FACTORS PREDICTING ADAPTATION OF MOTHERS HAVING A HOSPITALIZED CHILD IN PEDIATRIC INTENSIVE CARE UNIT

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Thesis

Entitled

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FACTORS PREDICTING ADAPTATION OF MOTHERS HAVING A HOSPITALIZED CHILD IN PEDIATRIC INTENSIVE CARE UNIT.

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ABSTRACT

This descriptive research aimed to examine the level of stress caused by the environment of the pediatric intensive care unit (PICU), the coping strategies, and adaptation among mothers having a hospitalized child in PICU, and the predictability of maternal adaptation from stress, education and family income. The sample comprised 90 mothers having a hospitalized child in PICU at Siriraj Hospital. Data were collected by questionnaires. The questionnaires consisted of the Demographic Data Form, Maternal Stress, Maternal Coping, and Maternal Adaptation Questionnaire. The data were analyzed by using descriptive statistics, Pearson's Product Moment Correlation Coefficient and multiple regression.

The results showed that the overall mean of maternal stress was at a moderate level ($\overline{X}$ = 2.89, S.D. = 0.71). The child's behavior and emotions, parental role alteration, procedures, sights and sounds, and child appearance induced the mothers to be stressed at a moderate level. The subjects used the emotion-focused coping rather than the problem-focused coping (mean proportion use of coping strategies = 0.55, and 0.45, respectively). Overall mean of maternal adaptation was at a moderate level ($\overline{X}$ = 2.61, S.D. = 0.35). Somatic health adaptation was at a good level, morale and social functioning adaptation were at a moderate level. The maternal stress and family income could predict 12.2% of the adaptation of mothers having a hospitalized child in PICU.

The finding suggests that nurses should help reduce maternal stress, by providing the information regarding her critically ill child, the environment of PICU, and involving the mother in her child's treatment and care.

KEY WORDS : STRESS / COPING / MATERNAL ADAPTATION / PEDIATRIC INTENSIVE CARE UNIT

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ปัจจัยทำนายการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต
(FACTORS PREDICTING ADAPTATION OF MOTHERS HAVING A HOSPITALIZED CHILD IN PEDIATRIC INTENSIVE CARE UNIT)

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บทคัดย่อ

การวิจัยเชิงบรรยายนี้มีวัตถุประสงค์ เพื่อศึกษาระดับความเครียดที่มาจากสิ่งแวดล้อมของหอผู้ป่วยเด็กวิกฤต วิธีการเผชิญความเครียด และการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต และศึกษาอำนาจการทำนายของความเครียด การศึกษาของมารดาและรายได้ของครอบครัวต่อการปรับตัวของมารดา กลุ่มตัวอย่างเป็นมารดาของเด็กที่เข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต โรงพยาบาลศิริราช จำนวน 90 คน เก็บรวบรวมข้อมูลโดยใช้แบบสอบถามข้อมูลส่วนบุคคล แบบประเมินความเครียด วิธีการเผชิญความเครียด และการปรับตัวของมารดา วิเคราะห์ข้อมูลโดยใช้สถิติบรรยาย สัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน และการวิเคราะห์ถดถอยพหุคูณแบบขั้นตอน

ผลการศึกษาพบว่า มารดามีความเครียดโดยรวมเฉลี่ยในระดับปานกลาง ($\overline{X}$ = 2.89, S.D. = 0.71) พฤติกรรมและอารมณ์ของเด็ก บทบาทของบิดามารดาที่เปลี่ยนไป การรักษาที่ได้รับ ภาพและเสียงของเครื่องมือ และลักษณะของเด็กที่ปรากฏ ทำให้มารดาเกิดความเครียดในระดับปานกลาง มารดาใช้วิธีการเผชิญความเครียดแบบการมุ่งปรับแก้ทางอารมณ์มากกว่าการมุ่งแก้ปัญหา (สัดส่วนของการใช้วิธีการเผชิญความเครียด = 0.55 และ 0.45 ตามลำดับ) ผลการปรับตัวโดยรวมของมารดาที่ระดับพอควร($\overline{X}$ = 2.61, S.D. = 0.35) การปรับตัวด้านสุขภาพร่างกายอยู่ในระดับดี การปรับตัวด้านขวัญและกำลังใจ และด้านการทำหน้าที่ทางสังคมอยู่ในระดับพอควร ความเครียด และรายได้ของครอบครัวสามารถทำนายการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤตได้ร้อยละ 12.2

จากผลการศึกษามีข้อเสนอว่า พยาบาล ควรช่วยลดความเครียดให้มารดาโดยการให้ข้อมูลเกี่ยวกับบุตรที่เจ็บป่วย สิ่งแวดล้อมของหอผู้ป่วยเด็กวิกฤต และให้มารดาได้มีส่วนร่วมในการรักษาและดูแลบุตร

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CHAPTER I
INTRODUCTION

Background and Significance of the Study

Stress is a condition which one cannot avoid every day through one's life time. In contrast, adaptation is the basis of homeostasis and resistance to stress. According to Monsen (Monsen, et al., 1992: 28), *adaptation* resulted when the individual was able to manage a series of behaviors and mental processes to neutralize the stress experience and reestablish integrity of function. Adaptation involved achieving a balance between perceived demands (stress) and managing resources (coping), a state of reduced anxiety and enhanced well-being.

Admission of a child to a pediatric intensive care unit was a cause of stressful experience for the child and his family, especially the mother (Lewandowski, 1992: 19). Since the admission often occurred suddenly and severely, the mother would appraise the situation to be stressful. Moreover, some external factors, such as the environment of the pediatric intensive care unit (PICU), as well as the internal factors like the recognition and understanding of the situation were other sources of maternal stress. At the same time, the degree of the stress depended on one's particular cognition and experience (Eberly, et. al., 1985: 57; Miles & Carter, 1989: 188).

Since the environment of the PICU was new and novel for the mother; lights all day and all night, plenty of medical instruments such as the ventilator and monitors, some continuous sights and sounds, the medical treatment procedures done to the child such as catheterization, medical injection, and venipuncture, including rushed performance of the medical team trying to save the patient, the brief and quick explanations, the limitation of the visiting time and the number of visitors allowed, the shortness of the interrelationship between mother and the beloved child were situations that the mother had experienced. All of these could create stress for the mother (Eberly, et al., 1985: 57).

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According to the many previous studies on the factors that caused parental stress in the PICU, using Miles and Carter's instrument (The Parental Stressors Scale: Pediatric ICU, PSS: PICU), it was found that the environment of PICU induced the mothers to have stress. The environmental stressors were those arising from the physical and psychosocial environment of the intensive care unit, including sights and sounds in the environment, procedures done to the child, the child's appearance, the child's behavior and emotion, staff communication, staff behavior, and inability of parents to perform their parental role (Chaisom, P., 1993; Eberly, et al., 1985; Heuer, 1993; Jingli, C., 1997; Miles & Carter, 1989; Prasert, A., 1997; Riddle, et al., 1989).

When one is facing stress, two coping strategies might employed; managing or altering the problem with the environment causing distress (problem-focused coping), or regulating the emotional response to the problem (emotion-focused coping) (Lazarus & Folkman, 1984: 150). The coping strategies would bring about three adaptational outcomes; social functioning, morale or life satisfaction, and somatic health (Lazarus & Folkman, 1984: 181). The relationships among the three components were complex and the adaptational outcome considered based upon the overall adaptation in the three dimensions.

There were also other factors related to maternal adaptation such as the mother's education and family income. Education enabled individual intellectual development and problem-solving skills which were significant resources for adaptation (Jaloweic & Powers, 1981: 10-15). Family income was the source of financial support necessary to serve the needs of the members and to spend on medical expenses while a child was hospitalized in the PICU, which resulted in the mother's abilities to cope and adapt to the problem (Sahin, 1986: 159).

As mentioned earlier having a child admitted to PICU caused stress for the mothers. Understanding the stressors, coping methods and adaptation outcome is very significant for those who work closely with the critically ill child and the mother. Thus, this study aimed to examine predicting factors of maternal adaptation including maternal stress due to the environment of PICU, maternal education, and family income. It is expected that the result would provide baseline data for nursing care plan for the critically ill child and family and further studies.

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Research Questions

1. What was the extent of the maternal stress (caused by the environment of the PICU), coping strategies and adaptation of the mothers having a hospitalized child in PICU?

2. Could the stress that was caused by the environment of PICU, maternal education, and family income predict the maternal adaptation?

Purposes of the study

1. To determine the maternal stress (caused by the environment of PICU), coping strategies, and adaptation of the mothers having a hospitalized child in PICU.

2. To determine the predictability of maternal stress, maternal education, and family income on adaptation of the mothers having a hospitalized child in PICU.

Conceptual Framework

The conceptual framework underlying this study was derived from Lazarus's theory of stress and coping (Lazarus & Folkman, 1984). The following is the conceptual framework to illustrate the factors predicting adaptation of the mothers having a hospitalized child in PICU.

Lazarus believes that psychological stress was a transaction between the person and the environment appraised by the person as taxing or exceeding his/her resources and affecting his or her well-being. The judgment of whether a particular person-environment transaction was stressful hinged on cognitive appraisal, experience, and individual factors (Lazarus & Folkman, 1984: 21).

Stress was mediated through cognitive appraisal, the process whereby the individual determined why and to what extent a particular transaction or series of transactions were stressful (Lazarus & Folkman, 1984 cited in Monsen, et al., 1992: 28). Cognitive appraisal was a process through which the person evaluated whether a particular encounter with the environment was relevant to his or her well-being, and if so, in what ways by primary appraisal, the person evaluated whether he or she had anything at stake in this encounter. In secondary appraisal, the person evaluated what if anything could be done to overcome or prevent harm or to improve the prospects for

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benefit.

Coping was the constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that were appraised as taxing or exceeding the resources of the person (Lazarus & Folkman, 1984: 141). The coping had two widely recognized major functions: regulating stressful emotions (emotion-focused coping) and altering the troubled person-environment transaction causing the distress (problem-focused coping). Then, the three basic kinds of outcome were generated, social functioning (e.g., in the family and at work), morale or life satisfaction, and somatic health.

When a critically ill child was admitted to the pediatric intensive care unit (PICU), the mother would be faced with various conditions or situations in the environment of PICU. The environment of PICU that the mothers must face were the child's appearance, child's behavior and emotions, parental role alteration, sights and sounds, procedures, staff behavior, and staff communication. The first evaluation of mothers in the event was called primary appraisal, which was a cognitive determination about the event. Primary appraisal included the judgment that an encounter was irrelevant, benign-positive, or stressful. Stressful appraisal occurred in three forms: 1) harm/loss, 2) threat, 3) challenge. The second evaluation was called secondary appraisal, which was a complex evaluative process when a person appraised the situation, concerning what might and could be done. Both primary appraisal and secondary appraisal affected the level of stress in these mothers.

Two factors that influenced the severity of stress of the mothers in primary and secondary appraisal were personal and situational factors. Commitment and beliefs affected personal factors. Commitments were a feeling of what was important to a person. It guided a person into or away from the situation. In addition, beliefs were the determination of how a person evaluated what was happening. It was composed of personal control and existential beliefs. Besides, situational factors were novelty, predictability, situational uncertainty, temporal factors, and ambiguity. Most mothers evaluated the situation in terms of how it would mean important commitments for them and whether there was a greater potential for threat and challenge. If they evaluated the situation as harmful, but it was still controllable, they might evaluate the

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situation as a challenge. On the contrary, if the mothers appraised the situation as a threat for them and they could not control it, such an event would be stressful for the mothers.

The review of literature revealed that maternal stress was affected when having a hospitalized child in PICU. The stress might be aggravated when the mothers encountered the threatening environment of the PICU. The causative factors were the child's appearance, child's behavior and emotions, sights and sounds, procedures, staff communication, staff behavior, and parental role alteration (Heuer, 1993; Chaisom, P., 1993; Jingli, 1997; Prasert, A., 1997). Because the stress had lessened the maternal ability and the mother's intellectual coping. The more the stress, the less effective the adaptation. Thus, the maternal stress caused by the environment of the PICU might be the constraint for coping of the mothers having a hospitalized child in PICU.

In a stressful event, the mothers tended to cope with the problem in two forms: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984: 150-157). The strategies of problem-focused coping were directly doing something to what had induced stress, altering the stressful environment, defining the problem, generating a new goal, changing new behavior, or learning new social skills. Emotion-focused coping strategies were aimed to decrease negative emotions associated with the stressful situation in order to maintain hope and optimism. Most people used both problem and emotion-focused coping strategies to deal with the stressful situation because there was no one best method.

Coping resources that the mothers used to cope with the stressful encounter were properties of the person. These included health and energy (a physical resource), positive beliefs (a psychological resource), problem solving, social skills (competencies), social support, and material resources (Lazarus & Folkman, 1984: 158-164).

Education was defined as resources for coping. Education was the creation, gathering and transferal of knowledge, experience and culture of human beings. More educated mother could understand, manage and cope with the child illness situation better than those of the less education (Jaloweic & Power, 1981: 10-15). The study by Srinon, K. (1998), the relationship between social support and maternal adaptation in caring for thalassemic children, which found that highly educated mothers had good

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adaptation or effective adaptation.

The family income, as the material resource, was a factor influencing the mother ability to cope with problems. High family income might reduce the vulnerability of threat and facilitate effective coping (Lazarus & Folkman, 1984: 164). Previous studies found that family income had positive relationship with mental health of mothers having a chronically ill child (Intaravichai, B., 1996), and adaptation of maternal role in mother of premature infant (Thankthongkum, S., 1990).

In a stressful situation, if the mothers were healthy, believed that outcomes were controllable, and had the coping resources, they would be able to effectively manage and cope with stress. Adaptation was the output after the mothers had evaluated and coped with the stress. It affected both the short-term and long-term outcomes in individuals: social functioning, morale, and somatic health.

Therefore, maternal stress (caused by the environment of PICU) as the constraint, maternal education as the coping resource, and family income as the material resource might be the variables that influence the adaptation of the mothers with having a child hospitalized in the intensive care unit as shown in Figure 1.

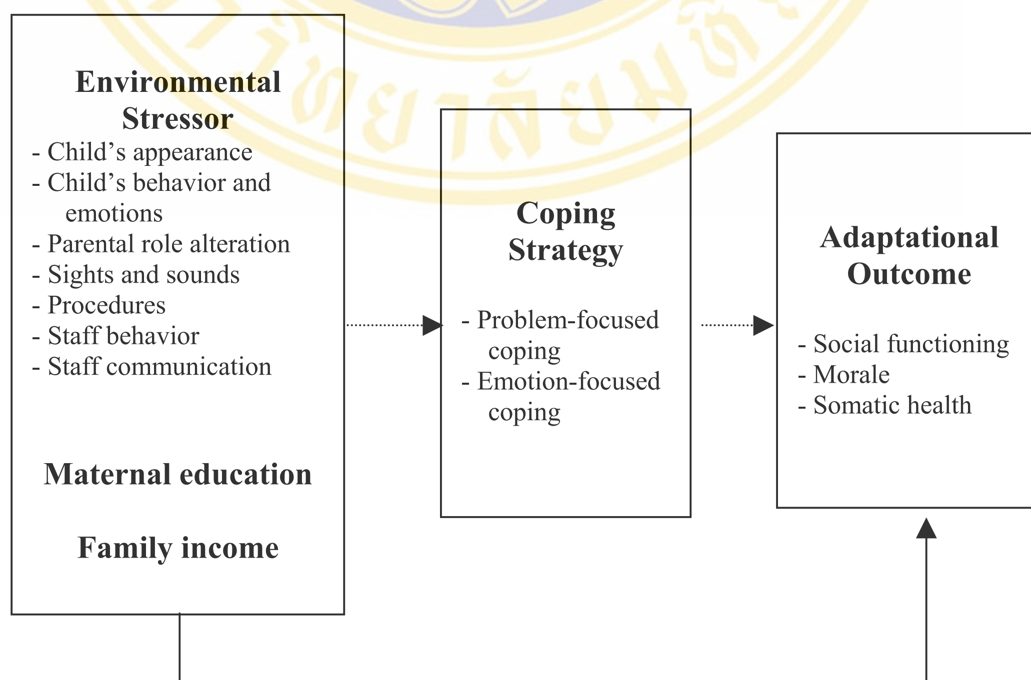

Figure 1 The conceptual framework of the study.

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Research Hypothesis

The maternal stress caused by the environment of PICU, maternal education, and family income could predict adaptation of the mothers having a child hospitalized in the pediatric intensive care unit.

Scope of the Study

The subjects were the mothers having a hospitalized child in a pediatric intensive care unit, Siriraj Hospital, from March to October 2003. Two pediatric intensive care units were administered by the Pediatric Department, and the other one was administered by the Surgical Department.

Definition of Terms

Maternal stress was a particular transaction between the mother and the environment of PICU which appraised by the mother as taxing or exceeding her resources and endangering their well being (Lazarus & Folkman, 1984: 21). The maternal stress was evaluated by the Parental Stressor Scale: Pediatric Intensive Care Unit (PSS: PICU) of Carter and Miles (1982) in Thai Version, translated by Prasert, A (1997).

Maternal coping was the constantly changing cognitive and behavioral efforts to manage specific situation of mothers confronted that were appraised as taxing or exceeding the resources of the mother. For this study, "Way of Coping" developed by Lazarus and Folkman, revised in 1984 (Lazarus & Folkman, 1984: 328-333) was used to assess maternal coping.

Maternal adaptation was the output after the mothers had evaluated and coped with the stress. It included social functioning, morale, and somatic health. In order to evaluate the maternal adaptation, the researcher modified the maternal adaptation questionnaire from the Adaptation of Cervical Cancer Patient Questionnaire of Pongpak Pittayapan (1999) based on Lazarus's theory on stress and coping.

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Maternal education was the total number of years that the mother had an educational attainment, which was counted from the elementary level to the highest level.

Family income was the total money in Baht, earned by all of the family members in a month. In the case of an unemployed mother or father, it is the earned income from only one person.

Expected Outcome and Benefits

1. The result will be used as a guideline for pediatric nurses to provide planning to help the mothers having a hospitalized child in a pediatric intensive care unit to achieve optimum adaptation.
2. The pediatric nurses can use the result of this study as base line data for providing continuous care in a pediatric ward and prepare the child's family to care for the ill child at a general ward and at home effectively.
3. The result of this study will be base line data for the pediatric nurses to conduct further studies about the strategies for helping the mothers of hospitalized children in PICU to adapt to the stress effectively.

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CHAPTER II
LITERATURE REVIEW

To determine the maternal adaptation and predictive factors of the adaptation among the mothers having a hospitalized child in a pediatric intensive care unit (PICU), the relevant literature was reviewed. The three major topics were as follow:

1. Lazarus' theory on stress and coping consisted of the definition of stress, cognitive appraisal, coping, and adaptational outcomes.
2. Stress, coping, and adaptation of mothers having a child hospitalized in the PICU.
3. Factors predicting adaptation of mothers having a hospitalized child in the PICU.

1. Lazarus' theory on stress and coping

Definition of stress

Stress was a basic experience, which one might encounter one's life time. It was difficult to specify the meaning of stress since the concept of stress depend on many factors such as the causes of stress, the nature of the stimulating agent, the physical and psychological response, and the stress occurring period. Therefore, it was not easy to make a conclusion that stress was the cause or the outcome of the particular event (Sorensen & Luckman, 1994: 268). The transaction definition was focused to expand the concept of stress in Lazarus's theory on stress and coping.

In the transactional model, the perception of stress appeared to be related to the person and event within a certain environment. Lazarus and Folkman indicated that stress should be treated as an organizing concept for understanding the dynamic event influencing human and animal adaptation. They commented that *psychological stress was a relationship between the person and the environment appraised by the person as taxing or exceeding his/her resources and affecting his or her well-being*. The

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judgment of whether a particular person-environment relationship was stressful hinged on cognitive appraisal, experience, and individual factors (Lazarus & Folkman, 1984: 21).

Cognitive appraisal

Cognitive appraisal was an evaluative cognitive process which intervened between the encounter and the reaction by shaping the emotional and behavioral response. Through the process, people evaluated the significance of what was occurring for their well-being. There were 3 kinds of cognitive appraisal: primary, secondary and reappraisal (Lazarus & Folkman, 1984: 31-38).

1. Primary appraisal

When people encountered a stressful event, the three kinds of primary appraisal could be differentiated as follows;

1.1 Irrelevant: the event had no implication for a person's well-being, having no value, need, or commitment, and nothing being lost or gained in the transaction.

1.2 Benign-Positive: the event with outcome preserved or enhanced well-being.

1.3 Stress Appraisals: the event included harm or loss, threat, and challenge.

1.3.1 In *harm or loss*, some damage to a person had already occurred. For instance, in injury or illness, disability, recognition of some damage to self-esteem or social esteem, loss of loved one, and loss of value had been evaluated.

1.3.2 *Threat* concerned harms or losses which had not yet occurred or were anticipated. It focused on the potential harms characterized by negatives such as fear, anxiety, and anger.

1.3.3 *Challenge* was the event which held the possibility for mastery or gain. It was focused on the potential for gain or growth inherent in an encounter characterized by pleasurable emotions such as eagerness, excitement, and exhilaration.

2. Secondary appraisal

Secondary appraisal was a judgment concerning what might be done to manage the situation including an evaluation of the effectiveness of the coping options

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and an evaluation of the consequences of the strategy used in term of demands and constraints. However, the secondary appraisal and the primary appraisal could occur simultaneously. The interaction in shaping the degree of stress and the strength and quality of the emotional reaction was quite complex. For example, other things being equal, if the person was helpless or too ill to deal with a demand, stress would be relatively great because the harm or the loss could not be overcome or successfully executed.

When a person was in a troubled situation, one must appraise the event and select the coping strategies. People might employ problem-focused forms of coping to approach the manageable problem. In contrast, emotion-focused form of coping would be used when encountering loss or harm.

3. Reappraisal

After trying to eliminate the trouble, reappraisal was used to reevaluate the adaptational outcomes by chaining appraisal based on new information from the environment and/or the person.

Factors influencing appraisal

Lazarus and Folkman (1984: 56-103) indicated that personal factors and situational factors were the two elements determining the stress and its severity.

1. Personal Factors

Personal factors influenced appraisal by determining the prominence of well-being in a given encounter, shaping the person's understanding of the event and the outcome of his or her emotions and coping efforts, and providing the basis for appraisement outcomes. The two personal characteristics were commitment and belief.

1.1 Commitment was an expression of what was important to people by underlining the selected options. It affected appraisal by guiding people into or away from threatening, harmful, or beneficial situations, shaping cue-sensitivity, and indicating the impact on vulnerability.

1.2 Belief determined how a person evaluated the happening situation. In appraisal, it indicated what fact was, and how things were in the environment. It also shaped the understanding of its meaning. The influence on appraisal was difficult to observe since it always operated on a tacit level. However, its impact could be

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observed when there was sudden loss of belief or a conversion to a different belief system.

Belief included belief about personal control; general and situational, and existential belief. The less ambiguity there was about a particular encounter, the more likely situational appraisals of control would affect emotion and coping. In a controllable situation, people would evaluate it as a challenge.

2. Situational Factors

Situational factors which created the potential for threat, harm, or challenge were as follow.

2.1 Novelty means a situation with which the person had not had previous experience. In general, most situations were not completely new. Certain aspects could be familiar or there could be a general resemblance between the situation and some other class of event. Novelty encouraged appraisal of inferences based on related prior experience or on general knowledge.

A person evaluated a completely new situation as a threat only if some aspect of it had been previously connected with harm. If a situation was completely novel and, previously, no aspect of it connected with harm, it would not result in an appraisal of threat. Similarly, if no aspect of it previously related to mastery or gain, it would not be evaluated as a challenge.

2.2 Predictability meant the predictable environmental characteristics which could be detected, discovered, or learned. When encountering a predictable event, less stress than that of an unknown outcome was evaluated.

2.3 Event Uncertainty: Human behavior, in nature, had event uncertainty which introduced the notion of probability. It was indicated that a maximum uncertainty event was often extremely stressful. Its immobilizing effect on the anticipatory coping process caused mental confusion.

When a person could not make a decision, fear, excessive worrying and rumination, and eventually anxiety or stress could result. This anxiety or stress might interfere with cognitive functioning, thus, making it more difficult to cope. It could be assumed that the more uncertain the event, the more heightened its effect was likely to be.

2.4 Temporal Factors: It was indicated that time might be one of the

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most important elements of a stressful situation since it influenced threat and challenge appraisals. The temporal factor included imminence, duration, and uncertainty.

2.4.1 *Imminence* referred to how much time there was before an event occurred. The less imminent an event in which cues signaling harm, danger, or the opportunity for mastery or gain presented, the less urgent and more complex the appraisal processes became. Although the passage of time could elevate a threat, it could also allow the person to manage a threat through cognitive coping, leading to the reduction of stress.

2.4.2 *Duration* was the length of time during which an event occurring or the length of a persisting stressful event. Duration was very important in disease and psychopathology. A chronic intermittent pattern gave the individual time off to the extent that the event was put out of mind between occasions. On the other hand, a chronic persistent pattern did not easily allow time off. So, a more persistent level of threat was expected, at least until coping and reappraisal processes were interposed. Similarly, encountering a stressful event for a long time might lead to the patient suffering from illness.

2.4.3 *Temporal uncertainty* referred to not knowing when the event would occur. The greater the ambiguity, the more personal factors shaped the situational appraisal. Ambiguity could intensify a threat if there was some other cue presented indicating potential harm. It could also decrease a threat by allowing alternative interpretations of the significance of the encounter. Temporal uncertainty was stressful only when a threatening cue indicated that the event was going to happen.

Finally, situational factors and personal factors were always interdependent. Their significance for stress and coping derived from the function of the cognitive processes which gave weight to one in the context of the other.

Assessment of stress

Stress was defined and examined by a group of psychologists in some of its objective and subjective determinants, and some outcomes of stress, such as physiological and psychological costs. Recently, health psychologists have adapted to measure stress and assess its effects. They looked at the measurement of stressful life

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events, daily hassles, chronic strain, and stress in the workplace and the home (Taylor, 1995: 237).

Major change in the health of a family member is a situation that everyone can experience in life's events. The hospitalization of a child for even a minor illness is a stressful experience for both child and family. When the child is critically ill, however, the strain is magnified. Parents of critically ill children are faced with a great number of such conditions or situations. Of all the stresses the parents may face, the critical care environment itself may cause the stress.

Miles and carter (1983: 354) had developed the conceptual framework and model to explain and organize the many stimuli that may be sources of stress for parents when their child was admitted to an intensive care unit. This framework and model were based on their own research on parental stress in the intensive care unit and four theories that were related to stress and illness: Hans Selye's theory on stress, Richard Lazarus's cognitive-phenomenological theory on stress and coping, Sr. Callista Roy's model of nursing, and Rudolph Moos's theory on coping with illness.

To assess parent's level of stress encountered during the PICU experience, Miles and Carter developed the Parental Stress Scales Pediatric ICU (PSS: PICU), from the retrospective reports of parents after their child's discharge from the PICU by Carter and Miles in 1982 (LaMontagne & Pawlak, 1990: 416). It consisted of 37 items and was categorized into 7 dimensions; the child's appearance, the child's behaviors and emotional reaction, sights and sounds in the unit, procedures done to the child, staff communication, staff behavior, and parental role alteration. The 510 subjects having a hospitalized child in the PICU were asked to complete the questionnaires. The results showed that internal consistency of the questionnaire (Cronbach's alpha) ranged from 0.69 to 0.96, with a total alpha coefficient of 0.96.

For this study, the researcher used the PSS: PICU Thai version to evaluate the level of maternal stress causing by the environment of the PICU, as translated by Anchalee Prasert (1997).

Coping

Lazarus and Folkman (1984: 141) had defined coping as constantly changing cognitive and behavioral efforts to manage specific external and /or internal demands

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which were evaluated as taxing or exceeding the resources of a person. It was concerned with what the person actually thought or did in a particular event. During the encounter, the person would read the realities of what was happening and what could be done. They affected coping.

Coping served two overriding functions: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984: 150-153). They could both facilitate and impede each other in the coping process throughout the stressful encounter.

1. Problem-Focused Coping

Problem-focused coping referred to the strategies to manage or alter the problem with the environment causing distress. These coping strategies were similar to those of problem solving. They included defining the problem, generating alternative solutions, weighing the alternatives in terms of cost and benefits, choosing the best options, and acting. Problem-focused coping would be used when a person had evaluated the situation and learnt that it could be handled.

2. Emotion-Focused Coping

Emotion-focused coping consisted of cognitive processes directed at lessening emotional distress by changing the meaning of a stressful transaction. The strategies included avoidance, minimization, distancing, selective attention, positive comparisons, wresting positive value from negative events, and so on.

Emotion-focused coping was employed to maintain hope and optimism, to deny both fact and implication, to refuse to acknowledge the worst, to act as if what happened did not matter, and so on. These processes lent a person to an interpretation of self-deception or reality distortion.

Coping resources and constraints

Besides cognitive appraisal, the way people actually cope also depended heavily on the available resources and the constraints which inhibited use of the resources. It was impossible to catalogue all of the resources upon which people drew to cope with the myriad demands of living. Thus, *resources* with primary properties of the living were reviewed.

1. Health and Energy

The crucial role played by physical well-being was particularly evident in

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enduring problems and in stressful transactions. It was indicated that health and energy certainly facilitated coping efforts. A person who was frail, sick, tired, or debilitated would have less energy to expand on coping than those who were healthy.

2. Positive Beliefs

Hope could be encouraged by the generalized belief that outcomes were controllable or by positive beliefs. Beliefs not only served as coping resources but also inhibited coping efforts. For example, a belief in a punitive God could lead a person to accept a distressing situation as punishment and to do nothing to manage the problem. A belief in fate would lead to an appraisal of helplessness which in turn discouraged relevant problem-focused coping. A situation evaluated as holding the possibility for change and control was associated with more problem-focused coping than those having to be accepted.

3. Problem-Solving Skills

Problem-solving skills were important resources for coping with the stressful situation. They consisted of the ability to access information, identify the problem, weigh alternative courses of action, and select and implement an appropriate plan of action. They themselves were drawn from other resources including a wide range of experiences, the person's store of knowledge, the cognitive or intellectual ability to use that knowledge, and the capacity for self-control.

4. Social Skills

Social skills referred to the ability to communicate and behave with others effectively in a socially appropriate way. They facilitated problem-solving in conjunction with other people, increased the likelihood of being able to access cooperation, and gave the individual more control over social interactions.

5. Social Support

The social environment was not only a predominant cause of stress but also provided vital resources for living and flourishing. However, support from a social relationship as a mediator of health outcomes was unclear. Some of the confusion about social support has arisen since there were at least two different ways social support might be relevant to adaptation. First, it was believed that being embedded in a social network might make people feel good about themselves and their lives. Lack of social support stemming from losing social ties through separation, divorce or death

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was highly stressful. Second, support worked as an immediate buffer to stress and its destructive somatic consequences or provided valuable resources for coping when stress occurred. People would have better morale and health, and function better, if they received or believed that they would receive social support when it was needed.

There were three types of functions of social support: emotional support, tangible support, and information support (Schaefer, et al., 1982 cited by Lazarus & Folkman, 1984: 250).

5.1 Emotional support included attachment, reassurance, and being able to rely on and confide in a person. It might contribute to the feeling that one was loved or cared about. These might lead to reduced uncertainty and worry. Then, the stress was remedied.

5.2 Tangible support involved direct aid such as loans or gifts, and services such as taking care of someone who was sick, doing a job or chore. It might contribute to decrease the problem and the stress.

5.3 Informational support provided information or advice, and gave feedback about how a person was doing. It was indicated that feedback helped to maintain social identify and a sense of integration in society. It might signal that the other person cared and that the recipient was valued. It can also overlap with emotional support.

6. Material Resources

Material resources referred to money and goods or services which money could buy. Having enough resources greatly increased the coping options in almost any stressful transaction. They provided easier and more effective access to legal, medical, financial, and other professional assistance. These might reduce the person's vulnerability to threat and facilitate effective coping.

The *constraints* which might affect the fullest use of the material resources were the following;

1. Personal Constraints

Personal constraints or personal agendas referred to the internalized cultural values and beliefs which prohibited certain types of action or feeling and psychological deficits. A person's constraints presumably derived from the process of

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socialization. An individual influenced by cultural norms depended in part on what was at stake and the consequences for violating them, and the extent to which he or she complied with norms. For example, Thai people, in general, believed and trusted a physician or the health personnel. They usually allowed their health problems to be the physicians business.

2. Environmental Constraints

It was concluded that environments might differ in the nature and frequency of threats posed to the individual and in the breadth of options available for addressing threatening situations. They might also respond to the coping efforts in ways which engaged their strategies.

3. Level of Threat

Threat appraisals were characterized by intense negative emotions such as fear, which could range from minimal to extreme. The level of threat the person experiences played a crucial role in determining coping. The extent to which a person felt threatened was in part a function of his or her evaluation of coping resources due to the internal and external demands in a particular situation and the constraints inhibiting their use. The level of threat, in turn, influenced the extent to which available resources could be used for coping. The greater the threat, the more primitive, desperate, or regressive emotion-focused forms of coping tended to be, and the more limited the range of problem-focused forms of coping were.

Problem-focused forms and emotion-focused forms of coping were used with different frequencies due to the level of perceived stress. Regarding the low degrees of stress, the two forms of coping appeared with similar frequency. At moderate ranges of stress problem-focused forms of coping were the dominant response. At high levels of stress, emotion-focused forms of coping began to be predominant.

Coping measurement

To measure coping Lazarus and Folkman used the Ways of Coping as a checklist that could either be self-administered or, preferably, administered by an interviewer. This checklist was developed in a number of studies, as well as by

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subjects in their research and members of their research group. In addition to the broad function of emotion- and problem-focused coping, the items on the checklist involved four basic modes of coping: direction, inhibition of action, information search, and a complex category referred to as cognitive coping.

Therefore, the researcher used the Way of Coping questionnaire to assess the coping of the mothers to the stress during the PICU experience.

Adaptational outcomes

Lazarus and Folkman (1984: 181) had given a definition of adaptation as the outcomes of an individual thinking process to evaluate a stimulating event, plan to seek options, and cope with the stress.

The principal roles of the appraisal and coping processes were that they affected both the short-term and long-term outcomes in individuals: social functioning, morale or life satisfaction, and somatic health (Lazarus & Folkman, 1984: 181-225).

1. Social Functioning

Social functioning which was influenced by various factors including the person's history with its implications, autonomy, trust, intimacy, culture values, and social expectation, could be defined as the ways an individual fulfilled his or her various roles as satisfaction with interpersonal relationships. It could also refer to the skills necessary for maintaining roles, and relationships. A person's overall social functioning was mostly determined by the effectiveness of the evaluation and coping with daily events. In effective coping, problem-focused forms and emotion-focused forms of coping would work in a complementary way and not impede each other.

2. Morale

Morale was concerned with how a person feels about oneself and his or her condition of life including happiness, satisfaction, and well-being. The positive and negative emotions which were experienced during a stressful encounter were reflection of the person's momentary evaluation of his or her well-being. People with lower expectations were more likely to view their performance with satisfaction than those with higher expectations.

The long-term outcome of morale paralleled the short-term outcome of emotions generated in a specific encounter. Morale over the long run might depend on

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a tendency to assess encountered events as challenges, to cope with negative outcomes by putting them in a positive light, and effectively managing a wide range of demands. This positive thinking, a form of emotion-focused coping, was best regarded from the standpoint of defensive reappraisal. Morale also depended on being effective in coping across the widest range of encounters. The competent coper might experience less stress or be less oppressed by the ordinary stress of living.

3. Somatic Health

The effect of stress on somatic health was described as the physiological reaction. There were many reactions as the body responded to stress. These physiological reactions included autonomic reactions, biochemical reactions, immune response, and blood circulation. The reactions could occur in different degrees; light or severe, and a different period of their life time. Increasing heart rate, hypertension and high blood sugar, muscle wasting, and gastric irritation were some of the short-term reactions (Starefos & Prater, 1990: 876-878; Ignatavicius, et al., 1995: 109-110). People who have a high level of stress are often more prone to illness and have lowered ability to cope with illness and subsequent stress (Kozier, et al., 1995: 830).

Overall, the relationships among the morale, social functioning, and somatic health were complex. Good functioning in one sphere might be directly related to poor functioning in another. Similarly, good functioning in one area did not necessarily mean that the person functioned well in all areas. In order to evaluate the adaptational outcome, we must be concerned with all aspects; social functioning, morale, and somatic health (Lazarus & Folkman, 1984: 182).

Therefore, the adaptational outcome of mothers having a hospitalized child in PICU should be assessed in all three aspects; social functioning, morale, and somatic health. In this study, the researcher used the maternal adaptation questionnaire to assess all three aspects of adaptational outcome of the mothers having a hospitalized child in PICU, based on the concept of Lazarus's theory on stress and coping.

2. Stress, coping, and adaptation of mothers having a hospitalized child in PICU

Mothers are essential to their child, especially while the child was confronting

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a critical illness (Curley & Wallace, 1992: 377). When a critically ill child was admitted to the pediatric intensive care unit, the mothers would be faced with a great number of stress conditions or situations. Even the environment of PICU could induce the mothers' stress.

The transaction model for understanding parental stress in the intensive care unit was developed by Miles and Carter in 1983 (cited by Miles, et. al., 1989a: 182), based on the theories of Selye, Lazarus, Roy, Moos, and their colleagues. It was indicated that stressors experienced by parents when their child was in an intensive care unit were identified as personal, situational, and environmental (Miles & Carter, 1983). *Personal stressors* included the personal and family characteristics such as age, personality factors, parental role, educational level, and economic status. *Situational stressors* were variables related to the child's illness such as perceived severity, type of admission, and adequacy of parental preparation for the experience. *Environmental stressors* were defined as stress stimuli arising from the physical and psychosocial aspects of the ICU environment (Miles, et al., 1989b: 208-209).

Since the environment of the PICU was new and novel for the mother; lights all day and all night, plenty of medical instruments such as the ventilator and monitors, some continuous sights and sounds, the medical treatment procedures done to the child such as catheterization, medical injection, and venipuncture, including rushed performance of the medical team trying to save the patient, the brief and quick explanations, the limitation of the visiting time and the number of visitors allowed, the shortness of the interrelationship between mother and the beloved child were situations that the mother had experienced. All of these could create stress for the mother (Eberly, et al., 1985: 57).

The physiological reactions to stress included autonomic reactions, biochemical reactions, immune response, and blood circulation. The processes of homeokinesis, maintenance of steady state, and the General Adaptation Syndrome just described all affect physiological adaptation (Murray & Zentner, 1989: 137). However, the reactions could occur in different degrees, light or severe.

Most people with stress were selfish, aggressive, and offensive. These social behaviors, in turn, would cause other problems including social problems, family problems, and interpersonal problems. Furthermore, it could have an effect on health

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and ambition. These might lead to reduce an individual's performance. When the performance could not achieve the expectations and the encounter outcomes were not satisfied, the mother might be hopeless, sad, and depressed. These might affect maternal health including physical and mental, the being well-being, and the self-confidence of the mothers and their self-esteem.

In addition, hard work, less relaxation, and inadequate consumption might affect the mother psychologically and sociologically. For instance, having to spend a lot of time taking care of an ill child might make the mother have less or no time to take care of other family members. This might, in turn, affect the mental perception of the others in the family. The family members may have adverse reactions to call for an intention. Furthermore, if the family could not afford the expense, improper responses including anger, quarrels, disagreement, and worry might occur. Finally, the family and the mother's health might be damaged if the mother could not cope with the situation.

The mothers had to make more effort to cope with a stressful situation (LaMontagne & Powlack, 1990: 416-421). A mother who used effective coping strategies could achieve adaptation. If the mother used ineffective coping strategies, she could be maladaptive, have increased stress and became ill. These might, in turn, affect her performance and social being.

The mothers would have more stress from a problem that was cumulatively increased; the more the stress, the less effective the adaptation (Selye, 1956 cited in Carter, et al., 1985: 180). This might be because the stress had lessened the mental ability and the mother's intellect. Consequently, the health of the mothers could be affected in the long run. It was also indicated that the stress causing factors had an inverse affect on psychological adaptation (Pinyomit, S., 1996; Kumsiengsai, D., 1996).

In conclusion, having a child admitted to a PICU was a crisis creating maternal stress. Encountering an uncertain situation like this could increase the stress. Thus, the mother should adapt herself to maintain the equilibrium of physical, mental and social aspects.

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3. Factors predicting adaptation of mothers having a hospitalized child in PICU.

The factors predicting adaptation of mothers having a hospitalized child in PICU included the stress due to the environment of the intensive care unit, maternal education, and family income.

Maternal stress caused by the environment of PICU

When a child was admitted to an ICU, the mothers would face a great number of stress conditions or situations. The intensive care unit's environment itself might also be a cause of the stress. Miles and Carter had developed the Parental Stressor Scale: Pediatric Intensive Care Unit (PSS: PICU) to assess parents' perceptions of stress stimuli in the intensive care unit environment (Miles & Carter, 1989). Several investigators had used this instrument with the critically ill child's parents.

In the year 1985, Carter and colleagues studied the parental environmental stress in pediatric intensive care units, 110 mothers and 55 fathers having a hospitalized child in PICU. They found that the greatest stress was due to parental role alteration. The parents prepared for a child's admission perceived less stress in 3 dimensions: staff communication, staff behavior, and parental role alteration (Carter, Miles, Buford, Hassaneia, 1985).

Eberly and colleagues (Eberly, Miles, Cater, Hennessey, & Riddle, 1985) studied the parental stress after the unexpected admission of a child to the intensive care unit, 233 planned admissions and 262 unexpected admissions. The result was parents with unexpected admissions perceived significantly greater state anxiety and higher mean scores on all PSS: PICU dimensions. Parental role alteration and child's behavior and emotion were the highest dimensions for both groups.

Tichy and colleagues (Tichy, Braam, Meyer, & Rattan, 1988) studied stressors in pediatric intensive care units, 10 PICU children and their parents. The results indicated the worst stressors were invasive procedures causing pain and discomfort, and parents indicated both environmental and physical stressors were equally prominent and important.

Miles and colleagues conducted a series of studies related to parental stress in PICU. Including a study of the pediatric intensive care unit environment as a source of stress for parents (1989), of 324 mothers and 186 fathers of 350 children hospitalized

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in a PICU. The timing of data collection varied from 24 to 99 hours after admission to the PICU (Miles, Carter, Riddle, Hennessey, & Eberly, 1989c). The two greatest stressors for parents were the child's behavior and emotions and alterations in the parental role. The study of testing a theoretical model: correlation of parent stress responses in the PICU (Miles, Carter, Hennessey, Riddle, & Eberly, 1989b), with 179 parents of children with cardiac diagnoses and 331 parents of children with noncardiac diagnoses hospitalized in PICU, found the parents of heart surgery children had significantly less stress on 2 dimensions: parental role alteration and child's appearance. Parental role alteration and child's behavior and emotions dimensions had the highest score for both groups.

Riddle and colleagues (Riddle, Hennessey, Eberly, Carter, & Miles, 1989) studied stressors in the pediatric intensive care unit as perceived by mothers and fathers, and found mothers' top stressors were child's behavior and emotions and alterations in parental role; fathers' top stressors were staff communication and child's behavior and emotions. Mothers' stress ratings were higher than fathers' ratings for 5 of 7 stressor dimensions measured.

Heuer (1993), in a study of parental stressors in a pediatric intensive care unit, with 32 parents of 22 critically ill children, aged 6 weeks-15 years, conducted interviews after 48 hours post-admission. In this study, parental role and procedures were the two top stressors for mothers, whereas fathers' scores were highest for procedures and sights and sounds of the PICU.

In China, Jingli (1997) studied parental environmental stress and stressors in pediatric intensive care units, with 20 parents whose children were admitted to PICU at Beijing Children's Hospital and Peking Union Medical College Hospital in China. The results indicated that parental role alteration dimension were perceived as stressors by all subjects and in all dimension were environmental stressors: child's appearance, child's behavior and emotion, procedures, sights and sounds, staff communication, staff behavior, and parental role alteration. Fathers had significant higher mean scores of stress level than mothers.

In Thailand, Chaisom, P. (1993) studied the stress and coping strategies of parent of children hospitalized in pediatric intensive care unit, and collected data from 60 parents, representing 39 children hospitalized in a PICU in Maharaj Chiang Mai

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Hospital She used a revised version of PSS: PICU of Carter & Miles (1983). The parents were assessed after the first visit of their child. Her study identified that the child's behavior sub-scale was the most significant stressor for the parents. The child's appearance and the parental role alteration were the second and third significant stressors for the parents, respectively.

Prasert, A. (1997), in a study of the effect of application theory of goal attainment on parents' anxiety in pediatric intensive care unit, studied 86 subjects who were father and/or mothers whose child was admitted to PICU. The subjects were asked to complete the PSS: PICU developed by Carter & Miles (1982). The results showed that within the first twenty-four hours of admission, both father and mothers indicated that the first two highest score dimensions were the child's behavior and emotion and the child's appearance. Furthermore, the parents were assessed for state-anxiety by using the STAI of Spielberger (1970). Both fathers and mothers reported a rather high level of state-anxiety.

In conclusion, the environment of the intensive care unit was not completely novel for all of the mothers having a hospitalized child in PICU, but the stressful situation might be a source of threat. Furthermore, an ambiguity of the child's illness status might increase the threat to the mother. Several studies indicated that the maternal stress was influenced by the environment of the PICU. The causative factors were the following.

1. Child's Appearance

The special treatments for the patients in an intensive care unit and the patients' appearance might threaten the parents' feeling. Moreover, the ambiguity about the prognosis of the child would increase the maternal stress.

2. Child's Behavior and Emotion

Child's behaviors included crying, confusion, painfulness, unconsciousness, and sleeplessness might hurt the parents' feelings when the parents found that they had failed to help or remedy the suffering of their children, and the stress was increased.

3. Sights and Sounds

Most of the parents were not familiar with the environment of the intensive

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care unit which was full of medical instruments, physicians, professional nurses, and other severely ill patients. The brightness, the vital signs, and the noise generated from the instruments might be interpreted as threats creating stress for mothers.

4. Procedures

The treatments received such as drug injections, phlegm sucking, and blood sampling might affect the parents' emotions and increase the parental stress.

5. Staff Communication

The communication between the parents and the staff of the intensive care unit was associated with the parental stress. Since the staff were very busy and serious most of the time, they had not enough time to give the details or adequate information to the parents. Lack of clarity about the child's status might affect the stress.

6. Staff Behavior

The staff performances and their serious manner might affect the parents' stress. They might interpret the staff's behavior based on their past experience. The previous experience might be associated with harm, danger, or mastery. Then, the error interpretation might make the mother feel troubled and stressful.

7. Parental Role Alteration

Having a child admitted in an intensive care unit might affect the parental roles. The parental role alterations included the parents concept of the child's illness, the perception of the parents about the prognosis of the child's illness, loss of an opportunity to take care of their child, guilt due to the child's illness, error interpretation, the increasing cost due to the illness, and the anxiety from having not enough time to take care of other family members.

All of the above mentioned factors could aggravate the maternal stress and meant the mother had to make more effort to cope with the stressful situation (LaMontagne & Powlak, 1990: 416-421). The more the stress, the less effective the adaptation. This might be because the stress had lessened the mental ability and the mothers' intellectual coping. Consequently, the health of the mothers was affected in the long run. It was also indicated that the stress causative factors had an inverse affect on the psychological adaptation (Pinyomit, S., 1996; Kumsiengsai, D., 1996). Thus, the maternal stress was the major factor predicting the maternal adaptation.

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Maternal education

Education enables the mothers to learn from and make use of the indirect and direct experiences. The educated mothers would have more chance to cope with a stressful event than those who were uneducated. Educated mothers would have not only higher percentage of ability to interpret and understand an event accurately but also more opportunity to get adequate information (Jaloweic & Power, 1981: 10-15). Moreover, Vrolarn, V. (1992) studied perceptions of uncertainty in illness, coping and general well-being of parents with children admitted in an intensive care unit. The results of the study showed that duration of education was negatively correlated with perception of uncertainty in illness ($r = -.30$, $p < .01$). Thus, highly educated mothers will have less perception of uncertainty of their child's illness. This is because educational level can help mothers to understand and form suitable perceptions about their child's illness. This is consistent with Yeanyong, V. (1994) who studied the relationship between social support, selected factors and maternal adaptation in caring for asthmatic children, in mothers, and Srinon, K. (1998) who studied the relationship between social support and maternal adaptation in caring for thalassemic children. They found that highly educated mothers had good adaptation or effective adaptation.

Family income

Naturally, monetary resources greatly increase the coping options in most stressful transactions. They provided easier and more effective access to medical and other professional assistance. High family income might reduce the vulnerability of threat and facilitate effective coping (Lazarus & Folkman, 1984: 164). Intaravichai, B. (1996) studied the relationship between demographic and child's illness factors, social support and mental health of mothers of chronically ill children, and found the family income had a positive relationship to the mental health of mothers. In addition, Thankthongkum, S. (1990) studied the relationship between anxiety and adaptation of maternal role in mothers of premature infants, and found that family income had a positive relationship to the adaptation of maternal role in mothers of premature infants. Likewise, the study of Kamsiengsai, D. (1996), on the relationship between stress level, social support and maternal adaptation of mothers with obstetric complications, found that the family income was correlated to maternal adaptation in mother with

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obstetric complications. It was consistent with the study of Varachnonth, P. (1998), on spouse support and maternal role adaptation of the post partum mothers, which found the family income was a factor predicting the maternal role adaptation. Furthermore, family income was significantly associated with mental health and role of the mother. Thus, it might be a factor that can predict the adaptation of mothers having a child hospitalized in PICU.

In conclusion, the review of literature revealed that maternal stress was affected when having a hospitalized child in PICU. The stress might be aggravated when the mother encountered the threatening environment of the PICU. Selected adaptational outcomes had been approached to cope with the stressful event. Moreover, there were other factors related to the maternal adaptation such as maternal education, and family income. Thus, the present research aimed to study the predicting factors of maternal adaptation including maternal stress due to the environment of PICU, maternal education, and family income.

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CHAPTER III
METHODOLOGY

Research Design

This descriptive research was used to study the factors predicting adaptation of mothers having a hospitalized child in pediatric intensive care unit (PICU). These factors were maternal stress, maternal education, and family income.

Population and Sampling

The target population of this study was mothers who had a hospitalized child in the intensive care unit, Pediatric Department and Surgical Department, Siriraj Hospital. The samples were selected by purposive sampling with the following inclusion criteria:

1. Having a child admitted in the PICU for at least 3 days, and
2. Having visited the child in PICU at least 2 times.

The sample size was calculated by using Thorndike equation to reach an adequate power for regression analysis (Thorndike, 1978 cited by Prescott, 1987: 130) as the following:

$$N = 50 + (10 \times \text{number of independent variables}).$$

Since, there were three independent variables in this study: maternal stress causing by the PICU environment, maternal education, and family income. Then, the calculation for sample size was

$$N = 50 + (10 \times 3)$$
$$= 80$$

Therefore, the minimum sample size was 80. In this study, the researcher used the sample size equal to 90 cases.

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Setting

The study setting was the intensive care units for critically ill children, Siriraj Hospital. There were two pediatric intensive care units in the Pediatric Department and another one in the Surgical Department.

The PICU, Pediatric Department, was an eight bed unit providing 24-hours care for critically ill children, aged ranging from one month to 13 years old, with medical and surgical problems, or infectious and non-infectious diseases. The staff of PICU consisted of a head nurse, registered nurses, practical nurses, residents, and medical attendants. They had special knowledge and skill in caring for critically ill children and used high technology to save life: ventilator support, cardiac monitors, continuous blood pressure monitoring, central venous pressure and intracranial pressure monitoring. The parents were allowed to visit their child 2 times a day during 10.00-12.00 a.m. and 16.00-18.00 p.m., two visitors for 15 minutes each time.

The ICU, Surgical Department, was an eight bed unit providing 24-hours care for critically ill children before and after undergoing surgery, excluding cardiovascular surgery. The age of the admitted patients in this unit was the newborn up to 14 years old. The staff had special knowledge and skills in caring for critically ill children undergoing surgery and employed high technology to save life. The visiting hours were between 11.00 a.m. to 18.00 p.m. Not more than 2 visitors were permitted to enter the room within 5 minutes.

Instrumentation

Questionnaires were used to collect the data as follow (Appendix A):

Part 1: Demographic data form

The demographic data form was developed by the researcher to elicit the information about the mother, the child and the family. The maternal data were age, marital status, maternal education, occupation, and experience of having a hospitalized child in the PICU. For the child, the data consisted of age and rank of the child in the family. While the family data included income, sufficiency of the income, number of children, and family type.

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Part 2: Maternal adaptation questionnaire

This questionnaire was modified from the Adaptation of Cervical Cancer Patient Questionnaire, developed by Pongpak Pittayapan (1999) based on Lazarus' theory on stress and coping.

The Adaptation of Cervical Cancer Patient Questionnaire developed by Pongpak Pittayapan (1999) evaluated the adaptational outcome in cervical cancer patients undergoing radiotherapy. This instrument was used to study the process of stress appraisal, coping and adaptational outcome in cervical cancer patients undergoing radiotherapy. This questionnaire consisted of 37 items, divided into 3 dimensions: social functioning and relationship 15 items; morale 5 items; and somatic health 16 items. The questions used to determine the somatic health were categorized into 2 types, assessed by patients from the patient's perception 13 items and assessed by the researcher 3 items. The content validity was 0.93 and reliability using Cronbach's alpha coefficient was 0.87.

In this study, the researcher modified the questionnaire in order to fit the characteristics of the sample and objectives of the study. The researcher had chosen 26 items from the items of Pongpak's questionnaire and added the 9 other items, developed from and guided by the literature review into the developed questionnaire. In the morale section, items 19 and 20 were added to evaluate the feelings of the mother facing a stress situation. In the somatic health section, items 29, 30, 31, 32, 33 and 34 were added to evaluate the signs of the maternal stress affected. Then, the modified questionnaire consisted of 35 items including 15 items of social functions and relationship, 7 items of morale, and 13 items of somatic health. Each item had four categories rated on the 4 point scale as follows:

No affect on the mothers	was equivalent to	4 points.
Slight affect on the mothers	was equivalent to	3 points.
Moderate affect on the mothers	was equivalent to	2 points.
Severe affect on the mothers	was equivalent to	1 point.

The scores of adaptational outcome ranged from 35 to 140. The higher scores indicated that maternal adaptation was effective or good. The interpretation of maternal adaptation in each dimension and overall was based on the following criteria:

Mean score 1.00-1.99 meant that the mothers of a hospitalized child in

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	the PICU had ineffective adaptation or poor adaptation.
Mean score 2.00-2.99	meant that the mothers of a hospitalized child in the PICU had moderate adaptation.
Mean score 3.00-4.00	meant that the mothers of a hospitalized child in the PICU had good adaptation or the adaptation was effective.

Part 3: Maternal stress questionnaire

In this study, the researcher used the Parental Stressors Scale: Pediatric Intensive Care Unit (PSS: PICU) Thai version to evaluate the stress of the mothers caused by the environment of PICU, as translated by Anchalee Prasert (1997).

Anchalee Prasert (1997) translated the original Parental Stressors Scale: Pediatric Intensive Care Unit (PSS: PICU) into Thai Version, which was employed to evaluate the maternal stress when a child was hospitalized in the PICU. The content validity and the language suitability were approved by three experts. A pilot study was conducted among 10 subjects who met the inclusion criteria. The Cronbach's alpha coefficient was 0.90.

The Thai version questionnaire consisted of 37 items and was categorized into 7 dimensions; 3 items for child's appearance and sights and sounds, 10 items for child's behaviors and emotions, 6 items for procedures, 5 items for staff communication, 4 items for staff behaviors, and 6 items for parental role alteration. The subjects were free to answer the questionnaire according to their experience. The questionnaire was rated by a 6 point rating scale as follows:

Extremely stressful	was equivalent to	5 points.
Very stressful	was equivalent to	4 points.
Moderately stressful	was equivalent to	3 points.
Slightly stressful	was equivalent to	2 points.
Not stressful	was equivalent to	1 point.
Not experienced	was equivalent to	0 points.

The scores ranged from 37 to 185; a higher score indicated that the mothers had high stress. The interpretation of maternal stress in each dimension and overall

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was based on the following criteria:

Mean score 1.00-1.49 meant that the mothers of a hospitalized child in the PICU had no stress.

Mean score 1.50-2.49 meant that the mothers of a hospitalized child in the PICU had slightly stress.

Mean score 2.50-3.49 meant that the mothers of a hospitalized child in the PICU had moderate stress.

Mean score 3.50-4.49 meant that the mothers of a hospitalized child in the PICU had very high stress.

Mean score 4.50-5.00 meant that the mothers of a hospitalized child in the PICU had extreme stress.

Part 4: Maternal coping strategies questionnaire

The Way of Coping Questionnaire developed by Lazarus and Folkman, revised in 1984 (Lazarus & Folkman, 1984: 328-333) was used to assess the maternal coping. It consisted of 67 items, and evaluated the coping strategies of the mothers; problem-focused coping and emotion-focus coping. The problem-focused coping was divided into 2 strategies, confrontive strategies 6 items, and planful problem solving strategies 6 items. The emotion-focused coping was divided into 6 strategies, included positive reappraisal 7 items, accepting responsibility 4 items, self-controlling 7 items, escape-avoidance 8 items, seeking social support 6 items, and distancing 6 items. Seventeen items were added for the nature of the questionnaire. Each item had four categories, rated by a scale as follows:

Not used	was equivalent to	0 points.
Used somewhat	was equivalent to	1 point.
Used quite a bit	was equivalent to	2 points.
Used a great deal	was equivalent to	3 points.

Excluding the 17 items (2, 3, 4, 5, 19, 24, 27, 32, 37, 53, 55, 57, 61, 64, 65, 66, 67), the 50 items were calculated for the mean scores of each strategy and aspect. The coping strategies were interpreted by mean scores in each strategy and the aspect based on the following criteria:

Mean score $\leq$ 0.99 meant that the mothers of a hospitalized child in

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the PICU had seldom used or little used the coping strategies.

Mean score 1.00-1.99 meant that the mothers of a hospitalized child in the PICU had sometimes used or rather used the coping strategies.

Mean score 2.00-3.00 meant that the mothers of a hospitalized child in the PICU had often used or frequently used the coping strategies.

Relative score

All 50 items were also calculated to determine relative score. Calculation of the relative score is by dividing the mean of each aspect of coping strategies with sum of mean score of all coping strategies. The value of relative score ranged from .00-1.00 and summation of overall relative score is equal to one.

Vitaliano (1987) interpreted that if the relative score of any aspect of coping strategies is high, it means that aspect is much frequently used. This means that other aspects of coping strategies are lower used. The relative score, thus, helps explain the comparison of efforts each individual used to cope with stress.

Validity and reliability of the instruments

Content Validity

The questionnaire consisted of four parts: demographic data form, maternal adaptation, maternal stress, and maternal coping strategies. The questionnaire was evaluated by five experts: three pediatric nursing instructors, one pediatric psychiatrist, and one pediatric nurse experienced in nursing care of the critically ill child (Appendix B). Then, the questionnaire was revised based on the experts' comments and suggestions.

Reliability

Reliability of the instruments was tested by using Cronbach's alpha coefficients. A pilot study was conducted among twenty-four subjects who met the inclusion criteria and were willing to complete the questionnaires. The Cronbach's alpha coefficients of the maternal stress questionnaire, maternal coping strategies

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questionnaire, and maternal adaptation questionnaire were 0.93, 0.93, and 0.80, respectively.

Protection of Human Subjects

The human rights of the subjects were respected in this study (Appendix C). The eligible subjects were individually approached to participate in the study. The study objectives, the data collection processes, expected research outcomes, subject rights, the type of questionnaires, the amount of time used for completing the questionnaires, and the right to withdraw from the study were explained. Written consent was obtained from each subject. The subjects who agreed to participate in this study were informed that the individual data would be kept confidential and results presented as a group report.

Data Collection

The data collection was processed by the researcher in the following steps.

1. A letter for permission to conduct research issued by the Faculty of Graduate Studies, Mahidol University, was sent to the Director of Siriraj Hospital and the Ethical Committee on Research Involving Human Subject, Faculty of Medicine Siriraj Hospital, Mahidol University.

2. After receiving permission, the researcher met the head nurse of the pediatric intensive care unit, Pediatric Department and Surgical Department, Siriraj Hospital to introduce herself and ask for the collaboration to collect data.

3. The data collection was in the following steps:

3.1 The subjects were selected by the purposive sampling technique based on the inclusion criteria. The medical charts were reviewed. The pediatric intensive care unit was visited by the researcher everyday to obtain the eligible subjects.

3.2 The researcher met the subject to introduce herself, explained the purpose of the study, and asked for cooperation. The subject was also informed of her full right to accept or reject to participate in the study, and quit responding to the questionnaire at any time without any adverse impact on both herself and her child.

3.3 After accepting participation in the study, the subject was invited into the prepared place, a quiet room with air conditioning, without any disturbance, and

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private enough for the mother to freely express her feeling and thinking. Then, the eligible mother was advised how to fill out the questionnaire, and asked to complete the questionnaire including the demographic data form, maternal adaptation questionnaire, maternal stress questionnaire, and maternal coping strategies questionnaire without time limitation.

3.4 While responding to the questionnaire, the eligible subject was assisted by the researcher to clarify any problematical points. To lessen the tension or the stress which might occur during completing the questionnaire, the mother would be asked to stop working on the questionnaire, was given of a glass of fresh water and cheered up, until she was prompted to finish the questionnaire.

3.5 If the subject was illiterate, the questionnaire was read and completed with the assistance of the researcher according to the mother's responses.

3.6 After receiving the completed questionnaire, the researcher thanked the mother for her cooperation, and facilitated her to visit the child in the PICU.

4. The questionnaire was prepared for further statistical analysis.

Data Analysis

A computer software package was used to evaluate the data obtained in the following steps:

1. Frequency and percentage distribution were used to analyze the demographic data.

2. Arithmetic mean and standard deviation were used to analyze the score of stress (excluding the data of no event with score of 0), the score of coping strategies, and the score of maternal adaptation in a particular aspect and overall.

3. Pearson's Product Moment Correlation was performed to determine the relationship between the variables; maternal stress, maternal education, family income, and maternal adaptation.

4. Multiple regression analysis was used to examine the predictability of maternal adaptation by selected factors including maternal stress (caused by the PICU environment), maternal education, and family income.

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CHAPTER IV
RESULTS

Ninety mothers with a child hospitalized in PICU of Siriraj Hospital were included in the study. Questionnaires were used to collect the data; eighty-eight educated mothers completed the questionnaire by themselves, and two uneducated mothers were interviewed by the researcher. The results of the data analysis were shown in four parts as follows:

Part I: Descriptive statistics of demographic data of mothers, hospitalized children in PICU, and families were presented in Table 1.

Part II: Descriptive statistics of maternal adaptation, maternal stress caused by the environment of PICU, and maternal coping were presented in Tables 2-5.

Part III: The relationship between predictive variables; maternal stress, maternal education, family income and adaptation of mothers having a hospitalized child in PICU were presented in Table 6.

Part IV: The predictability of maternal stress, maternal education, and family income on adaptation of the mothers having a hospitalized child in PICU were presented in Tables 7-8.

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Part 1 Descriptive statistics of demographic data of mothers, hospitalized children in PICU, and families

It was found that most of the mothers in this study (84.4%) were 20 to 40 years old, and 93.3% of them were married. Thirty-three mothers (36.7%) had completed primary school, and 38.9% of them were employees. The largest group of the mothers (75.6%) did not have experience of having a child hospitalized in PICU.

For the hospitalized children, most of them (46.7%) were infants, and 45.6% of them were the firstborn child of the family.

Regarding the characteristics of the family, it was found the majority of mothers (58.9%) had a nuclear family type, 41.1% of the mothers had two children. Thirty-three mothers (36.7%) had family income of less than 5,000 baht per month. Seventy percent of the mothers had inadequate income. The general characteristics of the samples were presented in the Table 1.

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Table 1 Characteristics and demographic data of mothers, hospitalized children in PICU, and families (n = 90).

Characteristics	**Frequency**	**Percentage**
Maternal aged (years)		
17 - 20	5	5.6
20 - 40	**76**	**84.4**
> 40	9	10
Marital status		
Married	**84**	**93.3**
Widowed / Divorced / Separated	6	6.7
Maternal education		
Uneducated	2	2.2
Primary school	**33**	**36.7**
Secondary school	31	34.4
Diploma / Certificate	9	10
Bachelor degree	15	16.7
Maternal occupation		
Unemployed	27	30
Employee	**35**	**38.9**
Commerce / merchant	14	15.5
Agriculturist	6	6.7
Government officials	8	8.9
Maternal experienced of having a child hospitalized in PICU		
Experienced	22	24.4
No experienced	**68**	**75.6**

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Table 1 Characteristics and demographic data of mothers, hospitalized children in PICU, and families (continued) (n = 90).

Characteristics	**Frequency**	**Percentage**
Child's aged (years)		
<1	**42**	**46.7**
1-3	16	17.8
>3-6	14	15.5
>6-14	18	20
Rank of the child		
1	**41**	**45.6**
2	33	36.7
≥3	16	17.7
Family type		
Nuclear family	**53**	**58.9**
Extended family	37	41.1
Number of the children in family		
1	33	36.7
2	**37**	**41.1**
3	16	17.8
>3	4	4.4
Family income (Baht/Month)		
≤ 5,000	**33**	**36.7**
5,001-10,000	24	26.7
10,001-15,000	8	8.9
15,001-20,000	10	11.1
>20,000	15	16.7
Adequacy of family income		
Adequate	27	30
Inadequate	**63**	**70**

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Part 2: Descriptive statistics of maternal adaptation, maternal stress caused by the environment of PICU, and maternal coping.

Maternal adaptation

Overall, the adaptational outcome of mothers having a hospitalized child in PICU was at a moderate level with a mean score of 2.61 (S.D. = 0.35), and was presented in Table 2. Considering each dimension, somatic health adaptation was at a good level with a mean score of 3.01 (S.D. = 0.39). The morale and social functioning adaptation were at a moderate level with a mean score of 2.53 (S.D. = 0.52), and 2.33 (S.D. = 0.46), respectively.

Table 2 Mean scores, standard deviations, and level of the adaptation of mothers having a hospitalized child in PICU, overall and in each dimension (n = 90).

Maternal adaptation	$\bar{X}$	S.D	Level of adaptation
Overall adaptation	**2.61**	**0.35**	**Moderate**
Each dimension			
- Somatic health	**3.01**	**0.39**	**Good**
- Morale	2.53	0.52	Moderate
- Social functioning	2.33	0.46	Moderate

Maternal stress

In this study, it was found that the environment of PICU induced maternal stress at a moderate level with a mean score of 2.89 (S.D. = 0.71). Considering the individual dimensions, the five dimensions that caused moderate stress were the child's behavior and emotions ($\bar{X}$ = 3.34, S.D. = 0.91), parental role alteration ($\bar{X}$ = 3.10, S.D. =1.00), procedures ($\bar{X}$ = 3.02, S.D. = 1.01), sights and sounds ($\bar{X}$ = 2.86, S.D. = 1.22), and child's appearance ($\bar{X}$ = 2.77, S.D. = 1.43), respectively. The staff

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communication and staff behavior was not at a stressful level with a mean score of 1.41 (S.D. = 1.19), and 1.30 (S.D. = 0.60), respectively (Table 3).

Table 3 Mean scores, standard deviations, and level of maternal stress caused by the environment of PICU, overall and in each dimension (n = 90)

Maternal stress	$\bar{X}$	S.D	Level of stress
Overall maternal stress	**2.89**	**0.71**	**Moderate stress**
Each dimension			
- Child's behavior and emotions	**3.34**	**0.91**	**Moderate stress**
- Parental role alteration	3.10	1.00	Moderate stress
- Procedures	3.02	1.01	Moderate stress
- Sights and sounds	2.86	1.22	Moderate stress
- Child's appearance	2.77	1.43	Moderate stress
- Staff communication	1.41	1.19	No stress
- Staff behavior	1.30	0.60	No stress

Maternal coping

It was found that the mothers with a hospitalized child in PICU used the coping strategies to deal with the stressful situation at the sometimes used level, with a mean score of 1.16 (S.D. = 0.37). The mothers used the emotion-focused coping and problem-focused coping at a sometimes used, with a mean score of 1.20 (S.D. = 0.37), and 1.03 (S.D. = 0.43), respectively. The mean scores, standard deviations and use of coping strategies of mothers having a hospitalized child in PICU were presented in Table 4.

The strategies in emotion-focused coping which the mothers used at the sometimes used level were seeking social support ($\bar{X}$ = 1.51, S.D. = 0.62), accepting responsibility ($\bar{X}$ = 1.32, S.D. = 0.60), positive reappraisal ($\bar{X}$ = 1.22, S.D. = 0.57),

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self-controlling ($\overline{X}$ = 1.18, S.D. = 0.46), and distancing ($\overline{X}$ = 1.12, S.D. = 0.51), respectively. One strategy that the mothers rated at the seldom used was escape-avoidance with mean score of 0.96 (S.D. = 0.34).

Regarding the problem-focused coping, the mothers had sometimes used both planful problem-solving and confrontive strategies, with a mean score of 1.04 (S.D. = 0.57), and 1.02 (S.D. = 0.41), respectively.

Table 4 Ranged, mean scores, standard deviations and use of maternal coping strategies, in overall, aspect, and in each strategy (n = 90)

Maternal coping	Min-Max	$\overline{X}$	S.D	Use of coping strategies
Overall maternal coping	**.52 – 1.94**	**1.16**	**0.37**	**Sometimes used**
Emotion-focused coping	**.58 - 2.08**	**1.20**	**0.37**	**Sometimes used**
- Seeking social support	.17 - 3.00	1.51	0.62	Sometimes used
- Accepting responsibility	.00 - 2.75	1.32	0.60	Sometimes used
- Positive reappraisal	.14 – 2.71	1.22	0.57	Sometimes used
- Self-controlling	.29 - 2.43	1.18	0.46	Sometimes used
- Distancing	.00 – 2.33	1.12	0.51	Sometimes used
- Escape-avoidance	.25 – 1.75	0.96	0.34	Seldom used
Problem-focused coping	**.17 – 2.00**	**1.03**	**0.43**	**Sometimes used**
- Planful problem solving	.00 - 2.33	1.04	0.57	Sometimes used
- Confrontive	.17 – 2.50	1.02	0.41	Sometimes used

Since the number of the items of Way of Coping Questionnaire in each strategy was unequal, the result could not refer to differences in intrapersonal and between person, so, the researcher used the relative score to identify the proportion of the maternal effort that used the coping strategies in each dimension that was related to the total effort of the mothers in all dimensions.

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It was found that the mean proportion use of coping strategies of the mothers in emotion-focused coping and problem-focused coping were .55 (55%), and .45 (45%), respectively. The ranged, mean score and standard deviation of relative scores of the maternal coping strategies in each aspect and each strategy were presented in Table 5. Considering emotion-focused coping strategies, seeking social support was .21 (21%), accepting responsibility strategy was .18 (18%), positive reappraisal was .16 (16%), self-controlling was .16 (16%), distancing was .15 (15%), and escape-avoidance was .13 (13%). Regarding the problem-focused coping strategies, confrontive was .53 (53%), and planful problem solving was .47 (47%)

It meant that the mothers were more likely use the strategies in emotion-focused coping than problem-focused coping. The emotion-focused coping strategies that the mothers preferred to use were the seeking social support, accepting responsibility, positive reappraisal, self-controlling, distancing, and escape-avoidance, respectively. Concerning the problem-focused coping strategies, the mothers used more confrontive strategies than planful problem solving strategies.

Table 5 Ranged, mean score and standard deviation of relative scores of maternal coping strategies, in each aspect and each strategy (n = 90)

Coping strategies	Min-Max	Mean	S.D.
Emotion-focused coping	**.38 - .84**	**.55**	**.07**
- Seeking social support	.02 - .37	.21	.06
- Accepting responsibility	.00 - .38	.18	.06
- Positive reappraisal	.03 - .26	.16	.04
- Self-controlling	.05 - .30	.16	.03
- Distancing	.00 - .28	.15	.05
- Escape-avoidance	.04 - .30	.13	.04
Problem-focused coping	**.16 - .62**	**.45**	**.07**
- Confrontive	.20 – 1.00	.53	.18
- Planful problem solving	.00 - .80	.47	.18

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Part 3: The relationship between predictive variables, maternal stress, maternal education, family income, and adaptation of mothers having a hospitalized child in PICU.

Adaptation scores of the subjects ranged from 59 to 117 ($\bar{X}$ = 88.78, S.D. = 11.89), and stress scores ranged from 17 to 115 ($\bar{X}$ = 78.89, S.D. = 31.01). Maternal education was 0 to 16 years ($\bar{X}$ = 9.43, S.D. = 4.36) and family income was between 2,000 to 60,000 baht per month ($\bar{X}$ = 12,858.89, S.D. = 12,128.99).

Pearson's product moment correlation analysis was performed to determine the correlation between four variables; the maternal stress, maternal education, family income, and maternal adaptation. It was found that maternal stress was correlated with maternal adaptation at the statistical significance level of .01 ($p < .01$). The correlation coefficient was -.284, which showed that the correlation was at a low level with negative direction. The maternal stress and maternal adaptation variables changed in the opposite direction. The maternal education and family income variable had no statistically significant correlation with maternal adaptation (Table 6).

The correlation between maternal stress, maternal education, and family income variable, was analyzed by using the three correlation coefficient values which ranged from -.007 to .610. It was found that no value of the correlation coefficient between the three variables was higher than 0.90, thus, this set of data had no multicollinearity (Tabachnick & Fidell, 1996:84).

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Table 6 Minimum, maximum, mean, standard deviation, and matrix of correlation coefficients among maternal adaptation, maternal stress, maternal education, and family income (n = 90)

Variable	Maternal adaptation	Maternal stress	Maternal education	Family income
Maternal adaptation	1.000			
Maternal stress	-.284**	1.000		
Maternal education	.171	.089	1.000	
Family income	.206	-.007	.610***	1.000
Minimum	59	17	0	2,000
Maximum	117	115	16	60,000
Mean	88.78	78.89	9.43	12,858.89
Standard deviation	11.89	31.01	4.36	12,128.99

** $p < 0.01$, *** $p < 0.001$

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Part 4: The predictability of maternal stress, maternal education, and family income on adaptation of the mothers having a hospitalized child in PICU

Standard multiple regression was used to examine the relationship of the predictive variables and adaptation of mothers having a hospitalized child in PICU. Using the enter technique, all the independent variables including maternal stress, maternal education, and family income were entered at the same time. The result showed that the correlation coefficient was positive and fairly low (R = .366). Maternal stress, maternal education, and family income could explain 13.4% of variance in adaptation of the mothers having a hospitalized child in PICU (R^2 = .134). The standardized regression coefficients of the predictive variables of mothers having a hospitalized child in PICU were presented in Table 7.

Determining the beta weight of three independent variables, it was found that maternal stress had the highest value (beta = .266). Thus, maternal stress had more influence on adaptation of mothers having a hospitalized child in PICU than the other independent variables. At the statistically significant level of .05, the independent variables in the model that can be used to predict the maternal adaptation was maternal stress (p = .021). It can be assumed that maternal stress was the only predictive variable that was a statistically significant in the regression.

Table 7 Standardized regression coefficients of the predictive variables of mothers having a hospitalized child in PICU.

Independent variables	b	Standard error	Beta	t	Sig.
Maternal stress	-.102	.043	-.266	-2.353	.021
Maternal education	.392	.373	.144	1.050	.297
Family income	.0001	.000	.136	1.067	.289
Constant = 94.042, R = .366, R^2 = .134, Adjust R^2 = .093, SEE = 11.32, F = 3.283*					

*p < .05

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After using the stepwise multiple regression analysis, the result showed that maternal stress was selected into the first equation at the first step. The regression coefficient of maternal stress was -.109, showing that it had negative correlation with the maternal adaptation, and could predict the adaptation of mothers having a hospitalized child in PICU at .01 statistic significant level ($p < .01$), with the constant of 97.363 and standardized regression coefficient of -.284 (Table 8). That is, maternal stress could explain 8.1% of variance of the maternal adaptation at the statistical significance level of .01.

Then, family income was the next and last variable that was selected into the model at the second step. Thus, the second equation consisted of two variables, the regression coefficient of maternal stress and family income were -.108, and .0001, respectively. When the family income was controlled as the constant value, the maternal stress had negative correlation with maternal adaptation and could predict the maternal adaptation at the statistical significance level of .01 ($p < .01$). Whereas, the maternal stress was controlled as the constant value, family income had positive correlation with maternal adaptation at the statistical significance level of .05 ($p < .05$). The constant value was 94.753 and standardized regression coefficient of maternal stress and family income were -.283, and .204, respectively. The two variables could explain 12.2% of the variance of adaptation of mothers having a hospitalized child in PICU. It demonstrated that family income could increase the explained variance of adaptation of the mothers having a hospitalized child in PICU to 4.1%.

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Table 8 Stepwise regression analysis predicting adaptation of mothers having a hospitalized child in PICU with maternal stress and family income (n = 90)

Step	Independent variables	R	R^2	R^2 change	F change	b	Bata	t
1	Constant					97.363		29.344***
	Maternal stress	.284	.081	.081	7.718	-.109	-.284	-2.778**
2	Constant					94.753		27.032***
	Maternal stress	.350	.122	.042	4.116	-.108	-.283	-2.813**
	Family income					.0001	.204	2.029*

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

If we know the value of the maternal stress (S) and family income (I), we can predict the adaptation of mothers (A) having a hospitalized child in PICU from the regression equation as follows.

The unstandardized regression coefficient equation for calculation was:

$$Y (A) = 94.753 - .108(S) + .0001(I)$$

This regression equation showed that if the family income is constant while maternal stress has increased 1 unit, we can predict that the maternal adaptation will decrease .108 units. If the maternal stress was decreased 1 unit, the maternal adaptation will increase .108 units. Otherwise, if the maternal stress is constant, when the family income has increased 1 baht, the maternal adaptation will increase .0001 units. In contrast, if the family income has decreased 1 baht, we can predict that the maternal adaptation will decrease .0001 units.

In conclusion, maternal stress and family income were the variables that could predict the adaptation of mothers having a hospitalized child in PICU by 12.2% at the statistically significant level of .05.

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CHAPTER V
DISCUSSION

This study aimed to examine factors predicting the adaptation of the mothers having a hospitalized child in PICU. It also investigated the maternal stress caused by the environment of PICU, the style of coping and the ability of adaptation among the mothers having a hospitalized child in PICU. The factors predicting adaptation of the mothers having a hospitalized child in PICU were maternal stress, maternal education, and family income. The results were discussed in accordance with the following objectives:

Objective 1: To determine the level of stress (caused by the environment of PICU), the coping strategies, and adaptation of the mothers having a hospitalized child in PICU.

Maternal stress caused by the environment of PICU

The results of this study showed that the environment of PICU could induce the mother to be stressful at a moderate stress level ($\bar{X}$ = 2.89, S.D. = 0.71). The five dimensions of environmental stressors were the child's behavior and emotions ($\bar{X}$ = 3.34, S.D. = 0.91), parental role alteration ($\bar{X}$ = 3.10, S.D. = 1.00), procedures ($\bar{X}$ = 3.02, S.D. = 1.01), sights and sounds ($\bar{X}$ = 2.86, S.D. =1.22), and child's appearance ($\bar{X}$ = 2.77, S.D. = 1.43), respectively. The two dimensions that did not create stress as perceived by the mothers were the staff communication ($\bar{X}$ = 1.41, S.D. = 1.19) and staff behavior ($\bar{X}$ = 1.30, S.D. = 0.60) (Table 3).

The results indicated that the environment of PICU was a psychosocial stressor for the mothers having a hospitalized child in PICU at the moderate level. The finding of this study agreed with the previous studies that reported the environment of PICU

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was the stressor of mothers while a child was hospitalized in PICU. (Chaisom, P., 1993; Heuer, 1993; Jingli, 1997; Miles et al., 1989c; Prasert, A., 1997; Riddle, et al., 1989). Chaisom, P. (1993), in the study of the stress and coping strategies of parents of children hospitalized in pediatric care unit, found the overall mean score of the stress was at the moderate level.

This finding may be because most of the mothers (75.6%) had no experience in having a child hospitalized in PICU. They might appraise the events in the environment of PICU as a threat or harmful situation as novel, unpredictable, uncertain, and ambiguous which caused them to be so stressful. However, most of the mothers in this study still had social support that could help reduce the level of stress from this situation. The support might come from their spouse, family members, and the National Health Security Office that took responsibility for medical expenses.

Considering the five dimensions that caused stress in the mothers at the moderate level, the first, child's behavior and emotions had the highest mean score ($\bar{X}$ = 3.34, S.D. = 0.91). This finding was consistent with the study of Prasert, A. (1997: 48), on the effect of application theory of goal attainment on parents' anxiety in a pediatric intensive care unit, in which it was found that the child's behavior and emotions caused maternal stress at the highest score dimension. Riddle and colleagues (Riddle, et. al., 1989), in the study of stressors in the pediatric intensive care unit as perceived by mothers and fathers, found that the mothers' top stressor was the child's behavior and emotions.

This finding was also supported by Lazarus's theory on stress and coping in that a person normally evaluates a new situation as a threat if some aspect of it is related to harm (Lazarus & Folkman, 1984: 83). In this study, most of the mothers (75.6%) had no experience with having a child hospitalized in PICU. The mothers were confused and frightened by the behaviors and emotions expressed by their child.

Parental role alteration dimension was the second with a high mean score ($\bar{X}$ = 3.10, S.D. = 1.00), indicating stress at a moderate level. It can be explained that mothers had to change their role from nurturing the healthy child to be mothers who had to take care of a critically ill child, without knowing how to nurture their loved

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child. Based on interviews with the mothers, most of them reported the need to participate in the child's caring but they did not know how to help their critically ill child. Alteration of the maternal role thus created stress to the mothers at a moderate level.

This finding was consistent with the study of Miles and colleagues (Miles, et al., 1989c), on the pediatric intensive care unit environment as a source of stress for parents, Riddle and colleagues (Riddle, et al., 1989), on stressors in the pediatric intensive care unit as perceived by mothers and fathers, and Eberly and colleagues (Eberly, et al., 1985), on the study of parental stress after the unexpected admission of a child to the pediatric intensive care unit, all of which found that parental role alteration had a high score dimension.

The third dimension: procedures ($\bar{X}$ = 3.02, S.D. = 1.01) also created stress for mothers at a moderate level. A possible explanation is the therapeutic and diagnostic procedures are performed frequently in the PICU. Many of the procedures, such as catheterization, suction, injection of medications, and venipuncture, are invasive as well as painful to the child (Steven, 1981: 617). For the mother who did not have enough explanation about the procedure that must be done to her child, and had no prior experience, it could induce stress for her (Carter, et al., 1985; Heuer, 1993; Philichi, 1988).

The finding of this study was congruent with previous studies that reported procedures as stressful. Prasert, A., (1997), in the study of the effect of application theory of goal attainment on parents' anxiety in pediatric intensive care unit, and Jingli (1997), in the study of parental environmental stress and stressors in pediatric intensive care unit, found that the procedures done to a child caused the mothers to be stressful.

The fourth dimension, sights and sounds ($\bar{X}$ = 2.86, S.D. = 1.22), created stress for the subject mothers at a moderate level. This finding may be because the mothers might interpret the medical equipment and its sound around the ill child as a threat. They might view their child's condition as severe and critically ill. Even though

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the physicians and nurses working in PICU might describe the PICU equipments to the mothers before they made the first visit.

This finding was inconsistent with Miles and colleagues (Miles, et al., 1989c), study of the pediatric intensive care unit environment as a source of stress for parents, which found that sights and sounds in the PICU were not particularly stressful to parents, because the physician and nurses described the PICU equipment to the mothers before their first visit, and most of the mothers in their study were well aware of the expected physical components of an ICU through the experience with someone in an ICU and media exposure.

The fifth dimension, child's appearance ($\bar{X}$ = 2.77, S.D. = 1.43), created stress for the subject mothers at a moderate level. This result may be because the mothers appraised the appearance of their ill child as being painful or uncomfortable. This made the mothers stressful.

This finding was consistent with the study of Miles and colleagues (Miles, et al., 1989c), on the pediatric intensive care unit environment as a source of stress for parents, which found that the child's appearance could make the mother stressed.

The other dimensions in this study, the staff communication ($\bar{X}$ = 1.41, S.D. = 1.19) and staff behavior dimension ($\bar{X}$ = 1.30, S.D. = 0.60) did not create stress as perceived by the mothers. It can be explained that the quality nursing care for the critically ill child and family in the PICU of Siriraj Hospital, meant nurses often spend more time with parents and keep parents updated on changes in their child's condition. Physicians meet with parents daily when possible and reviewed the child's plan of care. This information can increase parental understanding of the child's hospitalization, enhance their coping abilities, and decrease their stress level (Kasper & Nyamathi, 1988: 579). The mothers may not perceive the communication patterns of staff and behavior of staff as stressors and may attest to the high quality of care provided to mothers in these units.

This finding was consistent with the study of Prasert, A. (1997), on the effect of application theory of goal attainment on parents anxiety in pediatric intensive care unit, and Chaisom, P. (1993), in the study of the stress and coping strategies of parents

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of children hospitalized in pediatric intensive care unit, which found the lowest scores in the staff communication and staff behavior dimensions.

The coping strategies of the mothers having a hospitalized child in PICU

The present study found that the mothers having a hospitalized child in PICU used the coping at the sometimes used level with a mean score of 1.16 (S.D. = 0.37). They also used emotion-focused and problem-focused forms of coping for dealing with stress at the moderate level with a mean score of 1.20 (S.D. = 0.37), and 1.03 (S.D. = 0.43), respectively (Table 4).

It can be explained that the mothers had appraised that the environment of PICU was a stressful situation, and induced stress at a moderate level that required a moderate adaptation. Thus, the two styles of coping might be employed, managing or altering the problem with the environment causing distress, and regulating the emotional response to the problem (Lazarus & Folkman, 1984: 150).

This finding was consistent with the study of LaMontagne and Pawlak (1990), on stress and coping of parents of children in pediatric intensive care unit, which found that parents used emotion-focused and problem-focused forms of coping for dealing with stress. The study of Chaisom, P. (1993), on stress and coping strategies of parents of children hospitalized in pediatric intensive care unit, found that the parents used the coping strategies at the sometimes level.

In addition, the subjects in this study reported rather used emotion-focused coping than problem-focused coping, with a mean proportion use of the coping strategies of 0.55 (55%), and 0.45 (45%), respectively (Table 5). This can be explained as the overall environment of PICU was a stressor for the mothers. The mothers had appraised that during that short period of time, nothing could be done to modify harmful, threatening, or challenging environmental conditions. Then, emotion-focused coping was employed to maintain hope and optimism, to deny both fact and implication, to refuse to acknowledge the worst, and so on. These processes lent a person to an interpretation of self-deception or reality distortion. Problem-focused coping, on the other hand, would be approached when a person had evaluated the situation as amenable to change (Lazarus & Folkman, 1984: 150). Likewise, the study

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of Vrolarn, V. (1992: 53), on the perception of uncertainty in illness, coping and general well-being of parents with children admitted in intensive care unit, found that emotion-focused coping had a negative correlation with general well-being of parents with children admitted in the intensive care unit. This finding was also consistent with the study of LaMontagne and Pawlak (1990), on stress and coping of parents of children in a pediatric intensive car unit, which found that the parents more likely used emotion-focused rather than problem-focused forms of coping for dealing with stress.

In this study, most of the mothers probably used seeking social support strategy at the sometimes used level (mean proportion use of coping strategies = 0.21 and S.D. = .06) (Table 5). This finding was consistent with the previous study, LaMontagne and Powlak (1990), on stress and coping of parents of children in a pediatric intensive care unit, LaMontagne and colleagues (1992), on parental coping during pediatric critical care experiences, and LaMontagne and colleagues (1994), on psychophysiological responses of parents to pediatric critical care stress, which found that the most frequently used coping strategies was seeking social support. In contrast, the study of Chaisom, P. (1993), on stress and coping strategies of parents of children hospitalized in a pediatric intensive care unit, found that the positive reappraisal mode was the most frequently used in the parents of this study.

It can be explained that the admission of a child to a PICU had many impacts on the mothers. It results in increasing the maternal demands, thus, they needed social support for dealing with the problem or stressful situation. The social support that the mothers having a hospitalized child in PICU needed might be the emotional support, tangible support, and information support. If the mothers received the support as they need, it might help them to cope effectively or adapt in the appropriate way. People will have better morals and health, and function better, if they receive or believe that they will receive social support when it is needed (Lazarus & Folkman, 1984: 250). Thus, the mothers in the present study probably used seeking social support strategies at the sometimes used level.

Moreover, the data revealed that in the emotion-focused coping mode, escape-avoidance strategies, the mothers rated at the seldom used ($\bar{X}$ = 0.96, S.D. = 0.34)

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(Table 4). It can be explained that the mothers felt it was her responsibility to take care of the ill child and try to decrease the guilty feeling and anger from the maternal role insufficiency (Ruppert & Meisel, 1996: 45). In encounters with the situation, mothers appraised as requiring more information before they could act, used more seeking social support and less escape-avoidance (Folkman, et al., 1986: 1001).

Concerning the problem-focused coping, the mothers reported using both planful problem-solving and confrontive strategies to deal with stress, and more likely to use confrontive strategies than planful problem-solving (mean proportion use of coping strategies = 0.53, S.D. = .18, and 0.47, S.D. = .18, respectively) (Table 5). It can be explained that most of the mothers had appraised the situation in the environment of PICU as amenable to change, especially in the role alteration, from the mothers nurturing the healthy child to being the mothers of a critically ill child. It might be the mothers received the information about the child's condition, treatment, prognosis, and the rules and regulations of the PICU from the physicians and nurses before the first visit, which could increase maternal understanding of the situation and enhance coping ability, thereby, decreasing the maternal stress and anxiety. Thus, the mothers used both planful problem-solving and confrontive strategies to deal with the moderate level of stress (Lazarus & Folkman, 1984: 169).

In conclusion, the coping strategies used by the mothers in this study, were employed to deal with all dimensions of environmental stress, not any specific dimension or situation. The results of the study also did not evaluate the effectiveness of each coping strategy based on each situation the mothers face. Thus, it can only be explained that the coping strategies reported by the mothers were those the mothers often used to deal with the stress related to all situations since their child was admitted in PICU.

The adaptational outcome of the mothers having a hospitalized child in PICU

With regard to the research outcomes, the mothers had moderate adaptation ($\overline{X}$ = 2.61, S.D. = 0.35) (Table 2). Considering each aspect, somatic health was at a good level ($\overline{X}$ = 3.01, S.D. = 0.39), morale and social functioning were at a moderate level ($\overline{X}$ = 2.53, S.D. = 0.52, $\overline{X}$ = 2.33, S.D. = 0.46, respectively).

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Overall adaptation was at the moderate level. It can be explained that most of the mothers (93.3%) were married. Although 58.9% of the subject mothers had a nuclear family type and 75.6% of them had no experience about the hospitalization of the child in PICU, they had advice, and encouragement including assistance with house work from husbands and relatives. By using item 9 in the adaptation questionnaire to describe the family support of the mothers, it was found that the mothers received support from the family members. Moreover, most subjects let the National Health Security Office take the responsibility for the medical and hospital expenses. It resulted in moderate stress for the mothers, and two coping modes might employed; managing or altering the problem with the environment causing distress (problem-focused coping) and regulating the emotional response to the problem (emotion-focused coping).

In the present study, the mothers used different strategies of coping modes to deal with the stressful situation that occurred. Even though the mothers reported using more emotion-focused coping than problem-focused coping, they did not try to make themselves feel better by eating, drinking, smoking, or using drugs or medication. Thus, overall, the mothers might have effective adaptation.

The maternal adaptation in somatic health was at a good level ($\overline{X}$ = 3.01, S.D. = 0.39). This explanation is that prolonged or excessively high levels of corticosteroids in severe stress situation will have damaging effects on the human body (Starefos & Prater, 1990: 878). In this study, the date of data collection was 3 days after admission, thus, it was short and had no obvious effect on health of mothers. Moreover, 84.4% of the mothers were 20 to 40 years old. Thus, it might not affect the somatic health of the mothers.

Morale adaptation was at the moderate level. This finding can be explained because a serious illness of the children requiring hospitalization was a major cause damaging morale and encouragement of mothers. They felt guilt, blamed themselves and had a deficit and loss of confidence to do things. By using the items 16 to 20 in the adaptation questionnaire to describe the feeling self-blame, it was found that the admission of a critically ill child in PICU had moderately affected the morale of the

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mothers. Fortunately, even though nurses and physician were very busy, they tried to spend more time with mothers and keep mothers updated on changes in their child's condition and the child's plan of care. This information can increase maternal understanding of the child's hospitalization, decrease their self-blame, and enhance their coping.

In addition, based on interviews with the mothers, most of them revealed that caring for their child was their total responsibility and if they provided insufficient care for their child this could cause their child to be seriously ill. At the observation of the first visit of the mothers, they kept distance from their child and were afraid of touching them. However, they participated in the decision making on the proper treatments for their child once they had received the information about disease, symptoms, and necessary treatments from physicians and nurses. They were also able to perform some activities for their children such as changing diaper, massage, touching and alleviation. Furthermore, the encouragement from their husbands, family members and friends promoted moderate adaptation of the mothers.

Social functioning adaptation showed the least mean and was at a moderate level ($\bar{X}$ = 2.33, S.D. = 0.46). It can be explained that hospitalization of the child and increased responsibility affected the social functioning of the mothers. That means mothers have to take care of family members, do house work or work in a career and at the same time they have to take care of their hospitalized child. They need to have spare time for visiting or staying with their child. The mothers who had a professional career had to stop or be absent from work for visiting or staying with their child. In this study, one third of the mothers (37.8%) was employees, thus, they must manage this demand during a child's hospitalization. Besides receiving support from their husbands, family members and friends, they also reduced the time of some activities such as social activity, private activity and hobbies. Thus, the social functioning adaptation of the mothers having a hospitalized child in PICU was at a moderate level.

Objective 2: To determine the predictability of maternal stress, maternal education, and family income on adaptation of the mothers having a hospitalized child in PICU.

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The results of this study revealed that maternal stress and family income accounted for 12.2% in explaining the variance in adaptation of the mothers having a hospitalized child in PICU at the statically significant level of 0.05 (Table 8). This can be explained as follows.

The explanation is that high stressfulness can affect cognitive function and capacity of information processing; consequently, coping by problem solving is interfered with (Lazarus & Folkman, 1984: 168). A person with stress tends to have narrow interests, repeated thinking, and memory problems, result in losing neat organization (Sheffer, 1983: 23 cited by Khadking, N., 2001: 95; Lewandowski, 1992: 50). The maternal stress disturbs the coping process, and results in being unable to adapt to stress when the child was hospitalized in PICU. Thus, a high stressed mother might have ineffective adaptation. In accordance with the study of Kamsiengsai, D. (1996), on the relationship between stress level, social support and maternal adaptation in mothers with obstetric complications, it was found that mothers with low stress have good adaptation in the maternal role. The study of Pinyomit, S. (1996), on the relationship between stressors, spouse support and psychological adaptation of mothers of sick newborns, found a significantly negative correlation between stressor and psychological adaptation.

Family income is a factor influencing the family ability to cope with problems because family income means financial support that most of the mothers were concerned about. Money is the important material resource for providing the vital resources for living and flourishing. Having enough resources greatly increased the coping options in almost any stressful transaction; they provided easier and more effective access to medical, financial, and other professional assistance. This might reduce the person's vulnerability to a threat and facilitate effective coping (Lazarus & Folkman, 1984: 164). Thus, highly stressed mothers with low incomes tend to have ineffective adaptation. This finding was consistent with the study of Kongpan, S. (1990), on the relationship among coping strategies and well-being in mothers of a hospitalized child, which reported the positive relationship between coping with the family's problem and family income of the mothers.

People with greater resources typically cope with stressful events better, because time, money, friends and other resources simply give a person more ways of

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dealing with a stressful event (Taylor, 1995: 273, 276). Resources may have little effect on a person's coping success at low levels of stress, but may become important at high level of stress (Taylor, 1995: 276).

People, who must simultaneously deal with several other sources of stress in their lives such as the financial difficulty, or other health problems, will have fewer resources left to use in coping with a new stressor than will people who do not have to deal with other life stressors (Cohen & Lazarus, 1979 cited by Taylor, 1995: 276). Thus, the nurses working on the unit might have more concern for highly stressed mothers with low income, who tend to have ineffective adaptation.

In conclusion, maternal stress and family income were selected as predictors and accounted for 12.2% in explaining the variance in adaptation of the mothers having a hospitalized child in PICU at the statistically significant level of 0.05.

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CHAPTER VI
CONCLUSION

Summary of the Study

This study was a descriptive research aimed to determine the predictability of maternal stress, maternal education, and family income among mothers having a child hospitalized in PICU, and to assess the stress caused by the environment of PICU, the style of coping, and the ability of adaptation among the mothers having a hospitalized child in PICU. Ninety mothers with a hospitalized child in PICU of Siriraj Hospital were selected as subjects in this study by purposive sampling.

The Demographic Data Form, Maternal Stress, Maternal Coping Strategies, and Maternal Adaptation Questionnaire were used to collect the data, from March to October 2003. The data were analyzed as follows:

1. Demographic data of the subject was analyzed by percentage.
2. Mean and standard deviation were used to analyze the scores of maternal stress and adaptation.
3. Mean, standard deviation, and relative score were used to analyze the scores of maternal coping strategies.
4. Pearson's Product Moment Correlation Coefficient was calculated to determine the relationship between the variables; maternal stress, maternal education family income, and maternal adaptation.
5. Multiple regression analysis was used to examine the predictability of maternal adaptation by selected factors including maternal stress, maternal education, and family income.

Findings of the study can be summarized as follows

1. General characteristics of the subjects. Most of the mothers (84.4%) were between 20 to 40 years of age and 93.3% of them were married. The majority of

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mothers (36.7%) had completed primary school, and 38.9% were employees. The
between 20 to 40 years of age and 93.3% of them were married. The majority of mothers (36.7%) had completed primary school, and 38.9% were employees. The largest group of the mothers (75.6%) did not have experience in having a child hospitalized in PICU. Most of the hospitalized children in PICU (46.7%) were infants, and 45.6% of them were the firstborn child. Most of the mothers (58.8%) had a nuclear family type, 41.1% of them had two children, with family income less than 5,000 baht per month (36.7%), and 70% had inadequate income.

2. The maternal stress caused by the environment of the PICU was at a moderate level. The five dimensions that were reported as causing stress at a moderate level were the child's behavior and emotions, parental role alteration, procedures, sights and sounds, and child's appearance, respectively. Two dimensions that the mothers reported as not stressful were staff communication and staff behavior.

3. The overall maternal coping was at a sometimes used level. The mothers were more likely to have used the strategies in the emotion-focused coping rather than the problem-focused coping. The emotion-focused coping strategies that the subjects had preferred to use were seeking social support, accepting responsibility, positive reappraisal, self-controlling, and distancing, respectively. One strategy that the mothers reported at a seldom used level was escape-avoidance. For the problem-focused coping strategies, the mothers reported at a sometimes used level the planful problem solving and confrontive strategy.

4. The overall maternal adaptation was at a moderate level. The somatic health adaptation was at a good level. Morale and social functioning adaptation were at a moderate level.

5. Maternal stress and family income could explain 12.2% of variance in adaptation of the mothers having a child hospitalized in PICU.

Implications and Recommendations

Implications and application of the research findings

The result of this study shows that maternal stress and family income could predict the adaptation of mothers having a hospitalized child in PICU. The maternal stress was significant on maternal adaptation.

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In order to decrease the maternal stress caused by the environment of PICU, which included child's behavior and emotions, parental role alteration, procedures, sights and sounds, and child's appearance, nurses should establish the protocol for giving the information, consisting of the essential information as follows:

1. The visiting periods and the hospital rules as well as advice about the rules during visits.

2. The characteristics of the physical environment of the PICU, the work of healthcare personal, the equipment used and the reason for using such equipment, the child's appearance and the child's potential behavioral and emotional reactions.

3. The information about their child's condition, the various treatment measures being used, and the child's changing responses to treatment. Although informing mothers about the child's diagnosis and specific treatment measures often is considered to be the responsibility of physicians, nurses can be helpful in this area by clarifying the explanations given by physicians. In addition, nurses can provide information about specific nursing measures related to the child's treatment.

4. Nurses need to explain how mothers can help their critically ill child by visiting, talking to the child, touching and soothing, and other care-giving actions.

In addition, involving the mother in the treatment of her child may provide the mother with a more realistic impression of the degree of the child's illness, and empower the mother to feel more actively involved in her child's care, which may relieve some of her distress and allow her to be more helpful and reassuring to her child, as well as decreasing stress from alteration of parental role.

Implications for further studies

Based on the findings of this study, recommendations for the research are presented as follows:

1. The result found that maternal stress and family income could explain 12.2% of variance in adaptation of mothers having a hospitalized child in PICU. Approximately 87.8% of the variance in maternal adaptation was left unexplained and further studies are needed to investigate.

2. Based on the result, the environment of PICU that caused the mothers the most stress were child's behavior and emotions, parental role alteration, procedures,

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sights and sounds, and child's appearance, respectively. Thus, further study should be conducted to test intervention that could reduce the maternal stress caused by the environment of PICU and enhance maternal adaptation.

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APPENDIX

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APPENDIX A
Data Collection Instruments

แบบประเมินปัจจัยทำนายการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต

คำชี้แจง

เนื่องจากมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤตอาจประสบกับภาวะเครียดจากสภาพการณ์สิ่งแวดล้อมของหอผู้ป่วยเด็กวิกฤต และพยายามใช้วิธีการต่างๆในการเผชิญกับภาวะเครียดนั้น เพื่อให้สามารถปรับตัวต่อความเครียดจากสถานการณ์ที่เกิดขึ้นได้ ขอให้ท่านตอบแบบสอบถามดังต่อไปนี้ตามความเป็นจริง

แบบประเมินปัจจัยทำนายการปรับตัวของมารดา ที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต เป็นแบบสอบถาม 1 ชุด มีจำนวน 149 ข้อ และใช้เวลาในการทำแบบสอบถามประมาณ 1 ถึง $1^1/_2$ ชั่วโมง แบบสอบถามชุดนี้แบ่งออกเป็น 4 ส่วนคือ

ส่วนที่ 1 แบบสอบถามข้อมูลส่วนบุคคล จำนวน 10 ข้อ

ส่วนที่ 2 แบบประเมินการปรับตัวของมารดา จำนวน 35 ข้อ

ส่วนที่ 3 แบบประเมินความเครียดของมารดา จำนวน 37 ข้อ

ส่วนที่ 4 แบบประเมินวิธีการเผชิญความเครียดของมารดา จำนวน 67 ข้อ

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ส่วนที่ 1

แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง

กรุณาเติมข้อความลงในช่องว่าง และใส่เครื่องหมาย √ ลงใน □ หน้าข้อความที่เป็นจริงเกี่ยวกับตัวท่าน

1. ท่านอายุ..........ปี
2. สถานภาพสมรส
   □. คู่ □. ม่าย / หย่า หรือแยกกันอยู่
3. ระดับการศึกษาของท่าน
   □. ไม่ได้เรียนหนังสือ
   □. ประถมศึกษา โปรดระบุ......................................
   □. มัธยมศึกษาโปรดระบุ..
   □. ประกาศนียบัตร อนุปริญญาหรือเทียบเท่าโปรดระบุ...................................
   □. ปริญญาตรี หรือสูงกว่าปริญญาตรี โปรดระบุ...
4. อาชีพของท่าน
   □. ไม่ได้ประกอบอาชีพ □. รับจ้าง
   □. ค้าขาย / ธุรกิจ □. เกษตรกรรม
   □. รับราชการ □. อื่นๆ โปรดระบุ.............................
5. ท่านเคยมีบุตรที่เจ็บป่วยรุนแรงจนต้องเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤตมาก่อนหรือไม่
   □. เคยมี □. ไม่เคยมี
6. รายได้ของครอบครัวเฉลี่ยต่อเดือน...........................บาท
7. ท่านมีรายได้เพียงพอกับค่าใช้จ่ายหรือไม่
   □. เพียงพอ □. ไม่เพียงพอ
8. ในครอบครัวของท่านมีสมาชิกประกอบด้วย
   □. บิดา มารดา และบุตร □. บิดา มารดา บุตร และ ญาติพี่น้องอื่นๆ
9. ท่านมีบุตรทั้งหมด..........คน
10. บุตรที่เจ็บป่วยของท่านขณะนี้อายุ..........ปี และเป็นบุตรคนที่..........

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ส่วนที่ 2
แบบประเมินการปรับตัวของมารดา

คำชี้แจง

ข้อความต่อไปนี้เป็นคำถามเกี่ยวกับความรู้สึกและการกระทำหรือพฤติกรรม ที่เกิดขึ้นเมื่อท่านเผชิญกับความเครียดขณะที่บุตรของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต กรุณาอ่านคำถาม และเลือกตอบข้อที่ตรงกับความรู้สึกหรือการกระทำของท่าน โดยทำเครื่องหมาย √ ลงใน □ หน้าข้อที่ตรงกับความรู้สึกหรือการกระทำของท่านตามความเป็นจริง

ตัวอย่าง

การเจ็บป่วยของลูกจนต้องเข้ารับการรักษาในหอผู้ป่วยวิกฤต ทำให้ท่านต้องเปลี่ยนแปลงวิธีการดำเนินชีวิตหรือไม่ มากน้อยเพียงใด

√□. วิธีการดำเนินชีวิตยังคงเหมือนเดิม
□. เปลี่ยนแปลงเล็กน้อย
□. เปลี่ยนแปลงพอควร
□. เปลี่ยนแปลงใหม่อย่างสิ้นเชิง

จากตัวอย่างถ้าท่านเลือกตอบวิธีการดำเนินชีวิตยังคงเหมือนเดิม แสดงว่า สถานการณ์การเจ็บป่วยของบุตรจนต้องเข้ารับการรักษาในหอผู้ป่วยวิกฤต ไม่ทำให้ท่านต้องเปลี่ยนแปลงวิธีการดำเนินชีวิต

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กรุณาอ่านคำถาม และเลือกตอบข้อที่ตรงกับความรู้สึกหรือการกระทำของท่าน โดยทำเครื่องหมาย √ ลงใน □ หน้าข้อที่ตรงกับความรู้สึกหรือการกระทำของท่านตามความเป็นจริง

1. การเจ็บป่วยของลูกครั้งนี้เป็นปัญหาต่อการทำงาน ทั้งงานอาชีพและงานในบ้านของท่านมากน้อยเพียงใด

□. ไม่มีปัญหา

□. มีปัญหาบ้าง แต่เป็นปัญหาเล็กน้อย

□. ทำให้เกิดปัญหามากพอควร

□. ทำให้เกิดปัญหาอย่างมาก

2. ขณะนี้ท่านสามารถทำงานอาชีพ หรืองานบ้าน ได้ดีมากน้อยเพียงใด

□. ทำงานไม่ได้เลย

□. ทำงานได้ แต่ไม่ดีนัก

□. ทำงานได้ดีพอควร

□. ทำงานได้ดีเท่าเดิมหรือมากกว่าเดิม

3. ขณะนี้ท่านยังคงให้ความสำคัญกับภาระหน้าที่ที่ต้องรับผิดชอบต่างๆของท่าน มากน้อยเพียงใด

□. ให้ความสำคัญน้อยมาก หรือไม่มีเลย

□. ให้ความสำคัญค่อนข้างน้อย

□. ให้ความสำคัญพอควร

□. ให้ความสำคัญเช่นเดิม หรือมากกว่า

4. การเจ็บป่วยของลูกทำให้ท่านต้องลาหยุดงานอาชีพ หรือหยุดงานบ้าน มากน้อยเพียงใด

□. ไม่ต้องหยุดเลย

□. หยุดบ้างเป็นบางครั้ง

□. หยุดบ่อยมาก

□. หยุดการทำงานทุกอย่าง

5. การเจ็บป่วยของลูกทำให้ท่านต้องเปลี่ยนแปลงเป้าหมายในการทำงานหรือไม่ มากน้อยเพียงใด

□. เป้าหมายยังคงเหมือนเดิม

□. เปลี่ยนเป้าหมายเล็กน้อย

□. เปลี่ยนเป้าหมายพอควร

□. เปลี่ยนเป้าหมายใหม่อย่างสิ้นเชิง

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6. ตั้งแต่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต ท่านสังเกตว่าท่านกับผู้ร่วมงานหรือคนในบ้าน มีการถกเถียงหรือมีปัญหาเข้ากันไม่ได้ มากขึ้นหรือไม่

□. มีปัญหาอย่างมาก

□. มีปัญหาพอควร

□. มีปัญหาเล็กน้อย

□. ไม่มีปัญหา

7. ตั้งแต่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต สัมพันธภาพระหว่างท่านกับสามีของท่าน เป็นอย่างไร

□. ไม่มีปัญหา

□. มีปัญหาเล็กน้อย

□. มีปัญหาพอควร

□. มีปัญหาอย่างมาก

8. ตั้งแต่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต สัมพันธภาพระหว่างท่านกับสมาชิกในครอบครัวของท่าน (เช่น พ่อ แม่ ลูก ญาติพี่น้อง เป็นต้น) เป็นอย่างไร

□. มีปัญหาอย่างมาก

□. มีปัญหาพอควร

□. มีปัญหาเล็กน้อย

□. ไม่มีปัญหา

9. เมื่อท่านต้องขอความช่วยเหลือในการดำรงชีวิตประจำวันจากบุคคลอื่น (เช่น สมาชิกในครอบครัว เพื่อน เพื่อนบ้าน เป็นต้น) ท่านรู้สึกว่าได้รับความช่วยเหลือจากบุคคลเหล่านี้ดีหรือไม่

□. ได้รับความช่วยเหลือดีมาก

□. ได้รับความช่วยเหลือค่อนข้างดี

□. ได้รับความช่วยเหลือบ้างเล็กน้อย

□. ไม่ได้รับความช่วยเหลือเลย

10. ท่านยังคงให้ความสนใจกับการใช้เวลาว่างหรืองานอดิเรก เหมือนที่เคยทำก่อนที่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤตหรือไม่ (เช่น ชมรายการโทรทัศน์ ปลูกต้นไม้ เลี้ยงสัตว์ อ่าน-หนังสือ เป็นต้น) มากน้อยเพียงใด

□. ให้ความสนใจน้อย หรือไม่มีเลย

□. ให้ความสนใจลดลงจากเดิมมาก

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□. ให้ความสนใจลดลงจากเดิมเล็กน้อย

□. ให้ความสนใจเหมือนเดิม

11. ปัจจุบันท่านยังคงทำกิจกรรมต่างๆที่ท่านสนใจหรือเคยทำนั้นๆ มากน้อยเพียงใด

□. ทำกิจกรรมเหมือนเดิม

□. ทำกิจกรรมลดลงจากเดิมเล็กน้อย

□. ทำกิจกรรมลดลงจากเดิมมาก

□. ทำกิจกรรมน้อย หรือไม่ได้ทำเลย

12. ขณะนี้ท่านให้ความสนใจที่จะเข้าร่วมกิจกรรมกับสมาชิกในครอบครัว เหมือนที่ทำมาก่อนที่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต มากน้อยเพียงใด

□. ให้ความสนใจน้อยมาก หรือไม่ให้ความสนใจเลย

□. ให้ความสนใจลดลงจากเดิมพอควร

□. ให้ความสนใจลดลงจากเดิมเล็กน้อย

□. ให้ความสนใจเหมือนเดิม

13. ท่านยังคงร่วมกิจกรรมต่างๆกับสมาชิกในครอบครัว เหมือนที่ทำมาก่อนที่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต มากน้อยเพียงใด

□. เข้าร่วมกิจกรรมได้เหมือนเดิม

□. เข้าร่วมกิจกรรมลดลงจากเดิมเล็กน้อย

□. เข้าร่วมกิจกรรมลดลงจากเดิมพอควร

□. เข้าร่วมกิจกรรมน้อยมาก หรือไม่เข้าร่วมกิจกรรมเลย

14. ท่านสนใจกับการมีกิจกรรมในสังคม เหมือนที่เคยมีก่อนการเจ็บป่วยของลูก มากน้อยเพียงใด

□. ให้ความสนใจน้อยมาก หรือไม่ให้ความสนใจเลย

□. ให้ความสนใจลดลงจากเดิมพอควร

□. ให้ความสนใจลดลงจากเดิมเล็กน้อย

□. ให้ความสนใจเหมือนเดิม

15. ท่านยังคงเข้าร่วมกิจกรรมต่างๆกับเพื่อน เหมือนที่เคยทำก่อนที่ลูกของท่านเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต มากน้อยเพียงใด

□. เข้าร่วมกิจกรรมได้เหมือนเดิม

□. เข้าร่วมกิจกรรมลดลงจากเดิมเล็กน้อย

□. เข้าร่วมกิจกรรมลดลงจากเดิมมาก

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□. เข้าร่วมกิจกรรมน้อยมากหรือไม่เข้าร่วมกิจกรรมเลย

16. ในระยะนี้ท่านเคยรู้สึกตำหนิตนเอง หรือรู้สึกว่าเป็นความบกพร่องของท่านที่ทำให้ลูกต้องเจ็บป่วย หรือคนอื่นต้องเป็นทุกข์ บ้างหรือไม่ มากน้อยเพียงใด

□. รู้สึกอย่างมาก

□. รู้สึกพอควร

□. รู้สึกบ้างเล็กน้อย

□. ไม่รู้สึกเลย

17. ในระยะนี้ท่านเคยรู้สึกว่าความมีคุณค่าหรือความภาคภูมิใจในตนเองลดลง บ้างหรือไม่ มากน้อยเพียงใด

□. ไม่เคยรู้สึกเลย

□. รู้สึกบ้างเล็กน้อย

□. รู้สึกพอควร

□. รู้สึกอย่างมาก

18. ในระยะนี้ท่านรู้สึกว่ารูปร่างหน้าตาของท่านเปลี่ยนแปลงไป หรือไม่ มากน้อยเพียงใด

□. รู้สึกอย่างมาก

□. รู้สึกพอควร

□. รู้สึกบ้างเล็กน้อย

□. ไม่เคยรู้สึกเลย

19. ในระยะนี้ท่านเคยรู้สึกกลัวผิดพลาดในการทำสิ่งต่างๆ บ้างหรือไม่ มากน้อยเพียงใด

□. ไม่เคยรู้สึกเลย

□. รู้สึกบ้างเล็กน้อย

□. รู้สึกพอควร

□. รู้สึกอย่างมาก

20. ในระยะนี้ท่านรู้สึกไม่มีความสุข เศร้าหมอง หมดกำลังใจ บ้างหรือไม่ มากน้อยเพียงใด

□. รู้สึกอย่างมาก

□. รู้สึกพอควร

□. รู้สึกบ้างเล็กน้อย

□. ไม่เคยรู้สึกเลย

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21. การเจ็บป่วยจนต้องเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤตของลูกครั้งนี้ ทำให้ความรักความผูก-พันของท่านและสามีเป็นอย่างไร

☐. ความรักความผูกพันต่อกันยังมีเช่นเดิม

☐. ความรักความผูกพันต่อกันลดลงเล็กน้อย

☐. ความรักความผูกพันต่อกันลดลงอย่างมาก

☐. ไม่มีความรักความผูกพันต่อกันหลงเหลืออยู่เลย

22. ความสุข ความพึงพอใจ ที่ได้รับจากการแสดงความรักระหว่างท่านกับสมาชิกในครอบครัวเปลี่ยนแปลงอย่างไร

☐. ไม่มีความสุขและความพึงพอใจเลย

☐. สูญเสียความสุขและความพึงพอใจอย่างมาก

☐. สูญเสียความสุขและความพึงพอใจไปบ้างพอควร

☐. มีความสุขและความพึงพอใจเหมือนเดิม

23. ปัจจุบัน การรับประทานอาหารของท่านเป็นอย่างไร

☐. ปกติ

☐. มีอาการเบื่ออาหารเล็กน้อย

☐. มีอาการเบื่ออาหารค่อนข้างมาก

☐. มีอาการเบื่ออาหารอย่างรุนแรง

24. การขับถ่ายปัสสาวะของท่านขณะนี้เป็นอย่างไร

☐. ถ่ายปัสสาวะบ่อยครั้งขึ้น มาก

☐. ถ่ายปัสสาวะบ่อยครั้งขึ้น ค่อนข้างมาก

☐. ถ่ายปัสสาวะบ่อยครั้งขึ้น เล็กน้อย

☐. ปกติ

25. การขับถ่ายอุจจาระของท่านขณะนี้เป็นอย่างไร

☐. ถ่ายอุจจาระปกติ

☐. มีอาการท้องเสียหรือท้องผูก เล็กน้อย

☐. มีอาการท้องเสียหรือท้องผูก ค่อนข้างบ่อย

☐. มีอาการท้องเสียหรือท้องผูก บ่อยมาก

26. ปัจจุบันการนอนของท่านเป็นอย่างไร

☐. นอนไม่หลับทั้งคืน

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□. นอนหลับได้เล็กน้อย

□. นอนหลับได้พอควร

□. นอนหลับได้ตามปกติ

27. ท่านรู้สึกว่าน้ำหนักของท่านลด หรือเพิ่ม อย่างไร

□. น้ำหนักไม่ลดลง หรือไม่เพิ่มขึ้น

□. น้ำหนักลดลง หรือเพิ่มขึ้น เล็กน้อย

□. น้ำหนักลดลง หรือเพิ่มขึ้น ค่อนข้างมาก

□. น้ำหนักลดลง หรือเพิ่มขึ้น อย่างมาก

28. ท่านรู้สึกอ่อนเพลียหรือไม่ อย่างไร

□. รู้สึกอ่อนเพลียมาก ไม่มีกำลัง

□. รู้สึกอ่อนเพลียค่อนข้างมาก

□. รู้สึกอ่อนเพลียเล็กน้อย

□. มีกำลังตามปกติ

29. ท่านรู้สึกปวดศรีษะบ้างหรือไม่ อย่างไร

□. ไม่มีอาการปวดศรีษะ

□. ปวดศรีษะเล็กน้อย นานๆครั้ง

□. ปวดศรีษะค่อนข้างมาก นานๆครั้ง

□. ปวดศรีษะมาก และบ่อยครั้ง

30. ท่านรู้สึกปวดเมื่อยกล้ามเนื้อตามร่างกาย เช่น ต้นคอ หลังไหล่ บ้างหรือไม่ อย่างไร

□. รู้สึกปวดเมื่อยตามร่างกายมากจนรู้สึกไม่อยากทำอะไร

□. รู้สึกปวดเมื่อยตามร่างกายค่อนข้างมาก ทำอะไรได้ค่อนข้างลำบาก

□. รู้สึกปวดเมื่อยตามร่างกายเล็กน้อย

□. ไม่มีอาการปวดเมื่อยตามร่างกาย หรือปกติ

31. ท่านรู้สึกหายใจลำบาก หรือหายใจได้ไม่เต็มที่ บ้างหรือไม่ อย่างไร

□. หายใจได้เป็นปกติ

□. หายใจลำบากเล็กน้อย นานๆครั้ง

□. หายใจลำบากค่อนข้างมาก นานๆครั้ง

□. หายใจลำบากมาก บ่อยครั้ง

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32. ท่านรู้สึกหัวใจเต้นเร็ว หรือใจสั่น บ้างหรือไม่ อย่างไร

□. รู้สึกหัวใจเต้นเร็วหรือใจสั่น มาก บ่อยครั้ง

□. รู้สึกหัวใจเต้นเร็วหรือใจสั่นค่อนข้างมาก นานๆครั้ง

□. รู้สึกหัวใจเต้นเร็วหรือใจสั่น เล็กน้อย นานๆครั้ง

□. ไม่มีอาการหัวใจเต้นเร็วหรือใจสั่น

33. ท่านรู้สึกตื่นเต้นง่ายกับเหตุการณ์ที่ไม่คุ้นเคย บ้างหรือไม่ อย่างไร

□. ไม่รู้สึกตื่นเต้นง่าย

□. รู้สึกตื่นเต้นง่ายเล็กน้อย เป็นบางครั้ง

□. รู้สึกตื่นเต้นง่าย ค่อนข้างบ่อย

□. รู้สึกตื่นเต้นง่าย บ่อยๆ

34. ท่านรู้สึกมึนงงหรือเวียนศีรษะบ้างหรือไม่ อย่างไร

□. รู้สึกมึนงง หรือเวียนศีรษะมาก บ่อยครั้ง

□. รู้สึกมึนงง หรือเวียนศีรษะค่อนข้างมาก เป็นบางครั้ง

□. รู้สึกมึนงง หรือเวียนศีรษะเล็กน้อย เป็นบางครั้ง

□. ไม่รู้สึกมึนงง หรือเวียนศีรษะ หรือปกติ

35. ท่านมีความรู้สึกอื่นๆที่เกิดขึ้นนอกเหนือจากความรู้สึกต่างๆดังกล่าวมาแล้วหรือไม่ อย่างไร (ถ้ามีโปรดระบุ)..

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ส่วนที่ 3
แบบประเมินความเครียดของมารดา

คำชี้แจง

แบบประเมินความเครียดของมารดา เป็นแบบสอบถามเกี่ยวกับเหตุการณ์ที่มารดาได้พบเห็นเมื่อบุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต และอาจทำให้เกิดความเครียดได้ ความรู้สึกเครียดหมายถึง ปฏิกิริยาทางด้านอารมณ์ และความรู้สึกนึกคิดของท่าน ที่เกิดขึ้นเมื่อท่านได้พบและมีการรับรู้ต่อเหตุการณ์ต่างๆ ในขณะที่บุตรของท่านเข้ารับการรักษาพยาบาลในหอผู้ป่วยเด็กวิกฤต เช่น ความกังวลใจ กลุ้มใจ ทุกข์ใจ ไม่สบายใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ

โปรดอ่านข้อความในแต่ละข้อ และทำเครื่องหมาย √ ลงในช่องว่างที่ตรงกับความรู้สึกของท่าน ข้อความด้านซ้ายมือของแบบสอบถามเป็นเหตุการณ์ที่พบในหอผู้ป่วย ส่วนด้านขวามือเป็นข้อความบอกความรู้สึกเครียดของมารดาเมื่อพบเหตุการณ์นั้น ซึ่งแบ่งออกเป็น 6 ระดับและมีความหมายดังนี้

ไม่มีเหตุการณ์เกิดขึ้น หมายถึง ท่านไม่พบเห็นเหตุการณ์นั้น

ไม่เครียด หมายถึง เมื่อท่านพบเหตุการณ์ดังกล่าวแล้วไม่เกิดความรู้สึกกังวลใจ กลุ้มใจ ทุกข์ใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ

เครียดเล็กน้อย หมายถึง เมื่อท่านพบเหตุการณ์ดังกล่าวแล้วเกิดความรู้สึกกังวลใจ กลุ้มใจ ทุกข์ใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ เพียงเล็กน้อย

เครียดปานกลาง หมายถึง เมื่อท่านพบเหตุการณ์ดังกล่าวแล้วเกิดความรู้สึกกังวลใจ กลุ้มใจ ทุกข์ใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ พอควร

เครียดมาก หมายถึง เมื่อท่านพบเหตุการณ์ดังกล่าวแล้วเกิดความรู้สึกกังวลใจ กลุ้มใจ ทุกข์ใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ ค่อนข้างมาก

เครียดมากที่สุด หมายถึง เมื่อท่านพบเหตุการณ์ดังกล่าวแล้วเกิดความรู้สึกกังวลใจ กลุ้มใจ ทุกข์ใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ มากที่สุด

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ตัวอย่าง

โปรดอ่านข้อความในแต่ละข้อ และทำเครื่องหมาย √ ลงในช่องว่างที่ตรงกับความรู้สึกของท่าน

เหตุการณ์ที่พบในหอผู้ป่วย	ไม่พบเหตุการณ์นั้นเลย	เมื่อพบเหตุการณ์ดังกล่าวแล้วเกิดความรู้สึก				
		ไม่เครียด	เครียดเล็กน้อย	เครียดปานกลาง	เครียดมาก	เครียดมากที่สุด
ลักษณะของลูกที่พบเห็น - ลูกมีอาการเหนื่อยหอบ					√	

จากตัวอย่าง ถ้าท่านทำเครื่องหมาย √ ลงในช่องเครียดมาก แสดงว่าท่านได้พบเห็นบุตรมีอาการเหนื่อยหอบแล้ว ทำให้ท่านรู้สึกกังวลใจ กลุ้มใจ ทุกข์ใจ รำคาญใจ ผิดหวัง หรือเศร้าใจ มาก

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เหตุการณ์ที่พบในหอผู้ป่วย	ไม่พบเหตุการณ์นั้นเลย	เมื่อพบเหตุการณ์ดังกล่าวแล้วเกิดความรู้สึก				
		ไม่เครียด	เครียดเล็กน้อย	เครียดปานกลาง	เครียดมาก	เครียดมากที่สุด
ลักษณะของลูกที่พบเห็น 1. ลูกมีอาการบวม						
2. สีผิวของลูกเปลี่ยนแปลง (ซีด คล้ำ เหลือง)						
3. ดูเหมือนว่าลูกกำลังหนาว						
การตอบสนองทางด้านพฤติกรรมและอารมณ์ของลูก 4. ลูกดิ้น ขัดขืน หรือต่อต้าน						
5. ลูกร้องไห้ หรือสะอึกสะอื้น						
6. ลูกแสดงความต้องการ เรียกร้องสิ่งต่างๆ						
7. ลูกแสดงอาการเจ็บปวด						
8. ลูกแสดงอาการกระสับกระส่าย						
9. ลูกแสดงอาการตกใจกลัว						
10. ลูกแสดงอาการโกรธ						
11. ลูกแสดงอาการเศร้าใจ หรือซึมเศร้า						
12. ลูกไม่สามารถพูดหรือร้องไห้ได้						
13. ลูกดูสับสน.						
ภาพและเสียงจากเครื่องมือ 14. การได้เห็นสัญญาณภาพการทำงานของหัวใจ						
15. การได้ยินเสียงการทำงานของเครื่องมือต่างๆดังเป็นระยะ						

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		ไม่เครียด	เครียดเล็กน้อย	เครียดปานกลาง	เครียดมาก	เครียดมากที่สุด
16. การได้ยินเสียงร้องจากเครื่องมือต่างๆดังขึ้นทันทีทันใด						
การรักษาพยาบาลที่ลูกได้รับ 17. การฉีดยา						
18. การกระตุ้นให้ลูกไอ หรือหายใจลึกๆ โดยการเคาะบริเวณหน้าอก						
19. การดูดเสมหะ						
20. การแทงเข็มเพื่อให้น้ำเกลือ หรือเพื่อการตรวจรักษา						
21. การมีสายหรือท่อต่างๆอยู่ในตัวลูก						
22. การมีบาดแผลตามตัวลูก						
ท่าทีและพฤติกรรมของเจ้าหน้าที่ (แพทย์ พยาบาล และผู้ช่วยพยาบาล) 23. พูดคุยเรื่องตลก หัวเราะ หรือพูดเสียงดังขณะทำงาน						
24. สนใจที่จะพูดคุยกับฉันน้อยไป						
25. มีเจ้าหน้าที่หลายคนเกินไป (แพทย์ พยาบาล และเจ้าหน้าที่อื่นๆ) เปลี่ยนหน้ามาคุยกับฉัน						
26. ไม่มีการแนะนำตัวให้ฉันทราบก่อนว่าเป็นใคร						
การติดต่อสื่อสารของเจ้าหน้าที่ (แพทย์ พยาบาล และผู้ช่วยพยาบาล) 27. เวลาอธิบายสิ่งต่างๆมักพูดเร็วเกินไป						
28. ใช้คำพูดที่ฉันไม่เข้าใจ						

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		ไม่เครียด	เครียดเล็กน้อย	เครียดปานกลาง	เครียดมาก	เครียดมากที่สุด
29. บอกให้ฉันทราบถึงอาการของลูกแตกต่างกัน หรือขัดแย้งกัน						
30. ไม่บอกให้ฉันทราบถึงสิ่งผิดปกติที่เกิดขึ้นกับลูก						
31. พูดคุยกับฉันน้อยไป						
บทบาทของบิดามารดาที่เปลี่ยนแปลง 32. ฉันไม่สามารถให้การดูแลลูกได้ด้วยตนเอง						
33. ฉันไม่สามารถอุ้ม หรือโอบกอดลูกได้						
34. ฉันไม่สามารถอยู่ปลอบโยนเมื่อลูกร้องไห้						
35. ฉันไม่สามารถมองเห็นลูกได้ตามที่ฉันต้องการ						
36. ฉันไม่สามารถเข้าเยี่ยมลูกได้ตามที่ฉันต้องการ						
37. เหตุการณ์ทั้งหมดที่พบในหอผู้ป่วยเด็กวิกฤต ทำให้ท่านรู้สึกเครียดมากน้อยเพียงใด						

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ส่วนที่ 4
แบบประเมินวิธีการเผชิญความเครียดของมารดา

คำชี้แจง

ความเครียดเป็นภาวะที่พบได้ในการดำเนินชีวิตประจำวันที่เราทุกคนไม่อาจหลีกเลี่ยงได้ ทำให้คนต้องพยายามใช้วิธีการเผชิญความเครียดต่างๆเพื่อรักษาภาวะสมดุลของตนไว้ โดยการใช้ทั้งความคิดและการกระทำเพื่อมุ่งแก้ไขสิ่งที่ก่อให้เกิดความเครียด

ข้อความต่อไปนี้เป็นวิธีการที่บุคคลนึกคิด กระทำหรือแสดงพฤติกรรม เมื่อเกิดปัญหาหรือเผชิญกับสถานการณ์เครียด โปรดอ่านข้อความและทำเครื่องหมาย √ ลงในช่องที่ตรงกับปริมาณหรือความถี่ ที่ท่านเลือกใช้วิธีการเผชิญความเครียดตามข้อความนั้น ในการจัดการกับสถานการณ์ความเครียด โดยในแต่ละช่องมีความหมายดังนี้

ไม่เคยใช้เลย หมายถึง เมื่อเกิดปัญหาหรือเผชิญกับสถานการณ์เครียด ท่านไม่เคยได้ใช้วิธีการดังกล่าวในการจัดการกับความรู้สึกเครียด

ใช้เป็นบางครั้ง หมายถึง เมื่อเกิดปัญหาหรือเผชิญกับสถานการณ์เครียด ท่านได้ใช้วิธีการดังกล่าวในการจัดการกับความรู้สึกเครียดนั้นเป็นบางครั้ง

ใช้ค่อนข้างบ่อย หมายถึง เมื่อเกิดปัญหาหรือเผชิญกับสถานการณ์เครียด ท่านได้ใช้วิธีการดังกล่าวในการจัดการกับความรู้สึกเครียดนั้นค่อนข้างบ่อย

ใช้บ่อยมาก หมายถึง เมื่อเกิดปัญหาหรือเผชิญกับสถานการณ์เครียด ท่านได้ใช้วิธีการดังกล่าวในการจัดการกับความรู้สึกเครียดนั้นเกือบทุกครั้ง

ตัวอย่าง

วิธีการเผชิญความเครียดหรือปัญหา	ไม่เคยใช้เลย	ใช้เป็นบางครั้ง	ใช้ค่อนข้างบ่อย	ใช้บ่อยมาก
- ฉันเล่าเรื่องที่ฉันไม่สบายใจให้ญาติพี่น้องทราบ			√	

จากตัวอย่างถ้าท่านทำเครื่องหมาย √ ลงในช่องใช้ค่อนข้างบ่อย แสดงว่าท่านใช้วิธีการเล่าเรื่องที่ท่านไม่สบายใจให้ญาติพี่น้องทราบ เพื่อจัดการกับความรู้สึกเครียดนั้นค่อนข้างบ่อย

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1. ฉันพยายามสนใจเฉพาะสิ่งที่ฉันกำลังต้องกระทำต่อไปเท่านั้น				
2. ฉันพยายามวิเคราะห์ปัญหาที่เกิดขึ้นกับฉันเพื่อให้เข้าใจดีขึ้น				
3. ฉันพยายามไปสนใจเรื่องอื่น โดยหันไปทำงานหรือหากิจกรรมอื่นทำ				
4. ฉันรู้สึกว่า เวลาจะทำให้เกิดการเปลี่ยนแปลง สิ่งเดียวที่ทำได้ขณะนี้คือการรอคอย				
5. ฉันต่อรองหรือประนีประนอมเพื่อให้ได้รับสิ่งที่ดีจากเหตุการณ์				
6. ฉันทำบางอย่างทั้งๆที่ไม่รู้ว่าจะเกิดประโยชน์หรือไม่ แต่อย่างน้อยฉันก็ได้ทำอะไรบ้าง				
7. ฉันพยายามทำให้คนที่เกี่ยวข้องกับเหตุการณ์เปลี่ยนแปลงความคิด				
8. ฉันพูดคุยกับคนใกล้ชิด (เช่น สามี ญาติ เพื่อนร่วมงาน เพื่อนบ้าน) เพื่อให้เข้าใจสถานการณ์ที่เกิดขึ้นกับฉันในขณะนี้				
9. ฉันวิจารณ์หรือสอนตนเอง				
10. ฉันพยายามไม่ปิดกั้นตัวเอง แต่จะเปิดใจยอมรับอยู่บ้าง				
11. ฉันหวังว่าปาฏิหารย์จะเกิดขึ้น				
12. ฉันปล่อยให้เป็นไปตามโชคชะตา ในบางครั้งฉันก็ต้องมีโชคร้ายบ้าง				
13. ฉันทำตัวไปตามปกติเหมือนไม่มีอะไรเกิดขึ้น				
14. ฉันพยายามเก็บความรู้สึกไว้ภายใน				
15. ฉันพยายามมองหาส่วนดีในเหตุการณ์ที่เกิดขึ้น				
16. ฉันนอนหลับมากกว่าปกติ				

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17. ฉันแสดงอารมณ์โกรธกับคนที่เป็นต้นเหตุของปัญหา				
18. ฉันยอมรับความเห็นอกเห็นใจ และความเข้าใจจากคนอื่น				
19. ฉันบอกตนเองในเรื่องที่ช่วยให้รู้สึกดีขึ้น				
20. ฉันเกิดแรงบันดาลใจที่จะทำบางอย่างที่สร้าง-สรรค์				
21. ฉันพยายามลืมทุกสิ่งทุกอย่างที่เกิดขึ้น				
22. ฉันขอความช่วยเหลือจากบุคคลที่มีความเชี่ยว-ชาญ				
23. ฉันเปลี่ยนแปลงตนเองในทางที่ดีขึ้น				
24. ฉันรอดูว่าอะไรจะเกิดขึ้น ก่อนที่จะตัดสินใจทำอะไรลงไป				
25. ฉันกล่าวคำขอโทษ หรือทำบางอย่างให้ฉันรู้สึกดีขึ้น				
26. ฉันวางแผนการกระทำ และกระทำตามแผนการนั้น				
27. ฉันยอมรับสิ่งที่ดีรองลงมาจากสิ่งที่ฉันต้องการ				
28. ฉันระบายความรู้สึกด้วยวิธีใดวิธีหนึ่ง				
29. ฉันตระหนักว่าฉันเป็นผู้ก่อปัญหา				
30. ฉันได้รับประสบการณ์ดีกว่าเดิม หลังจากผ่านเหตุการณ์นี้				
31. ฉันพูดคุยกับใครบางคนที่สามารถแก้ปัญหาได้อย่างเป็นรูปธรรม				
32. ฉันหลีกหนีจากปัญหาชั่วขณะ เช่น พยายามพักผ่อน ลาพักร้อน				

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33. ฉันพยายามทำให้ตนเองรู้สึกดีขึ้น ด้วยการกิน ดื่ม สูบบุหรี่ ใช้ยา หรือสารเสพติด				
34. ฉันฉวยโอกาสหรือทำบางสิ่งบางอย่างที่เสี่ยงมาก				
35. ฉันพยายามไม่ทำอะไรผลีผลาม หรือทำตามลาง-สังหรณ์				
36. ฉันค้นหาสิ่งที่ฉันศรัทธาใหม่				
37. ฉันคงความมีทิฐิมานะโดยไม่ปริปาก				
38. ฉันค้นพบใหม่ว่า อะไรที่มีความสำคัญในชีวิต				
39. ฉันเปลี่ยนแปลงบางอย่างเพื่อให้ผลออกมาดี				
40. ฉันหลีกเลี่ยงที่จะพบปะกับผู้คน				
41. ฉันไม่ปล่อยให้ปัญหารบกวนจิตใจ โดยพยายามไม่คิดถึงมันมากเกินไป				
42. ฉันขอคำแนะนำจากญาติ หรือเพื่อนที่ฉันนับถือ				
43. ฉันปกปิดไม่ให้คนอื่นรู้ว่าปัญหาเลวร้ายแค่ไหน				
44. ฉันทำความเข้าใจสถานการณ์ให้ถ่องแท้ แต่ไม่จริงจังกับมันมากไป				
45. ฉันพูดคุยกับใครบางคนถึงความรู้สึกของฉัน				
46. ฉันยืนหยัดและต่อสู้เพื่อให้ได้สิ่งที่ต้องการ				
47. ฉันโยนปัญหาให้กับผู้อื่น				
48. ฉันตกอยู่ในสถานการณ์เดียวกับที่เคยประสบ-มาก่อน				
49. ฉันรู้ว่าฉันต้องทำอะไร ฉันจึงทุ่มเทความพยายามเป็นสองเท่าเพื่อให้สำเร็จ				
50. ฉันปฏิเสธว่าเหตุการณ์นั้นไม่ได้เกิดขึ้น				
51. ฉันสัญญากับตนเองว่ามันจะไม่เป็นอย่างนี้ในครั้งต่อไป				
52. ฉันค้นพบวิธีแก้ปัญหาหลายทาง				

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53. ฉันยอมรับมัน เพราะไม่สามารถทำอะไรได้				
54. ฉันพยายามที่จะไม่ให้ความรู้สึกของตนเองไปรบกวนการทำสิ่งอื่นมากเกินไป				
55. ฉันหวังว่าจะสามารถเปลี่ยนแปลงสิ่งที่เกิดขึ้นหรือความรู้สึกของฉันได้				
56. ฉันเปลี่ยนแปลงตนเองในบางอย่าง				
57. ฉันนึกถึงเวลาหรือสถานที่ที่ดีกว่าที่เป็นอยู่ตอนนี้				
58. ฉันหวังว่าเหตุการณ์จะผ่านพ้นไปหรือแก้ไขได้				
59. ฉันฝันหรือตั้งความหวังว่า เหตุการณ์จะเป็นอย่างไรต่อไป				
60. ฉันสวดอ้อนวอนสิ่งที่ฉันเคารพ				
61. ฉันเตรียมตัวรับเหตุการณ์ที่อาจเลวร้ายที่สุด				
62. ฉันซักซ้อมในใจว่าจะพูดหรือทำอะไร				
63. ฉันคิดถึงคนที่ฉันศรัทธาว่าจะแก้ไขเหตุการณ์ที่เกิดขึ้นอย่างไร และใช้เป็นแบบอย่าง				
64. ฉันพยายามมองเหตุการณ์ที่เกิดขึ้นตามมุมมองของผู้อื่น				
65. ฉันเตือนตนเองว่า เหตุการณ์อาจจะเลวร้ายกว่านี้ได้				
66. ฉันวิ่งหรือออกกำลังกาย				
67. ฉันพยายามทำบางอย่างที่แตกต่างจากที่กล่าวมาแล้วข้างต้น(โปรดระบุ)...........................				

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APPENDIX B

List of experts consulted on validation of the research instruments

1. Assistant Professor Chatree Witoonchart, M.D.
   Department of Pediatric,
   Faculty of Medicine, Siriraj Hospital, Mahidol University.
2. Associate Professor Dr. Rutja Phuphaibul
   Nursing Department, Faculty of Medicine,
   Ramathibodi Hospital, Mahidol University.
3. Associate Professor Wilai Leesuwan
   Nursing Department, Faculty of Medicine,
   Ramathibodi Hospital, Mahidol University.
4. Assistant Professor Dr. Wanida Sanasuttipun
   Department of Pediatric Nursing
   Faculty of Nursing, Mahidol University.
5. Mrs. Chintana Parkpreaw
   Head Nurse of Pediatric Intensive Care Unit, Nursing Department,
   Faculty of Medicine, Siriraj Hospital, Mahidol University.

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Faculty of Medicine Siriraj Hospital
Mahidol University

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

No. 220/2002

Protocol Title	Factors Predicting Adaptation of Mothers Having A Hospitalized Child in Pediatric Intensive Care Unit.
Protocol Number	--------
Principal Investigator	Miss. Lakha Pangnukroh
Name of Department	Nursing of Department

The aforementioned project and informed consent have been reviewed and approved by the Ethical Committee, Faculty of Medicine Siriraj Hospital, Mahidol University, based on the Declaration of Helsinki on December 27, 2002

Signature of Chairman ....
(Prof. Sumalee Nimmannit)

Signature of Dean P. Sakol ....
(Clin. Prof. Piyasakol Sakolsatayadorn)

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หนังสือแสดงเจตนายินยอม

วันที่........เดือน...................................พ.ศ............

ข้าพเจ้า...อายุ...............ปี อาศัยอยู่บ้านเลขที่.........................

ถนน...................................... ตำบล.. อำเภอ.......................................

จังหวัด...โทรศัพท์...โทรสาร..............................

ขอแสดงเจตนายินยอมเข้าร่วมโครงการวิจัยเรื่อง ปัจจัยทำนายการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต โดยข้าพเจ้าได้รับทราบเกี่ยวกับรายละเอียดของโครงการดังต่อไปนี้

วัตถุประสงค์ของการวิจัย

1. เพื่อศึกษาความเครียด การเผชิญความเครียด และการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต
2. เพื่อศึกษาอำนาจการทำนายของความเครียดของมารดา การศึกษาของมารดา และรายได้ของครอบครัว ต่อการปรับตัวของมารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต

ประโยชน์ที่คาดว่าจะได้รับจากการวิจัย

1. เพื่อเป็นแนวทางสำหรับพยาบาลในการวางแผนการช่วยเหลือมารดาของผู้ป่วยเด็กภาวะวิกฤต ให้สามารถปรับตัวเผชิญความเครียด เมื่อบุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤตได้อย่างเหมาะสม
2. เพื่อเป็นข้อมูลที่ใช้ประกอบการวางแผนการจำหน่ายผู้ป่วย เพื่อการดูแลต่อเนื่องในหอผู้ป่วยเด็กที่ไม่วิกฤต และเตรียมครอบครัวผู้ป่วยให้สามารถให้การดูแลผู้ป่วยต่อเนื่องที่บ้านได้อย่างมีประสิทธิภาพ
3. เพื่อเป็นข้อมูลพื้นฐานสำหรับการพยาบาลในการวิจัยต่อเนื่อง เกี่ยวกับการหาวิธีช่วยให้มารดาที่บุตรเข้ารับการรักษาในหอผู้ป่วยเด็กวิกฤต สามารถปรับตัวต่อความเครียดได้อย่างเหมาะสม

การเก็บข้อมูลในการวิจัย

โดยการใช้แบบสอบถาม 1 ชุด ซึ่งแบ่งออกเป็น 4 ส่วนคือ แบบสอบถามข้อมูลส่วนบุคคล แบบประเมินความเครียดของมารดา แบบประเมินวิธีการเผชิญความเครียดของมารดา และแบบประเมินการปรับตัวของมารดา ซึ่งจะใช้เวลาประมาณ $1\text{-}1^1/_2$ ชั่วโมง

ความเสี่ยงหรือผลข้างเคียงที่อาจจะเกิดขึ้น มีน้อยมาก ท่านอาจรู้สึกเครียดขณะทำแบบสอบถาม จึงควรพักให้รู้สึกผ่อนคลายก่อน เมื่อพร้อมแล้วจึงทำแบบสอบถามต่อ

การติดต่อกับผู้วิจัยในกรณีที่มีปัญหา (ตลอด 24 ชั่วโมง) 01-3353130

หากผู้วิจัยมีข้อมูลเพิ่มเติมทั้งด้านประโยชน์และโทษที่เกี่ยวข้องกับการวิจัยนี้ ผู้วิจัยจะแจ้งให้ทราบอย่างรวดเร็วโดยไม่ปิดบัง

ข้าพเจ้ามีสิทธิ์ที่จะของดการเข้าร่วมโครงการวิจัยโดยไม่ต้องแจ้งให้ทราบล่วงหน้า โดยการงดการเข้าร่วมการวิจัยนี้จะไม่มีผลกระทบต่อการได้รับบริการหรือการรักษาที่ข้าพเจ้าจะได้รับแต่ประการใด

ข้าพเจ้าได้รับทราบข้อมูลของโครงการข้างต้น ตลอดจนข้อดีข้อเสียที่จะได้รับจากการเข้าร่วมโครงการในครั้งนี้ และข้าพเจ้ายินยอมที่จะเข้าร่วมในโครงการดังกล่าว โดยขอให้ผู้วิจัยงดการเปิดเผยชื่อ ประวัติ ตลอดจนข้อมูลที่เกี่ยวข้องกับข้าพเจ้า แก่ผู้อื่นได้รับทราบ

ลงชื่อ..ผู้ให้ความยินยอม
(..)

ลงชื่อ..พยาน
(..)

ลงชื่อ..พยาน
(..)

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APPENDIX D

Testing Assumptions of Multiple regression Analysis

The assumptions were tested before using multiple regression analysis as follows:

1. Normal Distribution

Using a histogram of standardized residuals, assessed the relationships are linear and the dependent variable is normally distributed for each value of the independent variable, then the distribution of the residuals should be approximately normal. If the distribution of the residual was normal; with one peak of 0.25 of a standard deviation above the mean; it meant the relationship is linear. Besides, the dependent variable is normally distributed for each value of the independent variable (Norusis, 1996 cited by Munro, 2001: 273). It has been show that a histogram of the standardized residuals was approximately normal and presented as follow:

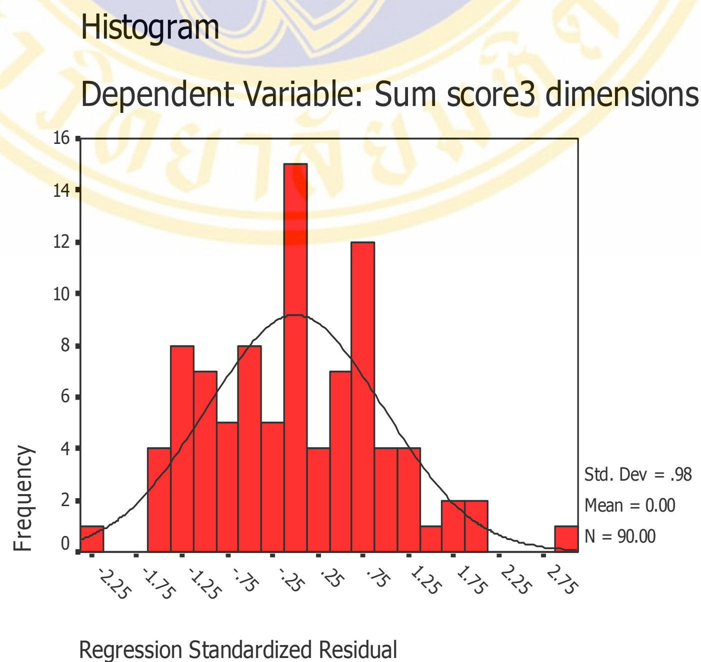

Figure 2 Histogram of Residuals

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2. Homoscedasticity

To check this assumption, the residuals can be plotted against the predicted values and against the independent variables. When standardized predicted values are plotted against observed values, the data would form a straight line from the lower-left corner to upper right corner, if the model fit the data exactly. The result showed that the actual scores vary around the prediction line, but in general they cluster fairly close to line (Figure 3).

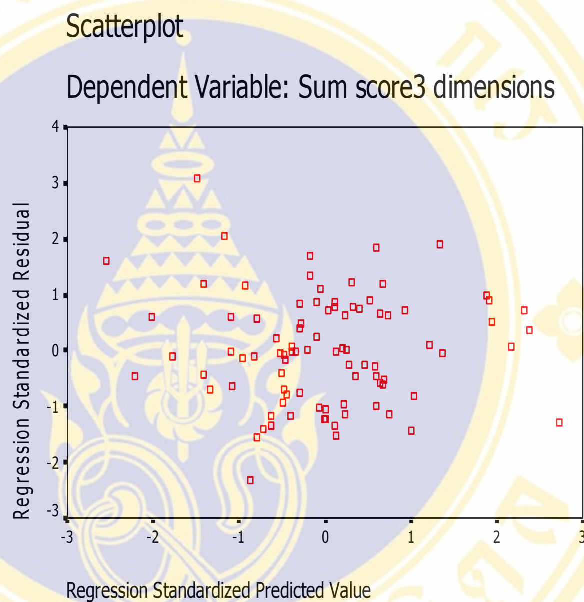

Figure 3 Plot of Residuals Against the Predicted Values of Maternal Adaptation

When the residuals are from a normal distribution, the plotted values fall close to the line in the normal probability plot. Thus, the probability was selected to check this assumption. The result showed that the plotted values fall close to the line in the normal probability paper plot as expected in a normal distribution (Figure 4).

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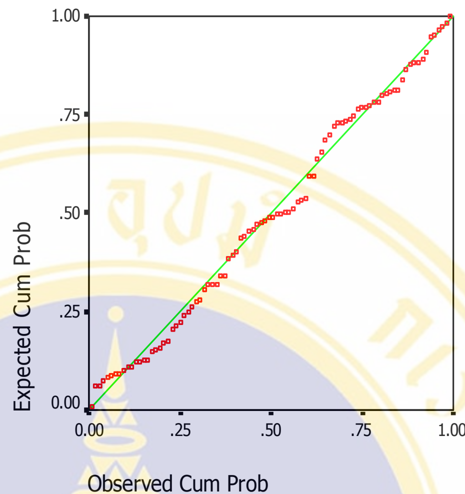

Figure 4 Normal P-P Plot of Regression Standardized Residual

3. Multicollinearity

The Pearson's Product Moment Correlation was performed to examine the relation between independent variables. The result of this analysis revealed that the highest correlation coefficient among the study variables was 0.61 (Table 5). The correlation coefficient among the variable was not higher than 0.90 (Tabachnick & Fidell, 1996: 84). That is an issue of multicollinearity was not in concern.

In summary, multiple regression analysis was employed in this study because the data have met all the assumptions required by this method.

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BIOGRAPHY

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