PERCEIVED SELF-EFFICACY OF CAREGIVERS IN CARING FOR CHILDREN WITH PNEUMONIA AT HOME

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Thesis
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PERCEIVED SELF-EFFICACY OF CAREGIVERS IN CARING FOR CHILDREN WITH PNEUMONIA AT HOME

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ABSTRACT

This descriptive research which aimed at studying perceived self-efficacy of caregivers in caring for children with pneumonia at home and investigating the relationship between demographic characteristics of caregivers (age, educational level, family income) and perceived self-efficacy of caregivers in caring for children with pneumonia at home. The study sample consisted of principal caregivers of children ranging in age from one month to five years old who were hospitalized at Maharaj Nakhonratchasima Hospital, Nakhonratchasima province. Data were collected by means of the demographic data questionnaire and the perceived self-efficacy of caregivers in caring for children with pneumonia at home questionnaire. Statistical analyses included frequency distribution, percentage, means, standard deviation, and Chi-square.

The results of the study revealed that caregivers had a high average score on perceived self-efficacy in caring for children with pneumonia at home ($\overline{X}$ = 88.26, SD = 11.01). As for each aspect of perceived self-efficacy, it was found that the aspect with the highest mean score was taking children to outpatient referral ($\overline{X}$ = 94.80, SD = 13.22), followed by health, treatment, diet, environment, and medication. ($\overline{X}$ = 91.97, SD = 11.34; $\overline{X}$ = 91.23, SD = 11.86; $\overline{X}$ = 87.55, SD = 13.72; $\overline{X}$ = 86.07, SD = 15.70; $\overline{X}$ = 84.77, SD = 15.91, respectively). Moreover, it was found that age, educational level, and family income had no relationship to perceived self-efficacy of caregivers in caring for children with pneumonia at home (χ^2 = 7.533, 2.827, and 2.508, respectively).

Based on these findings, it was suggested that nurses should undergo training to equip the caregivers with knowledge and information necessary in promoting caregivers' appropriate perceived self-efficacy in caring for children with pneumonia at home, especially when it comes to administration of medication and environment. Proper preparation and promotion of caregivers' experience in care should be emphasized as well so as to increase quality of care provided to children with pneumonia at home.

KEY WORDS: SELF-EFFICACY / CHILDREN / PNEUMONIA

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การรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน
(PERCEIVED SELF-EFFICACY OF CAREGIVERS IN CARING FOR CHILDREN WITH PNEUMONIA AT HOME)

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บทคัดย่อ

การศึกษาครั้งนี้เป็นการวิจัยเชิงบรรยาย เพื่อศึกษาการรับรู้สมรรถนะในตนเองของผู้ดูแล และเพื่อศึกษาความสัมพันธ์ของปัจจัยส่วนบุคคลของผู้ดูแล ได้แก่ อายุ ระดับการศึกษา และรายได้ครอบครัว กับการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน กลุ่มตัวอย่างเป็นผู้ดูแลหลักที่นำเด็กอายุ 1 เดือน-5 ปี มารับการรักษาที่โรงพยาบาลมหาราชนครราชสีมา จังหวัดนครราชสีมา เก็บรวบรวมข้อมูลโดยใช้แบบสอบถามข้อมูลส่วนบุคคล และแบบวัดการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน และวิเคราะห์ข้อมูลด้วยสถิติความถี่ ร้อยละ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน และการวิเคราะห์ความสัมพันธ์โดยใช้การทดสอบ Chi-square

ผลการวิจัย พบว่า ค่าเฉลี่ยคะแนนการรับรู้สมรรถนะของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้านโดยรวมอยู่ในระดับสูง($\overline{X}$ = 88.26, SD = 11.01) สำหรับการรับรู้สมรรถนะในตนเองของผู้ดูแลตามรายด้าน พบว่าผู้ดูแลมีค่าเฉลี่ยคะแนนการรับรู้สมรรถนะในตนเองเกี่ยวกับการพาเด็กมาตรวจตามนัดสูงกว่าด้านอื่น ๆ ($\overline{X}$ = 94.80, SD = 13.22) รองลงมา ได้แก่ การดูแลสุขภาพ การดูแลความผิดปกติเบื้องต้น การให้อาหาร การจัดสิ่งแวดล้อม และการให้ยารับประทาน ($\overline{X}$ = 91.97, SD = 11.34; $\overline{X}$ = 91.23,SD = 11.86; $\overline{X}$ = 87.55, SD = 13.72; $\overline{X}$ = 86.07, SD = 15.70; $\overline{X}$ = 84.77, SD = 15.91 ตามลำดับ) นอกจากนี้พบว่า อายุของผู้ดูแล ระดับการศึกษา และรายได้ของครอบครัวไม่มีความสัมพันธ์กับการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน (χ^2 = 7.533, 2.827 และ 2.508)

จากผลการวิจัยครั้งนี้มีข้อเสนอแนะว่า พยาบาลควรสนับสนุนผู้ดูแลเกี่ยวกับการดูแลเด็กโรคปอดอักเสบที่บ้าน โดยเน้นการส่งเสริมการรับรู้สมรรถนะในตนเอง โดยเฉพาะด้านการให้ยารับประทาน และด้านการจัดสิ่งแวดล้อม เพื่อเตรียมความพร้อมของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน และส่งเสริมให้ผู้ดูแลมีพฤติกรรมในการดูแลเด็กโรคปอดอักเสบที่บ้านอย่างเหมาะสม

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CHAPTER I
INTRODUCTION

Background and Significance of the Study

One of the primary health problems among children is infection of the respiratory system. It has been found that lower respiratory tract infection causes loss of life in children, especially those living in the developing countries (Suwanjutha,2003). In Thailand, respiratory system illness has been one of the top five causes of infant fatality (Ministry of Public Health, 2004). According to the statistics of the Epidemiology Division, Department of Disease Control, Ministry of Public Health (Respiratory Tract Infectious Disease Control Division, 1996), it was found that in 2004 73,423 children in Thailand between the age of one month and five years old contacted pneumonia. In 2004, there were 2,495 children who were five years old and under who contacted pneumonia in Nakhonratchasima Province. In addition, it has been reported that in the year 2004, 562 children between one month and three years of age were hospitalized in a pediatric ward, and of these, 43 children (7.7%) returned to the hospital after being discharged.

Pneumonia is a frequently found serious lower respiratory tract infection. When infants and young children have signs of pneumonia, they need to be hospitalized immediately. This is because their condition will change rapidly and complications can easily occur (Hockenberry, Winson, & Winkelstein, 2005). In general, pneumonia will affect children for seven to ten days, and they will need a recovery period of one week (Hockenberry, et al., 2005). At present, it is the policy of almost public hospitals to reduce length of stay in hospital and to have patients return home for continuing care, with the aim to reduce hospital expenditures. For Maharaj Nakhonratchasima Hospital in Nakhonratchasima Province, children with pneumonia are generally hospitalized for four days. If their condition is found to be better, they will be discharged for continuing care at home.

The aim of continuing care is for the caregiver to offer proper care to children with pneumonia. Children's health will improve and they will not be readmitted if they are properly cared for. Thus, the caregivers need to have knowledge, understanding, and confidence to effectively care for children with pneumonia at home (Suwanjutha, 1997). However, from the study conducted by Smith & Daughtrey (2000), it was found that children with pneumonia who continued to receive care at home had recurrent pneumonia or other complications such as high fever. This threatens the caregivers' confidence in caring for children with pneumonia at home, especially when they have to do without assistance from the hospital. Even if the doctor has already given permission for the children to return home, some caregivers are concerned that the children have not yet fully recovered from pneumonia and may not fully recover if they are discharged. Therefore, caregivers believe that the children are not ready for continued care at home. Some caregivers negotiate with the hospital to allow the children to stay for one more night before discharge. However, other caregivers comply with the hospital discharge even though they still have worries (Smith & Daughtrey, 2000).

Self-care behaviors in health are aimed at promoting good health (Bandura, 1997). However, for the caregivers, knowledge alone is not related to good healthcare behaviors. A key factor connecting knowledge and behaviors is perceived self-efficacy (Bandura, 1997). Each individual has different types of perceived self-efficacy depending on various relevant factors. Froman and Owen (1990) found that the age of mothers had a positive relationship with perceived self-efficacy in infant care. This is in line with the study of Vipuro (2007) who found that the age of mothers had a positive relationship with perceived self-efficacy in infant care. Another study carried out by Cutrona and Troutman (1986) showed that the educational level of parents had a positive relationship with their perceived self-efficacy. Likewise, Vipuro (2007) also found that the educational level of mothers had a positive relationship with their perceived self-efficacy in infant care. Another important factor is family income. For example, Zahr (1991) found that family income had a positive relationship with perceived self-efficacy in pre-term infant care.

The perception in one's ability to do or not to do something relates to one's perceived self-efficacy or confidence in one's capability. It is a decision made by

each individual in order to achieve expected outcomes. According to Bandura (1997), perceived self-efficacy is the link between knowledge and behavior. Knowledge and behavior do not help one to succeed if they lack self-confidence to utilize that capability (Prasopkittikun, 2001). It can be said that if the caregivers have the knowledge and behavior to efficiently care for children with pneumonia at home, they also need to have a high level of perceived self-efficacy in provision of care. A number of previous studies have shown that demographic characteristics and knowledge of care for children with pneumonia at home are factors underlying a high level of perceived self-efficacy in caring for children with pneumonia at home (Froman & Owen, 1990; Vipuro, 2007; Cutrona & Troutman, 1986; Zahr, 1991; Aksiritrirat, 2000). With a high level of perceived self-efficacy, the caregiver will be perseverant in efficiently and continuingly caring for children (Bandura, 1997). This will yield positive results for treatment as children will recover from pneumonia and do not need to be re-hospitalized.

From a literature review of relevant research, it was found that perceived self-efficacy is related to demographic characteristics such as age, educational level, family income, and knowledge of care for children.

Age can affect the individuals' ability to take care of the dependents. Adults accept and are responsible for healthcare behavior. As one becomes older, one's perceived self-efficacy increases, starting from early adulthood and declining when entering late adulthood (Orem, 2001). Froman and Owen (1990) investigated mothers' and nurses' perception of infant care skills and found that age of the mothers had a positive relationship to their perceived self-efficacy. Similarly, Vipuro (2007) examined on the factors predicting maternal self-efficacy in infant care and reported that age of the mothers had a positive relationship to perceived self-efficacy in caring for infants.

Educational level is a basic factor for decision-making or considering issues. It assists in learning and understanding things more easily. Education enables individuals to seek the source of knowledge and to gather information from various media. It also helps them to properly apply knowledge and experiences gained from education (Orem, 2001). Thus, it can be stated that caregivers with high education will have better knowledge and understanding about illness and nursing care. As such,

caregivers who are educated are able to perceive their self-efficacy and make decisions to effectively care for children with a sickness. For instance, Cutrona and Troutman (1986) conducted a study to explore social support, infant temperament, and parenting self-efficacy and to determine the effects of a mediational model of postpartum depression. They found that educational levels of parents had a positive relationship to their perceived self-efficacy. This is in line with the study by Vipuro (2007) who found that the educational level of mothers had a positive relationship to perceived self-efficacy in infant care. Moreover, it was also found that mothers with high education were better able to seek knowledge, information, and sources for assistance from society or community in caring for children compared to mothers who had low education. Adequate access to information would influence perceived self-efficacy of mothers (Wolff, 1993 cited in Prasopkittikun, 2002).

Family income is representative of the socioeconomic status of the family (Orem, 1995). Pender (1996) points out that the socioeconomic status of a family influences one's daily life in responding to the basic needs of a person. It is the key element affecting the potential for self-care. It may mean that caregivers with high income can utilize the facilities of society, which can improve the caregiver's perceived self-efficacy in caring for children. Zahr (1991) investigated the relationship between mothers' confidence and mother-infant behavior in premature infants and found that family income had a positive relationship to their perceived self-efficacy in premature infant care.

Knowledge is a factor relating to perceived self-efficacy when caring for children with pneumonia at home. It is knowledge that individuals gain and link with their own thinking system that can change their behavior (Suwan, 1983). Appropriate knowledge helps individuals to investigate for information with rationale. Knowledge also helps individuals decide on their behavior in self-care to recover from illness sufficiently (Orem, 1991). For individuals to build-up their self-efficacy, they need to learn about the source of perceived self-efficacy, such as from enactive master experience, from vicarious experience, from verbal persuasion, and from physiological and affectiver states (Bandura, 1997). When individuals learn information, they will apply what is learned to decide on efficacy judgment. Learning from an intellectual process makes individuals decide on their capability for their own behavior. In other words, a

high level of perceived self-efficacy will affect individuals' behavior as they will devote more effort in order to achieve the expected outcomes. When encountering obstacles, individuals will not be easily discouraged. Instead, they should be more persistent in their behavior so as to achieve the expected results (Prasopkittikun, 2001). From the study conducted by Aksiritrirat (2000) on the relationship among mothers' personal characteristics, knowledge about asthma, self-efficacy, social support, and capability for dependent-care for asthmatic children, it was found that knowledge had a positive relationship to their perceived self-efficacy in caring for children. Another study by Smith and Daughtrey (2000) on parents' perception of their needs following discharge of their child from hospital came to the same conclusion. It was found that parents needed information about the illness of their children after being hospitalized until being discharged. For example, they needed information about how medication should be administered and what strategies they should use to prevent the recurrence of the illness. They also needed confidence in provision of self-care at home. If they were given suggestions, they were more confident in their own ability to perform caregiving tasks. From an extensive review of literature and research, it could be concluded that knowledge of caring for children had a positive relationship to parents' perceived self-efficacy in child care.

Previous studies have been conducted to examine the relationship between demographic characteristics and of caregivers (i.e. age, educational level, family income, knowledge of caring for children) and perceived self-efficacy of caregivers. For instance, Danchai (1996) studied a group of mothers with one-to-three-year-old children seeking health checkup and vaccination. Aksiritrirat (2000) studied mothers with 0-6-year-old children with asthma receiving treatment. Prasopkittikun (2002) studied mothers with premature infants having health checkup. Vipuro (2007) studied mothers with premature infants between 11 and 14 months of age seeking vaccination. However, no study has been conducted on perceived self-efficacy in caring for children with pneumonia at home. As a result, the researcher was interested in investigating perceived self-efficacy of caregivers in caring for children with pneumonia at home. It was anticipated that the findings of the study would shed light on relevant factors related to perceived self-efficacy of caregivers including age, educational level, family income, and knowledge of caring for children with

pneumonia at home. The objective of the study was to identify the confidence factor for caregivers in caring for children with pneumonia at home and to have in place guidelines to develop such confidence. The findings of the study would be beneficial for children who will be at home during their recovery period, as they will be in good health with better quality of care and quality of life.

Research Questions

1. What is the perceived self-efficacy of caregivers in caring for children, from one month to five years old, with pneumonia at home?

2. Are demographic factors of caregivers (i.e. age, educational level, family income, and knowledge of caring for children with pneumonia at home) related to perceived self-efficacy of caregivers in caring for children with pneumonia at home?

Purposes of the Study

1. To study the perceived self-efficacy of caregivers in caring for children between one month and five years old with pneumonia at home.

2. To study the relationship between demographic factors of caregivers (i.e. age, educational level, family income, and knowledge of caring for children with pneumonia at home) to perceived self-efficacy of caregivers in caring for children with pneumonia at home.

Hypotheses

Caregivers' demographic characteristics of age, educational level, family income, and knowledge of caring for children with pneumonia at home are related to perceived self-efficacy of caregivers in caring for children with pneumonia at home.

Conceptual Framework of the Study

Perceived self-efficacy is the basic concept of social learning theory (Bandura, 1997). According to Bandura (1997), one's behavior is a result of internal personal factor, representing behavior, and the external environment. These three factors form a continuous causal relationship. Behavior of a person may influence the external

environment and demographic factors such as perception and belief, while demographic factors influence a person's behavior and the external environment. In contrast, external environments change because of a person's behavior and beliefs that control such behavior.

Demographic factors include age (Froman & Owen, 1990; Vipuro, 2007), educational level (Cutrona & Troutman, 1986; Vipuro, 2007), family income (Zahr, 1991), and knowledge of child-care (Aksiritrirat, 2000). Perceived self-efficacy links knowledge and behavioral of caring. When caregivers acquire knowledge of caring for children with pneumonia, demographic factors will affect the knowledge. With sufficient knowledge, caregivers will be able to seek information with rational consideration and to decide on their behavior. They will become self-confident, encouraged, attentive, and perseverant in caring for children with pneumonia, regardless of stressful situations or difficulty in such caring situations. Caregivers will tend to have a certain behavior in caring for children with pneumonia at home. When caregivers have a high level of perceived self-efficacy in caring for children with pneumonia at home, it will improve their behavior in caring for children and enable them to maintain a stable behavior when caring for children with pneumonia at home.

Caregivers need to have and apply the appropriate knowledge in caring for children with pneumonia. Also, it is necessary for caregivers to have confidence in caring for children with pneumonia at home (Suwanjutha, 1997). The extent of such perceived self-efficacy depends on age (Froman & Owen, 1990; Vipuro, 2007), educational level (Cutrona & Troutman, 1986; Vipuro, 2007), family income (Zahr, 1991), and knowledge of caring for children (Aksiritrirat, 2000).

A review of literature and relevant research has revealed that caregivers need to have the knowledge and perceived self-efficacy in care in order to provide care at the highest quality. Therefore, the researcher was interested in studying the relationship between the demographic factors of caregivers (i.e. age, educational level, family income, and knowledge of caring for children with pneumonia at home) and their perceived self-efficacy in caring for children with pneumonia at home. The objective of this research was to understand how self-confidence affects caring for children with pneumonia at home. It was expected that the outcomes of this research

could be used to develop guidelines on how to properly care for children with pneumonia during recovery at home and to ensure these children's good health and better quality of life. The conceptual framework of this study is shown in Figure 1 below.

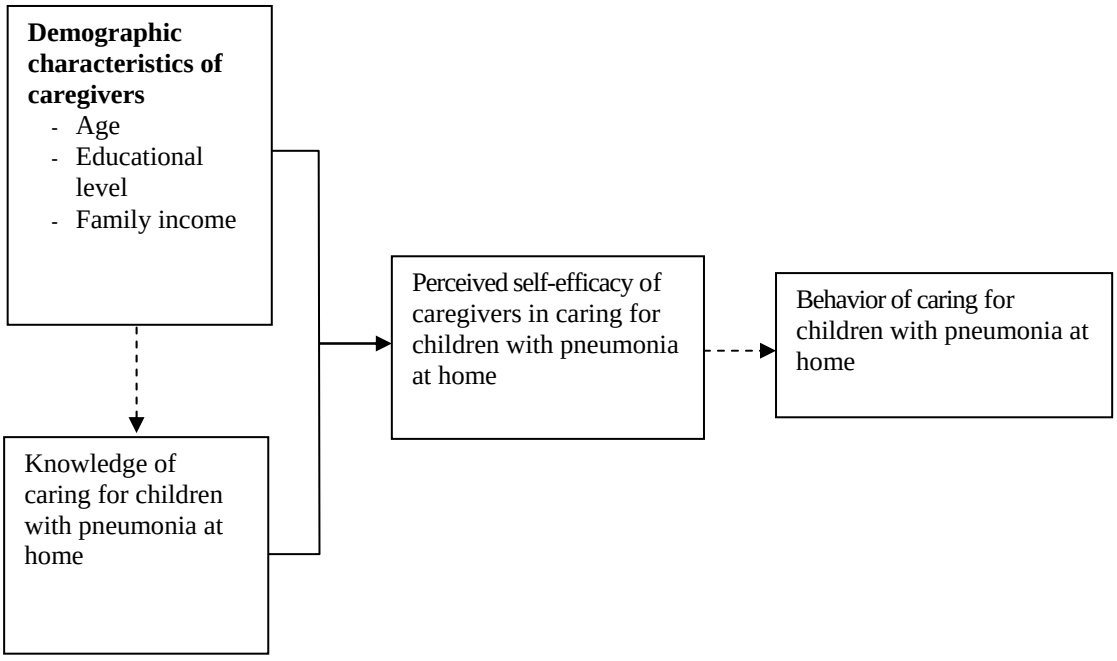

Figure 1: Conceptual framework of the Study

Scope of the Study

This research aimed at investigating the relationship between caregivers' demographic characteristics and their perceived self-efficacy in caring for children aged one month to five years old who had pneumonia and who were hospitalized at Maharaj Nakhonratchasima Hospital in Nakhonratchasima province.

Definition of Terms

Perceived self-efficacy of caregivers in caring for children with pneumonia at home referred to the level of self-confidence of caregivers to perform the tasks and behaviors in caring for children with pneumonia at home. Confidence included the ability to manage medication, environment, treatment, health, outpatient referral, and diet. In this study, perceived self-efficacy was assessed by using a

questionnaire of perceived self-efficacy of caregivers developed by the researcher based on the model proposed by Bandura (1997) and a guideline from the M-E-T-H-O-D process (Sawaengdee, 1993).

Caregivers referred to individuals who took care of the children who had pneumonia and who were hospitalized. They could be a father, mother, grandfather, grandmother, or relative who had the major responsibility in caring for children aged one month to five years old who had pneumonia.

Age referred to the age of caregivers in full years from birth to the date of the study.

Educational level referred to the highest education the caregiver obtained from a curriculum under the supervision of the Ministry of Education which could be divided into primary school, secondary school, certificate, Bachelor's degree, or higher.

Family income referred to the total amount of money earned monthly by the caregivers and other members in the family. The unit of income was in Thai baht.

Knowledge of caring for children with pneumonia at home referred to caregivers' knowledge on how to care for children with pneumonia at home related to various aspects of care such as medication, environment, treatment, health, outpatient referral, and diet. In the present study, knowledge of caring for children with pneumonia at home was assessed using a questionnaire of perceived self-efficacy of caregivers developed by the researcher based on the model proposed by Bandura (1997) as well as a guideline from the M-E-T-H-O-D process (Sawaengdee, 1993).

Expected Outcomes

The findings of this would shed light on perceived self-efficacy of caregivers in caring for children with pneumonia at home. They could also be utilized to develop guidelines for nurses to prepare them to assist caregivers who need to develop readiness and perceived self-efficacy to care for children with pneumonia at home so as to promote the proper behavior of caring for children with pneumonia at home and ensure their quality of life.

CHAPTER II
LITERATURE REVIEW

This research aimed at investigating perceived self-efficacy of caregivers in caring for children with pneumonia at home. In this chapter, related research and literature are reviewed in the following topics:

1. Caring for children with pneumonia at home
2. Perceived self-efficacy
3. Factors related to perceived self-efficacy of caregivers in caring for children with pneumonia at home

Caring for Children with Pneumonia at Home

Pneumonia is an illness from the infection of lung tissues. It occurs frequently in infants and young children (Hockenberry, el al., 2005). In general, pneumonia is caused by complications of a common cold (Schmitt, 2004; Mayo Foundation for Medical Education and Research [MFMER], 2005) and the flu (Hershey Medical Center, 2005). When a person is frequently exposed to bacteria and viruses that can cause pneumonia, the body will have mechanisms to protect the lungs from infection. However, sometimes the body cannot function properly, and thus microorganisms can get into the lungs (MFMER, 2005). Pneumonia in children under five years old is caused mainly by viruses and bacteria, or from other causes such as aspiration, long bed rest (Hockenberry, el al., 2005), etc. The disease generally varies in accordance with the age group and general status of the sick children, as well as their immunity, microorganisms of source, and seasons (Suchaxaya, 2005).

Pneumonia can be divided into three types as follows:

Viral pneumonia: Viral pneumonia occurs more often than bacterial pneumonia. It can be found in every age group and occurs with upper respiratory tract infection due to viruses such as Respiratory Syncytial Virus (RSV) in infants. Clinical symptoms may result in differences in sick children's conditions based on

laboratory examination (Hockenberry, el al., 2005). Infants and children with pneumonia under five years old are prone to viral pneumonia (Suchaxaya, 2005).

Primary Atypical Pneumonia: Clinical symptoms of primary atypical pneumonia are characterized by sudden normal fever. In other words, primary atypical pneumonia gradually develops with a majority of non-severe symptoms (Prabpon, 2001). Mycoplasma pneumonia is often found in children over five years of age (Mehta, 2003; Hockenberry, et al., 2005), and this type of pneumonia usually occurs in the winter season. The period of illness is seven to ten days, and if the treatment is properly given, the recovery period is one week. Children with pneumonia need to be hospitalized during this period (Hockenberry, et al., 2005).

Bacterial Pneumonia: Streptococcus pneumonia is frequently found in children. In the past few decades, this type of pneumonia had very clear clinical symptoms which distinguished it from other types. The illness is sudden and takes place with general symptoms as those caused by a virus. Infants suffering this type of pneumonia will have fever, tachypnea, coughing, chest pain sometimes when breathing, and a feeling of discomfort. Abdominal pain may cause confusion whether it is pneumonia or appendicitis. The sick children may also experience cold feeling as if they were having meningitis (Hockenberry, et al., 2005).

Risk factors for the illness

Ungthavorn (2005) explains that as the immune system of children cannot function completely, children are thus vulnerable to infection or can have pneumonia more easily than individuals in other age groups. Some risk factors are the following:

1. Malnutrition (Fonseca et al., 1996)
2. Lack of breastfeeding (Bulkow, Singleton, Karron, & Harrison, 2002; Fonseca et al., 1996)
3. Low birth weight (Bulkow, el al., 2002; Fonseca et al., 1996)
4. Lack of required vaccination (Fonseca et al., 1996; Schutze & Jacobs, 1992)
5. Siblings in the same household who are sick with coughing (Bravo, Sepulveda, & Valdes, 1997), etc.
6. Living in polluted areas (MFMER, 2005), i.e. children who stay close to smokers (Bravo, et al., 1997) or in overcrowded areas (Bulkow, et al., 2002)

7. Low socioeconomic status (Bravo, et al., 1997)

Signs and symptoms

Signs and symptoms of possible pneumonia are fever, fast breathing, or tachypnea (Suchaxaya, 2005). The severity of the symptoms differs depending on cause of the disease, age, and position of the infection (Sungkakoon, 2001). General symptoms include the following (Hockenberry, et al., 2005):

1. High fever
2. Coughing with white sputum or dry coughing
3. Tachypnea and inhalation with retraction and nasal flaring
4. Pallor to cyanosis (depending on severity)
5. Irritability, restlessness, or lethargy
6. Anorexia, vomiting, diarrhea, or abdominal pain

Infants and small children with pneumonia should be hospitalized as symptoms change rapidly with side effects. The earlier the diagnosis and subsequent treatment, the faster the recovery (Hockenberry, et al., 2005). Children can then be discharged for continuing self-care at home.

Behavior of caring for children with pneumonia at home

Caring for children with pneumonia at home should be supported by the family and with assistance and guidance from the healthcare team (Hockenberry, et al., 2005). The healthcare team should give suggestions to caregivers about the cause of pneumonia so that caregivers can care for children appropriately (Rashid, Afsana, & Begum, 2001). Care should be provided at the first diagnosis for prompt and proper care since pneumonia is a dangerous illness with high hospitalization rate, especially for infants under two months old. Moreover, emphases should be given to caregivers to prevent children from getting ill from pneumonia and other complications that are harmful to life. They should also be more careful in tracking irregularities in respiratory system or other chronic diseases (Suchaxaya, 2005). Therefore, caregivers need to know about how to care for children with pneumonia in many aspects. According to Sawaengdee (1993), The M-E-T-H-O-D process should be used as follows:

M stands for medication

Patients need to know about the medication they are given such as the name and action of the drugs, aims in using the drugs, administration methods, dosage, quantity, frequency, duration, precautions in using the drugs, and complications of the drugs.

E stands for environment

Patients need to know how to manage their home environment properly by taking the health situation, community, and information into consideration, especially the socioeconomic aspects.

T stands for treatment

Patients and family need to understand the goal of the treatment and have required skills for such treatment. They must be able to observe symptoms of illness and report those symptoms to doctors and nurses. They need to have sufficient knowledge to manage an emergency situation properly as well.

H stands for health

Patients and family need to understand their health situation in how the illness can limit and impact physical activities and daily life. They need to adapt their lifestyle and health limitations including adjustment for rehabilitation and prevention of complications.

O stands for outpatient referral

Patients need to understand and know the importance of follow-up appointments in terms of time and place. They need to know whom to ask for help in case of an emergency situation or occurrence of an acute illness. Moreover, outpatient referral means referring patients, the continuing care for patients, the delivery of the summarized discharge plan, and continuing care from hospital staff to another healthcare team in a new place.

D stands for diet

Patients need to understand and choose food properly with their health limitations. They also need to know how to avoid or refrain from hazardous food for health, including substance abuse.

Using The M-E-T-H-O-D process, caregivers should efficiently care for children as follows:

1. Medication: Children with pneumonia will receive medicines after being discharged from the hospital. Antibiotics are important for treatment as they help reduce death rate in children. During hospitalization, when the condition of children improves, the doctor will stop giving intravenous antibiotics and change to oral antibiotics instead. Antibiotics should be given for seven to ten days or at least for five days after a reduction of fever (Mehta, 2003). Caregivers need to make certain that children take medicines continuingly and exactly as prescribed by the doctor. Children should not stop taking medicines as pneumonia may recur. Put another way, medicines should be used consistently to protect and to control the signs of pneumonia even though children have no irregular symptoms (Suchaxaya, 2005). In addition, caregivers should observe the side effects of medicines such as rashes, chest tightening, nausea, and vomiting (Achananuparp, 2000). If there are complications, caregivers should stop administering medicines and visit the doctor immediately. Children with fever should take antipyretic drugs as prescribed by the doctor as well, but caregivers should not buy antipyretic drugs by themselves, especially aspirin that can cause bleeding in the stomach. Antipyretic drugs should be taken every four to six hours and can be used again if the fever is not reduced (Suchaxaya, 2005).

2. Environment: The house should be kept clean, without dust and with good ventilation, especially in the bedroom. Children should not be in overcrowded or polluted areas, or areas with cigarette smoke, fume, fuels, fire smoke, including crowded department stores and markets. This is because when children inhale, smoke will disturb tissues in the respiratory system which irritates the throat and lungs (Toojinda, 1993; Hockenberry, et al., 2005). This causes coughing, and children can get infected in their respiratory system. Family members should not smoke near children, and the sick children should be kept away from other people with a cold, fever, coughing, sneezing or other contagious diseases, especially infants under one year of age. If children are younger than three years old, they should not be in a daycare or nursery because they can easily contact an illness from other sick children at the daycare or nursery (Respiratory Tract Infectious Disease Control Division, 1996).

3. Treatment: Caregivers need to be skilled in treatment and have sufficient knowledge to manage emergency situations properly as follows:

3.1 When children have a fever lower than 38.5 degrees Celsius, caregivers should give a tepid sponge bath with warm water to the children so they do not get cold. After that, children should wear dry clothes, not too thick and not too thin to ventilate heat. Children should then be more comfortable and better able to sleep. Antipyretic drugs should be given to the children as prescribed by the doctor. Children should also drink a lot of water to reduce fever and replace loss of fluid. If fever remains high, caregivers should take steps to reduce the high fever, especially in young infants (Suchaxaya, 2005).

3.2 When children have sputum, coughing, and runny nose, they have difficulty in breathing. As a result, they will have less milk and food. This is a serious situation, especially for infants and young children who cannot relieve the sputum by themselves. If children have much sputum, Mucolytic drugs should be used as prescribed by the doctor (Respiratory Tract Infectious Disease Control Division, 1996). If children have a cough, cough medicine should be used as prescribed by the doctor, and the children should also drink a lot of fluid as well (Schmitt, 2004).

3.3 When children have some irregularities, caregivers need to notice them (Schmitt, 2004; Suchaxaya, 2005) such as persistent cough, fast breathing, respiratory distress, recurrent fever, high fever, febrile convulsion, and cyanosis, especially when the children's lips or fingernails appear blue due to lack of oxygen. First-aid should be given by caregivers before immediately sending the children to the doctor (Kapoor, Reddaiah, & Murthy, 1990).

4. Health: Children should clean their mouth and teeth at least twice a day after getting up and before going to bed (Suchaxaya, 2005). Caregivers should give them a bath, shampoo their hair, clean their clothes, put them to sleep, and play and exercise with them (Khampoh, 1997). Children's body should be kept warm with proper temperature, good ventilation, and proper clothing (Respiratory Tract Infectious Disease Control Division, 1996). In addition, young children still have incomplete development of immunity and can more easily get infection or pneumonia than children or adults in other age groups (Ungthavorn, 2005). Therefore, children should be vaccinated to prevent illness. If the children have a fever, they should refrain from getting vaccinations as their fever might be higher from some vaccines.

However, if they have a cold, they can get vaccinated. After children are vaccinated, caregivers should observe and take into account signs such as fever or swelling. If children have severe allergies from vaccination such as severe rashes, high fever, seizure, respiratory distress, tachypnea, pallor, weakness, and swelling, caregivers should take children to see the doctor immediately (Lolekha, 2005; Lolekha, R. & Lolekha, S., 2005). Children with respiratory system diseases, e.g. cold, or children with non-complete immunity can get pneumonia more easily as well (MFMER, 2005).

5. Outpatient referral: Seeing the doctor as appointed is required for children even though their conditions have improved, because their lungs are still infected (MFMER, 2005). Therefore, caregivers should take children to see a doctor when they are supposed to have a physical check-up, ask questions, and get advice from doctors and nurses. If something goes wrong, caregivers should consult the doctor immediately (Suchaxaya, 2005).

6. Diet: During recovery, children with pneumonia are not able to eat a large quantity of food due to the disease condition. For this reason, it is the duty of caregivers to supervise children to eat more frequently than usual (Suchaxaya, 2005) so as to ensure enough nutrition sufficient for the requirements of the body. Caregivers should slowly increase the amount of food after the children's condition has improved (Respiratory Tract Infectious Disease Control Division, 1996). Children should drink a lot of water and milk (Hockenberry, et al., 2005; Chantarojsiri, 2001; Sangkhakoon, 2001; Suchaxaya, 2005). Food should be soft and freshly cooked such as soup, fruit juice, and boiled rice (Achananuparp, 2000).

When children with pneumonia receive proper treatment at the hospital and continuing care at home, they can recover from the disease. In order for caregivers to be able to appropriately and effectively care for children, they need to receive support from the multidisciplinary team and related persons. Most importantly, caregivers need to have knowledge, understanding, and confidence in their capabilities to care for children with pneumonia at home. Therefore, it could be said that in order for caregivers to be able to provide care to children with pneumonia at home, they need to have knowledge of care for children with pneumonia at home to promote their perceived self-efficacy in caring for children with pneumonia at home.

Perceived Self-Efficacy

The theory of perceived self-efficacy is developed based on the basic concept of social learning theory proposed by Bandura (1997).

Perceived self-efficacy is defined as a decision made by each individual to or not to carry out a certain behavior. In other words, it is individuals' decision to act in order to get the desired result (Bandura, 1997). According to Bandura, perceived self-efficacy is the factor linking between individuals' knowledge and behavior. In carrying out general behaviors and healthcare behaviors, if individuals have low perceived self-efficacy, they will not be able to successfully do difficult behaviors. Furthermore, failure to do certain behavior appropriately may also be due to lack of sufficient effort to do the behaviors even though individuals have a high level of perceived self-efficacy. It is also possible that low perceived self-efficacy makes individuals have no attention to behave and thus not succeed in do the behavior.

Bandura (1997) points out that individuals' behaviors do not result from environmental factors alone but they also result from individuals' internal factors including affective factors, cognitive factors, and biographical factors. Thus, individuals' behaviors result from a causal structure which consists of three components of 1) the internal personal factor (P), 2) representing behavior (B), and 3) the external environment (E). These three factors have reciprocal determination and are dynamically interrelated. However, their influence depends on the situation or the behaviors individuals intend to carry out. The interrelationship among these three factors is illustrated in Figure 2.

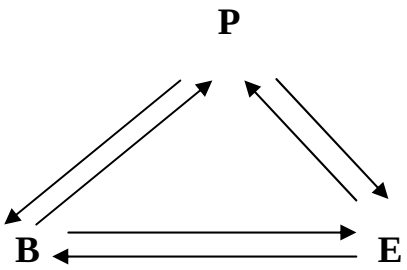

Figure 2: The Triadic reciprocal causation (Bandura, 1997)

When considering the interaction between internal personal factors and behaviors, it can be seen that internal personal factors of affective, cognitive, and biological factors play a role to determine the directions or have an influence on behavioral expressions of individuals. At the same time, the outcome of the behaviors will be considered as part of the thinking process of individuals as well.

The factors between behaviors and the external environment are an interaction between the behaviors and the environment in individuals' daily life. Behaviors are able to change the conditions of the environment, while the changed environmental conditions can result in changes in behaviors as well.

The factors between the external environment and individuals are an interaction between the internal personal factors and the environment, expectations, and beliefs. Internal personal factors can be developed and changed by the influence from the environment such as giving information through models, teaching, and social persuasion, which makes individuals respond differently depending on their social condition and demographic characteristics such as gender, age, and race. Moreover, individuals' responses also depend on individuals' roles and social status.

Bandura (1986) explains that in order for individuals to accept any behavior, there are two factors which play a role:

1. Efficacy beliefs refer to individuals' belief that they are able to carry out the behavior. Efficacy beliefs are an important factor which leads to actual practice to achieve the expected results.

2. Outcome expectancies refer to individuals' expectation of the outcomes of the behaviors they have decided to do.

Efficacy beliefs and outcome expectancies are related to each other as shown in the following Figure 3.

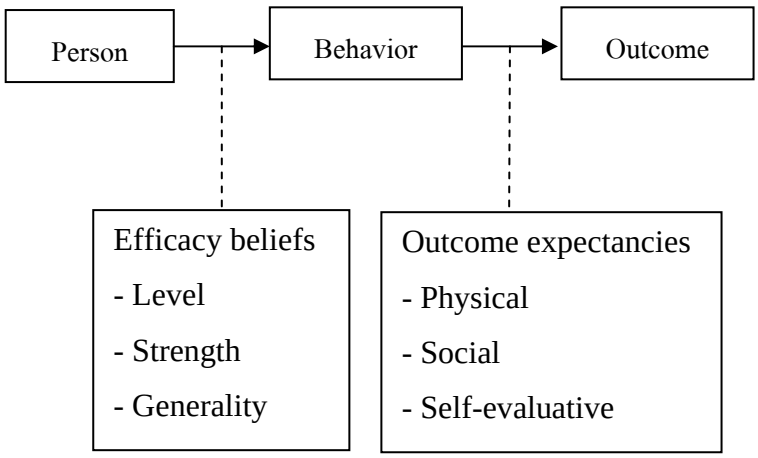

Figure 3: Relationship between efficacy beliefs and outcome expectancies (Bandura, 1997)

For individuals to create perceived self-efficacy in their behavior, they must learn from various sources (Bandura, 1986) as follows:

1. *Enactive mastery experience:* This is an important and most influential source of information for individuals' perceived self-efficacy. Individuals will behave until they succeed. Repeatedt success will create perceived self-efficacy. If not succeed, individuals' perceived self-efficacy will be low, thus affecting their confidence in their perceived self-efficacy to subsequently carry out the behavior. With perceived self-efficacy, individuals will try to behave for success even though they encounter problems and obstacles, but they will persist without any discouragement.

2. *Vicarious experience*: Whether an experience is successful or not will have an impact on perceived self-efficacy. If the model has the characteristics or is in a similar situation with what individuals have experienced, the impact on perceived self-efficacy will be greater as individuals will make more attempts to achieve.

3. *Verbal persuasion*: When significant or respected persons of individuals use verbal persuasions or compliments to motivate individuals to carry out certain behavior, individuals will be encouraged and try to carry out such behaviors.

However, verbal persuasion alone may not have great impact on individuals' decision and attempt to carry out behaviors, so it should be used together with other sources of perceived self-efficacy.

4. *Physiological and affective states*: When individuals are stressed, exhausted, or painful, they will feel disheartened and think that they cannot carry out a behavior successfully. This is because individuals tend to believe that stress is a result of lack of ability to carry out a behavior. In general, self-evaluation on the ability to carry out a behavior does not occur automatically after learning from these four sources of information. The information gained from cognitive process will be selected as individuals decide which information is most reliable or important for them. They will also combine the information to make their efficacy judgment.

Learning information from various sources through cognitive processing enables individuals to decide how much they are able to carry out certain behavior. High perceived self-efficacy makes individuals behave with more efforts to achieve the expected outcomes. When there are obstacles, they do not easily feel discouraged, but instead they will try to carry out or proceed with the activity.

Factors influencing perceived self-efficacy are as follows (Bandura, 1986):

1. Level: Some individuals believe in perceived self-efficacy for not-too-difficult activity. With more difficult tasks or those requiring more efforts, individuals' perceived self-efficacy may drop.

2. Strength: Individuals with strong faith in their own ability are not likely to give up easily regardless of how difficult the tasks are.

3. Generality: when individuals find themselves under one situation, they may behave with confidence. On the other hand, under another situation that requires the same behavior, it is possible that individuals may feel that their ability is lower.

According to the aforementioned self-efficacy theory, it is clear that caregivers' high perceived self-efficacy to care of children with pneumonia at home will impact their behaviors in caregiving, resulting in an effective provision of care. Thus, caregivers need to boost perceived self-efficacy on a periodical basis from hospitalization through to the discharge process. The aim is to maintain their perceived self-efficacy at least at the same level, if not increasing it to a higher level (Prasopkittikun, 2002).

Evaluation of Perceived Self-efficacy of Caregivers of Children with Pneumonia

An extensive review of literature on instruments used to measure perceived self-efficacy of caregivers has shown that there is no study on instruments to measure perceived self-efficacy of caregivers in caring for children with pneumonia at home in particular. However, there are a number of existing studies on instruments to measure perceived self-efficacy of caregivers of different groups of patients, which are reviewed below.

First, Froman & Owen (1990) investigated perceived self-efficacy of mothers and nurses in care of infants. They developed instruments to measure perceived self-efficacy, knowledge, and skills of mothers in infant caring in terms of health, food, and safety. There were 52 items which were arranged in a five-point rating scale that measured the mothers' level of confidence. Cronbach's Alpha was used to find internal consistency of the instrument, which was equal to 0.97. They also developed A Nurse Evaluation Questionnaire (NEQ) which consisted of five items on infant care. The questionnaire was used to observe mothers' infant caregiving activities by nurses regarding infant feeding, burping, diapering, bathing, and holding ability. The questionnaire items were arranged in a five-point rating scale. The internal consistency of the questionnaire determined by using Cronbach's Alpha Coefficient was equal to 0.94.

In addition, Teti & Gelfand (1991) conducted a study to explore behavioral potential of mothers with infants during the first year of life. They constructed a questionnaire called Maternal Efficacy Questionnaire (MEQ) which consisted of ten items which assessed the mothers' confidence in performing general infant care during the first year of life including feeding, dressing, bathing, etc. The items were arranged in a four-point rating scale, and the Cronbach's Alpha of internal consistency of the instrument was 0.79.

Later on, Prasopkittikun (2002) examined factors influencing perceived self-efficacy of mothers who provided care to preterm infants using the Thai version of the Maternal Efficacy Questionnaire (MEQ) developed by Teti & Gelfand (1991). A total of ten items arranged in a four-point rating scale were employed to determine the confidence of mothers for general infant care in the first year. Cronbach's Alpha of internal consistency was 0.71.

It is worth noting that the studies conducted by Froman & Owen (1990), Teti & Gelfand (1991), and Prasopkittikun (2002) all investigated perceived self-efficacy of mothers with healthy infants. However, the present study aimed at exploring perceived self-efficacy of caregivers of children with pneumonia at home. In addition, a literature review showed that the instruments used in these three studies employed a five-point rating scale ranging from 1 point (not confident at all) to 5 points (very confident), which could not be adopted in the present study as a more detailed form of assessment was desirable. In this study, a considerably detailed scoring was used, ranging from 0 point (not confident at all to do) to 100 points (definitely confident to be able to do), with a ten-point interval. Therefore, the researcher developed a new questionnaire which could be used to assess perceived self-efficacy of caregivers of children with pneumonia at home based on the concept of continuing care at home, a form of nursing care based on the M-E-T-H-O-D concept of Sawangdee (1993). This is because hospitalized children with pneumonia whose condition was not severe or whose condition had improved would be discharged from the hospital for continued care at home, with family caregivers providing care to them instead of members of a healthcare team (Bowden, Dickey, & Greenberg, 1998). The nursing care activities based on the M-E-T-H-O-D concept were related to medication, environment, treatment, health, outpatient referral, and diet. An extensive review of related literature, a development of questionnaire items based on the concept proposed by Bandura (1997), and an evaluation of instruments used in research on perceived self-efficacy have indicated that perceived self-efficacy was at a high level. Therefore, this concept was appropriate for the present study of perceived self-efficacy of caregivers of children with pneumonia at home.

Factors Related to Perceived Self-efficacy of Caregivers in Caring for Children with Pneumonia at Home

The factors affecting perceived self-efficacy of caregivers in caring for the children with pneumonia at home are as follows:

Age: Age can indicate individuals' ability to take care of dependents. Individuals' caregiving ability tends to increase when they enter adulthood before beginning to decline when entering late adulthood (Orem, 2001). A study of Froman

& Owen (1990) on perceived self-efficacy of mothers and nurses in infant care showed that the age of mothers had a positive relationship to their perceived self-efficacy with statistical significance ($P < .001$). Likewise, the study by Vipuro (2007) on factors predicting perceived self-efficacy in preterm infant care of mothers reported that the age of mothers had a positive relationship to perceived self-efficacy in preterm infant care with statistical significance ($P < .001$). Thus, it can be stated that age has a positive relationship to perceived self-efficacy.

Educational level: Education level is one basic factor of thinking, decision-making, or considerations on issues. It assists individuals in learning and understanding things more easily. It teaches individuals to seek for knowledge source and to gain information from various media. It also helps individuals to bring in knowledge and experiences gained from education for fruitful usage (Orem, 2001). Individuals with high education will have skills in seeking information, ask when in doubt or with misunderstanding, as well as allocate resources for optimization more effectively than those with low educational level (Muhlenkamp & Sayles, 1986). In other words, caregivers who are highly educated will have better knowledge and understanding about illness and nursing care. As such, caregivers can make a better decision and have more perceived self-efficacy in caring for children. A study by Cutrona & Troutman (1986) on social support, infant temperament, and perceived self-efficacy of parents revealed that educational level of parents had a positive relationship to their perceived self-efficacy. Similarly, Vipuro (2007) studied factors predicting maternal perceived self-efficacy in preterm infant care and found that educational level of mothers had a positive relationship to perceived self-efficacy in infant care ($r = 0.21$, $p < 0.05$). Furthermore, mothers with high education were better able to seek knowledge, information, and sources of assistance from society or community for their children than mothers with low education. Besides, adequate information support would influence perceived self-efficacy of mothers (Wolff, 1993 cited in Prasopkittikun, 2002). In brief, it can be concluded that educational level has a positive relationship to perceived self-efficacy.

Family income: Family income indicates socioeconomic status of a family, and it also reflects resources the family has in order to continuously care for its dependent members (Orem, 1995). Schor (1995) points out that a poor family has a

deficit in seeking resources to care for their children, while a middle income family has more time to care for children and engage in activities to promote intellectual development of the children. Also, a family with sufficient income and with savings is better able to allocate some of their financial resources to promote health of the children than the family that has to struggle to make ends meet. According to Pender (1996), socioeconomic status of individuals can influence individuals' daily life in responding to basic needs. It is also the key element affecting the potential for self-care. A study by Zahr (1991) on a relationship between maternal confidence and behavior in preterm infant care indicated that family income had a positive relationship to perceived self-efficacy in caring for premature infants aged four months old with statistical significance ($p < 0.01$). It can therefore be summarized that family income has a positive relationship to perceived self-efficacy.

Based on the aforementioned review of literature, it can be concluded whether or not caregivers are able to correctly and appropriately provide care to children with pneumonia at home depends on the caregivers' age, educational level, and family income, as well as their perceived self-efficacy to perform effective caregiving to children with pneumonia at home. Therefore, the present study on perceived self-efficacy of caregivers of children with pneumonia at home would provide a guideline for devising a teaching and supporting plan to enable caregivers to provide effective care to children with pneumonia at home to ensure their quality of life.

CHAPTER III
METHODOLOGY

Research Design

This descriptive research aimed at investigating the relationship between demographic characteristics of caregivers (i.e. age, educational level, family income, and knowledge of caring for children with pneumonia at home) and perceived self-efficacy of caregivers in caring for children with pneumonia at home.

Population and Sampling

The population in this study consisted of caregivers of children with pneumonia aged between one month and five years old who were hospitalized for treatment at Maharaj Nakhonratchasima Hospital, Nakhonratchasima province, from July 2006 to December 2006. The inclusion criterion of the sample set by the researcher was that they needed to be principal caregivers of the children aged between one month and five years of age who were sick with pneumonia and hospitalized at Maharaj Nakhonratchasima Hospital, Nakhonratchasima province. As regards sample selection, convenience sampling was used with the size of the sample calculated from the formula proposed by Thorndike (Thorndike, 1978 cited in Wilson, 1989) as follows:

$$N = (10xk) + 50$$

n = the sample size

k = the number of independent variables

In this study, there were four independent variables. They were the age of caregivers, educational level of caregivers, family income, and knowledge of caring for children with pneumonia at home. The calculation of the sample size was as follows:

$$n = (10x4) + 50$$

$$n = 90 \text{ cases}$$

Therefore, in the present study, the smallest number of subjects possible was 90 children with pneumonia. However, the final sample size of this study was equal to 100 to prepare for possible subject loss or incomplete data collection in some cases.

Setting

The study settings were two pediatric care units: the young children ward and the older children ward, at Maharaj Nakhonratchasima Hospital, Nakhonratchasima province.

The young children ward was the ward that provided pediatric care to children aged between one month and three years old. There were 30 beds occupied. The young children who were admitted in this ward were young children with diarrhea, heart disease, asthma, enteritis, and acute respiratory tract infection including common cold, pneumonia, otitis, pharyngitis, bronchitis, and croup syndrome, etc.

The older children ward was the ward that provided pediatric care to older children, ranging in age from four to 15 years old. The number of beds in the ward was also 30. Children who were admitted in this ward were those who were sick with cancer, diarrhea, heart disease, asthma, and acute respiratory tract infections including common cold, pneumonia, otitis, pharyngitis, etc.

While being hospitalized in one of the wards, the children with respiratory problems were generally treated with oxygen therapy, medication, suction, etc. When they became better, they would be discharged from the hospital. Before hospital discharge, caregivers would be informed with the knowledge on how to care for children with pneumonia at home from nurses. In most cases, the discharged children would have an appointment to return to the hospital within one week for the follow-up.

Instruments

The instruments used to collect the data consisted of the following:

1. Demographic data questionnaire: was constructed by the researcher, the data regarding the demographic characteristics of the caregivers including age, gender, marital status, educational level, occupation, family income, relationship between caregivers and children, experiences in caring for children with pneumonia, and knowledge of

caring for children with pneumonia. In addition, data concerning the children's profile including age, duration of treatment, medication to be taken at home were also elicited.

2. Knowledge of caring for children with pneumonia at home questionnaire was developed by the researcher based on an extensive review of related literature and research. The questionnaire was used to elicit data regarding caregivers' knowledge of caring for children with pneumonia at home. It was composed of 20 items which could be divided into six aspects as follows:

a. Medication (five items: items 1, 4, 5, 6, and 7)
b. Environment (three items: items 8, 9, and 10)
c. Treatment (four items: items 2, 3, 12, and 13)
d. Health (four items: items 11, 14, 15, and 16)
e. Outpatient referral (one item: item 17)
f. Diet (three items: items 18, 19, and 20)

The items in the questionnaire were closed-ended questions with two possible choices —true or false. The scoring criteria of the questionnaire were as follows:

If the items were related to correct knowledge (positive items),

the answer "yes" was equal to 1 point

the answer "no" was equal to 0 point.

If the items were related to incorrect knowledge (negative items),

the answer "yes" was equal to 0 point,

the answer "no" was equal to 1 point.

The total scores on caregivers' knowledge of caring for children with pneumonia at home ranged from 0 to 20 points. The interpretation of scoring was as follows:

High scores indicated that caregivers had a high level of knowledge.

Low scores indicated that caregivers had a low level of knowledge.

3. The perceived self-efficacy of caregivers in caring for children with pneumonia at home questionnaire was developed by the researcher based on concept of continuing care (M-E-T-H-O-D), the questionnaire structure was based on Bandura's (1997) concept of self-efficacy. This instrument consisted of items that assessed caregivers' confidence in providing care to children with pneumonia at

home. The total number of items in the questionnaire was 15, which were divided into six dimensions as follows:

3.1 Confidence in medication (three items: items 1-3)

3.2 Confidence in environment (three items: items 4-6)

3.3 Confidence in treatment (three items: items 7-9)

3.4 Confidence in health (three items: items 10-12)

3.5 Confidence in outpatient referral (one item: item 13)

3.6 Confidence in diet (two items: items 14-15)

The items in this questionnaire assessed the caregivers' confidence in caring for children with pneumonia at home. The respondents were required to evaluate their confidence in percentage, with 0% indicating complete no confidence and 100% indicating total confidence. The possible range for 15 items was 0-1500. In terms of interpretation of scoring, high percentages indicated a high confidence level, hence a high level of perceived self-efficacy of caregivers, while low percentages showed a low confidence level, hence a low level of perceived self-efficacy of caregivers.

Validity and Reliability

1. Content validity

The demographic data questionnaire, the knowledge of caring for children with pneumonia at home questionnaires, and The perceived self-efficacy of caregivers in caring for children with pneumonia at home questionnaire were first examined by three advisors. After that, they were submitted to a panel of three experts who were one pediatrician and two nursing instructors with expertise in caring for children with pneumonia to ensure content validity, language appropriateness, and suitable item sequencing (Appendix A). Then, the questionnaires were revised and improved based on the experts' comments and suggestions before they were tried out.

2. Reliability

The perceived self-efficacy of caregivers in caring for children with pneumonia at home questionnaire was tried out with a group of 30 caregivers of children with pneumonia aged one month to five years old whose characteristics were similar to those of the caregivers of the study. Cronbach's Alpha Coefficient (Polit &

Beck, 2004) was applied to confirm internal consistency of the instrument, and the value obtained was 0.94.

As regards the knowledge of caring for children with pneumonia at home questionnaires, the instrument was also tried out with 30 caregivers of children with pneumonia who had similar characteristics to the caregivers of the study, and Kuder-Richardson 20 (KR-20) (Kitpreedaborisood, 2002) was employed to confirm its internal consistency, with the obtained value of 0.16. However, it is worth noting that since the obtained value was considered low, the test-retest method was used with 30 principal caregivers of children aged one month to five years old with pneumonia who were hospitalized at Maharaj Hospital, Nakhonratchasima province, at the young children ward and the older children ward. The first administration of the questionnaire was conducted before the children were discharged from the hospital, and the second administration was done after the children had been discharged for two weeks. As for the second administration, the questionnaire was mailed to the pilot subjects, but only 11 caregivers returned the completed questionnaire back to the researcher. After that, Pearson's Product Moment Correlation Coefficient was employed, and the value obtained was 0.052. Since the values obtained from both tests were considered rather low, which reflected the poor quality of the questionnaire, then it was finally omitted and was not used to collect data in this study.

Data Collection

After approval had been granted by The Committee on Human Rights Related to Human Experimentation, Mahidol University, the researcher requested for an introduction letter from the Dean of the School of Graduate Studies, Mahidol University, to be submitted to the Director of Maharaj Nakhonratchasima Hospital, Nakhonratchasima province to ask for permission for data collection. After permission was granted, the researcher met the head nurses of young children ward and the older children ward in order to introduce herself and to give explanations on details of the research objectives and data collection procedures. Data collection was carried out by the researcher herself in the following steps:

1. After the physician discharged the children with pneumonia from the hospital, the researcher contacted the caregivers and invited them to participate in the

study. The researcher informed them of the research objectives, data collection procedures, and their rights as research participants.

2. Once the caregivers agreed to participate in the study, the researcher set aside an area within the ward for private conversation. The researcher explained to them how to respond to the two questionnaires in details. After that, the caregivers were asked to first fill out the demographic data questionnaire, and after they finished the first questionnaire, the perceived self-efficacy of caregivers in caring for children with pneumonia at home questionnaire was given to them to respond to. For the caregivers who had problems with writing or reading, face-to-face interviews based on the questionnaires were employed. It took approximately 15-20 minutes to complete the two questionnaires.

3. After the caregivers had answered the questionnaires, the researcher gave them a chance to ask questions that they may have and also gave them some recommendations regarding caring for children with pneumonia at home.

4. The questionnaires returned by the caregivers were prepared for the data analysis.

Protection of Human Subjects

The researcher was well aware of the protection of the rights of human subjects. After the approval was granted by The Committee on Human Rights Related to Human Experimentation, Mahidol University (Appendix B), the researcher selected the sample according to the previously set selection criteria before collecting the data. The researcher approached the would-be caregivers and explained to them in detail the research objectives, data collection procedures, and the protection of the rights of human subjects. They were informed that they had to right to participate or refuse to participate in the study, that they could withdraw from the study at any time if they wished, and that their decision to withdrawal would not affect the treatment their children would receive from the hospital in any way. In addition, they were assured that the data collected from them would be kept strictly confidential and would be reported as group data with no identification of the caregivers. After the caregivers agreed to participate in the study, the information sheet was given to them

and they were asked to sign the informed consent form (Appendix C) to indicate their willingness to become study subjects.

Data Analysis

Data were analyzed using the computer program in the following procedures:

1. Frequency distribution and percentage were utilized to analyze data regarding demographic characteristics of caregiver.

2. Means and standard deviation were used to analyze perceived self-efficacy of caregivers.

3. Pearson's Product Moment Correlation Coefficient was also employed to determine the relationship between the independent variables (caregivers' personal factors of age, educational level, and family income) and the dependent variable (caregivers' perceived self-efficacy). The results showed that the distribution of perceived self-efficacy of caregivers was not normal. Thus, the data were converted to take $\log_{10}$. However, the yielded distribution was still not normal. Also, when examining the linear relationship between the independent variables and the dependent variable using the scatter plot, it was found that there was no linear relationship. Therefore, it was concluded that Pearson's Product Moment Correlation Coefficient was not appropriate for the type of data gathered in this study, and Chi-square Test was then used instead.

4. Chi-square Test was used to analyze the relationships between the study variables of caregivers' age, educational level, and family income and their perceived self-efficacy in caring for children with pneumonia at home.

CHAPTER IV
RESULTS

The present study aimed at investigating perceived self-efficacy of caregivers in caring for children with pneumonia at home. The sample of the study consisted of 100 caregivers who provided care to children with pneumonia aged one month to five years old after they were hospitalized at Maharaj Nakhonratchasima Hospital, Nakhonratchasima province. In this chapter, the findings of the study are tabulated and presented with descriptions in the following order:

1. Demographic characteristics of the subjects
2. Perceived self-efficacy of caregivers
3. Relationships between age, educational level, and family income and perceived self-efficacy of caregivers

Part 1: Demographic Characteristics of the Subjects

According to the study findings, it was found that more than half of the caregivers were between 21 and 40 years old (69%). Almost all of them (94%) were female, most were married (88%), and more than half of them had secondary education and held a bachelor's degree or higher (74%). In terms of occupation, 34% were employees. More than half of them had family income less than 10,000 baht per month (64%). As regards the caregivers' relationship with the children with pneumonia, 73% were the mothers of the children. Moreover, the most of them did not have any experiences in caring for children with pneumonia (85%), and more than half did not receive knowledge of caring for children with pneumonia (67%), as shown in Table 1.

Table 1: Demographic characteristics of caregivers (N = 100)

Demographic characteristics	Number	Percentage
Age (years)		
≤ 20	6	6
21-40	**69**	**69**
41-60	20	20
> 60	5	5
Mean = 34.46; SD = 12.32		
Max = 73; Min = 17		
Gender		
Male	6	6
Female	**94**	**94**
Marital status		
Single	5	5
Married	**88**	**88**
Widowed	6	6
Separated	1	1
Educational level		
No education	2	2
Primary education	24	24
Secondary education	**35**	**35**
Bachelor's degree or higher	**39**	**39**
Occupation		
Unemployed/housewife	29	29
Agriculturist	23	23
Government official/State enterprise employee (pharmacists, nurses, teachers)	6	6
Employee	**34**	**34**
Business owner	8	8

Table 1: Demographic characteristics of caregivers (N = 100) (continued)

Demographic characteristics	Number	Percentage
Family income (Baht/month)		
< 10,000	**64**	**64**
10,000 - 20,000	25	25
> 20,000	11	11
Mean = 11,010; SD = 10,8492.98		
Max = 60,000; Min = 2,000; Median = 8,000		
Relationship with the children		
Mother	**73**	**73**
Father	7	7
Relative (grandmother)	20	20
Experiences in caring for children with pneumonia		
No	**85**	**85**
Yes	15	15
Reception of knowledge of caring for children with pneumonia		
No	**67**	**67**
Yes	33	33
Sources of the knowledge received (there could be more than one response to this item) **(N = 33)**		
Physician	**23**	**69.7**
Nurse	**25**	**75.76**
Hospital's manual/leaflet	20	60.61
Others (television, book, neighbor, relative)	18	69.7

The study findings revealed that close to half of the children with pneumonia ranged in age from 13-16 months (48%). As for length of stay, a little more than half were hospitalized for less than five days (59%). Finally, antipyretic drug was prescribed for almost all of the children to be taken at home (91%), as illustrated in Table 2.

Table 2: Demographic characteristics of the children with pneumonia (N = 100)

Demographic characteristics	Number	Percentage
Age (months)		
1 – 12	45	45
13 – 36	**48**	**48**
37 – 60	7	7
Mean = 15.90; SD = 12.64		
Max = 60; Min = 1		
Length of Stay (days)		
< 5	**59**	**59**
5 – 10	38	38
11 -14	3	3
Mean = 4.72; SD = 2.45		
Max = 14; Min = 1		
Medication taken at home (there can be more than one answer to this item)		
Antipyretic drug	**91**	**91**
Mucolytic drug	83	83
Antibiotic drug	69	69
Bronchodilator drug	29	29

Part 2: Perceived Self-Efficacy of Caregivers

The findings of the study showed that caregivers had a high mean score on overall perceived self-efficacy in caring for children with pneumonia at home (Mean = 88.26; SD = 11.01; Range = 44-100). When looking at each aspect of perceived self-efficacy, it was found that the aspect that received the highest mean score was outpatient referral (Mean = 94.80; SD = 13.22; Range = 40-100), whereas the aspect that received the lowest mean score was medication (Mean = 84.77; SD = 15.91; Range = 30-100), as depicted in Table 3 below.

Table 3: Range, mean, and standard deviation of each aspect of perceived self-efficacy of caregivers (N = 100)

Variables	Range	Mean	S.D.
Perceived self-efficacy of caregivers	**44-100**	**88.26**	**11.01**
Outpatient referral	40-100	94.80	13.22
Health	46.67-100	91.97	11.34
Treatment	40-100	91.23	11.86
Diet	40-100	87.55	13.72
Environment	16.67-100	86.07	15.70
Medication	30-100	84.77	15.91

When considering each aspect of perceived self-efficacy of caregivers in caring for children with pneumonia at home, it was discovered that caregivers had the most confidence in their capability to always bring the children to the doctor's office for follow-ups as required even though they were also confident in their ability to do other caregiving activities (Mean = 94.80; S.D. = 13.22). As for perceived self-efficacy of caregivers in health aspect, the statement that received the highest mean score indicated their confidence in their capability to always bring the children for vaccination as required even though they were busy with other responsibilities (Mean = 96.60; S.D. = 10.37). With regard to perceived self-efficacy of caregivers in treatment aspect, the statement that received the highest mean score reflected the caregivers' confidence in their capability to always give a tepid sponge bath to the children when they had a fever (Mean = 93.30; S.D. = 12.23). Furthermore, when considering diet aspect of perceived self-efficacy of caregivers, it was found that the item that received the highest mean score indicated the caregivers' confidence in their capability to feed the children with soft diet such as boiled rice and other freshly cooked foods in each meal (Mean = 90.20; S.D. = 15.17). In addition, as for perceived self-efficacy of caregivers in environment aspect, the item that received the highest mean score showed their confidence in the capability to avoid taking the children to crowded areas full of smoke and fuel fumes (Mean = 87.10; S.D. = 18.38). Finally, regarding medication aspect of perceived self-efficacy of caregivers, the item which received the highest mean score reflected the caregivers' confidence in their capability to correctly prepare and administration medications to treat the children's infection (Mean = 89.30; S.D. = 18.71), as illustrated in Table 4.

Table 4: Range, means, and standard deviations of perceived self-efficacy of caregivers in each aspect and each item (N = 100)

Perceived self-efficacy of caregivers	Range	Mean	S.D.
Outpatient referral	**40-100**	**94.80**	**13.22**
Confidence in capability to bring the children to doctor's office as appointed	40-100	94.80	13.22
Health	**46.67-100**	**91.97**	**11.34**
Confidence in capability to take the children to get their vaccine	40-100	96.60	10.37
Confidence in capability to get the children to exercise or play	50-100	90.30	14.73
Confidence in capability to provide care for children's daily living activities	50-100	89.00	15.67
Treatment	**40-100**	**91.23**	**11.86**
Confidence in capability to give a tepid sponge bath whenever the children have a fever	40-100	93.30	12.23
Confidence in capability to ensure that the children sufficiently drink warm water and are warmly dressed	40-100	90.40	13.17
Confidence in capability to observed unusual signs and symptoms	30-100	90.00	15.83
Diet	**40-100**	**87.55**	**13.72**
Confidence in capability to ensure that the children receive soft diets	40-100	90.20	15.17
Confidence in capability to ensure that the children receive sufficient food	40-100	84.90	16.42
Environment	**16.67-100**	**86.07**	**15.70**
Confidence in capability to avoid taking the children to crowded areas	10-100	87.10	18.38
Confidence in capability to keep the house clean	30-100	84.00	17.75
Confidence in capability to ensure that the children stay away from people who hare having a cold	10-100	79.00	20.17

Perceived self-efficacy of caregivers	**Range**	**Mean**	**S.D.**
Medication	**30-100**	**84.77**	**15.91**
Confidence in capability to correctly prepare medicines to treat the children's infection	20-100	89.30	18.71
Confidence in capability to administer medicines on time	30-100	86.90	17.16
Confidence in capability to observe allergy or side effects of medication	20-100	78.10	22.23

Part 3: Relationships between Age, Educational Level, and Family Income and Perceived Self-Efficacy of Caregivers in Caring for Children with Pneumonia at Home

According to the study findings, age, educational level, and family income were not related to perceived self-efficacy of caregivers (χ^2 = 7.533, 2.827, and 2.508, respectively), as shown in Table 5.

Table 5: Relationships between age, educational level, and family income and perceived self-efficacy of caregivers in caring for children with pneumonia at home as determined using the Chi-square test (N = 100)

Variables	Perceived self-efficacy of caregivers				Total	χ^2	P-value
	Equal to or below average		Higher than average				
	Number	Percentage	Number	Percentage			
Age (years)						**7.533**	**0.057**
≤ 20	5	83.3	1	16.7	6		
21-40	20	29	49	71	69		
41-60	8	40	12	60	20		
> 60	2	40	3	60	5		
Educational level						**2.827**	**0.243**
No education/Primary education	20	40	30	60	50		
Secondary education	12	36.4	21	63.6	33		
Bachelor's degree or higher	3	17.6	14	82.4	17		
Family income (baht/month)						**2.508**	**0.285**
<10,000	26	40.6	38	59.4	64		
10,000-20,000	6	24	19	76	25		
>20,000	3	27.3	8	72.7	11		

CHAPTER V
DISCUSSION

This research aimed at investigating perceived self-efficacy of caregivers in caring for children with pneumonia at home and determining the relationship between demographic factors of age, educational level, and family income and perceived self-efficacy of caregivers in caring for children with pneumonia at home. In this chapter, the research findings will be discussed.

Objective 1: To study perceived self-efficacy of caregivers in caring for children with pneumonia at home

The findings showed that most of the caregivers had a high average score of perceived self-efficacy (Mean = 88.26; SD = 11.01; Range = 44-100) (see Table 3).

According to the study findings, more than half of the caregivers were adults aged between 21 and 40 years old (69%) (Mean = 34.46). This is the age with maturity which is appropriate for child caring tasks. Furthermore, most of the caregivers were married (88%), and most completed secondary education and held a Bachelor's degree or higher (74%). In general, when caregivers have a high level of education, they can seek for information and knowledge from various sources, hence increasing their perceived self-efficacy and their decision-making ability about provision of care for children with pneumonia. Wolff (1993 cited in Prasopkittikun, 2002) has reported that mothers with a high educational level will be better able to seek knowledge and assistance from society or community for the benefit of their caregiving tasks than mothers with a low educational level.

When considering perceived self-efficacy of caregivers in each aspect, it was found that the aspect which received the highest mean score was outpatient referral aspect (Mean = 94.80, SD = 13.22, Range = 40-100). This was followed by health aspect (Mean = 91.97, SD = 11.34, Range = 46.6-100), treatment aspect (Mean = 91.23, SD = 11.86, Range = 40-100), diet aspect (Mean = 87.55, SD = 13.72, Range = 40-100), environment aspect (Mean = 86.07, SD = 15.70, Range = 16.67-100), and

medication aspect (Mean = 84.77, SD = 15.91, Range = 30-100), respectively as depicted in Table 3.

When considering the mean scores of each aspect and each item of perceived self-efficacy, it was found that most of them were at a high level. This showed that caregivers had a high level of perceived self-efficacy in caring for children with pneumonia. It is worth noting that most of the caregivers were mothers of the sick children (73%) and more than half of them were between 21 and 40 years old (69%). In addition, almost all of them were female (94%). In general, when individuals get older, their perceived self-efficacy tends to increase before it begins to decline when individuals enter late adulthood (Orem, 2001). When they become principal caregivers of sick children, they have a chance to learn from observation of others, and this can further develop their perceived self-efficacy (Bandura, 1997). While they are performing their caregiving tasks, they have a chance to develop their caregiving skills until they are successful with caregiving. After having repeated chances to become caregivers of sick children, when the children are sick with pneumonia, caregivers are likely to have a higher level of perceived self-efficacy. The present study investigated perceived self-efficacy of caregivers in caring for children with pneumonia at home. According to Bandura (1997), successful practices of certain behaviors can increase individuals' perceived self-efficacy, making them believe in their own capability to successfully perform the same or similar behavior.

Objective 2: To study the relationship between the demographic factors of caregivers, i.e. age, educational level, and family income, and perceived self-efficacy of caregivers in caring for children with pneumonia at home

According to the study findings, age, educational level, and family income had no relationship to perceived self-efficacy of caregivers in caring for children with pneumonia at home (χ^2 = 7.533, 2.827, and 2.508, respectively), as shown in Table 5. Such findings can be discussed as follows:

Age: Age did not have a relationship to perceived self-efficacy of caregivers in caring for children with pneumonia at home. This might be due to the fact that more than half of the caregivers were between 21 and 40 years old (69%). In general, when individuals are in their adulthood, they should have enactive mastery experience of their own or they may have developed vicarious experience from others. Thus,

they have confidence to perform caregiving and do easily give up even though the caregiving tasks are difficult or troublesome, hence a higher level of perceived self-efficacy (Bandura, 1997). This may explain why no relationship between age and perceived self-efficacy was found in the present study. For instance, Gross, Rocissano, & Roncoli (1989) investigated perceived self-efficacy of mothers in caring for a toddler aged one to three years old and found that the mothers' age did not have a relationship to their confidence in caring for their toddlers. Also, when mothers become older, their perceived self-efficacy tends to increase. Likewise, Aksiritrirat (2000) conducted a study to explore the relationship between demographic characteristics, knowledge about asthma, perceived self-efficacy, and social support of mothers and their ability to care for asthmatic children aged 0 to six years. The findings showed that there was no relationship between mothers' age and their ability to care for asthmatic children as most of the subjects in the study were in similar age groups.

On the other hand, Froman & Owen (1990) investigated mothers' and nurses' perceptions of infant care skill and found that mothers' age had a positive relationship to perceived self-efficacy of mothers ($r = 0.29$, $P < 0.001$). Likewise, Vipuro (2007) studied factors predicting maternal self-efficacy in infant care and reported that mothers' age had a positive relationship to their self-efficacy ($r = 0.29$, $p < 0.01$). Both studies were conducted with mothers of infants. Children of different ages have different developmental stages, so they receive different forms of care. Infants from birth to one year after birth depend on their mothers' care in all aspects, so they are more dependent on their mothers than toddlers aged one to three years. In general, childcare is not an easy task, especially when they are infants. According to Bandura (1997), individuals tend to have a high level of perceived efficacy when performing an easy task. When they encounter more difficult task or a task that requires more effort, their perceived self-efficacy can be reduced.

Educational level: Educational level did not have a relationship to perceived self-efficacy of caregivers in caring for children with pneumonia at home. One possible explanation is that some of the caregivers were uneducated or completed only elementary education (26%), but they still had a high level of perceived self-efficacy in caring for children with pneumonia at home. Hence, this finding has led to

a conclusion that educational background is not associated with caregivers' perceived self-efficacy.

Education is a fundamental factor of cognition, decision making, and consideration of different matters. It also plays a role in individuals' learning and understanding of different things. It enables individuals to search for sources of knowledge and receive information from different media and to utilize knowledge and experiences, they have accumulated for their own benefits (Orem, 2001). However, knowledge of caring for children with pneumonia at home is specific, so even if caregivers are highly educated, but if they do not receive specific information and guidance from the healthcare team members, they will not have knowledge or ability to perform caregiving tasks. Therefore, knowledge about caregiving needs to be newly acquired in addition to formal education the caregivers have received. Caregivers need to seek for healthcare knowledge from different sources to care for children with pneumonia, which is a form of self-directed learning. As a result, educational level is not associated with perceived self-efficacy of caregivers in caring for children with pneumonia at home. Bandura (1997) has pointed out that significant or respectable persons can convince caregivers to be confident in their ability to perform caregiving tasks. This makes caregivers stop doubting their own ability to give care to care receivers and enables them to develop morale and perseverance so as to succeed in caregiving duties. Aksiritrirat (2000) conducted a study to explore the relationship between demographic characteristics, knowledge about asthma, perceived self-efficacy, and social support of mothers and their ability to care for asthmatic children aged 0 to six years and found that there was no relationship between mothers' educational background and their caregiving ability. In other words, mothers had rather similar understanding of caregiving tasks regardless of their educational background.

On the other hand, Cutrona & Troutman (1986) conducted a study to investigate social support, infant temperament, and parenting self-efficacy using a mediational model of postpartum depression. The findings of their study revealed that educational level of parents had a positive relationship to self-efficacy of parents ($r = 0.27$, $p < 0.05$). Similarly, Vipuro (2007) carried out a study on factors predicting maternal self-efficacy in infant care and found that educational level of mothers had a

positive relationship to self-efficacy of mothers ($r = 0.21$, $p < 0.05$). It is worth noting that both studies were conducted with mothers of healthy infants with no sickness. Generally, mothers with a high level of education are better able to seek for knowledge, information, social assistance, or community support in order to benefit their childrearing than those mothers with low education. Sufficient information support will influence perceived self-efficacy of mothers (Wolff, 1993 cited in Prasopkittikun, 2002). This is because individuals with a high level of education are equipped with skills to seek for information, ask questions to clarify doubts or misunderstandings, and manage resources to benefit themselves more effectively than those who are not highly educated (Muhlenkamp & Sayles, 1986).

Family income: Family income did not have a relationship to perceived self-efficacy of caregivers in caring for children with pneumonia at home. As illustrated in Table 5, even though caregivers' income was less than 10,000 baht per month (64%), their perceived self-efficacy may be either at a high or a low level. In order for caregivers to have a high level of perceived self-efficacy, there are many factors that are involved, and certainly one of them is income. However, in this study, family income was found to have no relationship to perceived self-efficacy of caregivers. This may be explained that caregivers of children with pneumonia might have received and used a universal coverage healthcare card which made their children entitled to have free medical treatment at a public hospital or health center until they are 12 years old. Therefore, caregivers did not have to pay for medical expenses, and they only had to pay for traveling expenses when taking the children to the hospital for appointments or check-ups. As for caregiving at home, caregivers need to provide care to children with pneumonia at home without having to be responsible for extra expenses. For this reason, caring for children with pneumonia at home did not have any effect on caregivers' income and financial status. This is in accordance with the study conducted by Gross, Rocissano & Roncoli (1989) to investigate perceived self-efficacy of mothers with toddlers. They found that family income did not have a relationship to perceived self-efficacy of mothers in caring for their toddlers. In contrast, Zahr (1991) examined the relationship between maternal confidence and mother-infant behaviors in premature infants and discovered that family income had a positive relationship to confidence of mother in caring for preterm infants who were

four months old with statistical significance ($p < 0.01$). Likewise, Aksiritrirat (2000) conducted a study to explore the relationship between demographic characteristics, knowledge about asthma, perceived self-efficacy, and social support of mothers and their ability to care for asthmatic children aged 0 to six years. The findings showed that there was a statistically significantly positive relationship between family income and mothers' ability to care for their asthmatic infants ($r = 0.227$, p-value < 0.05). As such, it may be possible that since mothers' perceived self-efficacy is positively related to their ability to care for their children, family income should then be positively related to perceived self-efficacy of caregivers.

This research has found that caregivers had a high level of perceived self-efficacy in caring for children with pneumonia at home. However, there was no relationship between age, educational level, and family income and perceived self-efficacy of caregivers.

CHAPTER VI
CONCLUSION

The research objectives were to study perceived self-efficacy of caregivers in caring for children with pneumonia at home, with a focus on the relationship between caregivers' demographic characteristics (i.e. age, educational level, family income) and perceived self-efficacy of caregivers in caring for children with pneumonia at home. The sample of this study consisted of 100 principal caregivers who provided care at home to children with pneumonia aged between one month and five years old. The children were hospitalized at Maharaj Nakhonratchasima Hospital in Nakhonrat-chasima province before being discharged and cared for at home by their caregivers.

In this study, data were collected by means of two questionnaires. One was the Demographic data questionnaire and the other was the perceived self-efficacy of caregivers in caring for children with pneumonia at home questionnaire. Data were analyzed using the computer program. As for data analysis, data regarding demographic characteristics of the caregivers and children with pneumonia, and caregivers' perceived self-efficacy were analyzed in terms of frequency, percentage, means, and standard deviation. Also, Chi-square was used to determine the relationship among the study variables of age, educational level, family income, and perceived self-efficacy of caregivers in caring for children with pneumonia at home.

Summary of the Study

1. Demographic characteristics of caregivers and children with pneumonia

1.1 As regards demographic characteristics of caregivers, more than half of the caregivers were between 21 and 40 years old (69%). Almost all of them (94%) were female, most were married (88%), and more than half of them had secondary education and held a bachelor's degree or higher (74%). In terms of occupation, 34% were employees. More than half of them had family income less than 10,000 baht per month (64%). As regards the caregivers' relationship with the children with pneumonia, 73% were the mothers of the children. Moreover, the most of them did

not have any experiences in caring for children with pneumonia (85%), and more than half did not receive knowledge of caring for children with pneumonia (67%)

1.2 Regarding demographic characteristics of children with pneumonia, close to half of the children with pneumonia ranged in age from 13-16 months (48%). As for length of stay, a little more than half were hospitalized for less than five days (59%). Finally, antipyretic drug was prescribed for almost all of the children to be taken at home (91%).

2. As for perceived self-efficacy of caregivers in caring for children with pneumonia at home, it was found that caregivers had a high mean score on perceived self-efficacy in caring for children with pneumonia at home (Mean = 88.26; SD = 11.01; Range = 44-100). The aspect which had the highest mean score was outpatient referral (Mean = 94.80; SD = 13.22; Range = 40-100), whereas the aspect which received the lowest mean score was medication (Mean = 84.77; SD = 15.91; Range = 30-100).

3. In terms of perceived self-efficacy of caregivers in caring for children with pneumonia at home, the findings showed that age, educational level, and family income were not related to perceived self-efficacy of caregivers in caring for children with pneumonia at home. (χ^2 = 7.533, 2.827, and 2.508, respectively).

Implications and Recommendations

According to the findings of this study, it was found that caregivers had a high mean score of perceived self-efficacy in caring for children with pneumonia at home. The aspect which received the highest mean score was outpatient referral, while the aspect which had the lowest mean score was medication. Based on such findings, the following recommendations could be made:

Implications for nursing practice

1. Even though most of the caregivers had a high level of perceived self-efficacy in caring for children with pneumonia at home, probably because they graduated from a secondary school or held a bachelor's degree or higher, nurses' further support is needed. Nurses should offer support and assistance to caregivers by disseminating knowledge about care for children with pneumonia at home, give caregivers a chance to ask questions to clarify their doubts or express opinions,

demonstrate how to give a tepid sponge bath to reduce temperature, train caregivers on skills in administering medication, and teach them how to observe abnormal signs and symptoms to ensure caregivers' even higher perceived self-efficacy in caring for children with pneumonia at home and assist them in properly caring for children with pneumonia at home.

2. A program to promote caregivers' perceived self-efficacy in caring for children with pneumonia at home should be developed with an emphasis on the aspects of care which are not appropriately practiced such as medication aspect including observing side effects of medication and allergic reactions to medication ,and environment aspect including preventing children from being close to persons with a common cold, fever, or coughing. The program should help prepare caregivers and increase their readiness to provide care to children with pneumonia at home and ensure appropriate caregiving behaviors of caregivers to increase quality of care.

Implications for further research

1. The findings of the study revealed that caregivers had a high level of perceived self-efficacy to care for children with pneumonia at home. However, there may be other caregivers who do not have such a high level of perceived self-efficacy. Therefore, further studies should be conducted with other groups of caregivers recruited from other hospitals or in other provinces and with a larger sample size so as to shed more lights on caregivers' perceived self-efficacy in caring for children with pneumonia at home.

2. Factors influencing caregivers' perceived self-efficacy of children with pneumonia at home should be investigated so as to subsequently develop quasi-experimental research to gain better understanding of various factors affecting caregivers' perceived self-efficacy of children with pneumonia at home and to increase quality of care.

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APPENDIX

APPENDIX A

List of Content Validators

The content validity of the questionnaires used in this study was validated by three validators. Name list of content validators was as follows:

1. Dr. Anucha Saerejittima
   Infectious Pediatrician
   Department of Pediatrics
   Maharaj Nakhonratchasima Hospital
   Nakhonratchasima province
2. Assoc. Prof. Dr. Tassanee Prasopkittikun
   Department of Pediatric Nursing, Faculty of Nursing, Mahidol University
3. Assoc. Prof. Dr. Waraporn Chaiyawat
   Faculty of Nursing, Chulalongkorn University

APPENDIX B

Documentary Proof of Ethical Clearance

Documentary Proof of Ethical Clearance from the Committee on Human Rights Related to Human Experimentation, Mahidol University

No. MU 2006-131

Documentary Proof of Ethical Clearance
The Committee on Human Rights Related to
Human Experimentation
Mahidol University, Bangkok

Title of Project: Perceived Self-Efficacy of Cargiver in Caring the Children with Pneumonia at Home
(Thesis for Master Degree)

Principle Investigator: Miss Arworn Khoomkrathoke

Name of Institution: Faculty of Nursing

Approved by the Committee on Human Rights Related to Human Experimentation

Signature of Chairman: .....
(Professor Dr.Srisin Khusmith)

Signature of Head of the Institute: .....
(Professor Dr.Pornchai Matangkasombut)

Date of Approval: 24 JUL 2006

Date of Expiration: 23 JUL 2007

APPENDIX C

Participant Information Sheet and Informed Consent Form

เลขที่ใบรับรอง 007/2549

คณะกรรมการสนับสนุนการศึกษาวิจัยในคน

(Ethical Review Committee)

โรงพยาบาลมหาราชนครราชสีมา

โครงการวิจัย : การรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

ผู้ดำเนินการวิจัย : นางสาวอาวรณ์ คุ้มกระโทก

คณะกรรมการสนับสนุนการศึกษาวิจัยในคน โรงพยาบาลมหาราชนครราชสีมา อนุมัติในแง่จริยธรรมให้ดำเนินการศึกษาวิจัยเรื่องข้างต้นได้

โดยให้ผู้วิจัยรับเงื่อนไขที่เสนอดังต่อไปนี้

1. ให้ส่งรายงานความก้าวหน้าทุก 6 เดือน
2. ให้แจ้งคณะกรรมการสนับสนุนการศึกษาวิจัยในคนในกรณีที่แก้ไขเปลี่ยนแปลงโครงการวิจัยหรือหยุดโครงการก่อนกำหนด
3. รายงานเหตุการณ์ที่ไม่พึงประสงค์ที่ร้ายแรงหรือที่ไม่คาดคิด
4. รายงานเหตุการณ์ที่ไม่คาดคิด
5. รายงานข้อมูลข่าวสารที่คณะกรรมการสนับสนุนการศึกษาวิจัยในคนควรได้รับระหว่างดำเนินการวิจัย
6. ส่งรายงานฉบับสมบูรณ์เมื่อเสร็จสิ้นโครงการวิจัย

..... ประธาน

(นายอนุศักดิ์ ตั้งไพบูลย์)

ผู้อำนวยการโรงพยาบาลมหาราชนครราชสีมา

รับรองวันที่ 13 กรกฎาคม 2549 (ใบรับรองมีระยะเวลา 1 ปีหลังจากวันที่อนุมัติ)

คำอธิบายโครงการวิจัย

1. หัวข้อเรื่องที่จะทำการวิจัย

การรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

2. วัตถุประสงค์และวิธีการวิจัย

วัตถุประสงค์

1) เพื่อศึกษาการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็ก 1 เดือน - 5 ปีที่ป่วยเป็นโรคปอดอักเสบที่บ้าน

2) เพื่อศึกษาความสัมพันธ์ของปัจจัยส่วนบุคคลของผู้ดูแล ได้แก่ อายุ ระดับการศึกษา และรายได้ครอบครัว กับการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

วิธีการวิจัย

ผู้วิจัยทำการเก็บรวบรวมข้อมูลที่หอผู้ป่วยเด็กเล็ก และหอผู้ป่วยเด็กโต โดยให้ผู้ดูแลตอบแบบสอบถามทั้ง 2 ชุดโดยเรียงตามลำดับคือ แบบบันทึกข้อมูลส่วนบุคคลของผู้ดูแล และแบบวัดการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน การตอบแบบสอบถามใช้เวลาประมาณ 15-20 นาที

3. เหตุผลที่เชิญชวนให้ผู้ยินยอมตนให้ทำการวิจัยเข้าโครงการวิจัย

การที่ท่านได้รับเชิญให้เข้าร่วมโครงการวิจัยครั้งนี้ เพราะท่านเป็นบุคคลสำคัญที่สามารถเป็นตัวแทนของผู้ที่ทำหน้าที่หลักในการดูแลเด็กโรคปอดอักเสบที่บ้าน ในการที่จะเป็นประโยชน์ต่อการวิจัย

4. ระยะเวลาที่ต้องการทำการทดสอบในผู้ยินยอมตนให้ทำการวิจัย

ผู้ยินยอมตนให้ทำการวิจัยแต่ละคนจะต้องใช้เวลาในการตอบแบบสอบถามประมาณ 15-20 นาที

5. ประโยชน์ที่คาดว่าจะเกิดขึ้นทั้งต่อผู้ยินยอมตนให้ทำการวิจัยและต่อผู้อื่น

เป็นแนวทางในการประเมิน วางแผนปฏิบัติการสนับสนุน และการสอนในการช่วยให้ผู้ดูแลมีพฤติกรรมในการดูแลเด็กโรคปอดอักเสบที่บ้านอย่างเหมาะสม

6. ความเสี่ยงหรือความไม่สบายที่คาดว่าจะเกิดขึ้นกับผู้ยินยอมตนให้ทำการวิจัย ในการเข้าร่วมการศึกษาวิจัย

เนื่องจากการวิจัยนี้ เป็นการศึกษาแบบบรรยาย และเก็บรวบรวมข้อมูลโดยการใช้แบบสอบถาม ซึ่งไม่ก่อให้เกิดอันตราย หรือความเสี่ยงต่อสุขภาพของกลุ่มตัวอย่างแต่อย่างใด กลุ่ม

ตัวอย่างอาจต้องเสียเวลาในการตอบคำถามหรือไม่สบายใจที่ต้องตอบคำถาม ผู้วิจัยได้เตรียมการจัดการกับปัญหาเหล่านี้โดยอธิบายให้กลุ่มตัวอย่างทราบว่า กลุ่มตัวอย่างสามารถถอนตัวออกจากการวิจัยได้ โดยไม่มีผลกระทบต่อบริการที่ได้รับจากโรงพยาบาล

7. การเตรียมผลิตภัณฑ์ หรือกระบวนการรักษาที่พิสูจน์จากการทำวิจัยแล้วว่าปลอดภัย และมีประสิทธิผลไว้ให้ผู้ยินยอมตนให้ทำการวิจัยอย่างไร

เนื่องจากการวิจัยนี้ เป็นการศึกษาแบบบรรยายและเก็บรวบรวมข้อมูลโดยใช้แบบสอบถาม ซึ่งไม่ก่อให้เกิดอันตรายหรือความเสี่ยงต่อสุขภาพของผู้ยินยอมตนให้ทำการวิจัยแต่อย่างใด

8. ทางเลือกในการรักษาหรือวิธีการตรวจวินิจฉัยอื่น ที่อาจเป็นประโยชน์แก่ผู้ยินยอมตนให้ทำการวิจัย

เนื่องจากการวิจัยนี้ เป็นการศึกษาแบบบรรยายและเก็บรวบรวมข้อมูลโดยใช้แบบสอบถาม ซึ่งไม่ก่อให้เกิดอันตรายหรือความเสี่ยงต่อสุขภาพของผู้ยินยอมตนให้ทำการวิจัยแต่อย่างใด

9. ขอบเขตการดูแลรักษาความลับของข้อมูลต่าง ๆ ของผู้ยินยอมตนให้ทำการวิจัย

ข้อมูลที่ได้จากผู้ยินยอมตนให้ทำการวิจัยทั้งหมดจะถูกเก็บเป็นความลับ และจะไม่เปิดเผยชื่อ-นามสกุลใด ๆ ทั้งสิ้น ซึ่งข้อมูลทั้งหมดจะถูกวิเคราะห์และสรุปออกมาในภาพรวม

10. การดูแลรักษาที่ผู้วิจัยจะจัดให้

การศึกษาวิจัยครั้งนี้ไม่มีการรักษาใด ๆ เพิ่มเติม นอกเหนือจากการดูแลรักษาตามปกติจากแนวทางการดูแลของทางโรงพยาบาล

11. กรณีเกิดอันตรายหรือผลไม่พึงประสงค์จากการศึกษาวิจัย ผู้ยินยอมตนให้ทำการวิจัยจะได้รับการดูแลรักษาโดยไม่ต้องเสียค่าใช้จ่ายอย่างไรบ้าง

เนื่องจากการวิจัยนี้ เป็นการศึกษาแบบบรรยายและเก็บรวบรวมข้อมูลโดยใช้แบบสอบถาม ซึ่งไม่ก่อให้เกิดอันตรายหรือความเสี่ยงต่อสุขภาพของผู้ยินยอมตนให้ทำการวิจัยแต่อย่างใด

12. ในกรณีเกิดอันตรายจากการวิจัยถึงขั้นพิการหรือเสียชีวิต ผู้ป่วยหรือทายาทจะได้รับการชดเชยอย่างไร

เนื่องจากการวิจัยนี้ เป็นการศึกษาแบบบรรยายและเก็บรวบรวมข้อมูลโดยใช้แบบสอบถาม ซึ่งไม่ก่อให้เกิดอันตรายหรือความเสี่ยงต่อสุขภาพของผู้ยินยอมตนให้ทำการวิจัยแต่อย่างใด

13. สิทธิผู้ยินยอมตนให้ทำการวิจัยจะถอนตัวออกจากโครงการวิจัยได้ทุกเมื่อโดยไม่กระทบต่อการดูแลรักษาที่พึงได้รับตามปกติ

หากขณะตอบแบบสอบถามผู้ยินยอมตนให้ทำการวิจัยไม่สะดวกหรือสบายใจที่จะต้องตอบคำถาม ผู้ยินยอมตนให้ทำการวิจัยสามารถถอนตัวออกจากการวิจัยได้ โดยไม่มีผลกระทบต่อการดูแลรักษาที่พึงได้รับตามปกติจากโรงพยาบาลและจะได้รับการช่วยเหลือทันทีที่เกิดอาการผิดปกติ

14. ชื่อ ที่อยู่ และ เบอร์โทรศัพท์ของผู้วิจัยที่สามารถติดต่อได้สะดวก

ในขณะที่เข้าร่วมวิจัย หากท่านมีข้อสงสัยใด ๆ หรือต้องการข้อมูลเพิ่มเติม ท่านสามารถสอบถามได้จากผู้วิจัย นางสาวอาวรณ์ คุ้มกระโทก นักศึกษาปริญญาโท สาขาการพยาบาลเด็ก มหาวิทยาลัยมหิดล เบอร์โทรศัพท์ที่สามารถติดต่อได้ตลอดเวลาทั้งในเวลาราชการและนอกเวลาราชการ (086) 9754474

(นางสาวอาวรณ์ คุ้มกระโทก)
ผู้วิจัย

เอกสารยินยอมให้ทำการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ

การวิจัยเรื่อง การรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

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

ก่อนที่จะลงนามในใบยินยอมให้ทำการวิจัยครั้งนี้ ข้าพเจ้าได้รับการอธิบายจากผู้วิจัยถึงวัตถุประสงค์ของการวิจัย วิธีการวิจัย อันตรายที่อาจเกิดขึ้นจากการทำวิจัยรวมทั้งประโยชน์ที่จะเกิดขึ้นจากการวิจัยอย่างละเอียด และมีความเข้าใจดีแล้ว

ผู้วิจัยรับรองว่าจะตอบคำถามต่าง ๆ ที่ข้าพเจ้าสงสัยด้วยความเต็มใจ ไม่ปิดบังซ่อนเร้นจนข้าพเจ้าพอใจ

ผู้วิจัยรับรองว่าจะเก็บข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าเป็นความลับ และจะเปิดเผยได้เฉพาะในรูปที่สรุปผลการวิจัย การเปิดเผยข้อมูลเกี่ยวกับข้าพเจ้าต่อหน่วยงานต่าง ๆ ที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ผู้วิจัยรับรองว่าหากมีข้อมูลเพิ่มเติมที่ส่งผลกระทบต่อการวิจัย ข้าพเจ้าจะได้รับการแจ้งให้ทราบโดยไม่ปิดบังซ่อนเร้น

ข้าพเจ้าได้อ่านข้อความข้างต้นแล้ว และมีความเข้าใจดีทุกประการ และได้ลงนามในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม.....ผู้ยินยอม

ลงนาม.....พยาน

ลงนาม.....พยาน

ในกรณีที่ผู้ยินยอมตนให้ทำการวิจัยไม่สามารถอ่านและเขียนหนังสือได้ จะต้องได้รับการยินยอมในขณะที่ยังมีสติสัมปชัญญะ

ข้าพเจ้าไม่สามารถอ่านหนังสือได้ แต่ผู้วิจัยได้อ่านข้อความในใบยินยอมนี้ให้แก่ข้าพเจ้าฟังจนเข้าใจดีแล้ว ข้าพเจ้าจึงลงนามหรือประทับลายนิ้วหัวแม่มือของข้าพเจ้าในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม.....ผู้ยินยอม

(ลายนิ้วหัวแม่มือของ.....)

ลงนาม.....พยาน

ลงนาม.....พยาน

APPENDIX D

The Instruments

เครื่องมือการวิจัยเรื่องการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

คำชี้แจง

เครื่องมือการวิจัยเรื่องการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กปอดอักเสบที่บ้าน ประกอบด้วยเครื่องมือในการวิจัย 2 ชุด ประกอบด้วย

ชุดที่ 1 แบบสอบถามข้อมูลส่วนบุคคล ประกอบด้วย 2 ส่วนคือ

ส่วนที่ 1 ข้อมูลส่วนบุคคลของผู้ดูแลเด็กโรคปอดอักเสบ

ส่วนที่ 2 ข้อมูลส่วนบุคคลของเด็กโรคปอดอักเสบ

ชุดที่ 2 แบบวัดการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

ชุดที่ 1 แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง

กรุณาตอบแบบสอบถามโดยเขียนเครื่องหมายถูก √ ลงในวงเล็บ ( ) หน้าข้อความที่ตรงกับข้อมูลของตัวท่าน หรือเติมข้อความลงในช่องว่าง

ก. ข้อมูลส่วนบุคคลของผู้ดูแล

1. ปัจจุบันท่านอายุ.....ปี
2. เพศ ( ) หญิง ( ) ชาย
3. สถานภาพสมรส
   - ( ) โสด ( ) คู่
   - ( ) หม้าย ( ) หย่า
   - ( ) แยกกันอยู่
4. ระดับการศึกษาชั้นสูงสุด
   - ( ) ประถมศึกษาปีที่..... ( ) มัธยมศึกษาปีที่.....
   - ( ) ประกาศนียบัตรวิชาชีพ หรืออนุปริญญา ( ) ปริญญาตรี หรือสูงกว่า
   - ( ) อื่น ๆ ระบุ.....
5. ปัจจุบันท่านประกอบอาชีพ
   - ( ) ไม่ได้ประกอบอาชีพ ( ) แม่บ้าน
   - ( ) เกษตรกร ( ) รับราชการ
   - ( ) รับจ้าง ( ) ค้าขาย
   - ( ) อื่น ระบุ.....
6. รายได้ครอบครัวเฉลี่ยต่อเดือน.....บาท
7. ความสัมพันธ์ของท่านกับเด็ก
   - ( ) มารดา ( ) บิดา
   - ( ) ญาติ ระบุ..... ( ) อื่น ๆ ระบุ.....
8. ท่านเคยมีประสบการณ์ในการดูแลเด็กโรคปอดอักเสบหรือไม่
   - ( )ไม่เคย ( ) เคย

9. ในระหว่างที่เด็กของท่านเข้ารับการรักษาในโรงพยาบาล ท่านเคยได้รับความรู้เรื่องการดูแลเด็กโรคปอดอักเสบหรือไม่

( ) ไม่เคย

( ) เคย

ถ้าเคยท่านได้รับความรู้เหล่านี้จากแหล่งใด (ตอบได้มากกว่า 1 ข้อ)

( ) แพทย์ ( ) พยาบาล

( ) คู่มือ/แผ่นพับของโรงพยาบาล ( ) อื่น ๆ ระบุ.....

ข. ข้อมูลส่วนบุคคลของเด็ก (สำหรับผู้วิจัย)

11. ปัจจุบันเด็กที่เจ็บป่วยอายุ.....ปี.....เดือน

12. ระยะเวลาเข้ารับการรักษา.....วัน

13. ยาที่ให้เด็กรับประทานเมื่อกลับบ้าน.....

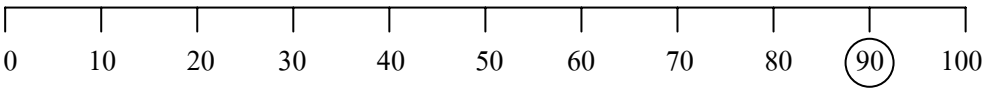
ชุดที่ 2 แบบวัดการรับรู้สมรรถนะในตนเองของผู้ดูแลในการดูแลเด็กโรคปอดอักเสบที่บ้าน

คำชี้แจง

แบบสอบถามนี้มีวัตถุประสงค์เพื่อต้องการทราบระดับความเชื่อมั่นหรือความมั่นใจของผู้ดูแลในความสามารถของตนเองที่จะดูแลเด็กโรคปอดอักเสบที่บ้าน ขอให้ท่านอ่านข้อความแต่ละข้อ แล้วพิจารณาว่ากิจกรรมในการดูแลแต่ละข้อนั้น ท่านมีความเชื่อมั่นว่าท่านจะสามารถให้การดูแลที่บ้านตามที่ระบุไว้มากน้อยเพียงใด จากนั้นเขียนวงกลม ○ รอบตัวเลขที่ตรงกับระดับความเชื่อมั่นของท่านมากที่สุดเพียงตัวเลขเดียว

ตัวอย่าง

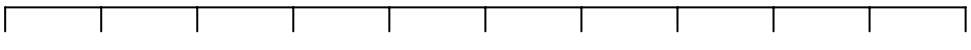
ฉันมั่นใจว่าฉันสามารถดูแลให้เด็กอยู่ในที่ไม่มีลมโกรก ถึงแม้ว่าบริเวณบ้านของฉันจะมีลมโกรกตลอดทั้งวัน



ไม่สามารถทำได้เลย สามารถทำได้ปานกลาง สามารถทำได้แน่นอน

จากข้อคำตอบแสดงว่าท่านมีความเชื่อมั่นร้อยละ 90 ว่าท่านจะสามารถดูแลให้เด็กอยู่ในที่ไม่มีลมโกรก ถึงแม้ว่าบริเวณบ้านของท่านจะมีลมโกรกตลอดทั้งวัน

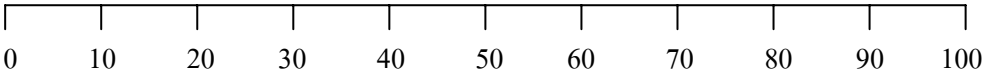
1. ถ้าเด็กต้องรับประทานยา ฉันมั่นใจว่าฉันสามารถให้เด็กรับประทานยาได้ตรงเวลาทุกมื้อ ถึงแม้ว่าเด็กจะงอแง ร้องไห้หรือไม่ยอมให้ความร่วมมือในการรับประทานยาก็ตาม



0 10 20 30 40 50 60 70 80 90 100

ไม่สามารถทำได้เลย สามารถทำได้ปานกลาง สามารถทำได้แน่นอน

2. ถ้าเด็กต้องรับประทานยาแก้อักเสบ ฉันมั่นใจว่าฉันสามารถสังเกตว่าเด็กมีอาการแพ้ยา หรืออาการข้างเคียงของยา



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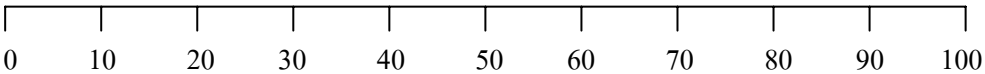
ไม่สามารถทำได้เลย สามารถทำได้ปานกลาง สามารถทำได้แน่นอน

3. ฉันมั่นใจว่าฉันสามารถผสมยาแก้อักเสบชนิดผงกับน้ำให้เด็กรับประทานได้อย่างถูกต้อง



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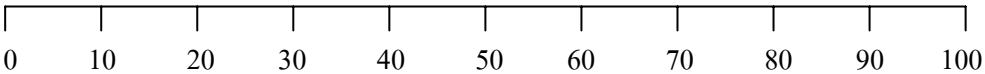
4. ฉันมั่นใจว่าต่อไปนี้ฉันสามารถจัดการดูแลให้บ้านสะอาดปราศจากฝุ่นละออง มีอากาศถ่ายเทสะดวกได้ตลอดเวลา



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ไม่สามารถทำได้เลย สามารถทำได้ปานกลาง สามารถทำได้แน่นอน

5. ……..

……..

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15. ……

APPENDIX E

Testing Assumptions of Correlation Analysis

One-Sample Kolmogorov-Smirnov Test showed that age, educational level (Educate), family income (Salary), and perceived self-efficacy (SumS) were not normally distributed. (Table 6)

One-Sample Kolmogorov-Smirnov Test

		SUMS	AGE	EDUCATE	SALARY
N		100	100	100	100
Normal Parameters(a,b)	Mean	1323.9000	34.4600	8.3900	11010.0000
	Std. Deviation	165.19285	12.31934	4.39213	10849.98254
Most Extreme Differences	Absolute	.172	.167	.207	.327
	Positive	.143	.167	.207	.327
	Negative	-.172	-.078	-.119	-.210
Kolmogorov-Smirnov Z		1.725	1.672	2.068	3.271
Asymp. Sig. (2-tailed)		.005	.007	.000	.000

a Test distribution is Normal.

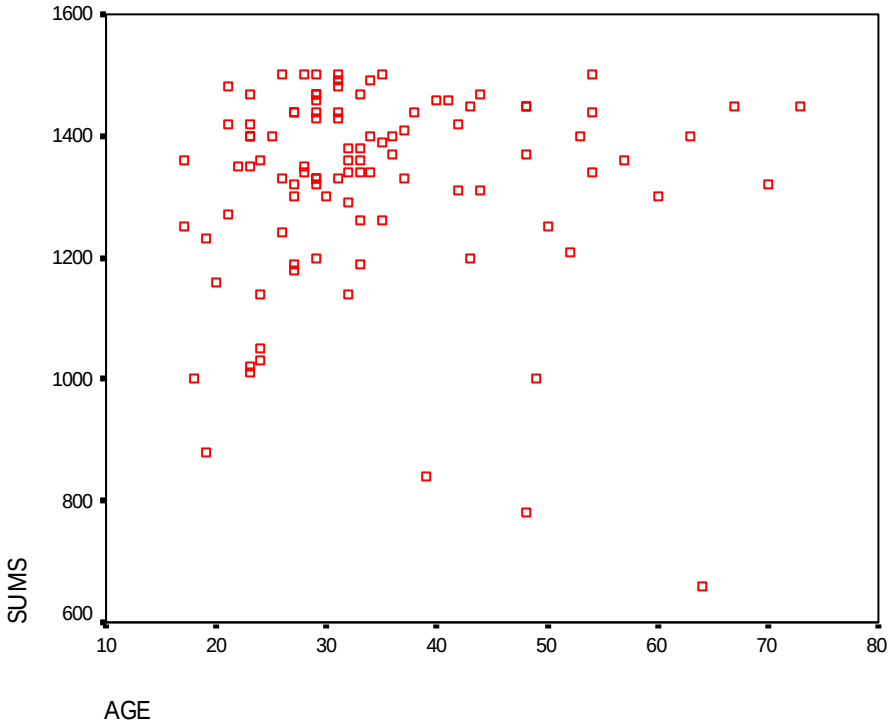
b Calculated from data.

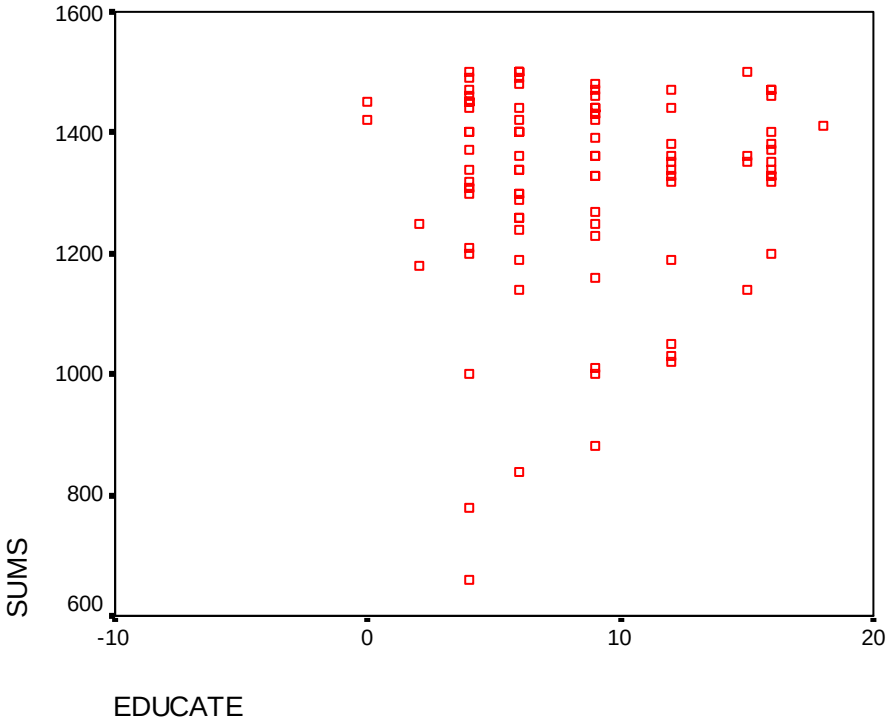
Table 6 One-Sample Kolmogorov-Smirnov Test **(**N = 100)

Test the assumption for linear relationship between X and Y

When plot the pair of scores independent variables: age, educational level (Educate), family income (Salary) and dependent variable, perceived self-efficacy (SumS), the dotes do not form a straight line. (Figure 5)

Graph





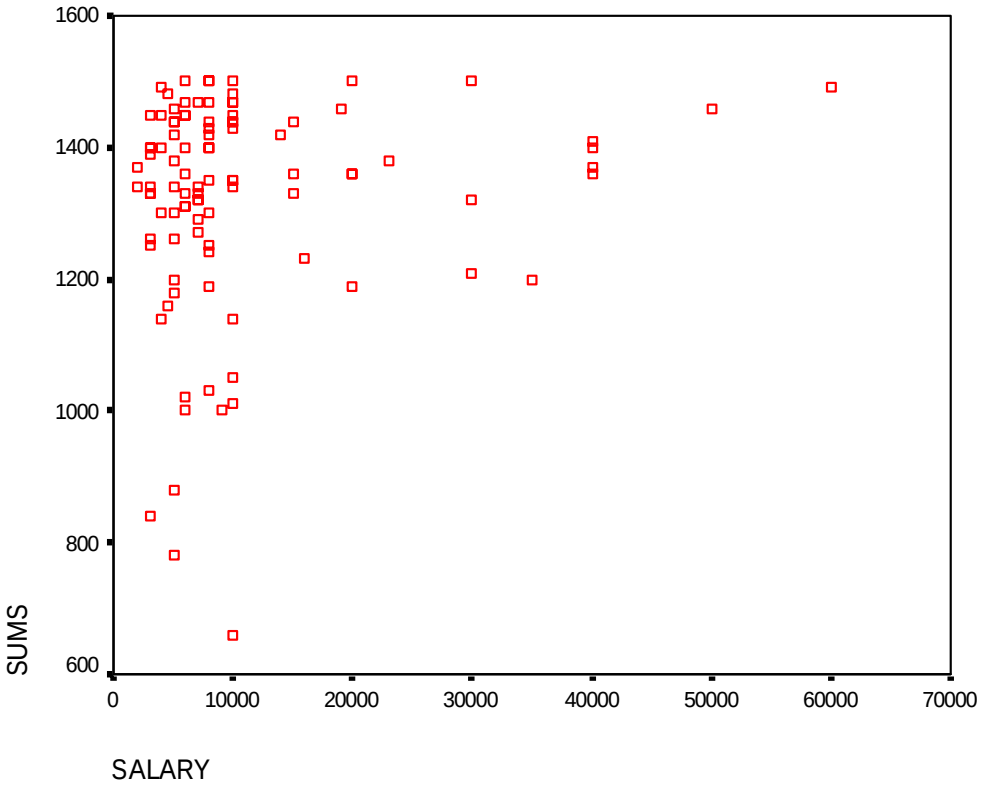


Figure 5 The dotes do not form a straight line

BIOGRAPHY

NAME	Miss Arworn Khoomkrathoke
DATE OF BIRTH	25 January 1974
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INSTITUTIONS ATTENDED	- Boromarajonani College of Nursing, Nakhonratchasima, Thailand, 1994-1997 Diploma in Nursing Science Equivalent to Bachelor of Science in Nursing. - Mahidol University, 2003-2008 Master of Nursing Science (Pediatric Nursing)
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