to the stress of the parents

All of the above mentions, this show that it dose not make any different at the variety of the anxiety of the mothers, high or low. It depends mainly on many factors. The anxiety depends on the stimulus, perception, interpretation of persons towards the events, custom, and cultures. The evaluation is influenced by variable of the surrounding such as the present condition of society, customs, traditions, cultures, and the person being variable such as the change of physical and mental, together with the nature of person.

The anxiety of the mothers may affect the children and cause feelings of insecurity, worry and fear during the hospital stay (Hazinski, 1992). This could lengthen the sickness of the children because the psychological stress may lead to physiologic complications. The release of catecholamines such as epinephrine and nor- epinephrine and their metabolites is one of the most reliable indicators of stress. Increase in blood pressure and pulse rate are early responses of the cardiovascular system to stress. Cardiac glycogen tends to be depleted during periods of stress, and release of vasopressin may result in a decrease in urine output. Stress can accelerate blood coagulation and increase fibrinolysis. The basal metabolic rate may increase thus causing the temperature regulation to be more difficult by an increase in heat production and concomitant with an increase in heat loss. Adrenocorticotrophic hormone (ACTH) is released, causing increased secretion of glucocorticoids, which in turn may lead to hyperglycemia, suppress immune and inflammatory reactions,

thymus shrinkage, and atrophy of lymph nodes. Stress ulcers, increased catabolism, and loss of body weight may occur (Lewandoski, 1992).

1.3. Anxiety and Anxiety assessment

Definition of anxiety:

Anxiety is a concurrent emotion of life. It has always existed and belongs to no particular epoch or culture. The meaning of anxiety was derived from the Greek root “to press tight”. The word “anxious” is derived from the Latin word “angere”, which means “to strangle”. It is similar to the word “anger”, which is regarded as “acute pain, suffering, or distress”. It implicates a perception of self and relationships with others (Stuart, 2001).

Anxiety is a feeling of fear caused by the feelings of uncertainty in the future, loneliness and feelings of insecurity. Anxiety is a subjective individual experience. It is stimulated by the unknown and may precede all new experiences such as entering school or giving birth to a child. Anxiety is a response to particular situations and is communicated interpersonally. It may be contiguous from one to another. For example, if a nurse is talking with an anxious patient within a short period of time, the nurse may also experience feelings of anxiety. Similarly, if a mother is very anxious in a specific situation, this anxiety may be transmitted to their children. Anxiety as a concept has been defined and described by many respected authors (Stuart, 1995).

Stuart (2001) stated that anxiety is a responsive feeling which occurs as a result of threat to a person’s self image, self esteem or identity. It results from a menace to something central to one’s personality and essential to one’s existence and security. It may be related to the fear of penalty, failure in love, interference in a relationship, solitude or loss of body function.

Isaacs (1996) described that anxiety is an emotion of stress that arises from a threat with uncertain cause.

Wilson and Kneisl (1992) explained that anxiety is a condition of uneasiness or discomfort with varying degrees. It is always coupled with guilt, doubt, fear, and obsession. It is so uncomfortable that most persons try to get rid of it as soon as possible.

Gorman, Sultan and Luna-Raines (1989) described anxiety as feelings of disquiet, a diffuse feeling of dread, apprehension or unexplained discomfort, activation of the autonomic nervous system in response to a vague, nonspecific threat. It is a subjectively painful warning of impending danger, real or imagined, that motivates the individual to take corrective action to relieve the unpleasant feelings and is experienced both psychologically and physiologically.

Speilberger (1972) states that when a motivation from both external (i.e. events) and internal (i.e. thought, feeling or need) occur, each person will perceive this situation as harm to oneself, both physically and mentally. This “Cognitive Appraisal” is a feeling of being threatened by any potential matter.

There are commonalities among perceptions of what constitutes a threat, loss or danger. Individuals typically feel anxious when they perceive a loss of or a threat to the following (Keltner, Schwecke, & Bostrom, 1999)

1. Health or the ability to perform and function
2. Self esteem or self respect
3. Self control
4. Power or control over one’s life
5. Status or prestige
6. Resources (emotional, physical, financial, spiritual, social and cultural)
7. Loved ones
8. Freedom or independence
9. Needs, goals, desires, and expectations

Overall, anxiety is an emotion responding to an uncertain situation or thing that could be threatening to a self confidence and self esteem. This causes a person to feel uncomfortable, anxious and insecure.

Sources of Anxiety

Anxiety is an inevitable result of the attempt to maintain equilibrium in a changing world (Wilson and Kneisl, 1992). People experience anxiety in many different situations and interpersonal relationships. Stimulus of anxiety varies with each individual. However, the general causes of anxiety have been classified into two major types of threats:

1. Threats to biological integrity: actual or impending interference with basic human needs such as need for food, drink or warmth.

2. Threats to self security:

2.1.) Unmet expectations important to self integrity

2.2.) Unmet needs for status and prestige

2.3.) Anticipated disapproval by significant others

2.4.) Inability to gain or reinforce self respect or to gain recognition from others

2.5.) Guilt or discrepancies between self-image and actual behavior

Signs of Anxiety

Anxiety cannot be directly observed, but may be recognized by:

1. Monitoring the person's behavior and physical response in an attempt to decrease anxiety.

2. Analyzing the feelings of the person experiencing anxiety. Physical and mental alteration of an anxious person includes:

2.1.) Physiological change (Stuart, 2001)

Neuromuscular: increased reflexes, startle reaction, eyelid twitching, insomnia, tremors, rigidity, restlessness, pacing, stained face, generalized weakness, wobbly legs, clumsy movement.

Cardiovascular: palpitations, increased blood pressure, faintness, actual fainting, decreased blood pressure, decreased pulse rate.

Respiratory: rapid breathing, shortness of breath, pressure on chest, shallow breathing, lump in throat, choking sensation, gasping.

Gastrointestinal: loss of appetite, revulsion towards food, abdominal discomfort, abdominal pain, nausea, heart burn, diarrhea.

Urinary tract: pressure to urinate, frequent urination.

Skin: flushed face, localized sweating (palms), itching, hot and cold spells, pale face, generalized sweating.

Pupil: pupil dilatation.

Behavioral: restlessness, physical tension, tremors, startle reaction, hyper vigilance, rapid speech, lack of coordination, accident proneness, interpersonal withdrawal, inhibition, flight, avoidance, hyperventilation.

2.2.) Emotional change

The following are the emotional changes: anxiety, anger, irritability, low self esteem, depression, paranoid, uncertainty, jealousy, worry, excitement, fear. The changes also include a high potential to cry, isolation, self criticism, blame others, pay less attention to themselves, and high level of frustration and tension.

Types of Anxiety

Speilberger, Gorsuch and Lushene (1970) explained two types of anxiety:

1.) State Anxiety: State anxiety is an emotion that happens for a short term. A person is aware of stress and fear while the autonomic nervous system is more active. The level of anxiety can change at all times

2.) Trait Anxiety: Trait anxiety is a unique nature of each person. It shows when a person responds to a threatening situation and increases with stress. A person with high level of trait anxiety will be uneasy more often than a person with low level of trait anxiety, due to the sensitive perception of threat and danger.

Levels of Anxiety

Peplau (1963) identified four levels of anxiety and described their effects:

1. Mild anxiety is associated with the tension of day-to-day living. During this stage, a person is alert and his or her perceptual field is increased. The person sees, hears, and grasps information more than before. This kind of anxiety can motivate learning and produce growth and creativity.

2. Moderate anxiety, in which the person focuses only on immediate concerns. This involves the narrowing of the perceptual field as the person sees, hears and grasps less information. The person's perceptual field is blocked in selected areas, but can attend to more if directed to do so.

3. Severe anxiety is marked by a significant reduction in the perceptual field. The person tends to focus on a specific detail and does not think about anything else. All behavior is aimed at relieving anxiety, and much direction is needed to focus on another area.

4. Panic is associated with awe, dread and terror. At this stage, details are blown out of proportions. The person is unable to do things even with direction because of a complete loss of control. Panic involves the disorganization of the personality. There are increased motor activity, decreased ability to relate to others, distorted perception and loss of rational thinking. Panic is a frightening and paralyzing experience. The person in panic is unable to communicate or function efficiently. This level of anxiety does not persist indefinitely because it is incompatible with living. A prolonged period of panic can result in exhaustion and death. It is a common and debilitating phenomenon that can be safely and effectively treated (Stuart, 2001).

Anxiety Assessment

Anxiety can be assessed in many ways. Spielberger noted that the evaluator should identify the most effective way of anxiety assessment which may include the following (Wilson-Barnet, 1992):

1. Assessment of physical changes by using medical devices to measure heart rate, blood pressure, respiratory rate and pupil dilatation.

2. Mental evaluation including two types of measurement.

- 2.1. Behavioral measurement of anxiety. It is an observation of behavioral changes in movement, speech and perception. Behavior is the reflection of a person's emotions.

- 2.2. An assessment of anxiety by self report. This is an assessment of anxiety and its intensity from a person's perception. Some well known and commonly used instruments for this kind of assessment are as follows (Ladder & Isaacs, 1971)

- 2.2.1. The Minnesota Multiphasic Personality Inventory (MMPI). It is probably one of the most widely used inventories, especially in North America. It consists of 550 statements, which the respondents are asked to answer "true" or "false". The statements are presented either on individual cards or listed on forms. The statements cover many areas ranging from physical health to neurological disorders and political and social attitudes.

- 2.2.2. The Taylor Manifest Anxiety Scale. This is one of the most widely used self report scales for trait anxiety. The scale arose out of the need to test ideas about anxiety as a drive state. The original Taylor MAS consisted of 50 items.

2.2.3. The Maudsley Personality Inventory (MPI) and Eysenck Personality Inventory (EPI). The MPI was one of the most widely used inventories in Britain and has been revised and renamed EPI. There are two alternative forms of 48 questions and each question has to be answered as “yes” or “no”. These questions were selected from 250 questions after an analysis of answers in terms of extra version and neuroticism scores.

2.2.4. The State-Trait Anxiety Inventory. This is a brief self report measure of both the state and trait anxiety. The “A-state scale” consists of 20 statements that pertain to the subject’s feelings at a particular moment in time. Half of the statements concern apprehension worry and tension (e.g. “I feel tense”), while the rest concern the absence of such feelings (e.g. “I feel calm”, “I feel content”). The subject rates each statement on a 4 point scale, from “not at all” to “very much so”. The “A-trait scale” comprises of 20 statements which refer to how the subject generally feels. Each statement (e.g. “I lack self confidence”) is rated on a 4 point scale from “almost never” to “almost always”.

2.2.5. Hamilton Anxiety Scale. This scale is intended for use with patients already diagnosed as suffering from other disorders. Twelve groups of symptoms culled from clinical experience are used together with the patient’s behavior in an interview.

An instrument most commonly used for the anxiety assessment is the State-Trait Anxiety Inventory by Spielberger and others. There are many ways to evaluate anxiety by self report measurement. In this study, the researcher has used the SAI (The State Anxiety Inventory Questionnaire Form Y-I), developed by Spielberger and others in 1977 because the anxiety referred to the state anxiety of the mothers that occurred during their children’s admission in the pediatric ward for the first time and it is also very popular due to its accuracy and applicability in cross cultural studies (Puntanit, 2002).

2. Nursing Strategies for Reducing Maternal Anxiety

2.1. Information Processing Theory

An inherent assumption of information processing theory is that individual functioning can be conceptualized and understood in terms of processing and use of both environmental and internal information. In this conceptualization, the person is seen as information processing system and focus largely upon the structure and operations within the system and how they function in the selection, Transformation, encoding, storage, retrieval and generation of information and behavior (Ingram & Kendal, 1986).

Carver (1979) made a distinction between two ways in which information processing ideas are used in psychology: a) at a micro level, which focuses on how information is encoded and retrieved in memory, and b) at a macro level which describes control systems or models of self-regulation, otherwise known as cybernetics. The macro level approach is the more commonly used approach in experimental psychology.

The TOTE (test-operate-test-exit) unit was first introduced by Miller, Galanter and Pribram in 1960 (Melnyk, 1995b), is the most useful in conceptualizing a control system. Input enters the system and is incorporated in to an existing state, which is then compared to a pre-existing standard or goal (figure 1). This is the test phase. If an incongruity exist between the current state and the standard or goal, behavior is initiated (the operate phase). The central component of this control system is a negative feedback loop that functions to decrease the discrepancy between the existing state and the standard. As long as incongruity exists, behavior will continue until the standard or goal is achieved.

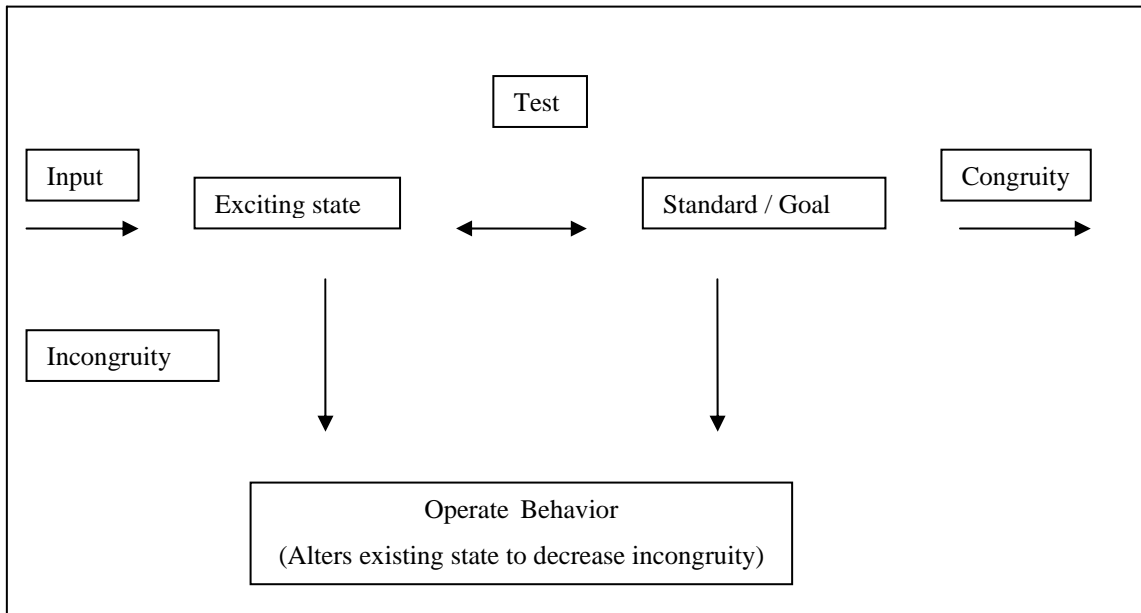


Figure 2. The TOTE Unit

All information processing depend on a “picture” in the mind of situations, events, and objects. That “picture” is called a schema (schemata is the plural from of schema). The schema includes expectation about sensations, emotional responses, action to be taken, outcomes, and other elements of the impending event. A schema provides a structure for interpreting what is experienced at sensory level, retrieving information from memory, planning actions, determining desired outcomes or goals, and setting priorities for use of resources. A schema contains knowledge allows a person to understand what is happening, and it also contains information about hoe to use the knowledge. A schema prepares a person to look for and focus attention on specific components of an experience. It provides a structure for interpreting the experience as it unfold. If a schema of a situation is reasonably accurate, it is used with confidence to predict future similar situations. A schema not only contains knowledge about the components and structure of an event but also plans for hoe to deal with the event and goals or desired outcomes of those efforts. As the event unfolds, comparisons are made between what the person expects to happen and what actually happens. (Neisser, 1976; Thorndyke & Hay-Roth, 1979; White & Carlson, 1983)

2.2. Self Regulation Theory

Self regulation theory is a cognitive theory that uses concept from information processing theory to explain human behavior (Johnson, 1984; Leventhal & Johnson, 1983). Its focus is on how individuals cope with stressful situations. The theory contends that provision of concrete objective information facilitates coping through the formation of a cognitive schema that is analogous to the real life experience. Coping has two functions or purposes (Leventhal, 1970). One is the reduction of emotional response, and the other is the reduction of the impact on functional activities. The coping facilitating intervention based in self-regulation theory consists of providing patients with a specific type of information prior healthcare event. The theory provides guidelines for selecting the type of information about healthcare events. The interventions based on self-regulation theory consist of a description of the impending event at the experiential level using concrete, objective terms. The information includes a description of the typical experience in terms of physical sensations and symptoms, temporal characteristics, environmental features, and causes of sensations, symptoms, and other aspects of the patient's experience (Johnson, Fieler, Jones, Wlasowicz, & Mitchell, 1997).

The process by which the information of this coping skill occurs include a) decreasing the discrepancy between what is expected and what actually occurs, b) increasing predictability, and c) enhancing one's ability to understand and interpret the experience (Johnson & Lauver, 1989).

Parallel Response Model

Self-regulation theory of coping with experiences associated with physical illness is based on an earlier parallel response model of coping with threatening events (Leventhal & Johnson, 1983). The original parallel response model had two different pathways for coping. The process for coping directed at reducing the danger of the event, or its disruption to functional activities, was represented in one pathway. The process for coping directed at reducing the emotional response to the event was represented in the other pathway. The process was through independent of each other. That is, the process in one pathway was not dependent on the outcome of the process in the other pathway (Johnson, et al., 1997)

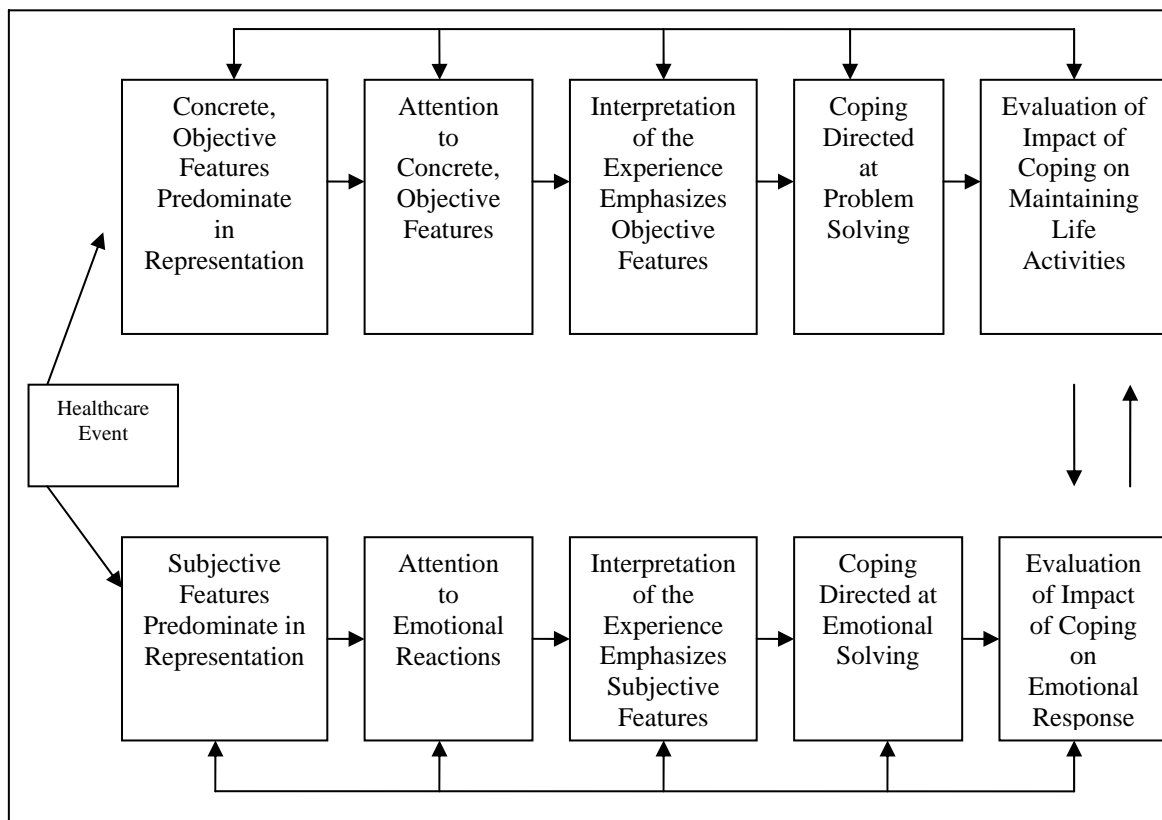


Figure 3. Model of Information Processing in Self-Regulation Theory

Self-Regulation Theory and Coping with Physical Illness

The Self-Regulation Theory presented here retains the emphasis on the different characteristics of the two pathways in the earlier parallel response model (Figure 3). In this theory, two outcomes of coping with healthcare events (functional and emotional outcomes) are addressed. The processes leading to the two different outcomes are represented in the pathways of the model. Both processes and outcomes are important to a comprehensive explanation of coping with physical illness. Achieving the emotional comfort outcome is not a guarantee that patients are not experiencing stressful disruptions in their activities. Being both emotionally comfortable and able to maintain usual activities is the most desirable outcome for patients.

Disease Representation

The component of the model in which the disease is represented consists of various elements organized hierarchically. The levels of the hierarchy range from the concrete experiential through abstract concepts (Carver & Scheier, 1982; Powers, 1973). A label for an illness is an abstract level. The location of an illness, treatment, and prognosis are sample of lower levels of abstraction. The specific experiential aspects of having illness and receiving treatment are the lowest level of hierarchy. Elements at this level include physical sensations, time required for treatment, and emotional response (Johnson et al., 1997).

The levels of a representation are integrated, and each plays a role in the information processing involved in coping (Carver & Scheier, 1982; Powers, 1973). The experiential level is highly significant to the coping process because little ambiguity exists at this level. The lack of ambiguity makes it easy to identify a discrepancy when comparing expectations and the current state.

The most useful representation for information processing and coping contains both abstract concepts and experiential elements. The abstract levels integrate the lower levels of the representation. Integration allows patients to interpret the experience and to feel that they understand what is happening.

Regulation of Functional Activities

The process that supports problem solving and regulation of function activities is illustrated in the top pathway of the model (Figure 3). The experience level of the representation consists of concrete, objective features are the physical sensations and symptoms experienced, temporal characteristics, environment features, and the cause of sensations, symptoms, and experiences (Johnson, Nail, Lauver, King, & Key, 1988) Physical sensations are what is seen, smelled, heard, felt, and tasted. Temporal characteristics are the duration and sequence of events. Temporal characteristics of side effects of treatments include when side effects can be expected to begin, when during the day they may be most often experienced, and when they may subside. Environmental features include the characteristics of the treatment room and the people in the environment. The causes of the features often are self-evident. But to prevent misinterpretation, the cause of explained.

The concrete, objective features of an experience are resistant to suggestion. When a patient focus on the concrete, objective features of the experience, comparisons between what is expected and what actually occurs are easily made. The lack of ambiguity reduces the influence of suggestions about what they will experience. When concrete, objective features of an experience are dominant in the cognitive representation, attention is directed to those features. Attending to objective feature directs monitoring of those features as the event unfolds, and feedback about the accuracy of the representation occurs (Leventhal & Johnson, 1983).

Regulation of Emotional Response

The process supporting regulation of emotional response is illustrated in the bottom pathway of the model. In this pathway, the dominant features in the representation are subjective and reflect emotional response to the impending experience. Attention is directed toward those subjective features, and they are looked for and expected as the experience unfolds. Subjective features are each patient's personal evaluation of and emotional response to the experience. These features can be influenced by the suggestion that they are part of the experience. Thus, patients are apt to experience the features if they are told to expect them. In this pathway, the experience is interpreted in light of the subjective features. Attention to the subjective aspects can elicit emotional memories associated with similar past experiences. The representation leads patients to look for emotional responses and to interpret the experience in terms of their vulnerability and emotional responses (Leventhal & Johnson, 1983). Attention is focused on the emotional component of experience. The continued focus on emotional responses and feedback of that response to the representation can cause emotions to escalate (Johnson et al., 1997).

The effectiveness of the coping efforts will be determined by their effect on emotions. If the coping effort results in a person being comfortable emotionally, the feedback to the problem-solving pathway will be that emotional coping was successful. That feedback can enhance problem-solving functions. If coping efforts are not successful, feedback to the emotional pathway will result in a continuation of monitoring emotions and efforts to achieve emotional comfort (Johnson et al., 1997).

Melnyk (1994) was guided by this theoretical framework. She studied informational interventions with the parents of hospitalized children. This study was

designed to evaluate the effects of two types of informational interventions, separately and in combination, on the process and outcomes of maternal and child coping with unplanned childhood hospitalization. In a 2x2 factorial experiment, 108 mothers of 2-5 year old hospitalized children were randomly assigned to one of four study groups: a) mothers who received child behavioral information that described behaviors typically displayed by young children during and after hospitalization, b) mothers who received parents' role information that focused on strategies to assist young children in coping with hospitalization, c) mothers who received both types of information, and d) mothers who received control information that described hospital services and policies. All experimental interventions were tape recorded to control the content and order of presentation. Findings revealed positive main effects of child behavioral information and parental role information on state anxiety as well as parental participation and support during hospitalization. Specifically, mothers who received either type of information reported less anxiety and participated more in their children's physical and emotional care than the mothers who did not receive the information. In addition, mothers who received the combined information supported their children through an intrusive procedure more than mothers who received parental role information and control information. Following hospitalization, mothers in all three experimental groups reported less anxiety than mothers in the control group.

Melnyk (1995b) studied coping with unplanned childhood hospitalization and the mediating functions of parental beliefs. She examined the processes by which two types of informational interventions (child behavioral information and parental role information) exerted effects on the coping outcomes of 108 mothers whose young children experienced unplanned hospitalization. Driven by a strong theoretical framework comprising of self regulation theory and control theory, this study's findings revealed that the effects of the experimental interventions were mediated by parental beliefs about their children's likely behavioral change and their parental role during hospitalization. Thus, progress was made in the beginning to understand how informational interventions actually enhance parental coping with childhood hospitalization.

Schepp (1991) studied the factors influencing the coping effort of mothers of hospitalized children. The purpose of this study was to test a theoretical model

predicting the relationship among four concepts: predictability of events, control, anxiety and coping effort of mothers of children hospitalized with acute physical conditions. The sample group consisted of 45 mothers of acutely ill, hospitalized children aged 1-24 months. For each of the concepts, 16 events commonly associated with hospitalization of a child were proportionately ranked using magnitude estimation measurement technique. It was found that 97 percent of the dependent variable, coping effort was explained by two of the three predictor variables-predictability of events and anxiety. The mothers who knew what events to expect experienced less anxiety and reported expending less effort to cope with the stressful events.

2.2. Effect of Information on Anxiety Reduction

In this study, the information of intervention based on self-regulation theory consists of a description of the impending event at the experiential level using concrete, objective terms. The information includes a description of the typical experience in terms of physical sensations and symptoms, temporal characteristics, environmental features, and causes of sensations, symptoms, and other aspects of the patient's experience (Johnson, Fieler, Jones, Wlasowicz, & Mitchell, 1997).

The process by which the information of this coping skill occurs include a) decreasing the discrepancy between what is expected and what actually occurs, b) increasing predictability, and c) enhancing one's ability to understand and interpret the experience (Johnson & Lauver, 1989).

In addition, Information means a fact or an acceptable fact that can be implemented. A person often needs information concerning hazards that could threaten his life both physically or mentally (Derdiarian, 1987b). Besides, information also assists human to adapt in a stressful situation (Cohen & Lazarus, 1983) such as:

1. Type of sickness and cause of primary treatment
2. Process or progress of treatment
3. Emotion or side effect that may occur
4. Strategy to deal with a threat

Information is a response to demand and increases a person's ability to effectively deal with stress and sickness (Kritpracha, 1994). Information should be presented in simple wordings which is concise but understandable. Medical terms

should be avoided since it may cause confusion and worry (Susan, 1989). Furthermore, receivers should be allowed to express their feelings. Listening skill plays an important role since it illustrates the attention of the sender to the receiver (Stanik, 1990).

While their children are hospitalized, parents should be given the following information:

1. The child's sickness
2. Opportunity to participate in caring for the child
3. Environments, rules, and the hospital staff
4. Medical expenses, health care insurance or benefits

Information is most helpful to mothers by decreasing worry and stress. It encourages mothers to deal with certain stress efficiently and be able to effectively make decisions (Auerbach, Martelli, & Mercuri, 1983). Often a great deal of anxiety is related to the trauma and pain inflicted on the children. Feelings of frustrations are often related to lack of information about procedures and treatments, unfamiliarity with hospital rules and regulations, a sense of unwelcomeness from the staff, or the feeling of being inhibited to ask for information. Such frustrations can be alleviated in a pediatric unit when mothers are aware of what to expect and what is expected of them. Mothers are encouraged to participate in their children's care and are regarded as the most significant contributor to the children's total health (Wong, 1993).

Mothers need to be introduced to the people who will be caring for their children, to the facilities available for their use, and to at least one mother of other children admitted in the same unit. They also need information about the policies of the hospitals and the unit. A warm, caring approach that makes mothers feel welcomed will considerably lessen the stress they feel at admission. Nursing staff should convey their recognition of the unique care and role of mothers from the beginning and provide ongoing understandable information and support that will enable the mothers to utilize their strengths in supporting their children.

Information would ease a reappraisal. However, giving information to worried mothers should be done with care since each mother has a different IQ, demand and perception. Therefore, a nurse should give concise and straightforward explanation. A

nurse should also repeat specific information in order to ensure that the mothers fully understand the information (Evans & Hansen, 1980).

The nurse is a primary source of information and support to the parents during the children's hospitalization. The explanation of care and the role model she provides helps to involve the family in their children's care. The nurse helps them to understand their children's illness and develop confidence in their ability to provide care. The nurse should remember that the mothers may feel inadequate or too frightened to physically care for their children, especially if their children's condition is serious. In these circumstances, it may be advisable to allow the mothers to observe the nurse caring for the children. The nurse should utilize this observation time to explain the purpose of various procedures and demonstrate how they are done. As mothers feel more comfortable, they may wish to increase their participation. When the mothers begin to participate more actively, the nurse should assist and offer encouragement, as the mothers will continue to need support and positive reinforcement. The mothers also need the opportunity to ask questions and clarify information. As the mothers become more comfortable in the role of care provider, the nurse should allow more independence but still assume responsibility for all of the care given (Ingersoll, 1981).

When the nurse detects anxiety in the mothers, the first task is to identify the cause of anxiety and to give whatever help possible to alleviate it (Marlow, 1988). In addition to their feelings about the illness itself, the mothers may be frightened and excited by the new experience of placing their children in the hospital. Many factors that increase their anxiety are as follows (Marlow, 1988):

1. Fear of strange environment in the hospital. If the mothers are disturbed by the continuing strangeness of the hospital atmosphere, the nurse can try to explain the use of equipment in lay terminology, make surroundings more homelike, and encourage the mothers to ask questions. Simple answers to the questions help allay anxiety. Also, if the nurse explains to the mothers what they can do for the children and with their children, they tend to feel more secure in providing care within the limits that have been established.

2. Fear of separation from the children and fear that the nurse will replace them and gain the children's love. If the mothers are anxious because the nurses are caring

for their children, the nurse can suggest them to participate in the care. Such activity can help them cope in a healthier way with their anxiety.

3. Fear of the unknown and of what will happen to the children immediately and in the future. The life of handicapped children appears more difficult because parents have no clear picture of what it will be like.

4. Fear that the children will suffer.

5. Fear that the condition is infectious and will spread to other members of the family.

6. Fear of the unbearable financial obligations incurred through the illness. The social service worker may be able to help with such problems.

7. Fear that the society will look upon the illness as a reflection of something wrong with the mothers.

Mothers' anxiety magnifies all other problems. They may enter into long discussions of problems extraneous to that of the children's illness. The nurse should accept this as natural and never feel that their dwelling on other difficulties means that they are uninterested in the children. The majority of mothers want the understanding and sympathetic support that the nurse can give and thereby gain a realistic view of the difficulties that they and the children must face. Some mothers may appear withdrawn. These individuals are in greater need of help. To assist them in putting their deep emotion into words may be too heavy a responsibility for the nurse to undertake. The psychiatrist or psychiatric social worker should be available to guide both the mothers in their concerns and the nurse in contact with them (Marlow, 1988).

A nurse can assist a mother in the following ways (Whaley & Wong, 1984; Smitherman, 1979).

1. Give immediate attention and care in order to ensure confidence and courage to the mothers.

2. Encourage expression, such as complaining about stress, guilt, and anxiety of a hospitalized child.

3. To be willing to listen to the mother's problems. Creative listening can effectively assist parents to cope with their emotions. A nurse should avoid judging, spoiling or criticizing while listening.

4. Discuss about the problems concerning the mothers' anxiety. This allows the mothers to ask and exchange information with the nurse.

5. Create the confidence in the mothers' abilities.

There are many studies regarding reduction of anxiety by providing information. Silprasert (1999) studied the effect of support and education on the coping mechanism of the parents of newborns in NICU. In this study, the Self Care Theory by Orem and the Stress Theory by Lazarus and Folkman were used as guidelines. The participants were 60 parents whose newborns were hospitalized at the NICU. The sample was specifically selected and divided into control and experimental groups of 30 each. The experimental group received standard treatment along with an educative supportive treatment. The results revealed that the parents in the experimental group had less anxiety as compared to the control group with statistical significance ($p < .001$).

Prasert (1998) conducted a study aimed to assess anxiety factors of parents by using specific form by Carter and Miles to evaluate perceptive factors of the participants who were 40 fathers and 46 mothers of children hospitalized at the pediatric intensive unit. The most dominant anxiety factors were the behavioral and emotional response of the patient. The other dominant factors include the child's appearance and behavior of hospital staff. The result showed that the participants in the experimental group had less anxiety than the control group with statistical significance ($p < .01$).

Rojanapradit (1998) investigated the effect of information giving on the anxiety and satisfaction of women who had premature labor pain. This study used the stress theory by Lazarus and Folkman as theoretical framework. The sample comprised of women with premature labor pain hospitalized at Ramathibodi Hospital and Rajvithi Hospital. The 50 women participating were divided into experimental group and control group of 25 women each. The experimental group received support and information from the nurse. The result showed that the participants in the experimental group experienced less anxiety than the control group with statistical significance ($p < .001$).

Anrudee (1993) studied the anxiety level of mothers of hospitalized children. The sample was divided into 2 groups of 40 persons each. The control group received standard treatment while the experimental group received nursing care focusing on

relationship, listening to their problems, encouragement in performing self care activities, update on information of the patient's condition and information on the mother's role in providing care during the hospital stay. The result showed that the maternal anxiety level was lower in the experimental group as compared to that in the control group.

A study by Petcharaburanin (1992) on systemic information given to mothers who had anxiety about repeated cesarean section comprised of a sample group of 80 women aged 20-40 years. They were divided into two equal groups and the experimental group was given systemic information by the researcher. After the experiment it was found that the mothers in the experimental group had less anxiety than those in the control group with statistical significance ($p < .01$).

Kaewvejchavong (1984) examined the effect of systemic hospitalization on the level of anxiety of the mothers of hospitalized children. The sample comprised of 30 mothers who received the following support: psychological support, positive reinforcement, information about the child's illness, information on the mother's role in providing care, hospital environment and possible family problems. The study reported that the mothers receiving systemic treatment had less anxiety than the other group with the statistical significance ($p < .01$).

Friberg's research revealed that parental anxiety and fear increased when they lacked the information regarding the treatment and procedures and the diagnosis of their child and the impact on the child's future (Friberg, 1972).

Roy (1967) studied on the role of the mothers of hospitalized children. In this study, the nurse built a relationship with the mothers and recommends them about the maternal role in child care. The nurse used 3 basic actions which are: paying attention to the mother's interests, giving information on anxiety and information on how to manage with a hospitalized child. The result indicated that the level of ability in the maternal role in the experimental group was higher than that of in the control group with statistical significance ($p = .05$).

In previous studies, many researchers have attempted in several ways to reduce the mothers' anxiety when their children are hospitalized by providing information to the mothers so they can better understand the situation and the children's behavior at the hospital. When analyze the contents of those information, it include the type of

information as same as the typical type of the information in Self-regulation Theory. The method assists the mothers to adapt to and be able to deal with the circumstances. Moreover, the mothers gain more confidence simultaneously as their anxiety reduces.

As seen in the literature review, numerous researchers have conducted studies by giving information in order to decrease the anxiety level of the sample group. Several methodologies have been used but no research has been done to decrease the maternal anxiety level by used framework of self-regulation theory delivering information via videotape during the admission period. Therefore, the chose to use this framework media in providing information to the mothers of hospitalized children in addition to the educational pamphlets.

From the above idea, the researcher integrated this theory with the needs of mothers of hospitalized children together, and then created the Admission Program offering the information to reduce the maternal anxiety.

In conclusion, the review of the literature shows that anxiety is a feeling of fear caused by the feelings of uncertainty in the future, loneliness and feelings of insecurity. Mothers are concerned when their children are in hospital, particularly it is first admitted. They are afraid of uncertainty, not feel secure. They are worried about the children symptoms, the medical treatment, how their children will be treated. Not knowing how to cope to the new environment and staff, rules and regulations make the mother increasingly anxiety. According to the self-regulation theory, the anxiety of mothers is decreases if they are well coped. This can be done by giving the specific information. The information includes sensation, objective features, a description of the typical experience in terms of physical sensations and symptoms, temporal characteristics, environment features, and causes of sensations, symptoms, and other aspects of the mothers' experience. The type of this information helps mothers to understand the event, predict and interpret the impending event, and increase confidence in their ability to deal with the present situation. When the hospitalized is occurred, the mothers have well cope in both of functional coping and emotional coping. This would decrease the maternal anxiety towards their ill children. In addition, the needs of mothers of hospitalized children were integrated in this program. The information in admission program is about the diseases, symptoms, medical treatment, procedures, a way to take care their own children when

hospitalized, hospital environment, rules and regulations of pediatric ward, and medical expense. The researcher gave the opportunity for the mothers to inquire the questions and gave the pamphlet regarding the care for the hospitalized children with respiratory disorders to the mothers. In order to help mothers to cope with situation of hospitalized children. All these things would strengthen the mothers and ready to encounter the situation occurring. The mothers will also get better understanding, interpret the event, and be able to predict the situation. This would certainly decrease the anxiety of the mothers.

CHAPTER III

METHODOLOGY

Research Design

This quasi-experimental research examined the effect of an admission program on anxiety of mothers of hospitalized children with respiratory disorders at Inburi Hospital.

Population and Sampling

The population in this research is a group of mothers of children suffering from respiratory disorders, and admitted at the pediatric ward of Inburi Hospital, Singburi province.

Sixty mothers were selected by convenience sampling method. These 60 subjects were divided into a control group and an experimental group of 30 subjects (Polit & Hungler, 1999) by matching pairs in age and education. In order to prevent the bias caused by the researcher, at first, the control group was asked for collecting data until 30 subjects completed then the experimental group were started. The mothers in experimental group were selected only with the mothers who meet the qualification; age and education of mothers must be the same as mothers in the control group. This is done by paired in age of mothers and education of mothers. The selection of participants required 30 paired of subjects which one paired is composed of one mothers to allocated to experimental group and one mother allocated to control group. In addition both of them need to have the same age that ranges no more five years and the same education level as the control group. The education level includes primary school, secondary school, or certificate or bachelor's degree.

The mothers were selected based on the following criteria:

1. Do not have any previous experience of their children being hospitalized.
2. The mothers are the primary caretaker of the children throughout the hospital stay.
3. The mothers do not have any history of psychological disorder.

Exclusion Criteria

1. The children required the use of a respirator.
2. The children were discharged from the hospital before 4 days.

Setting

This research was conducted at the pediatric ward of Inburi Hospital. It is the only department that admits pediatric patients. The age ranged from one day to 15 years old. The patients are admitted from the outpatient department, emergency room or the obstetrics department. In the admission procedure, the nurse at the department where the patient is first received contacts the ward and informs the nurse about the patient's diagnosis, symptoms, treatment and the procedures that need to be performed immediately on admission. The patient is then sent to the ward and is accompanied by a nurse if the patient's condition is critical.

The pediatric ward allows only one member of the family to stay with the patient in the ward. If the mother or any other family member is unable to stay with the patient, the nurse must be informed. The visiting hours are from 10 am to 8 pm. On admission the patient and relatives are instructed about the rules and regulations of the ward, equipments, different areas, utensils, and food. Caregivers are free to ask information about the patient from the physician or the staff nurse.

Instrumentation

The instruments used in this research are of two kinds i.e. the intervention and instruments for data collection.

1. Intervention:

The admission program for the mothers of children suffering from respiratory disorders and need hospitalization comprises of:

1.1. Provision of information via videotape regarding the symptoms of respiratory disorders, treatment and medical procedures that may be required and the role of mothers in efficient care of the pediatric patient during the hospital stay, rules and regulations of the ward, medical expenses, and the ward environment.

1.2. Opportunity for the mothers to inquire the questions

1.3. The pamphlet regarding the care for the hospitalized children with respiratory disorders is given to the mothers.

2. Instruments used in data collection

2.1. Demographic data form: The personal information of the mothers includes age, income, education, number of children, marital status, health history and the information of the children includes age, illness, and birth order.

2.2. The State Anxiety Inventory Questionnaire Form Y-I (SAI): In 1970, Spielberger, Gorsuch, and Lushene developed a tool to assess the anxiety level which comprises of two parts, i.e. state anxiety and trait anxiety. It has been tested for construction validity and for reliability by assessing the anxiety levels of students when faced with different situations. The Cronbach alpha coefficient calculated was .83 for state anxiety. Later, Spielberger and the others (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1977) improved this questionnaire in regards to language but maintained the same conceptual framework. In 2001, it was translated into Thai by Assoc. Professor Boonpean Chanwatana and assessed for content validity by four experts. This instrument was used to measure anxiety in ten mothers whose children were admitted in the hospital for the first time. The Cronbach alpha coefficient was .89 for state anxiety (Chanwatana, 2001). In addition, Parichart Silpraseart (1999) used the SAI questionnaire to assess the anxiety of 60 parents whose children were admitted in NICU. Cronbach's alpha reliability coefficient was 0.80. Furthermore, Kongsuwan (2000) assessed the reliability of the SAI in 30 relatives who were waiting for surgical patients undergoing elective surgery in the operating room at Siriraj Hospital. The internal consistency reliability using Cronbach's alpha coefficient was 0.78.

Scoring

The SAI questionnaire was designed to be self-administered, consisting of 20 questions that evaluated how the respondents felt at the moment they were facing the

situations such as hospitalization. The scoring of each question was a Likert-scale divided into 4 levels i.e. not at all =1, somewhat =2, moderately so =3, and very much so =4.

The SAI questionnaire included 10 negative questions. They were items 3, 4, 6, 7, 9, 12, 13, 14, 17, and 18, and ten positive questions were items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20.

Interpretation

A total score of all items in the questionnaire ranges from 20 to 80. High score represents high anxiety and low score indicates low anxiety (Spielberger, 1970).

Validity and Reliability of the Instruments

Content Validity

The instruments that were tested for validity include the admission program for the mothers of hospitalized children with respiratory disorders, the pamphlet regarding the pediatric department and the care of pediatric patients with respiratory disorders during hospitalization, the informative videotape and the instruments for data collection is The State Anxiety Inventory (SAI Form Y-I). All instruments were assured for content validity by 5 experts, including 1 pediatric physician, 2 pediatric nurse instructors, 1 psychiatric nurse instructor and head of the nursing department of Inburi Hospital, Singburi Province (Appendix B).

Reliability

The researcher used The State Anxiety Inventory (SAI Form Y-I) in Thai with twenty mothers who had similar characteristics to those of the sample group. The reliability using Cronbach's alpha coefficient was .760.

Data Collection

1. The researcher submitted a letter from the Faculty of Graduate Studies, Mahidol University to the director of Inburi Hospital to ask for permission for data collection.

2. When the permission was granted, the researcher met with the head nurse of the pediatric ward to introduce herself and to clarify the purposes and details of the study. Thereafter, the data collection process was started.

3. When patients were admitted to the pediatric ward, the researcher checked if the mothers had characteristics according to the inclusion criteria. The researcher then introduced the mothers to the research program and asked them if they wanted to participate in the study. When they agreed to participate, the researcher informed the participants of their rights and confirmed that their participation was voluntary and they might withdraw whenever they wanted and this would pose no consequence to the treatment of their children. After being given this information, the mothers were asked to sign the consent form.

4. In the data collecting procedure, the participating mothers were asked to fill the demographic data form and The State Anxiety Inventory (SAI Form Y-1). To minimize any potential bias that might occur in experimental research, thirty mothers in the control group were recruited and interviewed. Then thirty mothers in the experimental group were recruited and interviewed.

4.1. The data collection procedure in the control group included:

4.1.1. After answering the demographic data form and the State Anxiety Inventory (pre-test), the control group received the usual nursing care provided at the ward.

4.1.2. One day after pre-test, the mothers in the control group are given the SAI Form Y-1 for the second time (post-test 1).

4.1.3. Three days after pre-test, the mothers in the control group were asked to answer the State Anxiety Inventory (post-test 2) for the third time. After post-test 2, the control group was given the pamphlet regarding how to care for the hospitalized children with respiratory disorder.

4.2. The mothers in the experimental group were asked to answer the demographic data form and the State Anxiety Inventory (pre-test). After this, they were received the admission program. The procedure is as follows:

4.2.1. The mothers in the experimental group were given the information via videotape. It is divided into 2 parts

The first part is provided regarding the pediatric ward that inform about admit only children aged 1 month up to 15 years. This is medical treatment only, the amount of the patient beds, the staff working at the pediatric ward, medical treatment, the service of the staff, the environment of pediatric ward i.e. the patient beds, dinning

area, bathrooms, clothes drying area, information counter, rules and regulations of the ward, medical expense. The mothers were given information via videotape with explaining about the media all time.

The second part is the information to mothers about respiratory disorders, the cause of the disease, and the symptoms, the treatment and the procedures that children will receive such as intravenous fluid administration, injection, lung percussion, respiratory airway suction, or venopuncture. How mothers can take care their ill children in effective way namely: caring a child having a fever, caring a child when having procedures, caring a child concerning the general hygiene, eating, accident protection, observing the unusual symptom which may occur, promoting a child development while being in the hospital.

The above information were given in media and illustration step by step including the use of procedures with full detail. This part of the program was 30 minutes long.

4.2.2. The mothers were given the opportunity to asked question to clear their doubts.

4.2.3. The mothers received the pamphlet regarding how to care for the hospitalized children with respiratory disorders from the researcher.

4.2.4. One day after pre-test, the mothers were asked to answer The State Anxiety Inventory (post-test 1) for the second time. The evaluation took about 10 minutes.

4.2.5. Three days after pre-test, the researcher assessed the state anxiety level of the mothers again taking about 10 minutes (post-test 2).

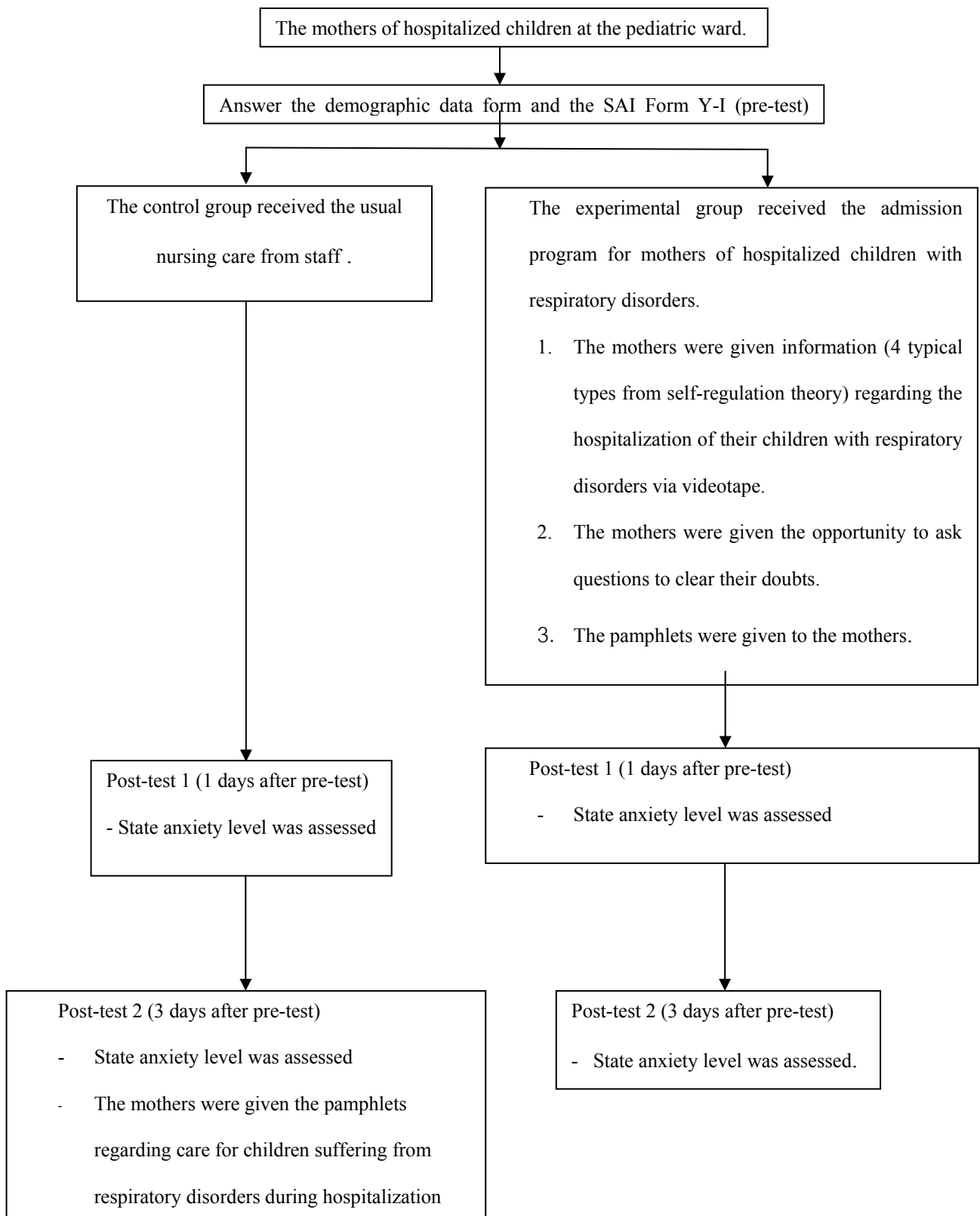


Figure 4. The Process of Data Collection

Protection of Human Subjects

The data collection procedure in this study encompassed the protection of human subjects. The researcher explained the purposes and the intervention of this study to the mothers and asked for their participation. The written informed consent was obtained to ensure that the mothers participated in the study on a voluntary basis. The mothers were also assured that all of their responses would be kept strictly confidential, that their identity would not be revealed, and that they were well informed about risk of participation in the study. Besides, they were confirmed that they had the right to participate and withdraw from this study at any time, and their decision would not affect the medical treatment or the care for their children.

Data Analysis:

The data was analyzed using the computer program. The details were as follows:

1. The percentage and frequency were used for analysis of the demographic data i.e. mothers' age, education, marital status, occupation, family income, medical expenses, number of children, birth order of the ill children, age of children, and illness of children.

2. Compare the mean anxiety scores of mothers before and after the experiment by using paired t-test.

3. Compare the mean anxiety score between the experimental group and the control group after the experiment by analysis of covariance (ANCOVA) and used the pre-test score as a covariate.

CHAPTER IV

RESULTS

This is a quasi experimental research with the purpose to examine the effect of an admission program on anxiety of mothers of hospitalized children with respiratory disorders. There are not the mothers in exclusion criteria. The data were collected by using the questionnaires to assess the state anxiety level (SAI) of the sample group in three stages which are the pre-test stage, one day after the pre-test (post-test 1) and three days after the pre-test (post-test 2). In additional finding, the satisfaction level of the mothers in the experimental group was also assessed one day after the pre-test. The data collection took place from August 2002 to January 2003. The results of the study are presented in 3 parts as follows:

Part I: The demographic data of mothers, hospitalized children, and family

Part II: Comparison of anxiety level of the mothers in the experimental group and the control group, before and after the experiment.

Part III: Additional finding: The satisfaction level of mothers in the experimental group towards the admission program.

Part I: The demographic data of mothers, hospitalized children, and family

Most of the characteristics of the mothers, family, and children in the experimental group and the control group are similar. The average age of the mothers is in the range of 20-30 years 73.3%, the marital status in both group were married 90% in experimental and 93.4% in control group, in both group, the mothers with primary level education 50%, the mothers in experimental group work as labors 53.4% and in control group are 56.7%, the mothers in experimental group with family income of 1,500-5,000 baht per month 53.3% and in control group 66.7%, the children in experimental group that using the 30 baht policy for health care 86.7% and in control group 73.4%, 46.7% of the experimental have 2 children while 53.3% of the control has one child and 60% of the sick child in the experimental group being the last born while 46.7% in the control being the only child, the average age of the children is in the range of 1-3 years 53.3% in the experimental group and 60% in the control group, 40% of the children in the experimental group are bronchitis as well as 46.7% in the control group.

On comparing the characteristics of the experimental group and the control group using the Chi square, it was found that the characteristics that did not differ were the age, marital status, educational level of the mothers, the mothers' occupation, the average family income, the medical expenses, the number of children, the birth order of the children, the age of the children, and the illness of the children as demonstrated in Table 1 and Table 2.

Table 1: Demographic characteristics of mothers having hospitalized children (n=60).

| Characteristics | experimental group (n=30) | | control group (n=30) | |
|-------------------------------------|------------------------------|------|-------------------------|------|
| | Number | (%) | Number | (%) |
| Age of mother | | | | |
| <20 | 2 | 6.7 | 2 | 6.7 |
| 20-30 | 22 | 73.3 | 22 | 73.3 |
| >30 | 6 | 20 | 6 | 20 |
| Marital Status | | | | |
| Married | 27 | 90 | 28 | 93.4 |
| Widowed | 1 | 3.3 | 1 | 3.3 |
| Separated or divorced | 2 | 6.7 | 1 | 3.3 |
| Education level | | | | |
| Primary school | 15 | 50 | 15 | 50 |
| Secondary school | 11 | 36.7 | 11 | 36.7 |
| Certificate or Bachelor's degree | 4 | 13.3 | 4 | 13.3 |
| Occupation | | | | |
| Unemployed | 9 | 30 | 8 | 26.7 |
| Employee | 16 | 53.4 | 17 | 56.7 |
| Government official | 1 | 3.3 | 1 | 3.3 |
| Other | 4 | 13.3 | 4 | 13.3 |
| Number of children | | | | |
| 1 | 10 | 33.3 | 16 | 53.4 |
| 2 | 14 | 46.7 | 12 | 40.0 |
| 3 | 5 | 16.7 | 1 | 3.3 |
| 4-5 | 1 | 3.3 | 1 | 3.3 |

Table 2: Demographic characteristics of family and hospitalized children (n=60)

| Characteristics | experimental group (n=30) | | control group (n=30) | |
|------------------------------------|------------------------------|------|-------------------------|------|
| | Number | (%) | Number | (%) |
| Family income | | | | |
| (Bath/month) | | | | |
| 1,500 - 5,000 | 16 | 53.3 | 20 | 66.7 |
| 5,001 - 10,000 | 10 | 33.3 | 7 | 23.3 |
| 10,001- 20,000 | 4 | 13.4 | 3 | 10 |
| Medical expenses | | | | |
| No insurance | 1 | 3.3 | 4 | 13.3 |
| Government or Social insurance | 3 | 10 | 4 | 13.3 |
| Universal coverage | 26 | 86.7 | 22 | 73.4 |
| with co-payment 30 bath | | | | |
| Birth order of the children | | | | |
| First-born | 2 | 6.7 | 0 | 0 |
| Last-born | 18 | 60 | 14 | 46.7 |
| Single-child | 10 | 33.3 | 16 | 53.3 |
| Age of children | | | | |
| 1 month - 1 year | 5 | 16.7 | 8 | 26.7 |
| >1 year - 3 years | 16 | 53.3 | 18 | 60 |
| >3 years - 5 years | 9 | 30 | 4 | 13.3 |
| Illness | | | | |
| Pneumonia | 10 | 33.3 | 9 | 30 |
| Bronchitis | 12 | 40 | 14 | 46.7 |
| Pharyngotonsillitis | 8 | 26.7 | 7 | 23.3 |

Part 2: Comparison of the anxiety level of the mothers in the experimental group and the control group, before and after the experiment.

The mean anxiety score of the experimental group at pre-test is 57.27 which are higher than the mean anxiety score of the control group (51.40). At post-test 1, the mean anxiety score of the experimental group reduces to 40.73 which are lower than the mean anxiety score of the control group (46.50). At post-test 2, the mean anxiety score of the experimental group (40.40) is lower than that of the control group (45.73). This suggests that the experimental group has the mean anxiety score after the experiment lower than the control group even though prior to the experiment, the mean anxiety score of the experimental group is higher than that of the control group. On comparison of the mean score at pre-test by independent t-test between the experimental group and the control group, it is found that there is not statistically significant differences ($t=-2.38$, $p>.05$).

Table 3: Means and standard deviations of the anxiety score of the experimental group and control group for three testing times

| Testing time | Experimental group | | Control group | |
|--------------|--------------------|-------|---------------|------|
| | mean | SD | mean | SD |
| Pre-test | 57.27 | 9.74 | 51.40 | 9.35 |
| Post-test 1 | 40.73 | 10.30 | 46.50 | 7.76 |
| Post-test 2 | 40.40 | 7.18 | 45.73 | 9.24 |

When compared to the mean anxiety score at pre-test, the mean anxiety score of the experimental group at post-test 1 and post-test 2 reduced with statistical significance ($p < .001$). But when the mean anxiety score of the experimental group at post-test 1 was compared with that at post-test 2, a reduction was observed but with no statistical significance ($p > .05$).

This showed that after the intervention, the mothers in the experimental group had reduced levels of anxiety as compared to those before the intervention but the level of anxiety at post-test 1 and post-test 2 did not differ significantly.

On comparison with the mean anxiety score at pre-test, the mean anxiety score of the mothers in the control group at post-test 1 and post-test 2, a reduction was observed with statistical significance ($p < .01$). In the control group, it was also found that the anxiety level reduced at post-test 1 and reduced further at post-test 2. On comparison with the mean anxiety score at post-test 1 and post-test 2, a reduction was observed with statistical significance ($p < .05$), as illustrated in Table 4

Table 4: Comparison of mean score of anxiety level at pre-test, post-test 1, and post-test 2 within the experimental group and within the control group.

| Testing Time | Experimental group | | | Control group | | |
|---------------------------|--------------------|-------|---------|-----------------|------|---------|
| | difference mean | SD | t | difference mean | SD | t |
| Pre test & Post test 1 | 16.53 | 10.19 | 8.90*** | 4.90 | 9.16 | 2.93 ** |
| Pre test & Post test 2 | 16.87 | 10.08 | 9.18*** | 5.67 | 8.77 | 3.54*** |
| Post-test 1 & Post-test 2 | 0.33 | 0.96 | 1.90 | 0.77 | 1.63 | 2.57* |

* $p < .05$, ** $p < .01$, *** $p < .001$

On comparing the mean score of the anxiety at post-test 1 between the control group and experimental group, using the pre-test as covariate, it was found that the two differed with statistical significance ($F=86.07, p<.001$) as shown in Table 5.

On analyzing the mean score of anxiety level, the mean score of the experimental group at post-test 1(40.73) is lower than that of the control group(46.50)

Table 5: Analysis of covariance of post–test 1 mean anxiety score, with pre-test mean anxiety score as covariate.

| Source | df | Type I Sum of Squares | Mean Square | F |
|----------------------|----|-----------------------|-------------|----------|
| Covariate (Pre-test) | 1 | 704.79 | 704.79 | 18.74*** |
| Main Effects (Group) | 1 | 3237.14 | 3237.14 | 86.07*** |
| Residual (Error) | 57 | 2143.72 | 37.61 | |
| Corrected Total | 59 | 6085.65 | | |

*** $p<.001$ Adjusted R Square= .635

On comparing the mean score of the anxiety level at post-test 2, between the experimental group and the control group, using the mean anxiety score at pre-test as covariate, it was found that the mean anxiety score at post-test 2 between the experimental group and the control group differed with statistical significance ($F=54.57$, $p<.01$) as shown in Table 6.

Table 6: Analysis of covariance of post- test 2 anxiety score, with pre-test anxiety score as covariate.

| Source | df | Type I Sum of Squares | Mean Square | F |
|----------------------|----|-----------------------|-------------|----------|
| Covariate (Pre-test) | 1 | 491.72 | 491.72 | 11.51*** |
| Main Effects (Group) | 1 | 2330.80 | 2330.80 | 54.57*** |
| Residual (Error) | 57 | 2434.42 | 42.711 | |
| Corrected Total | 59 | 5256.93 | | |

*** $p<.001$ Adjusted R Square = .521

Additional Finding

The satisfaction level of the mothers in the experimental group towards the admission program: Regarding the satisfaction level towards the admission program, 50-80% of the mothers in the experimental group responded that they were satisfied in items 1 to 10, except in item 5 regarding giving information about rules and regulations of the hospital. Half of the group expressed high satisfaction while the other half expressed moderate satisfaction. In item 7 regarding giving information about hospitalization expenses, 50% of the mothers expressed moderate satisfaction as shown in Table 7.

Table 7: Percentage and frequency of the mothers' satisfaction towards the admission program in each item.

| Item | Number (percent) of experimental group according to level of satisfaction score | | | |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------|------------------------|-----------------------|
| | 4 very satisfied | 3 moderately satisfied | 2 less satisfied | 1 not satisfied |
| 1. satisfied with admission program | 18(60) | 12(40) | - | - |
| 2. satisfied with information regarding the disease and behavioral of the patient | 19(63.3) | 11(36.7) | - | - |
| 3. satisfied with information regarding care of hospitalized children | 22(73.3) | 7(23.3) | - | 1(3.4) |
| 4. satisfied with information regarding environment and equipment | 19(63.3) | 10(33.3) | - | 1(3.4) |

Table 7: Percentage and frequency of the mothers' satisfaction towards the admission program in each item (continued).

| Items | Number (percent) of experimental group according to level of satisfaction score | | | |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------|------------------------|--------------------|
| | 4 very satisfied | 3 moderately satisfied | 2 less satisfied | 1 not satisfied |
| 5. satisfied with information regarding the regulations of pediatric ward | 15(50) | 15(50) | - | - |
| 6. satisfied with information regarding the responsibility of staff ward | 16(53.3) | 14(46.7) | - | - |
| 7. satisfied with information regarding health payment | 12(40) | 15(50) | 3(10) | - |
| 8. satisfied with information via videotape | 21(70) | 9(30) | - | - |
| 9. satisfied with the opportunity to ask questions and get answers from the researcher | 21(70) | 9(30) | - | - |
| 10. satisfied with the benefit from reading the pamphlet | 24(80) | 6(20) | - | - |

The mean score of the mothers' satisfaction in each item showed moderate to high satisfaction (3.30-3.80). The average of mean scores of each item was 3.60, which shown that most of the mothers in the experimental group shown satisfaction as demonstrated in Table 8.

Table 8: Mean and standard deviation of the mothers' satisfaction towards the admission program in each item.

| Items | Mean | SD |
|----------------------------------------------------------------------------------------|------|-----|
| 1. satisfied with admission program | 3.60 | .50 |
| 2. satisfied with information regarding the disease and behavior of the patient | 3.63 | .49 |
| 3. satisfied with information regarding care of hospitalized children | 3.67 | .66 |
| 4. satisfied with information regarding environment and equipment | 3.57 | .68 |
| 5. satisfied with information regarding the regulations of pediatric ward | 3.50 | .51 |
| 6. satisfied with information regarding the responsibility of staff ward | 3.53 | .51 |
| 7. satisfied with information regarding health payment | 3.30 | .65 |
| 8. satisfied with information via videotape | 3.70 | .47 |
| 9. satisfied with the opportunity to ask questions and get answers from the researcher | 3.70 | .47 |
| 10. satisfied with the benefit from reading the pamphlet | 3.80 | .41 |
| Over all | 3.60 | |

CHAPTER V

DISCUSSION

The objectives of this research were to study the effect of the admission program on anxiety of the mothers of hospitalized children with respiratory disorders. The sample group comprises of 60 mothers equally divided into control group and experimental group of 30 each. The experimental group received the admission program from the researcher, while the control group received the usual nursing care from the staff of the pediatric ward. The discussions according the hypothesis of this study are as follow:

Testing of Hypothesis:

Hypothesis 1: The level of anxiety of the mothers in the experimental group after the admission program is lower than the anxiety level of the mothers before the program.

From the results, the mean score of anxiety in the experimental group after undergoing the admission program reduces from the level before the program with statistical significance ($p < .001$), (Table 3).

The theory of Self Regulation that is based on Information Processing Theory states that to give information is to let the person know in advance the situations that may take place or the chronological order of the events that may take place by explaining in an objective manner, so as to allow the person to adjust and plan their actions accordingly. This also leads to better coping with stress (Johnson, 1984) and reduce their anxiety level. The information that provided to the experimental mothers was effect to coping of the mothers. The characteristics of information are the concrete, objective terms. It include

the physical sensations and symptoms, temporal characteristics, environmental features, and cause of sensations, symptoms, and other aspects of the patient's experience.

The physical sensations and symptoms are what is seen, smelled, heard, felt, and tasted. In this study, while the mothers were receiving information videotape, they see the equipment in videotape, hear crying of children when receive the procedures, and feel welcome from the staff. In addition they can see the children when receive the procedures i.e. the intravenous fluid administration, lung percussion, respiratory air way suction, method to decrease high temperature' children, caring the children regarding general hygiene care, eating, caring when their children have something wrong, and the caring to their children when they hospitalized. And the mothers can hear explaining about the content in video information. In addition the mothers can hear a noise from the media i.e. the crying children when receive intravenous administrator, a noise as respiratory air way suction and the suction machine works, a noise as a lung percussion, and a noise as nebulization.

The temporal characteristics are the duration and sequence of events. Temporal characteristics of side effects of treatments include when side effects can be expected to begin and when they may subside. In this study, the temporal characteristics are the sequence of admission. When the children are at ward, they must receive some caring i.e. intravenous administration, venopuncture, or lung percussion, and the expression of children when they hospitalized.

The environmental features are the picture of environment at pediatric ward, the characteristics of the treatment room, and staffs in the pediatric ward.

The causes of sensations, symptoms, and other aspects of the patient's experience are self-evident i.e. the cause of disease and cause to give procedures to their children, the cause of children's expression when hospitalized, and the caring of mothers for their hospitalized children.

The type of information helps mothers from unambiguous expectations about what will happen during hospitalization. It changes vague, possibly threatening notions about the new experience of hospitalization of their children into specific expectations about what the experience will entail. Mother will use their perceptions and interpretation of the information to regulate their coping response and behavior. The

information contents of this study can influence perception and interpretations of an impending stressful event (hospitalization of their children) so that mother can be self-regulating in a manner that enhances their ability to deal with a hospitalization of children. The mothers who have well coping are referring to decrease anxiety.

In addition, Pongkhamphan (1994) stated that the mothers of hospitalized children needed information regarding the role of the mother in caring for the sick child. They also needed information pertaining to the illness, symptoms, treatment, expenses, the hospital environment and the rules of the hospital ward. A study by Yapwatanaphan (1997), regarding the needs and the fulfillment of the needs of the mothers of pediatric patients receiving treatment at pediatric ward revealed that needed information about the illness, its cause, treatment, the rules and regulations of the hospital ward, the equipments used with their children, assurance about their children's safety, emotional support and information on how they could take care of their children during hospitalization. In a study by Melnyk (1995a) about giving information to mothers of hospitalized children regarding the behavior of the sick children and the mother's role in caring for the children, the information was given via audiotape. It was found that the mothers in the experimental group had reduced level of anxiety with statistical significance ($p < .01$).

Therefore, the researcher integrated two type of information, the characteristics of information in self-regulation theory and the information according the mothers' needs as guideline in this study.

Moreover, the method to give information is utmost important. These methods can enhance the effect to the receiving information of mothers. The researcher used 3 ways to give information i.e. videotape, give opportunity to mothers for ask their doubt, and give the pamphlet.

The researcher decided to use videotape as the media to give information to the mothers regarding the illness, symptoms of the children during the course of treatment at the hospital, the role of the mother in caring for their sick children, the various procedures that the children may receive, the environment of the pediatric ward, the staff, rules and regulations, and the medicine expense. The videotape provides an easy and understandable explanation. The mothers are given the opportunity to ask questions and clarify information with the researcher. The two way communication

can stimuli the attention and create good relationship. And then they are given pamphlets containing the same information as in the videotape. These pamphlets are for future reference in case any of the information is forgotten.

All these sources of information and effective methods to give information make them well acquainted with the atmosphere in the hospital and help build their confidence in performing their role in child care efficiently. When any of the events mentioned in the program takes place, the mothers can understand and adjust aptly to the situations, thus leading to a reduction of maternal anxiety in correspondence with the self regulation theory.

The results indicate the decrease in the average level of maternal anxiety of the experimental group after the experiment, as compared to the level before the experiment and hence supporting the first hypothesis.

Hypothesis 2: The level of anxiety of the mothers who received the admission program in the experimental group is lower than the anxiety level of the mothers in the control group.

When the mean scores of the anxiety in the experimental group and the control group are compared by using ANCOVA for analysis, using the pre-test as covariate, it is found that they differ with statistical significance ($p < .001$). When analyzed the mean score in Table 3, it is found that the mean anxiety score of the experimental group at post-test1(40.73) is lower than that of the control group(46.50) although, the mean anxiety score of the experimental group at pre-test is higher than the mean score of the control group. The explanation for this is that the mothers in the experimental group received information during the admission program that effect to their cope according the self-regulation theory and corresponded to their needs, including the information on the illness, symptoms, mother's role, the environment, staff, and the rules and regulations of ward. This information helped prepare them for the impending events and situations, and helped them cope aptly according the self-regulation theory. And the method of giving information was videotape as the media. The clear visual message and the accompanying information plus the opportunity for the mothers to ask questions from the researcher helped reduce the tension and the state anxiety of the

mothers reduce and build a good relationship between the researcher and the mothers. The mothers were also given informational pamphlets with content similar to that on the videotape so that the mothers could use as future reference. All of these resulted in the close proximity of the expectations and real situations, thus resulting in better coping. The results of the study show that the mean anxiety score of mothers in the experimental group more reduce than the mean anxiety score in the control group with statistical significance ($p < .001$).

The results of this study are in agreement with the findings of study by Melnyk (1994). She studied the anxiety of mothers of hospitalized child too. 108 mothers were studied and used the self-regulation theory as guideline of the study. The information that she provided to mothers were same as this study. It was regarding the child behavior and the role of parents when their child was hospitalization. Melnyk used the audiotape in her studied but this study used the videotape. The data were collected using the state anxiety assessment form by Spielberger and an assessment form to measure the role of the parents designed by Melnyk. The study found that this giving information could reduce anxiety of mothers in the experimental group. The mean anxiety score of mothers in the experimental group was lower than the mean anxiety score in the control group with statistical significance ($p < .01$).

In addition, Kaewvejchawong (1984) studied the effects of nursing intervention on reducing anxiety of hospitalized children's mothers. She provided information in giving support, encouragement and education to the mothers regarding the illness, the role of mothers in hospitalized child care, the hospital environment, problems experienced by other family members and financial problems. The information was given by the researcher herself through conversations with the mothers. The results showed that the giving information in this manner can greatly reduce the anxiety level of the mothers. The mothers in the experimental group had lower level of anxiety than those in the control group with statistical significance ($p < .01$). She did not use the self-regulation theory as guideline. But when analyzed the detail of the information that she provide to mothers in the experimental group, it was found that the contents were same as the characteristics of typical types in the self-regulation theory i.e. information regarding disease of their child, the cause to provide the procedures to their child, the sequence of treatments and caring their child, the environment of ward, problems in

other family members, and problem in medicine cost. It may be understood that characteristic of information like this can enhance the maternal coping and refer to reduction of maternal anxiety.

In this study, the anxiety measurement is done twice (post-test 1 and post-test 2), the researcher like to know how the change of the mean anxiety score of mothers in experimental group compared to mothers in the control group one day and three day after received an admission program. The study revealed that the anxiety level of the mothers in the experimental group abruptly decreases on the first day after the experiment, but on the third day it decreases a little. This can be explained that the anxiety theory found that graph of the level anxiety showing a curving line, this explains that when the anxiety reaches at a certain degree there will be a little change or no longer change (Goodwin, 1986). The experiment and the result of this study are in accord.

An analysis of mean score of the maternal anxiety in the control group by comparing the pre-test and post-test scores with the use of paired t-test, it was found that the mean score of the maternal anxiety at post-test 1 and post-test 2 was lower than pre-test with statistical significance ($p < .01$). This result can explain as follow:

1. The symptoms of the ill children improve: In the study of Blumberg (1980) found that the anxiety of the mothers in relation with excessive symptoms of children that in agree with the study of Kongpan (1990). She found that the severe ill child is negative relation to the coping of mother. Srilenawat (1987) stated that the perception of mothers to the severity of ill child, it also increase the anxiety of mothers. In addition, Wong (1993) stated that fear and anxiety of mothers may be related to the seriousness of the children's illness and the type of medical procedures involved to their children. Often a great deal of anxiety is related to the trauma and pain inflicted on the child. The study revealed that the symptom of the children of the control group improves on the third day. It refers to the level of mothers' anxiety measurement decreases.

2. A child with not severe disease. Respirators and medical equipments are not needed. The study of Halm and Alpen (1993) found that the medical equipments around the children create much anxiety to the mothers. The anxiety level of mothers that not too high in control group decreases when time passes by. The study of Halm

and Alpen (1993) agree with the study of Genaro (1986), the level of anxiety which is not too high, will decrease when time passes by. Genaro (1986) found that the anxiety of parental of children hospitalization reduced in 3-7 days. Therefore, the findings are in agreement with this study. The mothers in the control group are likely to have reduced anxiety level even without any intervention, as time passes

3. The age of ill child is a factor that effect to the anxiety of mothers. All of the mothers in both groups (experimental and control) have 1-3 years children. In this age, the children have developed in language. It can enhance a few communications to mothers. They are not only crying, then mothers can know to response to their needs. The mothers' anxiety about do not know to response their children are also decrease.

4. The routine treatment at the pediatric ward: The staff will give information about rules and regulations, facilities, the environment of ward, and the details the mothers need to know would somewhat anxiety of the mothers as well.

5. Talking to other mothers whose children have the same disease or inquiring information, which dare not to ask the staff, this may help the mothers understand the way to treat their child and help calm their down. These are also the way to reduce maternal anxiety.

In conclusion, the mothers in both groups have factors in above mention that reduce the maternal anxiety when the time passes by. But mothers in the experimental group were given an admission program, when compared the mean anxiety score with the control group they also found that reduction of anxiety score statistically significance ($p < .001$).

This indicated that even though the anxiety of the mothers of hospitalized children can be reduced as time passes, but providing the admission program to the mothers helps reduce the anxiety level more effectively, thus supporting the second hypothesis.

Research Limitations:

The researcher was unable to control the hospital staff from giving health care information and suggestions to the mothers or control changes in the severity of the children's illness during the time span of the study. During the course of the study, a staff from the psychiatric department counseled one of the participants in the

experimental group about the care of another child who was at home. A social worker contacted one of the mothers in the control group regarding free milk provision for her child. The researcher thinks that these incidents did have influence on the anxiety level of the mothers. In addition, one of the mothers in the experimental group whose child was admitted on the first day reported to the nurse at 18.00hrs that her child had a fever and if she could give him a sponge bath. The nurse checked the vital signs recorded at 17.45hrs which read that the child's body temperature was 37.6 degrees. The nurse walked to the child's bed, took off his clothes and said to the mother "He doesn't have a fever, but if you want you can bathe him" and then returned to the nurse's station. The mother got very upset by this event. She showed dissatisfaction that the nurse took off her child's clothes and walked away. She said "My child is hot with fever. I am scared that he will suffer seizures. If I could care for him by myself I wouldn't have brought him to the hospital." The mother burst into tears and was very upset that the nurse did not care about her child. The same nurse approached the mother and explained that the child had no fever but she thought the mother wanted to bathe the child and therefore, she tried to help by undressing him. The father of the child who was also present there explained to the nurse that his wife was anxious about the child's conditions and asked the nurse to check his temperature again. The temperature recorded was 38 degrees. The nurse gave the child medications to reduce fever and also gave him a sponge bath. The situation that took place had caused a conflict between the mother and the staff resulting in dissatisfaction.

CHAPTER VI

CONCLUSION

Summary of the study

This research is a quasi experimental research to study the effect of an admission program on anxiety of mothers of hospitalized children with respiratory disorders. The sample group selected for the study was 60 mothers of children receiving treatment at the pediatric ward of Inburi Hospital, Singburi province during August 2002 to January 2003. The mothers selected to participate in the study were the sole caregivers to their ill children throughout the hospitalization and all of these children were hospitalized for the first time. The sample group was divided into control group of 30 subjects and experimental group of 30 subjects. The data collection started with the researcher inspecting the admission process at the pediatric ward on a daily basis. The researcher selected the mothers of the pediatric patients with the characteristics according to the criteria set for the study and asked them to participate. The first thirty mothers selected were assigned into the control group. This group received the usual nursing care at the pediatric ward. The participants in the control group were asked to answer The State Anxiety Inventory form when admitted at ward (pre-test), one day after the admission (post-test 1) and again four days after admission (post-test 2). After this process was completed, the researcher selected the participants for the experimental group. This sequence was followed in order to prevent bias regarding different treatment of the mothers in the control group and the experimental group. The mothers in the experimental group were asked to fill a form concerning personal information and to answer the State Anxiety Inventory form. The mothers then underwent the admission program. The next day they were asked to answer The State Anxiety Inventory form again and the questionnaire to assess the satisfaction level towards the admission program. Four days after the admission the mothers were asked to answer The State Anxiety Inventory form for the last time. The data received were then analyzed with computer program.

Findings of the study can be summarized as follows:

1. The mothers in the experimental group and the control group have similar characteristics which are: age of mothers, education level of mothers, marital status, occupation, family income, medical expenses, number of children, birth order of children, age of children, and illness of children.
2. The mean anxiety score of mothers at pre-test of the experimental group and the control group differed but without statistical significance ($p > .05$).
3. The mean anxiety score of the mothers of the experimental group at post-test 1 and post-test 2, when compared with the pre-test, showed reduction with statistical significance ($p < .001$).
4. The mean anxiety score of the mothers of the control group at post-test 1 and post-test 2 showed reduction with statistical significance ($p < .01$).
5. The mean anxiety score of the mothers of the experimental group at post-test 1 and post-test 2 showed reduction more than those of the control group with statistical significance ($p < .001$).
6. In additional finding, the mothers of the experimental group showed high level of satisfaction (mean=3.60) towards the admission program.

Implications and Recommendations*Implications for Nursing Practice*

1. The researcher would like to suggest that the nurse at the ward use the admission program designed for this study to provide information to the mothers of the children hospitalized for the treatment of respiratory disorders.
2. For other departments with different rules and regulations, this admission program can be applied to suit the needs of the departments.
3. Some places or hospitals may not have videotape player therefore, other media such as audiotape or pictures may be used to present the information of the program.
4. The use of videotape as a media to give information attracts attention from the participants. Because of the life-like movements and depiction of real events can help relate the information to the participants more efficient, so nurse should use the videotape to provide information to the patient.
5. The atmosphere of the area used to provide the program information should be

quiet with minimal disturbances. The mothers of sick children may be distracted and experience anxiety if they hear their children crying.

6. After imparting the information, the nurse should always assess the satisfaction of the participants. The results of the assessment should be used to adjust the program to suit the needs of the mothers.

7. In providing information to the mothers regarding medical equipments, the nurse should include the information on infusion pump. This equipment is very often used with pediatric patients to regulate the flow of intravenous fluid with precision.

Implication for Future Research

1. The components of admission program for the mothers in the experimental group can be studied in several sub-groups. For example, the group that receives information solely from the pamphlets, the group that receives information via videotape, the group that receives information through discussion with the researcher, and the group that receives two or three of the above components. The data can be compared with that of the control group to study the effectiveness of the different method used to give information.

2. In this study, the mothers in the experimental group experienced have not too high level of anxiety before the study. In the future, if the researcher wants to observe clear change that takes place in anxiety level after the experiment, the researcher should select the mothers with high level of anxiety, for example, mothers of children admitted at the pediatric intensive care unit.

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APPENDIX

6. การจ่ายค่ารักษาพยาบาล

- () จ่ายเองทั้งหมด
- () เบิกจากต้นสังกัดได้ทั้งหมด
- () ประกันสังคม
- () ประกันสุขภาพ 30 บาทรักษาทุกโรค

7. จำนวนบุตรทั้งหมด.....คน

คนที่ 1 อายุ.....คนที่ 2 อายุ.....

คนที่ 3 อายุ.....คนที่ 4 อายุ.....

8. ผู้ป่วยเป็นบุตรคนที่

9. การวินิจฉัยโรค (ผู้วิจัยเป็นผู้เขียน).....

10. การเปลี่ยนแปลงของอาการบุตรขณะที่อยู่ในโรงพยาบาล(ผู้วิจัยเป็นผู้เขียน)

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แบบวัดความวิตกกังวล (State Anxiety Inventory)
SAI Form Y-I

ชื่อ.....

วันที่.....เลขที่.....

คำชี้แจง ข้อความต่อไปนี้ เป็นข้อความที่อาจแสดงถึงความรู้สึกต่างๆของท่าน โปรดอ่านข้อความแต่ละข้อ แล้วทำเครื่องหมายกากบาท (x) ทับลงบนตัวเลขในแต่ละข้อที่ตรงกับความรู้สึกของท่าน เกี่ยวกับการเข้ารับการรักษาในโรงพยาบาลของบุตรครั้งนี้ คำตอบของท่านไม่มีถูกหรือผิด และท่านไม่ต้องใช้เวลากับการตอบคำถามข้อใดข้อหนึ่งมากเกินไป แต่ขอให้เลือกข้อที่ตรงกับความรู้สึกของท่านในขณะนี้มากที่สุด

- ไม่รู้สึกเลย หมายถึง ในขณะนี้ ท่านไม่มีความรู้สึกนี้อยู่เลย
- รู้สึกบ้าง หมายถึง ในขณะนี้ท่านมีความรู้สึกนี้อยู่เพียงเล็กน้อย
- รู้สึกปานกลาง หมายถึง ในขณะนี้ท่านมีความรู้สึกนี้อยู่พอสมควร
- รู้สึกมาก หมายถึง ในขณะนี้ท่านมีความรู้สึกนี้อยู่ตลอด

ตัวอย่าง

| | ไม่รู้สึกเลย | รู้สึกบ้าง | รู้สึกปานกลาง | รู้สึกมาก |
|------------------|--------------|------------|---------------|-----------|
| ฉันรู้สึกเหนื่อย | X | 2 | 3 | 4 |

คำอธิบาย

จากตัวอย่าง ถ้าท่าน ใส่เครื่องหมายกากบาททับเลข 1 แสดงว่าในขณะนี้ท่านไม่รู้สึกเหนื่อยเลย

| | ไม่รู้สักเลย | รู้สักบ้าง | รู้สักปานกลาง | รู้สักมาก |
|------------------------------|--------------|------------|---------------|-----------|
| 1. ฉันรู้สึกสงบ----- | 1 | 2 | 3 | 4 |
| 2. ฉันรู้สึกมั่นคง----- | 1 | 2 | 3 | 4 |
| 3. ฉันรู้สึกดีเกี่ยวกับ----- | 1 | 2 | 3 | 4 |
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| 19. ฉันรู้สึกไม่หวั่นไหว-- | 1 | 2 | 3 | 4 |
| 20. ฉันรู้สึกแจ่มใส----- | 1 | 2 | 3 | 4 |

แบบประเมินความพึงพอใจของมารดาต่อโปรแกรมแรกรับสำหรับมารดา
ที่มีบุตรป่วยด้วยโรกระบบทางเดินหายใจที่เข้ารับการรักษาในโรงพยาบาล

คำชี้แจง

แบบประเมินชุดนี้ มีวัตถุประสงค์เพื่อต้องการทราบถึงความพึงพอใจของมารดา ต่อโปรแกรมแรกรับสำหรับมารดาที่มีบุตรป่วยด้วยโรกระบบทางเดินหายใจ ที่เข้ารับการรักษาในโรงพยาบาล โปรดอ่านข้อคำถามในแต่ละข้อ แล้วพิจารณาว่าข้อความแต่ละข้อนั้น ตรงกับความคิดเห็นของท่านมากน้อยเพียงใด แล้วใส่เครื่องหมาย ✓ ใน () หน้าข้อความนั้น โดยคำตอบแต่ละข้อ ไม่มีถูกหรือผิด

ตัวอย่าง

ท่านคิดว่าท่านพอใจเนื้อหาข้อมูลที่ท่านได้รับมากน้อยเพียงใด

- | | |
|----------|-------------|
| (✓) มาก | () ปานกลาง |
| () น้อย | () ไม่พอใจ |

คำอธิบาย

จากตัวอย่าง ถ้าท่านเลือกใส่เครื่องหมาย ✓ ลงในช่อง () มาก แสดงว่าท่านมีความพึงพอใจต่อเนื้อหาข้อมูลที่ท่านได้รับเป็นอย่างมาก

APPENDIX B

List of experts consulted on validation of the research instruments

1. Assistant Professor Dr. Waraporn Chaiyawat
-Faculty of Nursing, Chulalongkorn University
2. Assoc. Professor Boonpean Chanwatana
-Department of Pediatric Nursing
Faculty of Nursing, Mahidol University
3. Dr. Rungnapa Phanicharat
-Department of Mental Health and Psychiatric Nursing
-Faculty of Nursing, Mahidol University
4. Doctor Prawit Somboon
-Director of Inburi Hospital, Singburi Province
5. Miss Laeard Nardwong
- Head of Nursing Department, Inburi Hospital, Singburi Province

APPENDIX C

หนังสือแสดงเจตนายินยอมเข้าร่วมโครงการวิจัย (กลุ่มทดลอง)

วันที่.....เดือน.....พ.ศ.

ข้าพเจ้า.....อายุ.....ปี

อยู่บ้านเลขที่.....หมู่.....ซอย.....ถนน.....

ตำบล.....อำเภอ.....จังหวัด.....โทรศัพท์.....

ขอแสดงเจตนายินยอมเข้าร่วมโครงการวิจัยของนางประพิรพร รัตนศิริ นักศึกษาปริญญาโท สาขาการพยาบาลเด็ก คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล เรื่องผลของโปรแกรมแรกรับสำหรับมารดา ต่อความวิตกกังวลของมารดาที่มีบุตรป่วยด้วยโรกระบบทางเดินหายใจที่เข้ารับการรักษาในโรงพยาบาล โดยข้าพเจ้าได้รับทราบรายละเอียดของโครงการดังต่อไปนี้

วัตถุประสงค์ของการวิจัย เพื่อศึกษาผลของโปรแกรมแรกรับสำหรับมารดาที่ผู้วิจัยจัดทำขึ้นในการลดความวิตกกังวลของมารดาเมื่อบุตรเข้ารับการรักษาในโรงพยาบาลด้วยโรกระบบทางเดินหายใจ

ประโยชน์ที่คาดว่าจะได้รับจากการวิจัยคือ การนำวิธีทางในการวิจัยไปสู่การปฏิบัติจริงในการลดความวิตกกังวลของมารดา และสร้างความพึงพอใจให้แก่มารดาขณะบุตรเข้ารับการรักษาในโรงพยาบาล สิ่งตามมาเมื่อมารดาที่มีความวิตกกังวลลดลงคือมารดาจะสามารถให้การดูแลบุตรที่กำลังเจ็บป่วยได้อย่างเต็มที่ ส่งผลให้บุตรหายจากการเจ็บป่วยได้ดีขึ้น

ความเสี่ยงและผลข้างเคียงในการวิจัยครั้งนี้ไม่มี เนื่องจากเป็นการทดลองกับมารดา และเป็นเพียงการให้ข้อมูล และทำแบบประเมิน ไม่ได้มีการปฏิบัติกับร่างกาย หรือก่อให้เกิดความเจ็บปวดและอันตรายแต่อย่างใด

รายละเอียดขั้นตอนที่ผู้ร่วมโครงการวิจัยจะได้รับการปฏิบัติ มีรายละเอียดดังเอกสารแนะนำสำหรับผู้เข้าร่วมวิจัยที่แนบมาด้วยนี้ หากท่านมีข้อสงสัย กรุณาติดต่อผู้วิจัยได้ตลอด 24 ชั่วโมงที่โทรศัพท์หมายเลข 06-7750535 หากผู้วิจัยมีข้อมูลเพิ่มเติมทั้งด้านประโยชน์และโทษ ที่เกี่ยวข้องกับการวิจัยครั้งนี้ ผู้วิจัยจะแจ้งให้ผู้เข้าร่วมโครงการวิจัยทราบโดยเร็วและไม่ปิดบัง

ข้าพเจ้ามีสิทธิที่จะของการเข้าร่วมโครงการวิจัย โดยไม่ต้องแจ้งให้ทราบล่วงหน้า และการงดเข้าร่วมโครงการวิจัยครั้งนี้ จะไม่มีผลกระทบใดๆต่อการได้รับบริการหรือการรักษาที่บุตรของข้าพเจ้าจะได้รับ ข้าพเจ้าได้รับทราบข้อมูลข้างต้นตลอดจนข้อดีข้อเสียที่จะได้รับการเข้าร่วมโครงการในครั้งนี้ และข้าพเจ้ายินยอมที่จะเข้าร่วมโครงการดังกล่าวโดยขอให้ผู้วิจัยจัดการเปิดเผยชื่อ ประวัติ ตลอดจนข้อมูลที่เกี่ยวข้องกับข้าพเจ้าและบุตรให้แก่ผู้อื่น ได้ทราบ

จึงได้ลงลายมือชื่อไว้เป็นหลักฐาน ในการยินยอมเข้าร่วมโครงการวิจัยในครั้งนี้

ลงชื่อ.....ผู้ให้ความยินยอม
(.....)

ลงชื่อ.....พยาน
(.....)

ลงชื่อ.....พยาน
(.....)

หนังสือแสดงเจตนายินยอมเข้าร่วมโครงการวิจัย (กลุ่มควบคุม)

วันที่.....เดือน.....พ.ศ.

ดิฉันชื่อ นางประไพพร รัตนศิริ เป็นนักศึกษาปริญญาโท สาขาการพยาบาลเด็ก คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล ดิฉันมีความสนใจที่จะศึกษาถึงวิธีการที่จะช่วยลดความวิตกกังวลของมารดาเมื่อบุตรเข้ารับการรักษาในโรงพยาบาล จึงได้จัดทำโปรแกรมแรกรับสำหรับมารดานี้ขึ้น เพื่อศึกษาผลของโปรแกรมแรกรับนี้ต่อความวิตกกังวลของมารดา โดยใช้วิธีการให้ข้อมูลในการศึกษา ดิฉันมีความประสงค์จะขอความร่วมมือจากท่านในการทำแบบประเมินดังนี้

1. เมื่อแรกรับเข้ามาในหอผู้ป่วย ขอความร่วมมือจากท่านในการทำแบบประเมิน 2 ชุด ได้แก่

- แบบสอบถามข้อมูลส่วนบุคคล ใช้เวลาในการตอบแบบสอบถาม ประมาณ 5 นาที
- แบบประเมินความวิตกกังวล ใช้เวลาในการตอบแบบสอบถาม ประมาณ 10 นาที

หลังจากนั้น บุตรของท่านจะได้รับการดูแล เมื่อเข้าพักรักษาในหอผู้ป่วย จากเจ้าหน้าที่ของหอผู้ป่วย

2. หลังจากเข้ารับการรักษาในโรงพยาบาล 1 วันขอความร่วมมือในการทำแบบประเมินความวิตกกังวล ครั้งที่ 2

3. หลังจากเข้ารับการรักษาในโรงพยาบาล ในวันที่ 4 ขอความร่วมมือในการทำแบบประเมินความวิตกกังวล ครั้งที่ 3 หลังจากนั้นท่านจะได้รับคู่มือการเข้ารับการรักษาในโรงพยาบาล และคู่มือการดูแลบุตรป่วยด้วยโรคระบบทางเดินหายใจที่เข้ารับการรักษาในโรงพยาบาล 1 ชุด

ในการดำเนินการทั้งหมดนี้ ท่านสามารถที่จะปฏิเสธการทำแบบประเมิน หรือการเข้าร่วมการวิจัยได้ตลอดเวลา โดยจะไม่มีผลกระทบต่อการรักษาพยาบาลใดๆทั้งสิ้น รวมทั้งคำตอบของท่านจะถือเป็นความลับ และจะนำเสนอในภาพรวม ไม่มีการระบุชื่อผู้ให้ข้อมูล

ขอขอบคุณทุกท่านที่กรุณาให้ความร่วมมือ

ประไพพร รัตนศิริ

ผู้วิจัย

สำหรับผู้เข้าร่วมวิจัย

ข้าพเจ้าได้รับทราบรายละเอียดของการศึกษาดังที่อธิบายไว้ข้างต้น มีความเข้าใจและยินดีเข้าร่วมการวิจัยในครั้งนี้

ลงนาม.....ผู้เข้าร่วมวิจัย

APPENDIX D

การทดสอบ Assumption ของการวิเคราะห์ข้อมูลคะแนนความวิตกกังวลของมารดาในกลุ่มทดลองและกลุ่มควบคุมโดยใช้การวิเคราะห์ความแปรปรวนร่วม

1. ความสัมพันธ์ ระหว่าง Covariate กับตัวแปรตาม ต้องเหมือนกันทุกกลุ่ม จึงต้องทดสอบความเท่ากันของ Slope เส้นตรง (Test of Homogeneity of slopes)

1.1. Pre-test (covariate) and Post-test 1(dependent variable)

Test of Between- Subjects Effects

Dependent Variable: Post-test 1

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|----|-------------|--------|------|
| Corrected model | 1698.393a | 3 | 566.131 | 8.753 | .000 |
| Intercept | 677.672 | 1 | 677.672 | 10.478 | .002 |
| Group | 52.091 | 1 | 52.091 | .805 | .373 |
| Pre-test | 1064.248 | 1 | 1064.248 | 16.455 | .000 |
| Group*Pre-test | 167.337 | 1 | 167.337 | 2.587 | .113 |
| Error | 3621.790 | 56 | 64.675 | | |
| Corrected Total | 5320.183 | 59 | | | |

a. R Squared = .319 (Adjusted R Squared = .283)

1.2. Pre-test (covariate) and Post-test 2 (dependent variable)

Test of Between- Subjects Effects

Dependent Variable: Post-test 2

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|----|-------------|--------|------|
| Corrected model | 1341.944a | 3 | 447.315 | 8.203 | .000 |
| Intercept | 858.362 | 1 | 858.362 | 15.741 | .002 |
| Group | 37.578 | 1 | 37.578 | .689 | .410 |
| Pre-test | 811.592 | 1 | 811.592 | 14.883 | .000 |
| Group*Pre-test | 128.149 | 1 | 128.149 | 2.350 | .131 |
| Error | 3053.789 | 56 | 54.532 | | |
| Corrected Total | 4395.733 | 59 | | | |

a. R Squared = .319 (Adjusted R Squared = .283)

2. ทดสอบภายในแต่ละกลุ่ม ความสัมพันธ์ระหว่าง covariate (pre-test) กับตัวแปรตาม (post-test) จะต้องมีความสัมพันธ์ในรูปเชิงเส้น

2.1. Pre-test (covariate) and Post-test 1(dependent variable)

Levene’s Test of Equality of Error Variances

Dependent Variable: Post-test 1

| F | df 1 | df 2 | Sig. |
|------|------|------|------|
| .584 | 1 | 58 | .448 |

Test the null hypothesis that error variance of the dependent variable is equal across groups.

a. Design: Intercept + GROUP + Pre-test + GROUP*Pre-test

Tests of Between-Subjects Effects

Dependent Variable: Post-test 1

| Source | Type III Sum of Squares | df | Mean Squares | F | Sig. |
|-----------------|-------------------------|----|--------------|--------|------|
| Corrected model | 1698.393 | 3 | 566.131 | 8.753 | .000 |
| Intercept | 677.672 | 1 | 677.672 | 10.478 | .002 |
| Group | 52.091 | 1 | 52.091 | 0.805 | .373 |
| Pre-test | 1064.248 | 1 | 1064.248 | 16.455 | .000 |
| Group*Pre-test | 167.337 | 1 | 167.337 | 2.587 | .113 |
| Error | 3621.790 | 56 | 64.675 | | |
| Corrected Total | 5320.183 | 59 | | | |

a. R Squared = .319 (Adjusted R Squared = .28)

2.2. Pre-test (covariate) and Post-test 2 (dependent variable)

Levene’s Test of Equality of Error Variances

Dependent Variable: Post-test 2

| F | df 1 | df 2 | Sig. |
|------|------|------|------|
| .277 | 1 | 58 | .601 |

Test the null hypothesis that error variance of the dependent variable is equal across groups.

a. Design: Intercept + GROUP + Pre-test + GROUP*Pre-test

Tests of Between-Subjects Effects

Dependent Variable: Post-test 2

| Source | Type III Sum of Squares | df | Mean Squares | F | Sig. |
|-----------------|-------------------------|----|--------------|--------|------|
| Corrected model | 1341.944a | 3 | 447.315 | 8.203 | .000 |
| Intercept | 858.362 | 1 | 858.362 | 15.741 | .000 |
| Group | 37.578 | 1 | 37.578 | 0.689 | .410 |
| Pre-test | 811.592 | 1 | 811.592 | 14.883 | .000 |
| Group*Pre-test | 128.149 | 1 | 128.149 | 2.350 | .131 |
| Error | 3053.789 | 56 | 54.532 | | |
| Corrected Total | 4395.733 | 59 | | | |

a. R Squared = .305 (Adjusted R Squared = .268)

3. การแจกแจงของค่าคลาดเคลื่อนเป็นแบบปกติ

3.1. Pre-test (covariate) and Post-test 1(dependent variable)

| Source | df | Type I Sum of Squares | Mean Square | F |
|----------------------|----|-----------------------|-------------|----------|
| Covariate (Pre-test) | 1 | 704.79 | 704.79 | 18.74*** |
| Main Effects (Group) | 1 | 3237.14 | 3237.14 | 86.07*** |
| Residual (Error) | 57 | 2143.72 | 37.61 | |
| Corrected Total | 59 | 6085.65 | | |

*** p<.001 Adjusted R Square= .635

3.2. Pre-test (covariate) and Post-test 2 (dependent variable)

| Source | df | Type I Sum of Squares | Mean Square | F |
|----------------------|----|-----------------------|-------------|----------|
| Covariate (Pre-test) | 1 | 491.72 | 491.72 | 11.51*** |
| Main Effects (Group) | 1 | 2330.80 | 2330.80 | 54.57*** |
| Residual (Error) | 57 | 2434.42 | 42.711 | |
| Corrected Total | 59 | 5256.93 | | |

*** p<.001 Adjusted R Square = .521

APPENDIX E

สรุปอาการผู้ป่วยเด็กระหว่างการเก็บข้อมูล

| กลุ่ม | อาการแรกเริ่ม | อาการตั้งแต่แรกเริ่มจนถึงวันที่ 4 |
|--------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ทดลอง | ผู้ป่วยเด็กส่วนใหญ่มาด้วยอาการไข้สูง ไอ มีเสมหะ มีน้ำมูกมาก หายใจลำบาก ซึม รับประทานอาหารได้น้อย บางรายมีคลื่นไส้ อาเจียน พักผ่อนได้น้อย | ผู้ป่วยกลุ่มนี้ส่วนใหญ่อาการดีขึ้น มีบางรายที่ยังมีไข้ต่ำๆ แต่ส่วนใหญ่ไม่มีไข้ ยังมีไอบ้างบางครั้ง ไม่มีเสมหะ ไม่มีน้ำมูก หายใจปกติ เล่นได้ รับประทานอาหารได้ไม่มีอาการคลื่นไส้ อาเจียน พักผ่อนได้ |
| ควบคุม | ผู้ป่วยเด็กส่วนใหญ่มาด้วยอาการไข้สูง ไอ มีเสมหะ มีน้ำมูกมาก หายใจลำบาก ซึม รับประทานอาหารได้น้อย บางรายมีคลื่นไส้ อาเจียน พักผ่อนได้น้อย | ผู้ป่วยทุกรายอาการดีขึ้น ไม่มีไข้ไอบ้างบางครั้ง เสมหะลดลง ไม่มีน้ำมูก หายใจปกติ ไม่มีอาการหอบเหนื่อย เล่นได้ รับประทานอาหารได้ พักผ่อนได้ |

BIOGRAPHY

| | |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| NAME | Mrs. Prapeeporn Rattanasiri |
| DATE OF BIRTH | 30 September 1970 |
| PLACE OF BIRTH | Singburi, Thailand |
| INSTITUTIONS ATTENDED | Saraburi Nursing Collage, 1988-1992: Bachelor of Nursing Science Mahidol University, 2001-2005: Master of Nursing Science (Pediatric nursing) |
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