

**EMPOWERMENT PROGRAM ON PROMOTING  
PERCEIVED SELF-EFFICACY IN CAREGIVERS  
OF AUTISTIC CHILDREN**

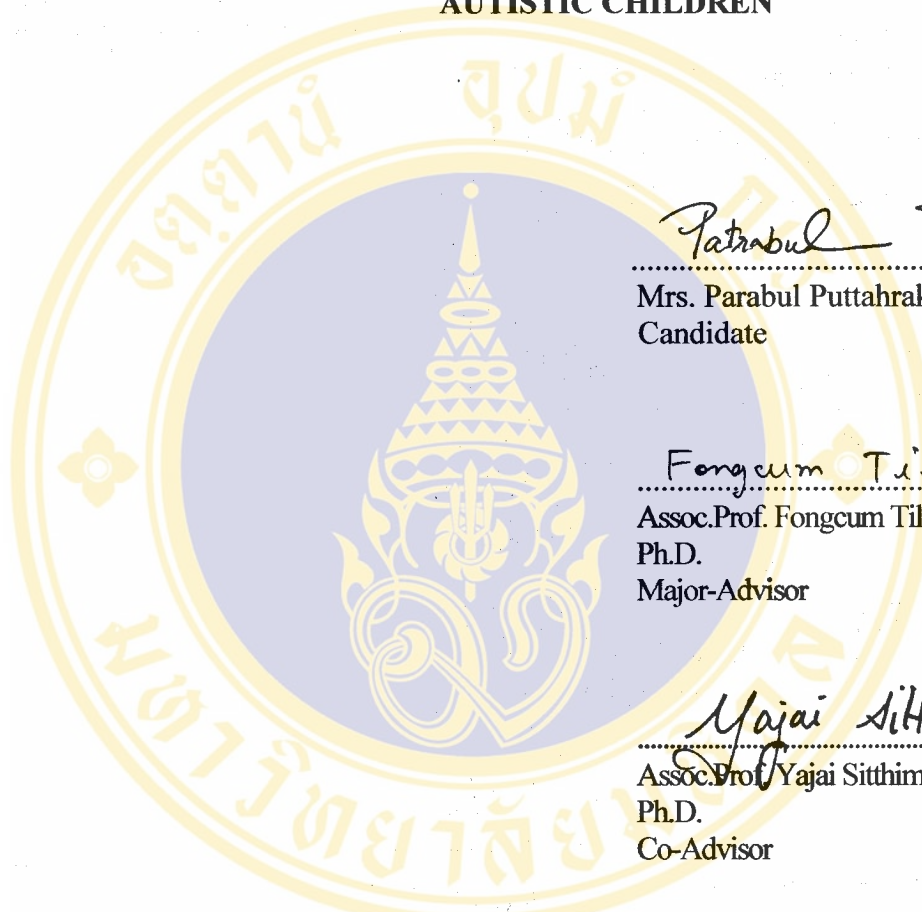


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Thesis  
Entitled

**EMPOWERMENT PROGRAM ON PROMOTING PERCEIVED  
SELF-EFFICACY IN CAREGIVERS OF  
AUTISTIC CHILDREN**



*Parabul Puttahraksa*

Mrs. Parabul Puttahraksa  
Candidate

*Fongcum Tilokskulchai*

Assoc.Prof. Fongcum Tilokskulchai,  
Ph.D.  
Major-Advisor

*Yajai Sitthimongkol*

Assoc.Prof. Yajai Sitthimongkol,  
Ph.D.  
Co-Advisor

*Dusit Liknapichitkul*

Mr. Dusit Liknapichitkul,  
MD.  
Co-Advisor

*Tassanee Prasopkittikun*

Asst.Prof. Tassanee Prasopkittikun,  
Ph.D.  
Co-Advisor

*Rassmidara Hoonsawat*

Assoc.Prof. Rassmidara Hoonsawat,  
Ph.D.  
Dean  
Faculty of Graduate Studies

*Fongcum Tilokskulchai*

Assoc.Prof. Fongcum Tilokskulchai,  
Ph.D.  
Chair  
Doctor of Nursing Science  
Faculty of Nursing

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on  
19 May, 2005

*Patrabul Puttahraksa*

Mrs. Patrabul Puttahraksa  
Candidate

*Fongcum Tilokskulchai*

Assoc.Prof. Fongcum Tilokskulchai,  
Ph.D.  
Chair

*Yajai Sitthimongkol*

Assoc.Prof. Yajai Sitthimongkol,  
Ph.D.  
Member

*Sriwana Poolsuppasit*

Mrs. Sriwana Poolsuppasit,  
MD.  
Member

*Tassanee Prasopkittikun*

Asst.Prof. Tassanee Prasopkittikun,  
Ph.D.  
Member

*Saipin Kasemkitwatana*

Assoc.Prof. Saipin Kasemkitwatana,  
Ph.D.  
Member

*Dusit Liknapichitkul*

Mr. Dusit Liknapichitkul,  
MD.  
Member

*Rassmidara Hoonsawat*

Assoc.Prof. Rassmidara Hoonsawat,  
Ph.D.  
Dean  
Faculty of Graduate Studies  
Mahidol University

*Kobkul Phanchaoenworakul*

Assoc.Prof. Kobkul Phanchaoenworakul,  
Ph.D.  
Dean  
Faculty of Nursing  
Mahidol University

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Patrabul Puttahraksa

**EMPOWERMENT PROGRAM ON PROMOTING PERCEIVED SELF-EFFICACY IN CAREGIVERS OF AUTISTIC CHILDREN.**

PATRABUL PUTTAHRAKSA 4336810 NSNS/D

D.N.S.

THESIS ADVISORS: FONGCUM TILOKSKULCHAI, Ph.D., YAJAI SITTHIMONGKOL, Ph.D., TASSANEE PRASOPKITTIKUL, Ph.D., DUSIT LIKNAPICHITKUL, M.D.

**ABSTRACT**

This study was a quasi-experimental design with pre-test/ post-test control group. It aimed to evaluate the effects of the empowerment program for caregivers of autistic children at the Child and Adolescent Mental Health Institute, Rajanakarin. The study was carried out over a 6-month period from September 2004 to February 2005. The participants were 74 caregivers who took care of 2-5 years old autistic children. After being enrolled into the study, the participants were matched by caregivers' age and children's age. Then they were purposively assigned into the experimental group (37 participants) or the control group (37 participants). Mothers were the majority of participants. Mean of education was 10.9 years. The majority had no care assistant. Most of them were healthy. Mean of child's age was 41.7 months. Most of the autistic children were male and the first child of their family and had no siblings.

The experimental group completed the empowerment program which was administered by the researcher together with the 5 days intervention program whereas the control group received only the routine treatment program. The empowerment program was composed of 4 steps: discovering reality, critical reflection, taking charge and holding on through group process. This program was based on the process of empowerment and perceived self-efficacy theory. The data was gathered through pre-test and the 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> week at post-test. T-test and ANOVA were used to examine the hypotheses.

The findings revealed that the experimental group had statistically significantly higher scores on perceived self-efficacy in care of autistic children than the control group at the *p*-value of less than .001 and there was a statistically significant difference between the 4<sup>th</sup> and 12<sup>th</sup> weeks while the scores from the 8<sup>th</sup> and 12<sup>th</sup> week were marginally different (*p*<.05).

The evidence from this study indicated that this program had effect on promoting perceived self-efficacy in autistic child care. The application of this program is suggested for all caregivers of 2-5 year old autistic children. Further study should be conducted to compare the perceived self-efficacy of the program between the experimental and the control groups in the long term.

KEY WORDS: EMPOWERMENT / SELF-EFFICACY /  
AUTISTIC CHILDREN / CAREGIVERS

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โปรแกรมการสร้างพลังใจในผู้ดูแลต่อการส่งเสริมการรับรู้สมรรถนะของตนเองในการดูแลเด็กออทิสติก  
(EMPOWERMENT PROGRAM ON PROMOTING PERCEIVED SELF-EFFICACY IN  
CAREGIVERS OF AUTISTIC CHILDREN)

ภัทรานุช พุทธิรักษา 4336810 NSNS / D

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คณะกรรมการควบคุมวิทยานิพนธ์: ฟองคำ ดิลกสกุลชัย, Ph. D., ยาใจ สิทธิมงคล, Ph. D., ทศนิ  
ประสภกิตติคุณ, Ph. D., คุณิต ลิขณะพิชิตกุล, พ.บ.

บทคัดย่อ

การวิจัยทดลองครั้งนี้ มีวัตถุประสงค์เพื่อประเมินผลของโปรแกรมการสร้างพลังใจใน ผู้ดูแล  
เด็กออทิสติก ที่พาเด็กมารับการรักษาที่สถาบันสุขภาพจิตเด็กและวัยรุ่นราชนครินทร์ ใช้เวลาในการศึกษา  
6 เดือน ระหว่างเดือนกันยายน 2547 ถึง เดือนกุมภาพันธ์ 2548 กลุ่มตัวอย่างเป็นผู้ดูแลเด็กออทิสติกที่มีอายุ  
2-5 ปี จำนวน 74 ราย แบ่งเป็นกลุ่มทดลอง 37 ราย กลุ่มควบคุม 37 ราย กลุ่มตัวอย่างได้รับการสุ่มเข้าแต่ละ  
กลุ่มโดยคำนึงถึงเพศของเด็กและเพศของผู้ดูแล

กลุ่มทดลองได้รับการดูแลตามโปรแกรมการสร้างพลังใจในการดูแลเด็กออทิสติกโดยผู้วิจัย ส่วน  
กลุ่มควบคุมได้รับการดูแลตามปกติจากพยาบาล โดยโปรแกรมการสร้างพลังใจประกอบด้วย 4 ขั้นตอน คือ  
การค้นพบสภาพการณ์จริง การสะท้อนคิดอย่างมีวิจารณญาณ การจัดการกับสถานการณ์ และการคงไว้ซึ่ง  
พลังใจ สร้างจากแนวคิดกระบวนการสร้างพลังใจและการรับรู้สมรรถนะของตนเอง ผลของโปรแกรมที่วัดใน  
การศึกษาค้นคว้าครั้งนี้คือ การรับรู้สมรรถนะของตนเองในการดูแลเด็กออทิสติก โดยรวบรวมข้อมูลก่อนและหลัง  
เข้าร่วมโปรแกรมสัปดาห์ที่ 4 และ 12 การวิเคราะห์ใช้สถิติ t-test และการวิเคราะห์ความแปรปรวนแบบทาง  
เดียว

ผลการศึกษาพบว่า ภายหลังเข้าร่วมโปรแกรมกลุ่มทดลองมีคะแนนการรับรู้สมรรถนะของตนเองใน  
การดูแลเด็กสูงกว่ากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ระดับ.001 และเมื่อเปรียบเทียบคะแนนการรับรู้  
สมรรถนะของตนเองในการดูแลเด็กออทิสติกภายหลังสิ้นสุดโปรแกรมในสัปดาห์ที่ 4 และสัปดาห์ที่ 12  
พบว่า กลุ่มทดลองมีคะแนนเพิ่มขึ้นอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 ผลการศึกษานี้ชี้ให้เห็นว่า  
โปรแกรมการสร้างพลังใจในผู้ดูแลมีผลให้การรับรู้สมรรถนะของตนเองในการดูแลเด็กออทิสติกเพิ่มขึ้น  
และมีการคงอยู่อย่างน้อย 12 สัปดาห์ ดังนั้นจึงควรมีการนำโปรแกรมการสร้างพลังใจในผู้ดูแลไปประยุกต์ใช้  
ในทางปฏิบัติในการให้ความช่วยเหลือผู้ดูแลเด็กออทิสติกวัย 2-5 ปี การวิจัยครั้งต่อไปควรประเมินคะแนน  
การรับรู้สมรรถนะของตนเองในการดูแลเด็กออทิสติกเปรียบเทียบระหว่างกลุ่มทดลองและกลุ่มควบคุมใน  
ระยะยาวต่อไป

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## CHAPTER I

### INTRODUCTION

#### **Background and Significance of the Study**

Autism is a chronic disease related to the children's overall intellectual level and development of language skills, speech, communications, socialization with others, and bizarre pattern of repeated behaviors. The onset of such symptoms began prior 30 months of age (Limsila, 1987). The occurrence of autism found of much increased from previous studies. The studies in foreign countries during the year 1966-1973 found that approximately 4-5 of 10,000 of children population were diagnosed autism (Gillberg, 1999; Fombonne, 1999). The studies in the United States of America between the year 1996 and 1998 found that the ratio of autistic children was 3-4 persons to 1,000 children population (Yeargin- Allsopp et al., 2003; Bertrand et al., 2001) which was approximately 10 times increased from the first survey. However, there was no survey of the occurrence of autism in Thailand, only the statistic from Yuwapasart Waitayopathum Hospital found that autistic children who were treated as outpatient was increased every year. From the year 1995-1997, the number was increased from 1,460 to 3,022 persons (Yuwapasart Waitayopathum Hospital, 1998). At present, there are more than 300 children who are awaiting for developmental stimulation at outpatient unit of this hospital (Yuwapasart Waitayopathum Hospital, 2002). This is shown that children who were diagnosed with autistic has been much evidently increased.

From severity of developmental disorders, autistic children must have caregivers in taking care closely. Taking care of autistic children much affect mental, emotional, and social aspects of both caregivers and autistic children. It has been found from research studies that parents who took care of autistic children were coped with more distress, compare to parents of children with mental retardation and children with mentally and physically disorders (Sanders, 1993; Catharina, 1995). The symptoms that caused most distress are the impairment in speaking, communication and making relationship with parents (Konstantareneas & Homatidis, 1998; Sergi,

1993). In addition, perception of burden in caring of autistic children and long term treatment, feeling of guilty, sorry, and a shame to bring out autistic children, poor relationship in the family, worry about the future of the children, unable to solve problems in children's daily life are also causes of distress, disappointment, and depression (Thanyamanta, 1991; Wongchum, 1995; Suwanthos, 1998; Dun et al, 2001; Olsson & Hwang, 2001; Gray, 1994; Sanders, 1993). With this regards, the caregivers with mental problems such as depression, anxiety, will have inappropriate behavior in caring of autistic children (Supuckwanich, 2000). On economically effect, the results of research indicated that the family is more responsible for the increasing of expenses in treatment and special therapy. The studies in Canada and the United States of America found that family with autistic child has spent USD 50, 000 – USD 60,000 per year for one autistic child in order to enable the child to participate in Intensive Behavioral Therapy Program (Kent, 2000; Elder, 2002). In Thailand, practice of speech and behavioral therapy are not included in the Universal Coverage of Health Care and no study on the expenses in treatment and in caring of autistic children was made, but the expenses can be considered from travelling expenses to meet doctor or developmental stimulation for each appointment. Because there is only one specialized hospital in providing only autistic services in Thailand that is Yuwapasart Waitayopatum Hospital in Samutprakarn Province whereas there are many autistic children throughout the country. For family who brought autistic child to special practice of speech from language therapist had spent Baht 400-600 per hour. Mothers of some families have to take vocational leave or quitting from the job in order to take care of a child which is great loss of human recourses in economic system. Therefore, autistic child's care is important health problems of the country which required assistance and support in order to lessen all effects in constructive manner.

There were several attempts to study the treatment of autistic children such as by medication (Brodkin et al., 1997; Buitelaar, 2000; Campbell et al, 1993) nutrition, vitamin, increased immunity (Lewis, 2000), Treatment and Education Program (Van Bourgondien & Schopler, 1996) including Behavioral therapy (Lovaas, 1987) speech therapy, and musical therapy. Because the exact cause of autism has not yet been known and therefore, at present, no medication is used for autism treatment to be

completely rehabilitated without recurrence. Medication treatment is only to decrease the symptom or the unwanted behavior such as aggressive behavior. The suggested most effective method of treatment is developmental stimulation from early childhood aims at communication, social, adaptation, behavior and learning. The family must be main principal, both mother and father are important persons in child's care (Trunkasombat, 2002; Pongpanich, 2002; Williams, 1991). Because parents and member of family are the persons who spent more times with children and are motivational forces and also being will power to autistic children, it is therefore the family should have more participation in autistic child care.

In Thailand, many institutions have given training to parents and relatives who take care of autistic children. The training was made in a big group with nurse being demonstrator for child's care. This method of training was made to every new parents and relatives who take care of children diagnosed autistic. However, results from studies in the year 1996 from 100 mothers of autistic children, found that approximately more than 30% of mothers were lack of knowledge in caring of autistic children, beside that the caring behavior was not appropriated. Mothers did not understand that the autistic children are unable to help themselves to avoid dangerous accident which may happened and therefore, lack of practice to prevent danger and also lack of training to children for necessary things such as training to swallow food; toilet training; training for good discipline including suitable punishment (Viriya, 1996), correspond with a study on 50 parents of autistic children which found that the parents of autistic children did not train them in social development because they did not know how to train. The care was not appropriated such as scolding, beating, and solving problem on their behalf even allowing them to watch VCD in order to let them staying at one place longer (Khaunkeree, 1998).

From the above research studies found that giving education by only training is not sufficient enough to enable caregivers to take care of autistic children in the right manner and suitable to child's symptoms. Taking care of autistic children is more delicate than taking care of normal children. Because autistic children required training for behavioral performance steps by steps continuously, and required best understanding from caregivers. The caregiver must therefore be patient and be capable enough to take care of children at home and also be capable to coordinate with health

personnel in order to take care of autistic children effectively. Caregivers of autistic children are therefore required to learn what is leading to the right method of autistic child care with suitability and continuing. Bandura (1986) suggested the concept of learning through cognitive process naming “perceived self-efficacy” which affect person’s action. If the person perceived self-efficacy, that person is expressed such abilities with patient, industrious, and perseverance. Stretcher et al., (1986) said that personal effort is influenced from the perceived self-efficacy which is important motivation to person to be confidence in self-efficacy to make such behavior success. Several studies in supporting the perceived self-efficacy could explain and predict of health behavior in several subjects such as Hanson (1998) studied in the group of parents who take care of children with asthma, the results of studies found that parents with more perceived self-efficacy were able to manage children with asthma after training by real experience. Moroz (1989) studied the effect of skills arrangement program for mothers in care of preschool age autistic children by using demonstration, telling them to do what to be done, and empowerment, results of studies found that the perceived of self-efficacy and the care by mothers were increased after program’s participation and after 3 months of follow up. Danchai (1997) studied in mothers of chronically ill children and found that the perceived self-efficacy of mothers is positive related to health promoting behavior to children. It could therefore be summarized that in encouraging caregivers of autistic children to have more perceived self-efficacy can help caregivers to have more confidence in taking care of autistic children.

The process of empowerment is a process which will be enable perceived self-efficacy by which the process of empowerment will help the person be able to analyze the real cause of the problem, be ready in solving problem by wisdom, sharing knowledge and skills together between health personnel and that person. This process of sharing together the knowledge and skills will enhance the person to the perceived self-efficacy that he/she is able to performs the desired behavior (Mishra et al., 1998; Pellino et al., 1998; Davison et al., 1997; Wallerstrein & Bernstein, 1988). There have been studies shown that the process of empowerment be able to enhance the perceived self-efficacy among 60 mothers of heart disease children, and the results of studies found that the mothers who participated in the process of empowerment having the

perceived self-efficacy in taking care of their own children increased more than mother who did not participate in the program (Sakulnum, 2002) and in the study of 30 caregivers of cerebrovascular disease patients found that after participation in process of empowerment program for 12 weeks, the program participants had higher level of the perceived self- efficacy, self -esteem and the ability in taking care of patients than before participation in the program (Petchtone, 2004). These studies demonstrated that the process of empowerment is a process of abilities leading to development of the perceived self-efficacy in management of problematic situations which is the most effective process for development of perception of thoughts through wisdom of each individual. With these reasons, the researcher had selected the process of empowerment in supporting to enhance the perceived self-efficacy in this research. Because autism is related to developmental disorders, thus, longer period of times of care is required. Therefore, this research could not evaluate the performance and the results of care of the caregivers. The evaluation is made only on the perceived self-efficacy in autistic child care of which supported research revealed that if the level of perceived self-efficacy of caregivers is high, the performance of autistic child's care will be appropriated and be continued.

The researcher of this study aims to modify the process of empowerment of Gibson (1995) and the perceived self- efficacy concept of Bandura (1986, 1997) to create the empowerment program to support the caregivers to enhance the perceived self-efficacy in autistic child care. It is believed that the integrated knowledge received from this study will help nurses to help increasing caregiver perceived self-efficacy in caring of autistic children in aspects of advocacy, co-ordination, efficient dealing with health care system, learning to persist, negotiation effectively, and be partnership in care of autistic children appropriately. This will be most beneficial for the development of nursing practice, and will be important information leading to further regulate health care policy for the caregivers and for autistic children of the country.

## Research Questions

The research questions of this study are:

1. Whether or how does the process of empowerment program for the caregivers enhance the perceived self-efficacy in autistic child care?
2. How is the endurance of the perceived self-efficacy in of autistic child care of the experimental group?

## Purposes of the Study

The purpose of this study is to determine the effect of the empowerment program for the caregivers on promoting the perceived self-efficacy in caring of autistic children.

## Conceptual Framework

The conceptual framework of this research was developed based on the perceived self-efficacy concept of Bandura (1986, 1997) and the model of process of empowerment in mothers of chronically ill children of Gibson (1995) as follows:

### 1. Perceived Self- Efficacy Concept

The perceived self-efficacy concept was originated from Social Learning Theory of Bandura (1977), the psychologist, and the words efficacy expectation was used at early stage which refers to the specific characteristic of the perceived self-efficacy and this expectation was indicated in behavioral expression. After that, the words “perceived self-efficacy” was used which means the confidence in self-abilities to manage and to perform behavioral performance to meet the designed objective (Bandura, 1986; 1997).

Any action of persons’ behavior is depended on 2 factors as follows: 1) The perceived self-efficacy and 2) The expectation outcome. The perceived self- efficacy is one part of the process of thoughts, linking the relationship between knowledge and action leading to evaluation of self-efficacy in coping with specific situations. The perceived self-efficacy is resulted to affect to persons’ action and the effectiveness of persons’ expression is depended on the perceived self-efficacy of situations.

The expectation outcome to occur from action is forecasting or the beliefs concerning behavioral performance (Bandura, 1977) which will be the beliefs of the results to follow after action of such behavior. The expectation of the results to occur from action is the important role in motivation and decision to change behavior which is based on whether or not such expectation will cause positive or negative effect to health and how resulted is to affect to social and self-appraisal. It can be seen that the person performs any behavioral performance is based on the beliefs in the abilities to perform of such behavioral performance and the expectation of results of such behavioral performance whether or not will achieve the desired objectives. This concept can be illustrated as per Figure 1 as follows:

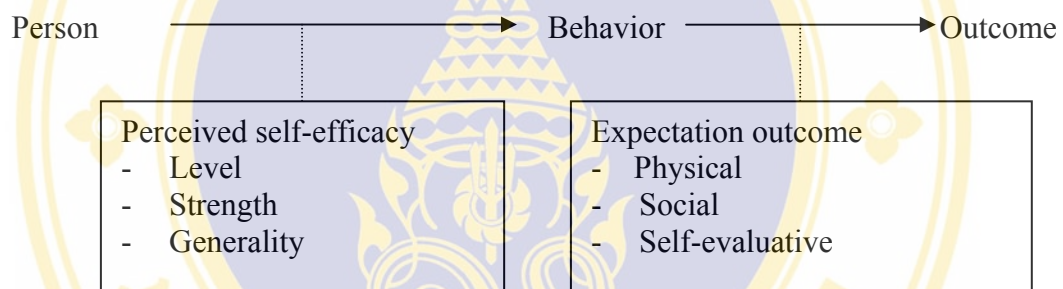


**Figure 1.** The relationships between perceived self-efficacy and expectation outcome (Bandura,1997).

The perceived self-efficacy and the expectation outcome is related to each other and will effect to behavioral performance of such person meaning that the perceived self-efficacy is the decision of self-ability to work at what level while the expectation outcome will be the decision of what results will be received from such behavioral performance. The perceived self-efficacy can predict the expected behavior better compare to the expectation outcome (Bandura, 1997; Oeker-Blacvk et al., 1992) of which the relationship between these 2 variable factors is affected to the decision of behavioral performance of such person.

As mentioned above, it can be seen that the perceived self-efficacy will be resulted to affect several behavioral performances. Therefore, the person with development in the perceived self-efficacy will be able to perform behavioral performance as desired with perseverance and with persistency of which Bandura

(1997) suggested the sources of information on the perceived self-efficacy the person could develop from 4 sources as follows:

**1. Enactive mastery experiences** is direct experience which will be most resulted to affect the perceived self-efficacy (Bandura, 1997) by making persons to be self-confidence from such success and the perceived self-efficacy to cope with situations the same as enactive mastery experiences or with high level of the perceived self-efficacy when coping with situations of enactive mastery experiences.

**2. Vicarious experiences** is the observation of others who have succeeded in coping with same problems or having seen the model of success. Although the influence of vicarious experience is minor compare to enactive mastery experiences but can also help the observers to perceived self- efficacy to such behavioral performance. The attributes of vicarious experiences which are impacted to the feeling of the perceived abilities to such behavioral performance such as solving problems of person who fear of many things by allowing seeing vicarious experiences with similar characteristic to their own selves can be able to lessen those fearsome. Observing others in behavioral expression similar to same situation with satisfactory results will cause the observer indirect experiences with tendency to believe that if there is an intention and effort, all things can be done by self.

**3. Verbal persuasion.** This method was widely used because it is the easy and convenient method. The perceived self-efficacy may be occurred or may be changed from receiving verbal persuasion that he or she is having abilities to change their own behavior in order to perform activities to meet the objective, however, this method is limited meaning that the results of encouraging self-efficacy is short.

**4. Physiological and affective states.** Hungry, weakness, fearfulness, or anxiety resulted from coping status of distress, or of that threatening situations of person, if with high level, will be influenced to the perceived self-efficacy in activities' performance (Lawrence & McLeroy, 1986). That means if the person is having high level of anxiety, that person is lacking of confidence in self- abilities, will always make decision to avoid such behavioral performance or avoid coping with that situations.

Encouraging and motivation for information to be received from all 4 sources are influenced factors causing the process of decision making in behavioral

performance, the perceived self-efficacy is increased of which Bandura (1997) suggested to this concept that the expectation concerning the abilities of person is different, depended on 3 dimensions as follows:

**1. Dimensional level** of difficulties and easiness refers the perceived self-efficacy of person depend on person's consideration to that works of how is the level of difficulties and easiness.

**2. Dimensional strength** of confidence refers the level of confidence in the ability to perform such activities.

**3. Dimensional generality** refers to the confidence in enactive mastery experiences could be used for similar performance of activities in different situations.

It can be seen that the perceived self-efficacy can foretell the results of behavioral expression in different situations based on Bandura's concept (Bandura, 1997) that the perceived self-efficacy is the decision of self-abilities in management and in performance of specific behavior to cope with situations to be managed in the future.

## **2. Empowerment concept**

The Empowerment concept have been analyzed by many academics in nursing science with several different definitions such as the process of enhancing the abilities to the person or group of persons (Rodwell, 1996) and is the cognitive process in making the persons having abilities as desired, able to solve problems and manage the sources of benefit available in their self-control (Gibson, 1991). The process of empowerment will be occurred if there is an acceptance between the health care provider and clients. The attributes of the process are cooperation, co-decision making and co-responsibilities (Ellis- Stoll & Popess Vawter, 1998), results of empowerment will be capable of controlling environmental factor which affected to that person and is able to develop the perceived self-efficacy (Gibson, 1991; Wallerstein Bernstein, 1988; Pellino et al., 1998; Mishra et al., 1998) and also develop health behavior (Ellis-Stoll & Popkess-Vawter, 1998; Gibson, 1995; Wallerstein & Berstein, 1988).

Gibson (1991) viewed the process of empowerment as the process of promoting and enhancing personal abilities in order to meet their necessary desires including to help the health care providers, family, and the group be able to perceive

the situations and supporting to perform in accordance with the reality of the plan. The model of process of empowerment in mothers of chronically ill children presented by Gibson (1995) with precondition that mothers must be developed with bond, love and commitment that they will be most responsible in taking good care of children. This precondition is the cause of stimulation to maintain the process of empowerment and after that mothers will participate in the categorized process of empowerment as follows:

### **1. Discovering reality**

When the mothers accepted the results of children diagnosed chronic disease, the 3 responses will occur as follows:

1.1 Emotional response. Although, medical diagnosis is in compliance with the abnormalities of the symptoms of children, mothers still feel severely frustrated, confused, frightened, anxious, and angry because they could not accept in the diagnosis. Mothers may believe that the diagnosis of disease is too early and still hopefully believe that child's symptoms will improve. However, mothers will feel grief which is a part of process of acceptance of situations and perceived in reality that, this situation of grief is real and is occurring to themselves.

1.2 Intellectual perception response. After the children's diagnosis, mothers feel uncertain, ambiguous, and therefore, trying to seek for more information from several sources such as books, doctors, nurses, or mothers of children who are in similar situations. The most trusted persons by mothers are health personnel, the most wanted information are the explanation the symptoms of children, planning for taking care of children, including anything mothers could be able to help their children.

1.3 Behavioral response. Mothers will do all things that could be done without consideration of right or wrong, trying to learn the best care of children, observe and record changing the symptoms of children until perceiving that they understand the children better than others, however, mothers still feel uncertain whether or not such care is too much of children's protection. Receiving the feedback information from closed people will enable mothers to know how is the position they are in caring their children, too much of worry or not in children care.

Some part of the causes of mothers' frustration came from family process. Because, mothers are the persons in responsible for the burden in care and may not

receive good support and good understanding from the member of family and also the symptoms of children are caused much of the problems in care. Seeking for information concerning the care from health personnel may be refused or may be ignored and these situations will cause more frustrations. In addition to the frustrations arising from others, frustration may be caused by themselves of which mothers are not succeeded in solving problems accordance with their ways of solving. Frustration is always occurred throughout the process of discovering reality.

## **2. Critical reflection**

Frustration will bring the mothers to change, meaning that mothers will evaluate themselves and analyze situations with consideration care. This is appropriate times in helping mothers to change from angry emotion, frustration, to the effective problems solving by which mothers will be able to develop the perceived self-strength, the confidence of expression and do as desired.

## **3. Taking charge**

When mothers perceived of their own strength and capabilities, mothers are ready to manage all situations as follows:

3.1 Advocacy, if children are chronically ill, they need help from mothers, it is very necessary for mothers to learn how to be advocate speaking for the benefit of children.

3.2 Efficient dealing with health care system, mothers must know the right channel and steps in dealing for assistance or in receiving health care services including using sources of benefit in health care services.

3.3 Learning to persist, mothers must be encouraged in seeking for health personnel relentlessly, persist and never give up in order to give and get information as desired.

3.4 Negotiation, mothers must negotiate with health personnel for what are wanted or for the services most suitable and most possibilities in practice for children, mothers, and parents.

3.5 Partnership in care, Mothers must accept that mothers are main caregivers, with good knowledge and skills. The role of nurses is supporter, advisor, and facilitator. Nurses and mothers are in the partnership in caring the children.

#### 4. Holding on

Holding on the empowerment is resulted from mothers' perception self-strength, self- abilities and self-efficacy in caring their children that can help mothers in holding on the empowerment to control the changing situations, although, in the future, the mothers will cope with obstacles, frustration, angry, these abilities are still maintained, and can help mothers to pass these situations or feelings. Mothers will try to take care of children with perseverance and persistence together with satisfied feeling of their capabilities.

In the process of empowerment, when the caregivers accepted the real situations occurred, seeing the problems and self with critical consideration until the perceived self-strength, ready to manage situations effectively. With this regards, in the process of taking charge, sources of self-efficacy was also inserted, begin from the vicarious experiences of researcher, opportunities of real practice, encouragement, and with the willingness of the caregivers to participate in process of empowerment will bring in the perceived self-efficacy (Gibson, 1991; Wallerstein & Bernstein, 1988; Pellino et al., 1998; Mishra et al., 1998). From the above framework of concepts, clear suggestion could be presented as shown in Figure 2 as follows:

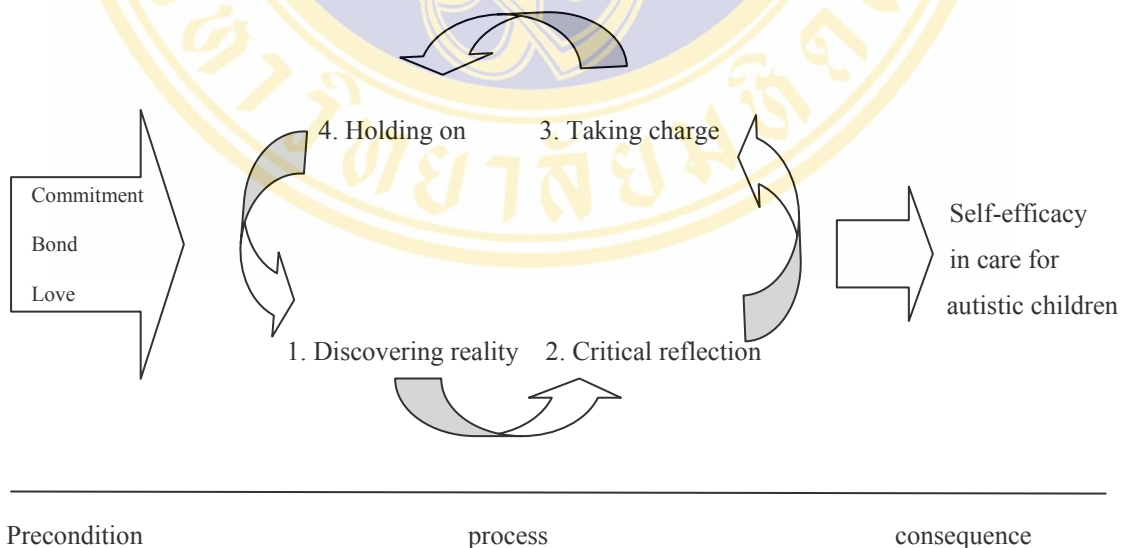


**Figure 2.** The process of empowerment for caregivers in taking care of autistic children.

## Hypotheses

The hypotheses of this study are as follows:

1. The caregiver who participated in the empowerment program had more perceived self-efficacy in autistic child care than those who did not.
2. The perceived self-efficacy in autistic child care of the caregiver who participated in the empowerment program continued increasing at the 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> week after completing the program.

## Scope of the Study

This research is to study the results of empowerment program to the caregivers in promoting perceived self-efficacy in caring of autistic children. The sampling group was caregivers who brought autistic children to receive treatment services at the Child and Adolescent Psychiatric Institute, Rajanakarin. The children aged between 2-5 years and the caregivers are in direct responsible and continuing in caring their children, be member of same family of children such as father, mother and relative and be without payment or remuneration.

## Definition of Terms

**Empowerment program** refers to the sets of activities developed from the perceived self-efficacy concept of Bandura (1986, 1997) and the concept of the process of empowerment for mothers of chronically ill children (Gibson, 1995; 1201-1210). The arrangement for caregivers of autistic children was divided into groups and each group consisted with 6-8 persons, and each group took 8 sessions. The first 5 sessions took one session a day and each session took 3 hours. Motivation was made every month for 3 sessions and each session took 3 hours. The period of times used for the program was 4 months. The arranged activities consisted with 4 steps: Discovering reality, Critical reflection, Taking charge and Holding on.

**The perceived self-efficacy in autistic child care** refers to the caregivers' beliefs in their abilities to care for autistic children in terms of the following behavioral cares: 1) being partnership in care in every aspects 2) advocacy 3) efficient dealing with health care system 4) learning to persist 5) negotiation. The assessment

was performed by using the perceived self-efficacy in caring for autistic children developed by the researcher. The scales consisted of 37 items with a response scale ranging from 0 (not at all can do) to 100 (certain can do).

### **Assumption**

1. Primary caregivers must be the persons who used to take care of children for at least 6 months, ought to believe of their commitment have to child's care the best possible and with their willingness when acknowledged the whole program. With this assumption, there should be continuing of commitment to child care.

2. The sample are fathers, mothers, or relatives ought to believe of love and bond in children.

## CHAPTER II

### LITERATURE REVIEW

To study the empowerment program in caregivers for promoting to the perceived self-efficacy in autistic child care, reviewed related literature and research report in the following subjects:

1. Autism
2. Problematic behavior and the needs for caring
3. Caregivers and caring behavior
4. Perceived self-efficacy concept
5. Empowerment concept
6. Autistic child care

#### Autism

1. **The definitions of autism** were many, have been periodically adjusted in accordance with times changed because of this disease has just been known only approximately 60 years ago and because of limitation of knowledge for diagnosis and in seeking for the real cause (Liknapichitkul, 2002). The first person who have given definition on autism was Eugen Bluer (The Autistic Family, 2003), the well-known psychiatrist in Zurich called children having similar behavior to schizophrenic patients, loss of communication with others, self preoccupied, ignored to the outside world. The word “autism” was originated from Greeks, “auto” means self. In the medical model, this disease was first reported in the year 1945s by Dr. Leo Kanner, the psychiatrist professor of John Hopkins who has written an article explaining the classic form of autism that are group of children with impairments in 3 domains: 1) Social interaction 2) Communication and the use of language 3) Limited imagination as reflected in restricted, repetitive and stereotyped patterns of behavior and activities (Edelson, 1999; Ontario Adult Autism, 2003). The word “autism” was suggested to be used with early infantile autism from the beliefs that this disease was occurred since

born and this definition is still being used up to present. Autism is also referred to a complex development of disabilities that typically appears during the first three years of life. The result of a neurological disorder that affects child's ability to communicate, understand language, play, and related to others (Center for disease control and Prevention, 2001; National Information Center for Children and Youth with Disabilities, 2001; Barreto, 1999; Limsila, 1995; Wing, 1980).

## **2. Characteristics of autism**

The degree of severity of characteristic differs from person to person, but usually includes as follows:

### **Severe delays in language development**

Language is slow to develop, if it develops at all. If it does develop, it usually includes peculiar speech patterns or the use of words without attachment to their meaning. Those who are able to use language effectively may still use unusual metaphors or speak in a formal and monotone voice.

### **Inconsistent patterns of sensory responses**

The child who has autism at times may appear to be deaf and fail to respond to words or other sounds. At other times, the same child may be extremely distressed by an everyday noise such as a vacuum cleaner or a dog's barking. The child also may show an apparent insensitivity to pain and a lack of responsiveness to cold or heat, or may over-react to any of these.

### **Uneven patterns of intellectual functioning**

The individual may have peak skills-scattered things done quite well in relation to overall functioning- such as drawing, music, computations in math, or memorization of facts with no regards to the importance or lack of it. On the other hand, the majority of autistic persons have varying degrees of mental retardation, with only 20 percent having average or above average intelligence. This combination of intellectual variations makes autism especially perplexing.

### **Marked restriction of activity and interests**

A person who has autism may perform repetitive body movements, such as hand flicking, twisting, spinning, or rocking. This individual may also display repetition by following the same route, the same order of dressing, or the same

schedule everyday, etc. The changes occur in these routines, the preoccupied child usually becomes very distressed.

### **3. Criteria of diagnosis**

In the past, autism was categorized in the group of mental disorders called infantile psychoses by early edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-I and DSM II) and was classified in the group of Childhood Schizophrenia and in the year 1980s, this disorders was added by DSM-II and autism was classified in the Pervasive Development Disorders (PDD) and has been periodically revised as diagnoses have evolved.

The system of categorized classification of Diseases or Child Psychotic Disorder with International standard at present consisted of 2 main systems namely: DSM-IV (Diagnostic and Statistical Manual of mental disorder-fourth edition) by American Psychiatric Association, 1994) and ICD-10 (The International classification of Diseases-ten version) by World Health Organization, 1993. Both systems of disorders fall under the classification of Pervasive Developmental Disorders (PDD). Because autism has not been discovered by diagnosis in clinic or by any instruments. The most accurate diagnosis must be based on observation the symptoms of each child. In addition, it must be based on asking the question of child's history from parents or from caregivers in the development and child's behavior (Northwestern Pennsylvania Autism Society of America, 2003). Children diagnosed autism in accordance with DSM-IV must have completely 4 criteria of symptoms, namely: 1) Qualitative impairments in reciprocal social interaction; marked impairment in the use of multiple nonverbal behaviors such as eye to eye gaze, facial expression, body posture and gestures to regulate social interaction, etc. 2) Qualitative impairments in communication; a delay in, or total lack of the development of spoken language, etc. 3) Restricted, repetitive and stereotyped patterns of behaviors, interests or activity; stereotyped and repetitive motor mannerisms such as hand or finger flapping or twisting or complex whole body movements, etc., and 4) Delays or abnormal functioning in social interaction, language as used in social communication or symbolic or imaginative play with onset prior to age 3 years (American Psychiatric Association, 1994). However, the categorized classifications of two systems used the method of counting symptoms in accordance with the criteria of diagnosis. With these

systems, some children have not been diagnosed autism because of the symptoms diagnosed did not meet the criteria of diagnosis caused children the loss of opportunities to receive suitable help and is also effected to the evaluation of prevalence.

From the criteria of diagnosis, the instruments for aiding the diagnosis of autism symptoms was created, however, these instruments could not be used to diagnose for the exact cause of autism, but could be used to gather information from other caregivers on child's behavior which could not be answered by parent and could be used to compare with general children in the same age and sample of instruments used as follows:

**The Autistic Behavior Checklist (ABC)** (Krung, et al., 2001) was instruments with accuracy of asking the parent to answer 57 questions in the questionnaire form in 5 domains namely: sensory, relating, body and object use, language, and social/self-help. Total of all scores indicated child's behavior in expression of symptoms of autism. This instrument did not give the exact cause of autism in diagnosis, but was indication to child development as it was and the appeared behavior was related to autism.

**The childhood Autism Rating Scale (CARS)** (Schopler et al., 1980) was widely used instrument. Score was given by physician by observation during children evaluation and the observed behavior was divided into 15 groups. Total of all scores was indication of children's behavior. If total score was less than 30 (Total score from 15-60), the diagnosis was considered "not autistic". If total score was more than 35, the diagnosis was considered "severe autism. If score was 30-35, the diagnosis was classified in 2 categories, mild to moderate autism. The deficiency of this instrument is inability of identifying differentiation of autistic children from children with other disorders such as mental retardation or minimal verbal skill (Lord, 1977) however, diagnosis of children in the first phase in order to allow child to receive treatment as soon as possible is more important than to have the exact cause of diagnosis. This instrument is, therefore, considered beneficial instrument.

**The Autistic Diagnostic Interview-Revised (ADI-R)** (LeCouter et al., 1989) is semi-structural questionnaire. Physicians and parents are evaluators of questionnaire with 111 questions divided into 4 domains in accordance with DSM-IV criteria. The

evaluation was made on the child's behavior both in the past and at present. This instrument was accurate to be used in the case of physicians who are not expertise.

However, evaluation of children suspected being autism and the use of that diagnosis must consist of 3 components namely, questions on the history of development, present situations of children and clinical observation altogether (Koenig & Scahill, 2001). All of 3 components gave important information to help in evaluation the variable behavior of children to enable them to receive the corrected assistance as quickly as possible. The instruments used in appraisal of autism was discovered from research report in foreign countries while the reviews of research report in Thailand did not discover the use of instruments in helping diagnosis, but discovered only in the use of criteria in accordance with DSM system (Diagnostic and Statistical Manual of Mental Disorders of American Psychiatric Association).

During the past 30 years, there have been studies on epidemiology of autism for 24 studies (Gillberg, 1999; Wing, 1993). The prevalence rate computed by Gilberg during year 1966s-1973s was 4.4 to child population of 10,000 persons or 1 to 2,000 persons, however, the mean of prevalence rate has been more increased during the past year and found that prevalence rate was 1 to 250 persons (Bertrand et al., 2001; Yeargin-Allsopp et al., 2003) When comparing from the report of these studies found that there was very different in the recruitment of children, instruments, and the criteria of diagnosis. If any cases of studies have been investigated by the same criteria, but the results received was differed, that may explain differential results of studies with differential prevalence rate. There were 3 studies of projects in the United States. One case study was made in California (Wing & Potter, 1999: 1). One study was made in New Jersey (Bertrand et al., 2001) and another one study was made in Atlanta (Yeargin-Allsopp et al., 2003) and DSM-IV was used as criteria in diagnosis. The project of studying in California found that prevalence rate of autism was 1 to 500 of child population. The project of studying in New Jersey found 1 to 250 of child population and the project of studying in Atlanta found 1 to 300 of child population. In addition, there was a report of Intelligence Quotient (I.Q.) revealed 60% having cognitive impairment, 8 % having convulsive symptom and 18 % having never been diagnosed before. All three projects found that the rate of boys: girls was 4:1.

Wing (1993) reviewed the studies about the prevalence of autistic children that used the criteria of diagnosis such as Kanner's criteria, Rutter's criteria, DSM-III and DSM-III-R found that the prevalence rate was 1:600 to 1:1,300 which was more differed than the studies using the same criteria. However, in consideration in accordance to the year studied found that the prevalence rate of autism was evidently increased.

#### 4. Causes

When Dr. Leo Kanner first identified in the year 1943 in the clinical features of infantile autism and up to present with several decades have passed, the exact causes of autism has still not been evidently discovered by scientists.

In the past, it was beliefs that the cause of autism came from the process of parents and family who did not take good care of children. Being inertia, too much aggressive, and indifferent to their own children, mothers are suffered from those accusations (Szatmari, 2003; Wing: 1980). At present, this theory has been proved untrue. Autism is not disease arisen from mental disorder. Several of research studies reported that the causes of autism are from many factors; genetic factor (Bailey et al., 1995), environmental factor which affected mental development for example, mothers are infected with German measles while pregnancy, mothers have taken thalidomine or valproate (Gilberg, 1999; London & Etzel, 2000). Although, the research studies have been made for long times, no exact causes have been clearly summarized. However, from the review of research's report found that the following factors may be the causes of autism, **factor of dysfunction in brain**: The abnormalities of cerebellum by MRI (magnetic resonance imaging) found hypoplasia and hyperplasia (Courchese et al., 1994). These abnormalities indicated to affect motivation, social interaction, learning, the process of collecting data and stimulation responds can explain why autistic children being in state of alertness or is too much stimulated. The children being disturbed communication with others is an attempt to lessen state of alertness, and is also effected to abnormal movement, posturing, and muscles strength. The abnormalities of cerebral cortex is thickening and cerebral lobe is big especially in boys (Priven et al., 1996) effected autistic children on social communication and the complexity of reasoning: The abnormalities of temporal lobe is extra large than regular (Priven et al., 1996) affected autistic children in emotion, social and impairment in

learning and analog memory and temporal lobe epilepsy is highly possible to occur: The disorder of limbic system especially in the part of amygdala and hippocampus found that nerve cell in this area is thick but smaller than regular person which caused disorders to autistic children in emotion, learning , memory including behavioral disorders.

**Neurotransmitters factor:** The most important and effect to the symptoms of autistic children is increasing levels of serotonin which is the cause of hyperactivities, anxiety, aggressive behavior, and self mutilation (Kuperman, 1987; National Institute of Mental Health, 1997): abnormality of increasing the levels of catecholamines indicated the lack of concentration, easy to be stimulated, worry, and learning (Young et al.,1987) Increasing levels of Opioid in plasma and water in spinal cord caused autistic children to be social impairment and decreasing the feeling of pain (Gilberg et al.,1985). **Immunity factor:** Some studies found that T-Cell and IgA, E substance being used for protection of HIV in some autistic children in low level (Bidet et al., 1993; Rensoni et al., 1995) caused easy allergic disorders to autistic child such as food poisoning from protein.

**Genetic factor:** Many studies have confirmed that genetic abnormality is the cause of the increased autism in Twin child (Bailey et al., 1995; Tanguay, 2000) including the studies in irregular cromosome, especially, cromosome no. 2, 7, 13, 15 16 and 19 or fragile x syndrome (Pezershk, 2001). Although, there was attempt to look for the causes of disease and up to present, no exact cause is known. Only definite summarization has been made that interest has shifted to biological factors, not from dysfunctional family process, however, inappropriate in child's care and the factor to the increasing of autism or with no improvement.

## **5. Intervention for children with autism**

These topics include medication treatment, communication/language training, educational intervention, behavioral intervention, and parental training.

### **5.1 Medication Treatment**

In 10-15 % of the cases, autism is associated with known medical causes that effect normal brain functioning (Rutter et al., 1994).

**-Medication effecting serotonergic neurotransmission** give the frequent occurrence of repetitive, stereotypic behaviors in individuals with autism, abnormalities in the serotonin neurotransmitter system (5-hydroxytryptamine (5-HT) have been hypothesized in this order. Researchers have found that whole blood and platelet serotonin as well as serotonin receptor antibodies are increased in individuals with autism as compared to controls, suggestive of the environment of serotonin in central nerve system abnormalities in autism. Drug that increases 5-HT neurotransmission such as the selective serotonin reuptake inhibitors (SSRIs) has also been found useful in reducing interfering stereotypical, repetitive behaviors, anxiety, hyperactivity, inattention, aggression and self-injury and improving pre linguistic, social behaviors, complete performance tasks and communication and language function. The medications that influence serotonin level such as fluvoxamine (Kauffman et al., 2001), clomipramine (Gordon et al., 1992), buspirone (McCormick, 1997) and venlafaxine (Hollander et al., 2000).

**-Anticonvulsants:** An estimated 35-40% of people with a diagnosis of autism develop a seizure disorder. This contrasts sharply with 0.5% incidence among the general population. Some reports have been published with describe children presenting with autistic symptoms and either absence seizure or epileptiform activity on electroencephalogram (EEG) who responded to antiepileptic drug (AED) treatment with seizure control and dramatic reduction in autistic symptomatology. Two researchers found that valproic acid was useful to control seizure and a dramatically accelerated rate of acquisition of both language and social skills (Child and Blair, 1997). Some researchers used divalproex sodium to treat 14 children/adolescents/adults with autism, which resulted in significant improvement in core symptoms of autism and associated features of affective instability, impulsivity, and aggression (Hollander et al., 2001).

**-Immunoglobulin Treatment:** Immune system abnormalities have been associated with autism. These have included inhibition of macrophage migration in response to human myelin basic protein, reduced helper T-cell and B-cell numbers and demonstration of circulating antibodies to serotonin receptors. One researcher used intravenous immunoglobulin to treat ten autistic children with immunoglobulin, four

children who showed mild improvements and one child there was a very significant amelioration of autism symptoms (Plioplys, 1998).

**-Hormonal Treatment:** Serotonin is a hormone released from cell in the duodenum in response to increase acidity or the presence of peptides and amino acids in the stomach. It is a peptide of 27 amino acids that increases bicarbonate and volume of oxocrine pancreatic secretions. Porcine secretin, given as a single intravenous dose has been used for diagnosis of pancreatic insufficiency for more than 20 years (Kaminska et al., 2002). Researches investigated the effect of a single intravenous dose of porcine secretin on 12 autism children through a randomized, double-blind, placebo-controlled, crossover study to assess on objective language and on social, neuropsychological, and gastrointestinal measures. The results indicated that significant differences were observed on the majority of the dependent variables. Statistically significant differences were not observed on the majority of the dependent variables. Statistically significant differences were observed on measures of positive effect and activity level following secretin infusion (Corbett et al., 2001). And another term used porcine secretin to treat sixty-four children with autism (age 2-7 years; 55 boys and 9 girls) and found that there were no group differences on formal measures of language, cognition, or autistic symptomatology (Robert et al., 2001).

**-Antibiotic Treatment:** Autistic regression occurs in approximately one third of cases, with regression typically occurring before 2 years of age, and involving loss of language, social, and play skills. Several parents of children with regressive-onset autism reported their observation of the following sequence: repeated broad-spectrum antimicrobial use (usually for chronic otitis media), followed by chronic diarrhea, then loss of language, play, and social skills, and subsequent onset of autistic symptoms. One example of researchers who used oral vancomycin to treat 11 children with regressive-onset autism and found improvement in 8 to 10 children studied. But these gains had largely waned at follow-up. Although this protocol used is not suggested as useful therapy, these results indicate that a possible gut flora-brain connection warrants further investigation, as it might lead to greater path physiologic insight and meaningful prevention or treatment in a subset of children with autism (Sanders et al 2000).

## 5.2 Communication/Language Training

The study of communication development in autism has taken an exciting turn in the past two decades. Language development is typically conceptualized in three areas: syntax, the structure of language; semantics, the meaning of language; and pragmatics, the interpersonal aspects of communication. Research in autism has converged on the area of pragmatics as the most impaired area in language development. The researchers that used a multiple baseline across-responses design to investigate the teaching to us gestures in combination with oral communication in four children with autism. Results demonstrate that generalization measures indicated that the children learned to respond in the presence of novel stimuli and a novel setting. Social validity measures revealed that the participant's behavior appeared more socially appropriate at the completion of the study than at the start of study, the participant's behavior was indistinguishable from that of their typically developing peers (Buffington et al., 1998). Some researchers used setting individualized goals that address the communicative difficulties of preschoolers with autism. The findings of this study indicate that preschoolers with autism, compared with typical peers in kindergarten, had low attention behavior; did not respond to their peer's comments, questions and invitations; and did not initiate interactions with peers. The use of setting goal was considered to be an important prerequisite for a systematic intervention addressing the needs of preschoolers with autism in inclusion settings (Gena and Kymissis, 2001). Other researchers used functional communication training (FCT) to train two autistic children. Results indicate that in the initially train tasks two autistic children. Results indicate that an increase in unprompted requests to take a break compared to baseline levels (O'Neil and Sweetland-Baker, 2001). Current communication approaches address children need both approaches to grasp the power of language to influence social interactions and to be able to imitate speech sounds in order to develop speech. It is no so much an issue of either/or as it is both/and, for young children with autism who are not yet verbal.

## 5.3 Educational Interventions

### Project TEACCH

With more than 35 years of empirical data supporting its efficacy (Autism Society of America, 2001). Project TEACCH (Treatment and Education of Autistic

and Related Communication-Handicapped children) is an intervention program model that integrates behavioral and cognitive theory, includes parents as co-therapists, and emphasizes long-term treatment and support from early childhood through adulthood. Families are taught to recognize impairments as well as to develop and implement supports addressing the deficits. Reported outcomes include gains in function and development, improved adaptation and increase in functional skills, and skill generalization to other and other settings (Panerai, Ferrante & Zingale, 2002). This dynamic model incorporates research from multiple fields and like functional analysis approaches, also employs individualized assessment and treatment planning. While it is compatible with a variety of other treatment modalities, this approach has been criticized as not being intensive or aggressive enough and for placing insufficient emphasis on communication and language development (Autism Society of America, 2001).

#### 5.4 Behavioral Intervention

Persons with autism are often described as having relatively high arousal or anxiety level. Children with autism demonstrate a desynchronized electroencephalogram pattern, indicating high level of arousal. This desynchronization was related to increase environmental stimulation and increase stereotyped behavior. The underlying reason for the high levels of arousal in some persons with autism is not entirely known. Some researchers suggested a high level of arousal may be due to neurological dysfunction, such as sensory processing problems and suggested that a myelination defect might lead to increase neuronal arousal (McClelland et al., 1992). One method clinicians use to lessen anxiety and arousal in persons with autism is the application of deep pressure. One research article investigated the effect of deep pressure on arousal and anxiety reduction in twelve children with autism with Grandin's Hug Machine. The results indicated a significant reduction in tension and marginally significant reduction in anxiety for children who received the deep pressure compared with the children who did not (Edelson et al., 1999).

Lovaas began developing and evaluating operant discrimination learning techniques and intervention packages. Lovaas' approaches-often Applied Behavior Analysis are some of the best known and most widely used in the field and focus on

the development of attention, imitation, receptive or expressive language, and pre-academic and self-help skill. Using one to one therapist-child ratio and intensity (20-40 hours per week) (Lovaas, 1987; Smith & Lovaas, 1988; Cattellgordon & Cattlall-Gordon, 1998).

### 5.5 Parental Training

Parents of children with multiple handicaps (i.e., developmental delays, autism, and severe language impairments) are often faced with uncertainty regarding their children's disabilities and the appropriateness strategies. May, out of desperation, seek training methods that are typically used by parents of nonimpaired children. These parent training interventions are generally inappropriate for autistic and severely language-impaired children and may suggest behavior management strategies that are even contrary to interventions best suited to the special needs of these children (Elder, 1994; Williams, Elder, & Griggs, 1987). One researcher used a single subject experimental research design to investigate the use of Ecological communication Orientation (ECO) intervention package with four mothers of autistic children. Results showed that all four mothers demonstrated increases in the frequency with which they used the child training skills following treatment. Increases in the four child behavior frequencies (i.e. vocal utterances, social responding, social initiating, and intelligible words spoken) were also noted by Elder (1995). Some researchers used a randomized controlled trial to evaluate a caregiver-based intervention program in community day-care centers. Results showed that there were greater gains in language abilities, significant increases in caregivers' knowledge about autism. Results demonstrated the progression for 60 children across 12 months, adaptive behavior (9.7 months), and language (6.1 months) (Bibby et al., 2001). Another one used The NAS Early Bird Program in six families. Results showed that parents learn to understand autism, to build social communication, and to analyze and use structure, so as to prevent inappropriate behaviors (Shields, 2001).

From literature review on treatment in Thailand found that child psychiatrist will diagnose and consider to prescribe drugs to children with severe behavior such as self mutilation, hyperactivity movement which may endanger to autistic children themselves and treatments have been made by developmental therapy, behavioral therapy, occupational therapy, and speech therapy, by health care profession such as

nurse, occupational therapist, psychologist, and speech therapist including on special education teacher. Program for teaching parent of autistic children was arranged but no study of treatments for the results of program has been made. (Liknapichitkul, 2002; Trunkasombut, 2002).

## **Problematic Behavior and the Needs for Caring**

Autistic children need of mental, emotional, and social care for basic development as general child. In addition, autistic children need special care in accordance with the impairment from autistic conditions. Each autistic child has self-characteristic behavior due to more or less of the severity in differential of symptoms. However, the characteristics of behavioral abnormalities of autistic children are likely the same which is in accordance with the pattern of autism. The said behavior of autistic children is in needs of care from caregivers for the development in accordance with age and appropriate behavior as follows:

### **1. Speech and means of communication**

80% of autistic children have severity of language problems and means of communication (Trunkasombut, 2002). Some autistic children have never been talking and seem to be deaf for whole life. Some could speak in imitation of other's words by mostly repetition of the last words or 2-3 last words of each sentence. Autistic children speak in imitation of others' words without knowing the meaning just like the parrot. This imitation of speech is called echolalia (Wing, 1980). Some academics have divided the development of language and speech of autistic children into 10 levels beginning from the first level: The children are always quieted and without speaking and may make noise of crying when distressed until to 10<sup>th</sup> level that can speak in sentences (Kichatham, 1997). Problems of using of language and means of communications of autistic child were classified into 2 parts: Problems of understanding other's words and understanding of other's exhibitions of movement. Most of autistic children could understand meaning of words at the age of 5 years (Trantranont, 1984). Problems of means of communication, autistic children are delayed in speaking than general children. Approximately 20-50 of autistic children can not speak at all and at approximately 50 % could be able to speak at the age of 5 years (Trantranont, 1984). Characteristic of speaking is mainly speaking in imitation

causing non-response with others or cannot use words in communication with others. Autistic children can develop from speaking in imitation to the use of words by themselves. Some autistic children can develop from speaking in words, in phrases and in sentences with real meanings, however autistic children who can speak still having impairments in using words such as inability of using their names, not knowing the opposite words, using the intonation in expression of feeling is not good, limitation of words, incorrect classification of sentences and knowing the meaning of words or sentences only when situations are clearly indicated. These abnormalities caused autistic children having the problems of communication and the use of language which is the symptoms used in diagnosis of autistic too (American Psychiatric Association, 1994; World Health Organization, 1993).

Therefore, solving the problems of speech and means of communication to autistic children should aim to enable them be able to communicate and interpret the meanings of other's feelings and thoughts in appropriate means most nearly to normal children in order to help them be able to communicate with outside world with confidence.

## **2. Performance of daily's activities**

Autistic children lack of interest in environment, social, and person. All necessary skills in all aspects in addition to the development of speech and means of communication should be encouraged in all aspects especially skills in performance of daily activities, otherwise, children will depend on caregivers all the times and that caregivers have to take care of them closely in order to help. The abilities of skill learning for self-help in performance of daily activities at preschool age is to enable children be able to help themselves better in schooling at primary level which is in corresponds with child's development (Ketutat, 1993) including helping autistic children not to be rejected by friends in the same age and others in society.

In training all aspects of skills to autistic children, the caregivers are faced with many problems due to the problems of adaptability of autistic children, tendency to resist to the change and anxiety. Caregivers should make situations in the ways that children are coping with changes gradually including encouraging, supporting, empowering, and treating them in the way that they feel with no inferiority, at the

same time, caregivers should not allow autistic children having special privileges over others, but the flexibility may be considered.

It can be summarized that the skills of self-help in performance of daily activities, the caregivers should train autistic children in social development, and prepare them to the educational system which will be the most importance to the futures of autistic children. These skills are body's cleaning, dressing, eating, and toilet training.

### **3. Playing**

All children are fond of playing, moving, and learning, and wanted to play cheerfully in all occasions. Playing helps children's muscles fully developed. Playing with friends helps children be able to adapt themselves to society. Caregivers should help autistic children on emotional and thought development including stimulation of constructive thinking and imagination (Ketutat, 1993). Thus, playing is the development of children in all aspects.

Autistic children do not play in the same way as normal children. The abnormalities used for criteria in diagnosis of autistic children with DSM IV is inability to play, and imitational play as have seen in society suitable in accordance with age. They are interested in only some parts of subjects or toys, and talked only on the things of self-interest and wanted to talk to without caring whether or not there is a listener (American Psychiatric Association, 1994), playing alone, no association with any body, or never been playing with friends because of not knowing how to play. Playing will be individually playing, not knowing how to wait and the regulation of playing, prefer self-preoccupied in their own world. Playing is therefore importance to autistic children in social, emotional, and thought development. Caregivers should arrange playing activities in autistic child's care to encourage them of more development in all aspects.

It can be summarized that preschool autistic children required the care, physically, mentally, emotionally, and socially, for the development in compliance with development of age, especially developmental abnormalities caused by autism that is the use of language and means of communication, performance of daily's activities and playing. All of these will stimulate autistic children in preparing to enter

into school's society and be able to stay living in society including being the basic of all developments.

## Caregivers and Caring Behaviors

### 1. Caregivers

General meaning of caregiver is that any person who has given care to those who needs care. Family caregiver or informal caregiver means relative or any person who has given care to patient at home. Most of relatives or caregivers are members of family such as parent, husband, wife, grandparent, elder brother, younger brothers and steps of care was categorized as follows: Primary caregiver, means main caregiver who is directly responsible in taking care of patient all the times and continuously, aims to emphasize the care without receiving any payment or without remuneration whereas secondary caregiver is other person who may help in doing some activities, but not all the times and not continuous, such as taking care of on behalf of caregiver on some occasions when necessary (Manitoba Families for Effective Autism Treatment, 200; Family Caregiver Alliance and the State of California's Caregiver Research Center, 1998; Sirapo-ngam, 1996).

Caregiver's responsibilities or obligations to do is directly care of performance in daily's activities and the occurrence of behavioral problems, given support emotionally, mentally, and be coordinator in negotiation with health organization for treatment. The caregivers may also give financial assistance to patient (Cheewapoonpol, 1998; Sirapo-ngam, 1996).

In this study, caregivers of autistic children are the persons responsible directly and continuously in child's care, being a member of same family, such as parent, or relative without receiving payment, or remuneration, have a fond, love, and promise to child's care as possible such as in helping of the performance in daily's activities, managing problematic behavior.

### 2. Caring behaviors

Care is word which has been widely used in daily life. Care if used in good meaning is the explanation of relationship, love, involvement, attention and interest, and protection (Benner & Wrubel, 1989; Webster's Dictionary, 1988). It has been widely mentioned by many theorists in nursing science such as Orem (1999)

mentioned the care of dependent persons is performance of activities initiated by senior person and is done to the persons under their responsibilities to save life, encouragement of person's health and security in their responsibilities. Leininger (1981) explained that care is the activities of helping, encouraging, supporting, and the facilitating of convenience to persons or group of persons in accordance with expressed desires or in seeking for construction or for improvement the ways of life or in human being.

As above mentioned, autistic children are not able to take care of themselves due to limitation on the pervasive of developmental disorders. Especially, autism is chronic disease that can be diagnosed before 30 months of age. The autistic children are therefore in needs of help and the care from caregivers by guiding, training, controlling children to perform activities in developmental stimulation in accordance with preschool age which is the important things in encouraging for surviving, health status, and well-being to children under their responsibilities (Hanucharoernkul, 1991) caregiver's behavior in autistic child care is activities which should be initiated by caregivers themselves, done with intention, in good order and in categorized steps which is the selection of performance in meaningful activities and with best expectancy for children. Behaviors of caregivers in autistic child care consist of: partnership in care, advocacy, efficient dealing with health care program, learning to persist, and negotiation based on preschool age children development and symptoms of autism.

#### Perceived Self-Efficacy Concept

Perceived self-efficacy is a concept developed in many areas of professionals such as in nursing, medical, social worker, health behavior, psychology, and health education. The given meaning of the concept has been diversified. According to Social Cognitive Theory, the perceived self-efficacy means the confidence of self-abilities to manage and carry out the performance of activities to fulfill the designed objectives (Bandura, 1986).

The perceived self-efficacy was based on Social Learning Theory of Bandura (1977) of which Bandura believed that the occurrence of personal behavior consisted of 3 main factors such as internal factor, behavioral condition, and environmental

factor. Personal behavior will be occurred in reciprocal determination between three factors meaning that personal factor may be occurred from environmental influences and internal factor such as perception, beliefs. At the same time, internal factor is influenced from the expressed behavior of person and condition of circumstances. In reversion, the environment is changed because of personal behavior and the beliefs which designed behavior. All three factors are therefore interlocking system (Bandura, 1977). From said concepts, if any behaviors are expressed by a person, that person is perceived of self-efficacy, the results of such behavioral performance is expected. These two factors will be resulted back to affect the influence of personal behavior.

The perceived self-efficacy was developed from 4 sources: 1) Enactive mastery experiences 2) Vicarious experiences 3) Verbal persuasion, 4) Physiological and affective states (Bandura, 1997) which is impacted to personal action in the ways that two persons with same abilities may be expressed in different qualities if found that these two persons are differed in the perceived self-efficacy. For the same person if the perceived self-efficacy in each situation is differed, the expression of behavior may also be different because of the perceived self-efficacy is changed in accordance with situations. Therefore, the regulation of effectiveness of expression is depended on the perceived self-efficacy of those situations. Persons with high sense of the perceived self-efficacy will be patient, industrious, persistent, and be finally succeeded (Holloway & Watson, 2002).

### **1. The relationship of the perceived self-efficacy and health behavior**

From Bandura's concept which said that the perceived self-efficacy is playing an importance role to personal performance because it is the personal appraisal of self-abilities to success or not on such behavioral performance. The concept of perceived self-efficacy is therefore brought to explain the action of health behavior of person that the perceived self-efficacy is influenced to select to perform the activities continuously. It is a link between knowledge and action because only knowledge could not guarantee the adaptability of person's behavior (Damrosch, 1991; Lawrence & McLeroy, 1986; Moore, 1990).

Many studies have been studied and found that the perceived self-efficacy is the most indicator of behavior for health promotion in many groups of population such as aging (Homnan, 1996; Yaemchanchaya, 1995) diabetes patients (Charoenwongviwat,

1996; Crabtree, 1987; Kingery & Galsgo, 1989) heart disease and myocardial infarction disease (Cheng & Boey, 2002; Fitzgerald et al., 1989) post surgery patients (Oetker-Black, et al., 1992) including the caregivers of patients with dementia, stroke, and Alzheimer's (Fisher & Laschinger, 2001; Tang & Cheng, 2002; Gitlin et al., 2001).

In studying the concept of perceived self-efficacy in child care, several studies have been made in supporting this concept such as the studies for examining the relationship between the perceived self-efficacy of mothers and child care behavior. The study of perceived self-efficacy of 86 mothers with children under the age of 3-13 months and depression, perception of child's emotions, social support and child care behavior found that the perceived self-efficacy of mother was related to child's care behavior which is independence from other factors. When the perceived self-efficacy of mother factor is statistically controlled, it was found that the efficacy of being mother is not related to social support or state of depression (Titi & Gelfand, 1991). Reece (1992) studied the perceived efficacy of first pregnancy mother after giving child birth found that mother with high sense of the perceived self-efficacy on changing abilities of being the role of mother is well in infantile child's care the same with Blyth, et al. (2002) who studied on 300 mothers and the results of studies demonstrated that mothers with high sense of the perceived self-efficacy of breast feeding will tend to feed their milk to children than mothers with low sense of the perceived self-efficacy in the period of 1 week and 4 months after giving child birth.

On the perceived self-efficacy study in the parents of chronic illness children, the results demonstrated that mothers of chronic disease children or children with physical abnormalities are highly distressed, and the perceived self-efficacy is decreased (Silver, et al., 1995). Bartholomew et al. (1993) studied the perceived self-efficacy in cystic fibrosis children and in caregivers, the results found that the perceived self-efficacy is able to predict self-management behavior both in patients and in caregivers. In addition, there was research studies the effectiveness of program in giving knowledge and skills training to parents or caregivers in order to have the perceived self-efficacy and behavioral care improved appropriately such as the studies in parents and preschool children with asthma by measuring the knowledge and attitude, the perceived self-efficacy and behavioral management of asthmatic symptoms. After the end of program, it was found that parents had the improvement of

knowledge, attitudes, the perceived self-efficacy and behavioral management of asthma (Mester, et al., 1993).

In Thailand, the studies of relationship of the perceived self-efficacy in mothers having positive relationship with child's care behavior by studying in 80 mothers of asthmatic children aged 1-5 years old found that the perceived self-efficacy of mothers had relationship with child care behavior, and also found that the perceived self-efficacy of mother is related to child's health with the statistically significance level ( $P < .001$  and  $P < .01$ , respectively) (Samranchaiyatham, 1998). In addition, there were studies the results of program development for the perceived efficacy of mothers in taking care of heart disease children on 30 mothers to be received advice, demonstration, operation training, exchanging of experiences, recording of child's health, and the letter of motivation, evaluation was made in the first week, and 12<sup>th</sup> weeks found that after participation in the program, the perceived self-efficacy of sampling group and behavior in child care are increased ( $P < .001$ ) vertically and horizontally (Chotivithayatharakorn, 2000).

Autism is a disorder considered a chronic disease disorders. There was one study to train skills to parents in order to take care of autistic children that was made in 5 mothers and preschool autistic children. Training was made at clinic and at home, the evaluation was made after training for 12 weeks, the results found that the perceived self-efficacy and child care behavior is evidently improved. In addition, suggestion given to mothers to train their children at homes will produce positive results and remain for long time (Moroz, 1982).

## **2. The perceived self-efficacy of caregivers of autistic children**

This research has given the meaning of the perceived self-efficacy in autistic child's care of caregivers that means the caregivers perceived of their self-efficacy in management and in operation of behavioral performance of autistic child care to meet the designed objectives.

The attributes of the perceived self-efficacy of caregivers in autistic child care are: be partnership in care with health personnel in activities of being partnership in care such as speech, means of communication, performance of daily's activities and playing, advocacy, efficient dealing with health care system, learning to persist, negotiation with health personnel to achieve what are wanted.

The processes through which efficacy beliefs produced their effects. (Bandura, 1997) as follows:

1. Cognitive processes. People who have high sense of efficacy take a future time perspective in structuring their lives. Human behavior, being purposive, is regulated by forethought that embodies cognized goals. Personal goals setting is influenced by self-appraisal of capacities. The stronger the perceived self-efficacy, the higher the goals people set for themselves and the firmer their commitment to them. Those who have a high sense of efficacy view situations as presenting realizable opportunities. They visualize success scenarios that provide positive guides for performance

2. Motivational processes. In cognitive motivation, people motivate themselves and guide their actions anticipatory through exercise of forethought. They form beliefs about what they can do, they anticipate likely positive and negative outcomes of different pursuits, and they set goals for themselves and plan courses of action designed to realize value futures and avoid aversive ones.

3. Affective processes. People who have a high sense of coping efficacy adopt strategies and courses of action designed to change hazardous environments into more benign ones. The stronger the sense of efficacy, the bolder people are in taking on the problematic situations that breed stress and the greater their success in shaping them more to their liking.

4. Selection processes. Choices are influenced by beliefs of personal capabilities. Beliefs of personal efficacy can play a key role in shaping the courses lives take by influencing the types of activities and environments people choose to get as well as the types of environments they produce. People avoid activities and environments they believe exceed their capabilities, but they readily undertake activities and pick social environments they judge themselves capable of handling. The higher their perceived self-efficacy, the more challenging the activities they select.

### **3. Instrument for measuring perceived self-efficacy**

The perceived self-efficacy was brought to study in seeking for relationship with the change of health behavior and the maintenance of that behavior. In the past, the research was also initiated for more development on instruments used to evaluate the perceived self-efficacy. Perceived self-efficacy should be measured in terms of

particularized judgments of capability that may vary across realms of activity, under different levels of task demands within a given activity domain, and under different situational circumstances (Bandura, 1997; Bijl & Shortridge-Baggett, 2001; Maibach, & Murphy, 1995).

Bandura (1997) said that the perceived self-efficacy is changed in accordance with 3 dimensions namely; **level** means that the person's judgment of difficulty or easiness of work done, **strength** means the tenacious belief in person's capability will preserve in their efforts despite in numberable difficulties and obstacles, and **generality** of which Bandura has given the meaning that people may judge themselves efficacious across a wide range of activities or only in certain domains of functioning. Therefore, the assessment of the perceived self-efficacy must also be made in these 3 dimensions (Bandura, 1997; Bijl & Shortridge-Baggett, 2001; Maibach & Murphy, 1995).

Bandura suggested the standard methods for measuring the perceived self-efficacy that we should be made into 2 steps, **first step** is to ask the level of difficulty and easiness of activities that suggested to use the question "can do" rather than "will do". "Can" is a judgment of capability; "will" is a state of intention. The **second step** is to ask the strength of beliefs in person's ability to execute the requisite activities. Individual record the strength of their belief on a 100-point scale, ranging in 10-unit interval from 0 ("Can not do"); through intermediate degree of assurance, 50 ("Moderately certain can do"); to complete assurance 100 ("Certain can do"). Both steps could be created in the same measurement to appraise the perceived self-efficacy of any behavior. Efficacy scales are unipolar, range from 0 to a maximum strength. They do not include negative numbers because a judgment of complete incapability (0) has not lower gradations (Bandura, 1997). In addition, Maibach and Murphy (1995) also suggested to measure the perceived self-efficacy in health behavioral research that the measurement of the perceived self-efficacy from 0 to 100 scores was widely used in research for health promotion. For 5 steps of scale rating assessment from 1 (can not do), 2 (little certain can do), 3 (moderate certain can do), 4 (more certain can do, and 5 (complete certain can do) was used to assess in children and by phone interview in correspond with Bandura (1997) which suggested to avoid this type of assessment because they are less sensitive and less reliable.

The measurement of perceived self-efficacy is the appraisal of personal judgment of the ability to complete behavioral performance. It is an ability to judge at present. Therefore, the measurement of the perceived self-efficacy in the present situation of that person will be more accurate than the measurement of the belief in ability to such behavioral performance in the future (Maibach & Murphy, 1995).

From reviewing literatures related to the perceived self-efficacy concept, the research report related to the perceived self-efficacy concept in nursing science, behavioral science, and other sciences demonstrated that the perceived self-efficacy is related to care behavior. The researcher therefore could summarize that learning the perceived self-efficacy by cognitive approach is effective method in encouraging caregivers of autistic child expressed care behavior as self-designed. In bringing the concept of the perceived self-efficacy to be studied in the group of caregivers of ill children in Thailand is still a very few. The researcher did not find any studies in that case in the group of caregivers of autistic children. The studies for the guideline in development of autistic child care more effective should be made.

## **Empowerment Concept**

### **1. Empowerment**

The empowerment was originated from “social action” ideology in the 1960s and developed self-help perspectives in the 1970s (Gibson, 1991). Definitions of empowerment have been diversified in different branches of sciences. In behavioral science, empowerment has emerged out of the realization that clients have rights. They cannot be forced to follow a lifestyle dictated by health care professionals. The role of health care providers is to assist clients in making appropriate choices to take responsibility for their self-care. The concept of empowerment is the process of the perceived abilities of person or group of persons (Rodwell, 1996) and is the cognitive process that the person is perceived of abilities as desired, be able to solve problems and manage sources of benefit under their control (Gibson, 1991). Empowerment process will be occurred when there is an acceptance of each other between health care providers and clients. Attributes of the process is cooperation, co-decision, and co-responsibilities (Ellis-Stoll & Pokes-Vawter, 1998). The results of empowerment could control environmental factor which impacted to that person and could develop

perceived self-efficacy (Gibson, 1991; Wallerstein & Berstein, 1998; Pellino et al., 1998; Mishra et al., 1998) and can also develop health behavior (Ellis-Stoll & Pokes-Valwter, 1998; Gibson, 1995; Wallerstein & Berstein, 1988).

Empowerment can be viewed either as a process or as an outcome but specific definition can hardly be made (Rapaport, 1984; Israel, et al., 1994). Empowerment was divided into 3 levels: 1) Individual level is psychological process to develop the sense of control of their own life 2) Organizational level is to emphasize cooperation of members by offering information and making judgment together 3) Community level aims to solve community problems by enhancing participation of members (Wallerstein & Berstein, 1994; Israel, et al., 1994). This concept of empowerment has been widely used at all levels.

The results of the process of empowerment can be appraised from self-esteem, self-efficacy, self-confidence, satisfaction and results of health (Wallerstein, 1992).

The studies to support effects of the process of empowerment such as McCarthy, et al. (2002) who studied empowerment program in mothers who take care of asthmatic children. The results showed that 29 mothers who participated in the program perceived their abilities in situations control, the abilities in decision making, and the abilities in child's care are more improved than before participation in the program and more than 28 mothers who did not participate. For the studies of Jindamongkol and Luebunthawatchai (1998) who studied the effects of using an empowerment program on the coping abilities of schizophrenic patients. The results revealed that the coping abilities of schizophrenic patients who participated in the program is increased than before participation and more than those who did not participate, including Pensirinapa (1995) who studied the effects of empowerment program on prevention smoking among secondary school students in Supanburi Province. The researcher and teachers arranged 5 days program for 48 student leaders from 12 classrooms. They were trained to arrange activities and plan for prevention of smoking for classmates. The results showed the experimental group of students is positively changed which the statistically significance level of self-esteem, self-efficacy, immediately after program and after the period of follow up.

Empowerment is therefore the process of effected results in encouraging the perceived of self-esteem, the perceived self-efficacy, and the results of health of which

could be used by health personnel in problem solving and in encouraging health behavior to people at all levels. Bringing the process of empowerment to be used together with sources of encouragement to the perceived self-efficacy will make the process of empowerment more effective.

## **2. Empowerment and the perceived self-efficacy**

Empowerment is the process of making people to have abilities to work for fulfillment of the objective by giving the support, authority, resources including motivation to have self-confidence, the perceived of self-efficacy to control ways of living or their own lives. Therefore, the perceived self-efficacy is a result of process of empowerment such as Davison & Degners (1997) who used empowerment process to motivate the perceived self-efficacy in new patients diagnosed prostate cancer to prove the hypothesis that empowerment can help them to make decision in treatment plan and reduce their anxiety or depression. Sixty prostate cancer patients were divided into control group and experimental group, each group consisted of 30 persons. The experimental group received empowerment program accordance with empowerment concept of Conger & Cannungo of which developed from administrative theory and the perceived self-efficacy theory of Bandura with 5 steps as follows: 1). Identification of causes of losing power 2). Setting strategic methods for empowerment by setting the information and questions that related to the illness that the patients can directly ask the physician 3). Preparing for perceived self-efficacy promotion and setting rid of source of powerlessness 4). Power formation and 5) Evaluation. For control group, they were provided only description or information of the illness. Evaluation of anxiety and depression was made at 6<sup>th</sup> weeks. It was found that more cooperation for treatment in the experimental group was increased whereas anxiety and depression was decreased with statistically significance level compared to before test. Pellino et al. (1998) studied the increasing of the perceived self-efficacy using process of empowerment in preparing the orthopedic patients before surgery. The 39 patients in the experimental group received knowledge both before and after surgery and have been trained following VCD, whereas the control group of 35 patients received knowledge as usual. The results showed that the perceived self-efficacy of the experimental group is more increased with the statistically significance level than the control group. For Mishra et al's (1998) studied the evaluation of the

program in giving knowledge to increase the control of breast cancer in Latin women, the experimental group of 51 women received knowledge and training breast examination. The theory of perceived self-efficacy of Bandura was used for 10 weeks, the results found that the knowledge, the perceived self-efficacy, attitudes, and breast examination behavior in the experimental group has much improved with statistically significance level when compared to before program participation and than the control group.

For the studies in Thailand to support the process of empowerment is impacted to the increase of the perceived self-efficacy such as the studies of Sathirapanya (2001) in 76 ischemic stroke patients. The experimental and the control groups included 38 persons. The patients and relatives of the experimental group received the empowerment in accordance with program for 7 days, received learning in partnership through group process, training to lessen distress, relatives received skill training in social support, and the control group received activities provided by hospital as usual, the results revealed that the empowerment program could affect the increasing of quality of life, the perceived self-efficacy, self-esteem, of both patients and relatives with statistically significance level and found that the knowledge and skills in patient care among the relatives was also significantly improved. Chantarachot (1997) studied the effective results of empowerment training in experimental group of 34 nursing students in 3 days and follow up one a week for 3 weeks continuously, and the control group for 34 nursing students received no arrangement, the results found that the professional attitudes score of test group, self-esteem, the perceived self-efficacy in the experimental group increased more than before program participation and more than the control group with statistically significance level.

### **3. Empowerment for promoting the perceived self-efficacy of caregivers**

In reviewing the literature related to the empowerment which affected promoting the perceived self-efficacy of caregivers, Skulnum (2001) studied the effects of empowerment program on the perceived self-efficacy for self-management among mothers of children with congenital heart disease age 3 months to 6 months by arranging the experimental group for 30 mothers to receive knowledge, practice for lessening distress, practice in taking care of congenital heart disease children. The results found that the average score of the perceived self-efficacy for self-management

of the experimental group was more than before participation in the program and more than 30 mothers in the control group with the statistically significance level ( $<.05$ ). Petchtone (2002) studied the effects of empowerment program on caregiving abilities, self-efficacy and self-esteem among family caregivers of cerebrovascular disease patients. The study was based on one group pre-post test design. The sample was 30 relative and 30 patients. The relative who participated in the program received the empowerment accordance with Gibson's process through group process, knowledge was given, trained the skill of care in cerebrovascular patients. The results found that Gibson's process of empowerment affected the improvement of knowledge and abilities, self-efficacy and self-esteem more than before participation in the program with the statistically significance level ( $P<.001$ ).

It can be summarized that the empowerment affects the perceived self-efficacy of all group of population, especially for the group of caregivers, in addition to increase the perceived self-efficacy and caring behavior. However, these studies were measured only before and after participation in the program, the studies to follow up the effects of maintaining the perceived self-efficacy is still lacking. Therefore, studies and follow up for long terms should be continued.

### **Autistic Child Care**

The researcher reviewed related literatures in taking care of autistic children, synthesized the knowledge in accordance with the categorized level and presented the integrated knowledge as follows:

**1. The literature related to autistic child's care in foreign countries** discovered by researchers from the year 1976-2003 found that the studies of autistic child care have been widely made with interest in many different aspects from different sectors of professional such as physicans, psychologist, nurses, educators, behavioral therapists for long times and continuously. In nursing, during the past years, a few studies have been made, however, the point of studies was not different. The researcher therefore summarized all of the integrated knowledge and presented with categorized level and the point of studies as follows:

### **1.1. Knowledge at the level of description, explanation, and prediction**

#### **1. Studies the impact of autistic child care**

The studies the impact of caregivers in caring of autistic children can be summarized into 2 aspects: The impact to caregivers in autistic child care and impact to member of family.

**Impact to caregivers in autistic child care;** found that psychological impact is very importance and was commonly found. The most often problem found is stress (McKinney & Peterson, 1987; Bouma & Scheitzer, 1990; Catharina, 1995; Sanders, 1993), because of child disorders, especially dysfunction in verbal communication and the loss of relationship. Some caregivers faced with depression (Olsson & Hwang, 2001; Fisman, Wolf Noh, 1989) which is considered severe impact and is urgently required for treatment. In addition, autistic child care affect the physical impact. Mothers who take care of autistic adolescent child have reported the increasing of difficulties in behavioral performances and the limitation on physical abilities including the decreasing of skills of self-help because of tiresome from child care (Donovan, 1988) and this impact is also affected child care (Holrold & McArthur, 1976).

**Impact to member of family;** showed that autistic child care by mother affected the relationship between husband and wife because most of the times have been spent in taking care of autistic child which may cause the lack of attention to husband and normal children and leading to divorce, siblings of autistic children may feel being neglected and autistic children themselves are lacking of development and self-help as should be capacities (Gray, 1994; Rodrigue, Morgan & Geffen, 1990).

#### **2. Studies the factor of relationship of caregiver with autistic child care**

The results indicated that the factor influencing caregivers to take care of autistic children is parent's distress related to child care behavior (Sanders, 1993, Moes et al., 1992). In addition, it was found that autistic boys and boys with more older age, including the severity of disorder is resulted to affect distress and caring behavior (Bebko, Konstantareas & Springer, 1987).

Promoting caring behavior and social support can help lessening caregivers' distress and is also related to child care behavior (Dunn et al., 2001). The perceived self-confidence is a factor that caregivers used in real practice (Vacaro, 1993)

including confidence of being caregivers is related to behavioral performance of child care (Sharpley, Bisika & Efremidis, 1997).

### **1.2 The studies from qualitative research report**

It was discovered that five studies have been made; studies of life experience of being parents of adolescent autistic children with 6 themes of anxiety as follows: 1) Anxiety related to child behavioral disorders 2) Anxiety related to social and communication 3) Anxiety related to education and service receiving 4) Anxiety related to family 5) Anxiety related to health care professionals and 6) Anxiety related to the independence and the child's future (Fong, 1992). The study from parents on the problems occurred during child's awaiting of diagnosis such as the role of parents in promoting child's normal development, uncertain to the saying of professionals that diagnosis, causes, treatments, prognosis of disease was known and parents wanted to take part in care with team of health personnel and to cooperate for solving the problem in delayed development and child's disorders (Avdi, Griffin & Broug, 2000). Study of E-mail group of the parents of autistic children arising from receiving insufficient information and the needs to receive help and suggestion in child care found that the information used by group divided into 4 meanings such as to seek for the meaning of autism, to adjust to the changes, to help and motivate to each other and exchange of experiences (Huws, Jones & Ingledew, 2001). Another 2 subjects such as studies services system to autistic children found that the parents are dissatisfied on the lack of coordination and communication between them and health personnel, needs of explanation and the opportunity of consultation, support the family by training to be able to take care of autistic children, provide home program, and be equal to receive services (Kerrell, 2001; Sperry, Whaley, Shaw & Brame, 1999).

### **1.3 The knowledge at operational level**

The knowledge of this level is received from the experimental researches. The main subject of studies was medical model emphasized on autistic children therapy using different kinds of drugs such as serotonin reuptake for lessening aggressive behavior (Kuffmann, Vance & Pumriega, 2001; McComick, 1997), educational therapy (Penerai, Ferrante & Zingale, 2002), behavioral therapy (Lovaas, 1987). The less was found in studying for response to problems and the needs of caregivers, and the studies can be divided into 2 types; The studies about the program

allowing caregivers to take participation by increasing the capabilities in the care of autistic children. The results found that caring behavior of caregivers is corrected and is much increased, and the social communication of all children in whole program is also increased, including Ecological Communication Orientation (Elders, 1995), the NAS EarlyBird Program (Shields, 2001) and family therapy by adding bond into parents of autistic children of 10 families found that effective results were received from only two family while another 8 family were not received (Zappella et al., 1991).

Reviewing research report related to autistic child care as the role of foreign countries believe that the integrated knowledge at the level of description, explanation and prediction in autistic child care are available enough to make understanding concerning autistic child care except the knowledge concerning the encouragement to skill and confidence of caregivers and is still not enough to lead to the assistance to help caregivers to be able to perform the caring behavior by themselves at homes.

## **2. Integrated knowledge received from studies in Thailand**

Most of studies belong to Graduate students. From reviewing, the first study on this subject was made in the year 1991. The reviewing has been continuing up to present. Most of studies aimed to look for the resulted affect caregivers, coping with problems, and behavior of child care. Therefore, the integrated knowledge has been summarized and presented as follows: The studies about the impact from taking care of autistic children found that parents are having negative attitude toward children on problematic behavior and the difficulties of bring them up caused feelings of burdensome and distress (Suwantos, 1998; Wongschoom, 1996). This distress affected child care behavior (Supuckwanich, 2000) and some parents were physically ill and depressed (Thanyamanta, 1991). Times for own self, husband and normal child were decreased and affected quality of mother's life (Puekpong, 1998) and the family relationship was at low level and caused divorce.(Pisek, 1999).

The studies on coping of problems: seeking for information from several sources was made from the times of awaiting child's diagnosis up to the times of acceptance of information in relation to knowledge of disease and child care (Chantarachot, 2000), needs of social support, emotionally, information, and services from health personnel, these supports are impacted to level of parents' distress (Keownopratana, 1998) and method of solving the problems to autistic child care

behavior. Some caregivers used method of scolding, beating, and solving problems on behalf of children, allowing them seeing VCD in order to encourage them staying at one place longer, the very important problem is that caregivers have no knowledge of training child's behavior, therefore, no training has to be made, bringing child to hospital can cause caregiver less times for training, the expenses is high, awaiting for queue is long, and hospital is far from home (Khuanakere, 1998) in correspond to Kalaya Viriya's study (Viriya, 1996) which found that mothers who were lacking of knowledge in disease and in autistic child care were impacted to the right behavior of child care.

### **3. The studies of the knowledge of Nurses**

On the knowledge and early diagnosis of disease in well baby clinic throughout the country found that the knowledge of disease and early diagnosis to select autistic children of nurses was at moderate to less (Tilokskulchai, Asadaporn, and Sitthimongkol, 1998; Thamawasee, and Danpradit, 2000).

Selection of children to receive diagnosis and the effective treatment from early age will be good for children's prognosis.

The study about the methods of assistance to caregivers; using group supportive therapy found that mothers having increased in coping behavior with stress (Sriakhachin, 2000).

Knowledge received from studies in Thailand is considered substantial but not enough. The studies for the factors as guideline to help this group of caregivers and the studies on developmental stimulation or the methods of assistance to caregivers to be able to perform the true corrected behavioral child care at home is required.

From reviewing the literatures in relation to autistic child care both in foreign countries and in Thailand, received knowledge at level of description, explanation, and prediction, the impact of autistic child care, factors affecting the child care while the caregivers are still coping with problems and responsible in child care alone. Not only from the system of health care service which was not facilitated to the caregivers to have opportunities in taking part of child care but also caregivers are only received order from health personnel to do a care without considering to the problems and the readiness of the caregivers. The knowledge received is therefore not sufficient enough

to help caregivers to have confidence and to have caring behavior in autistic children correctly and continuously.

The concept, theory, and related research report received from the review of literature on autism, problematic behavior, and the needs of care, caregiver and autistic child care behavior, the perceived self-efficacy concept, empowerment concept and autistic child care demonstrated the symptoms and behaviors of autistic children which caused problems to caregivers in child care. While during child care, the caregivers were expressed of problems physically, emotionally, socially, and economically, these problems affected the perceived self-efficacy and caring behavior. Therefore, the results of these problems are impacted to autistic children themselves in lacking of stimulation in all aspects of development and in lacking of behavioral modification appropriately in order to help children of self-help accordance to their should be capabilities. There are several methods of treatment to autistic children, but no single method of treatment can be rehabilitated autistic children completely without recurrent. Several attempts to seek for the ways out have been made as much as possible. The often most research studies and effective method is by behavioral modification in child's development and training children with the appropriate behavior from early childhood continuously (Trankasombut, 2002; Cattell-gordon & Cattell-Gordon, 1998; Lavaas, 1998; Panerai, Ferante & Zingale, 2002; Smith & lovass, 1998). Parents or primary caregivers are most important persons to motivate child's development, the most important treatment is by treatment at home (Pongpanich, 2001; Trakasombut, 2002). Thus the development of integrated knowledge on autistic child care to be effective, nurse should prepare parents or caregivers with knowledge, abilities, including confidence to take care of autistic children by developmental stimulation and treat them with the appropriate behavior, especially in preschool children in order to help them of developmental abilities to enter into school society.

In summary, the concept of empowerment is the process of promoting the perceived self-efficacy. Therefore, the researcher used the empowerment concept to create the program in promoting the perceived self-efficacy of caregivers in autistic child care be increased and maintained for long time which will be resulted further to good effect to both caregivers and the autistic children.

## CHAPTER III

### METHODOLOGY

In this chapter, the research design, setting, population and sample are described. The instrumentation, data collection procedures and data analysis are also presented.

#### Research Design

This research aimed at studying the effect of empowerment program for caregivers to promote the perceived self-efficacy in caring of autistic children. It is a Quasi-experimental pretest-posttest non-equivalent comparison group design, using Gibson's (1995) empowerment concept and Bandura's (1997) self-efficacy theory as framework for study.

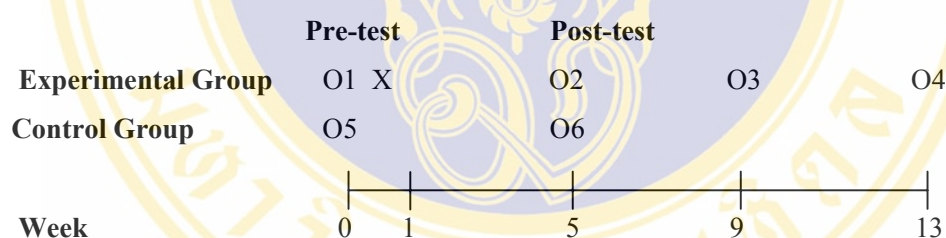


**Figure 3.** The research design for the effect of the empowerment program on promoting perceived self-efficacy in caring of autistic children.

O1, O5 refer to perceived self-efficacy scores prior to the start of the empowerment program.

X refers to the empowerment program that was conducted with the experimental group.

O2, O3, O4 refer to perceived self-efficacy scores of the experimental group at 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> week after the program.

O6 refers to perceived self-efficacy scores of the control group at the 4<sup>th</sup> week after the program ended.

## Population and Sampling

The eligible populations in this study were primary caregivers whose autistic children received first treatment services at Child and Adolescent Mental Health Institute, Rajanakarin, with criteria as follows:

### 1. Inclusion Criteria

#### Autistic children

1. The child was diagnosed autism by a psychiatrist based on DSM IV.
2. The child's age was between 2-5 years.
3. The child was allowed by a psychiatrist to participate in the current study

#### Caregivers

1. Primary caregiver had to be father, mother, or relative who was a primary caregiver taking care regularly and continuously more than others and lived in the same house with autistic child.
2. Primary caregiver was able to verbally communicate with the researcher.
3. Primary caregiver signed consent to participate in the study.

### 2. Exclusion criteria

1. The sample who could not participate through out all group sessions.

**Sample size:** The sample size was calculated by using statistical power analysis by Jacob Cohen (1988) as follows:

$$n = \frac{n_{.05}}{400 f^2} + 1$$

Given  $n$  = numbers of sample of this study

$f$  = effect size index for f-test =  $\frac{1}{2} d$

And  $d = \frac{m_A - m_B}{\sigma}$

$n = 1571$  when significant level of .05,  $u = 1$ , and power = .80 at  $f = .05$  (from table)  
given  $m_A, m_B$  = population means expressed in raw unit.

$\sigma$  = the standard deviation of either of population (since they are assumed equal).

Means of  $m_A, m_B$  was received from the pilot study of 5 caregivers,  $m_A = 61.1712$ ,  $m_B = 74.3243$  and standard deviation ( $\sigma$ ) = 18.7199 when the means were substituted, the sample of 32 for each group was obtained. However, the computation was extended to cover the loss of sample for 15%. Thus the size of sample in each group was equivalent to 37 persons, totally 74 persons.

However, at the 8<sup>th</sup> week after the program ended, one caregiver got sick and was excluded from the 8<sup>th</sup> and the 12<sup>th</sup> weeks followed-up because she could not take followed-up post-test and booster.

### **Selection of sample**

Sample was selected from caregivers with the designed qualifications from the registration record of autistic children who attended the Child and Adolescent Mental Health Institute. The group was purposively selected and divided into control and experimental group for 37 persons in each group and matched control and experimental groups by gender of children and gender of caregivers. Using gender in both autistic children and caregivers to match for this study for reducing bias because there were no study to support that gender in both groups affect perceived self-efficacy and caring behaviors or not.

### **Setting**

The setting for conducting this research was institution providing care for child and adolescence and family problems. For caring of autistic children, the routine care was made, the first step was to meet doctor for diagnosis, after that caregivers were assigned into a group about 20 pairs under intensive program for duration of 5 days, 3 hours per day.

Training was conducted for self-assistance, practice of fine and gross motor and art therapy. After that, the appointment for training was made every month, for 5 sessions a month, 3 hours a day for 3 months, then allowing to day care group inclusion for every week, 2 days a week.

## Instrumentation

The instrumentation in this research was divided into 2 types as follows:

### 1. The intervention

The intervention in this study is the empowerment program for caregivers of autistic children which the researcher arranged the process of giving knowledge in autistic child's care to caregivers in the domains of: being partnership in care such as speech and means of communication, performance of daily's activities and playing, advocacy, efficient dealing with health care system, approach with health team, negotiation, to enable the caregivers to have confidence in caring autistic children. This intervention is designed accordance with the concept of Gibson's empowerment model and the perceived self-efficacy of Bandura (1997) through group process to enable several of caregivers be able to participate in each program and being empower to each other as the following process:

#### 1) Group opening

The researcher leads the group to proceed as follows:

##### 1.1 Making relationship by:

- Welcome speech and introduce group leader
- Allowing members introduce themselves such as name and surname, address, the data concerning autistic child such as name, age, sex, the number of child. In case that caregivers take the care assistant with them, the care assistant will be allowed the group observer.

##### 1.2 Making assumption in the subject:

- **Objective of program participation** to induce group members to have the same objective and trying to cooperate in solving problems and sustain in the group until the end in order to empower to perceive self-efficacy in taking care of autistic children.

- **Regulations of group** in order to fulfill the group objectives, thus group members ought to cooperate and follow the regulations of group as follows: be good listener, speak one at a time, talk about things sharing interesting by group with constructive thoughts.
- **Confidentiality**, all members of the group including group leader must pre- agree that what was talking about in the group will be kept secret only within the group, and will not be disclosed or any information will not be given to the outsiders of the group because being participation in the group must be with good intention and with open minded in order to enable group's operation fulfills the objective.
- **The steps of group activities** to enable group participation and fulfill the group's objectives.
- **The duration used in group participation and the evaluation**, group's participation took 8 sessions, first 5 sessions will be a group session in every day, each session will take about 3 hours, times will be from 9.00 am to 12.00 am. The final 3 sessions will be group session in every 4 weeks. Times used will be approximately 3 hours for each session, and times will be from 9.00 am to 12.00 am. First evaluation, will be taken on preprogram, after that program evaluation will be made on 2<sup>th</sup>, 3<sup>th</sup> and 4<sup>th</sup> week after the program.

## 2) Duration of group operation

To operate by following autistic child's care program in the topics of:

- 1<sup>st</sup> session, the knowledge of autism, the care in speech and means of communication
- 2<sup>nd</sup> session, the care in performance of daily's activities
- 3<sup>rd</sup> session, the care in playing
- 4<sup>th</sup> session, advocacy and efficient dealing with health care system, approaching and negotiation with health care team
- 5<sup>th</sup> session, review all 4 activities
- 6<sup>th</sup> session, review all 4 activities

- 7<sup>th</sup> session, review all 4 activities
- 8<sup>th</sup> session, review all 4 activities

Each session is consisted of 4 steps of the followings:

- 2.1 Discovering reality
- 2.2 Critical Reflection
- 2.3 Taking charge
- 2.4 Holding on

When the practice of situational management was passed, and during duration the caregivers having opportunity for skill training of real care, the researcher will give booster intervention in the periods of every month for 3 months to boost confidence of holding on to caregivers after discharge from empowerment program.

### 3) Group ending

The group leader performs as follows:

- Summarize program participation by group members.
- Give opportunity to group members to express their opinion on problems and obstacle arisen from program participation and plan to solve problems in next session.
- Explain methods of recording children's behavioral recording and caring behavior in the record book.
- Make appointment and topic for the next session.
- Thank to group members for their cooperation.

The detail of empowerment program in each step as shown in Appendix A.

## 2. Instruments

The instruments used to gather data consisted of:

2.1 General data record forms consists of caregiver's data such as age, sex, educational level, occupation, family's income, duration of autistic child's care, and child's data such as numbers of sisters and brothers of autistic child, age, sex, (Appendix B).

2.2 The perceived self-efficacy in autistic child care Scale (Appendix C).

The researcher developed the instrument for assessment the perceived self-efficacy in autistic child's care of the caregivers by reviewing the literature and focus

group interview according to the perceived efficacy concept of Bandura (1997), perceived caregivers-efficacy in autistic child's care consisted of partnership in care with health care team, advocacy, efficient dealing with health care system, learning to persist, negotiation with health care team to achieve the desired objectives considered from personal beliefs in capabilities to engage in increasingly more demanding bouts of a given activities (task self-efficacy) and beliefs in personal capabilities to overcome barriers to engage in a behavior (barrier self-efficacy) (Pender, 2002) constructed the questions for 38 questions using the record of decision's abilities for 10 scores of each question from 0 (no at all can do) to 100 (certain can do) and brought to test for validity of the content from 5 experts, then be tested and in trial used with caregivers of autistic child for 30 persons in seeking for the mean of confidentiality. When the questions with 1 negative of corrected Item correlation was deleted, the remaining 37 questions will receive correlation mean of Alpha's coefficient equivalent to .9479 and when brought to be used in real practice with caregivers for 74 question items, the Alpha's coefficient mean was .9045.

The instrument composed of 37 items with details as follows:

- 1) Item 1-18, Teaching speech and means of communication.
- 2) Item 19-27, Practice of performance of daily's activities.
- 3) Item 28-31, Playing.
- 4) Item 32, Advocacy.
- 5) Item 34, Efficient dealing with health care system.
- 6) Item 33 and 35, Learning to persist.
- 7) Item 36, Negotiation with health team.
- 8) Item 37, Partnership in general care with team of health team.

The sample selected to answer the questions most suited to their perception by considering of how much more or less of confidence in self-abilities at present in behavioral performance as indicated in each item. The level of confidence must be appraised in percentage from 0 to 100 as follows:

|            |    |    |    |    |    |                    |    |    |    |         |
|------------|----|----|----|----|----|--------------------|----|----|----|---------|
| 0          | 10 | 20 | 30 | 40 | 50 | 60                 | 70 | 80 | 90 | 100     |
| not at all |    |    |    |    |    |                    |    |    |    | certain |
| can do     |    |    |    |    |    | moderately certain |    |    |    | can do  |

The more of total score is indicated of high perceived self-efficacy of caregivers in autistic child's care and the less of total score is indicated of low perceived self-efficacy of caregivers in autistic child care.

### **Validity and Reliability**

#### **1. Empowerment program for caregivers in caring of autistic children:**

The manual of autistic child care revised from the manual of autistic child care and speech training for caregivers of Yuwaprasart Waitayopatum Hospital with permission. The empowerment program and the manual of autistic child care were content validated by 5 experts, which consisted with 1 nurse instructor specialized in autistic child care, two physicians specialized in autistic child, one psychologist, and one speech therapist. The manual was pilot studied with 5 caregivers of autistic children for clarity and understandable of the content.

#### **2. The perceived self-efficacy in autistic child care form:**

2.1 Validity assessment. The perceived self-efficacy instrument was content validated by 5 experts, which consisted with one nurse instructor specialized in autistic child care, two physicians specialized in autistic child, one psychologist, and one speech therapist.

2.2 Reliability Assessment. After content validity was obtained, the internal consistency using Cronbach's alpha co-efficient has been seek from 30 caregivers who had similar characteristics to the subjects.

### **Research Assistant preparation**

A research assistant was trained to correct pre-test and follow up data. The research assistant in this study was professional nurse received specific training to autistic child's care. First stage, the researcher used 3 hours in work's demonstration by explaining the objectives and the methods of research, rights protection of the participant in this research. Research assistant will receive the questionnaire. Instructions for conducting the study questionnaire were provided. He did trial runs of data collection in real situation to demonstrate his understanding of the instructions.

Inter-rater reliability of perceived self-efficacy in care of autistic children was determined from five pairs of perceived self-efficacy scores that were assessed by the researcher and the research assistant. The agreement of this test was one hundred percent.

## Data Collection

After obtaining permission from The Committee on Human Rights Related to Human Experimentation, Mahidol University and the director of Child and Adolescent Mental Health Institute, Rajanakarin. The data collection proceed the following steps:

1. They were informed of the purpose and procedure of the study and asked for their cooperation. This research selected sample groups by the purposive sampling method. The data were collected between September 1, 2004 to February 25, 2005 total 24 weeks.

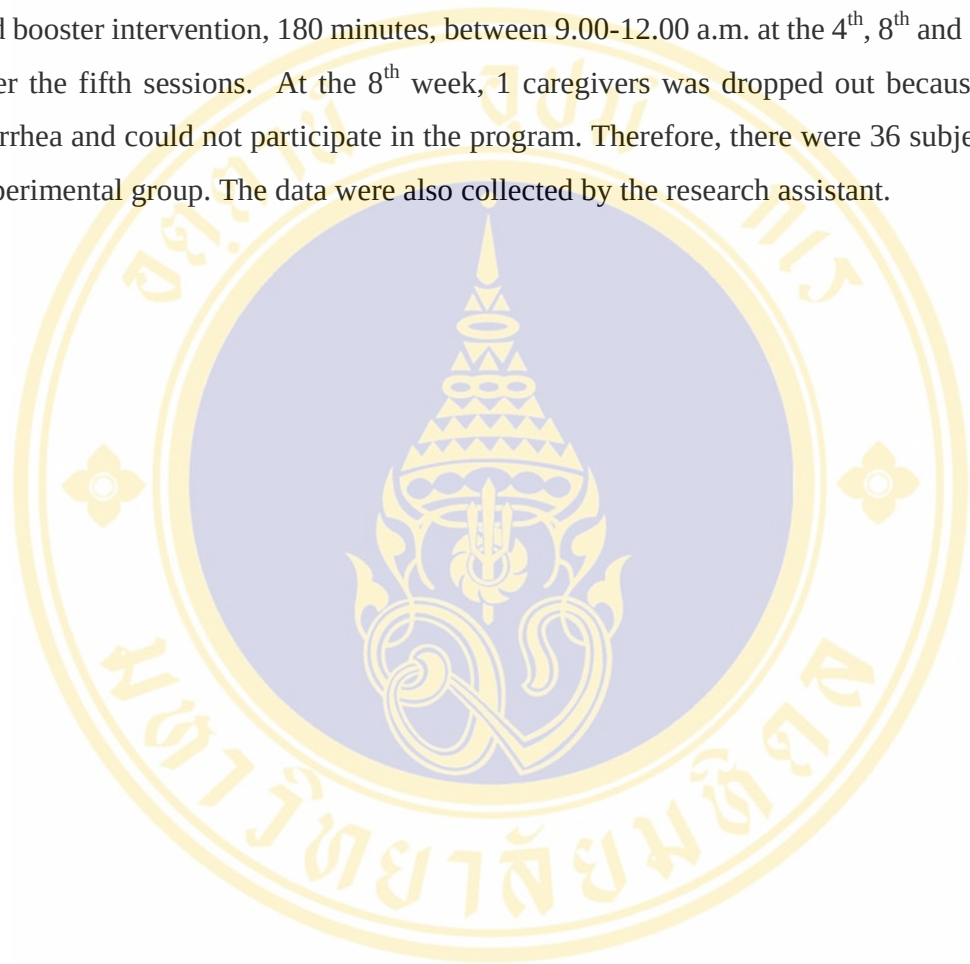
2. The researcher determined the list of 2-5 years old autistic children first received treatment at the Child and Adolescent Mental Health Institute, Rajanakarin. The study samples were selected from caregivers and autistic children who conformed to inclusion criteria.

3. The caregivers were individually, personally contacted. The researcher informed the caregivers about the purpose, risk and benefits of the study and the right to withdraw from the study any time without any effect to them and their children. The researcher then requested permission to include the caregivers and their autistic children in the study. Each caregiver signed the consent form (Appendix E) if she/he agreed to participate in this study. The subjects were chosen into the experiential or control group by gender of caregivers and autistic children.

4. The 37 subjects in the control group were asked to complete the general information form and the perceived self-efficacy in care of autistic children questionnaire as a pre-test. After the first collecting data, at the 5<sup>th</sup> week, the subjects in the control group was asked to complete the form and questionnaire as post-test. By collecting data from the control group first to avoid contamination. The data were collected by the research assistant with the awareness of which group the sample were in.

5. The 37 subjects in the experimental group were asked to complete the general information form and the perceived self-efficacy in care of autistic children questionnaire

(as a pre-test). Then the subjects were asked to participate in the empowerment program, consisting of five sessions, 180 minutes each between 9.00-12.00 a.m. for five days. The researcher arranged the examination on perceived self-efficacy in care of autistic children and booster intervention, 180 minutes, between 9.00-12.00 a.m. at the 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> week after the fifth sessions. At the 8<sup>th</sup> week, 1 caregivers was dropped out because she got diarrhea and could not participate in the program. Therefore, there were 36 subjects in the experimental group. The data were also collected by the research assistant.



**Process of research study can be summarized as following diagram:-**

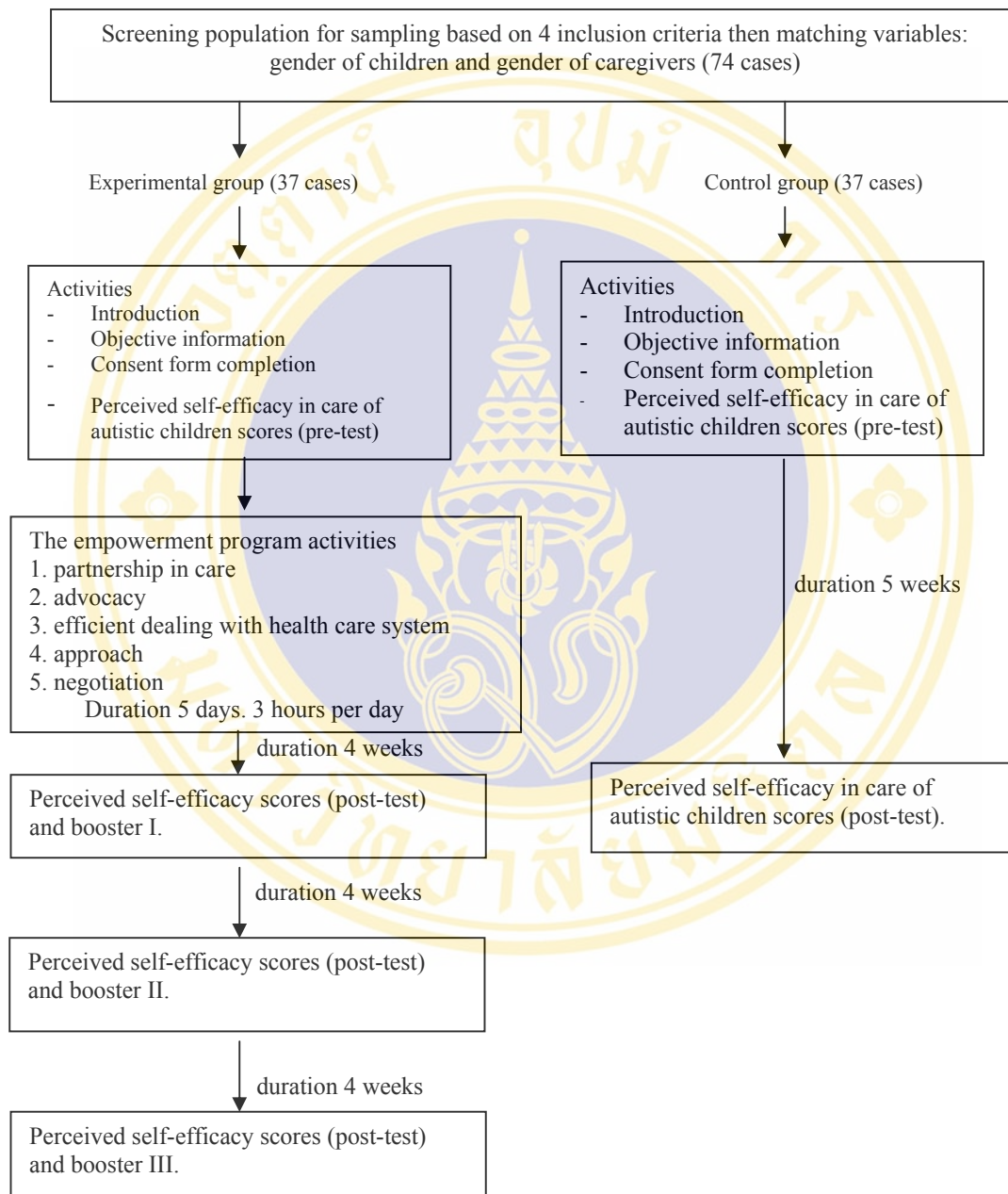


**Figure 4.** Summary of the study procedures.

## Protection of Human Subjects

The researcher must protect the rights of caregivers and children by introducing myself, explaining the objective of research, the steps of data collection and duration of research, including notification of rights in acceptance or refusal to participate in this research. During the study, if children and caregivers do not want to continue in participation until completion, the caregivers can withdraw without giving any reasons. The refusal to participate in the study will not do any harm to the regular care that they should receive. All data received under this study will be kept confidentiality. Names of caregivers and children will not be disclosed in presentation of data, but the code names will be used instead and the data will be presented as a group without individual identification.

## Data Analysis

The data of the study was analyzed by using Computer Statistical Package and the following statistical methods were used:

1. Descriptive statistics were performed to describe the demographic characteristics of the samples.
2. Analysis of Covariance (ANCOVA) was initially conducted to compare perceived self-efficacy scores obtaining at the 4<sup>th</sup> week after the intervention between the control and the experimental groups using pre-test scores and age of children as covariate variables. Since the assumption of ANCOVA was not met, thus, a comparison of the mean post-test scores of perceived self-efficacy in the experimental and the control groups after intervention was tested by using independent t-test.
3. Analysis of variance (ANOVA) was conducted to examine the differences in the mean scores of perceived self-efficacy over time in the experimental group. To determine which post-test scores differed from each other, a post-hoc test using the Scheffe test was conducted.

## CHAPTER IV

### RESULTS

This chapter presents the results of data analysis organized into four sections. First, characteristics of the sample are described. Next, the description of the perceived self-efficacy in autistic child care is presented. Third, an examination of the assumption for statistics used is also presented. Last, findings are arranged corresponding with the research hypotheses.

#### **Characteristics of the Sample**

The sample in this study consisted of 74 caregivers whose children were diagnosed as autism. Thirty-seven of these caregivers were recruited into the empowerment program (experimental group) provided by the researcher while the others did not (control group) and were waiting to get into the conventional program provided by the institutional staff. Below are description of the demographic characteristics of the caregivers and their autistic children in both groups. Also, the statistical tests for group differences on those demographic variables are presented. Significant group differences emerged for these two groups on child-care assistant and the child's age.

##### **1. Demographic characteristics of the caregivers**

Almost all of the caregivers in the experimental (89%) and the control (89%) groups were female. Over half of them in each group (65% vs 68%) were the child's mother; and the majority were married (87% vs 89%). Most caregivers in both groups were housewives (73% vs 78%) while the remainder had their own business, and worked in a government organization. Slightly more than half of the caregivers (54%) in the experimental group had no child-care assistants while the majority of their counterparts

(84%) did. Regarding to the caregivers' health status, over 80% of them in both groups (81% vs 86%) reported no physical illness. While the caregivers in the experimental group spent averaged 20.6 hours/day ( $SD = 6.1$ ) in care for their autistic child, those in the control group spent slightly lesser, that is, 17.9 hours/day ( $SD = 7.6$ ). The average ages of the caregivers in both group were 39 years ( $SD = 12.2$ ) and 36.7 years ( $SD = 8.8$ ), respectively. The number of years in education in both group was approximately ten years ( $10.7 \pm 4.6$  vs  $11.2 \pm 3.9$ ). Monthly personal income and family income of both groups were very skewed, thus, median of those income were reported (See Table 1).

**Table 1** Demographic Characteristics of the Caregivers

| Characteristics               | Experimental group |                           | Control group   |                           | <i>t</i> | $\chi^2$          |
|-------------------------------|--------------------|---------------------------|-----------------|---------------------------|----------|-------------------|
|                               | <i>n</i><br>(%)    | <i>M</i><br>( <i>SD</i> ) | <i>n</i><br>(%) | <i>M</i><br>( <i>SD</i> ) |          |                   |
| Gender                        |                    |                           |                 |                           |          |                   |
| Male                          | 4<br>(11)          |                           | 4<br>(11)       |                           |          | .64 <sup>a</sup>  |
| Female                        | 33<br>(89)         |                           | 33<br>(89)      |                           |          |                   |
| Relationship with children    |                    |                           |                 |                           |          |                   |
| Mother                        | 24<br>(65)         |                           | 25<br>(68)      |                           |          | .06 <sup>ns</sup> |
| Father/Grandparent/Relatives  | 13<br>(35)         |                           | 12<br>(32)      |                           |          |                   |
| Marital status                |                    |                           |                 |                           |          |                   |
| Married                       | 32<br>(87)         |                           | 33<br>(89)      |                           |          | .47 <sup>a</sup>  |
| Single/separate/divorce/widow | 5<br>(13)          |                           | 4<br>(11)       |                           |          |                   |
| Occupation                    |                    |                           |                 |                           |          |                   |
| Housewife                     | 27<br>(73)         |                           | 29<br>(78)      |                           |          | .29 <sup>ns</sup> |
| Others                        | 10<br>(27)         |                           | 8<br>(22)       |                           |          |                   |

**Table 1** (Continued)

| Characteristics                | Experimental group |                                          | Control group   |                                          | <i>t</i>            | $\chi^2$         |
|--------------------------------|--------------------|------------------------------------------|-----------------|------------------------------------------|---------------------|------------------|
|                                | <i>n</i><br>(%)    | <i>M</i><br>( <i>SD</i> )                | <i>n</i><br>(%) | <i>M</i><br>( <i>SD</i> )                |                     |                  |
| Assistant                      |                    |                                          |                 |                                          |                     |                  |
| Yes                            | 17<br>(46)         |                                          | 6<br>(16)       |                                          |                     | 7.63*            |
| No                             | 20<br>(54)         |                                          | 31<br>(84)      |                                          |                     |                  |
| Physical illness               |                    |                                          |                 |                                          |                     |                  |
| Yes                            | 7<br>(19)          |                                          | 5<br>(14)       |                                          |                     | .34 <sup>a</sup> |
| No                             | 30<br>(81)         |                                          | 32<br>(84)      |                                          |                     |                  |
| Caring hour per day (hours)    |                    | 20.6<br>(6.1)                            |                 | 17.9<br>(7.6)                            | -1.67 <sup>ns</sup> |                  |
| Age (years)                    |                    | 30.9<br>(12.2)                           |                 | 36.7<br>(8.8)                            | -.93 <sup>ns</sup>  |                  |
| Mean year of education (years) |                    | 10.7<br>(4.6)                            |                 | 11.2<br>(3.9)                            | .52 <sup>ns</sup>   |                  |
| Monthly income (Baht)          |                    | 6459.5<br>(12278.2)<br>(median = .00)    |                 | 5216.2<br>(7767.9)<br>(median = .00)     | -.52 <sup>ns</sup>  |                  |
| Monthly family income (Baht)   |                    | 24756.8<br>(16511.6)<br>(median = 20000) |                 | 25432.4<br>(17385.4)<br>(median = 20000) | .17 <sup>ns</sup>   |                  |

*a* = probability of Fisher's exact test.

*ns* = the difference was not statistically significant.

\**p* < .05

## 2. Demographic characteristics of the autistic children

Almost all of the autistic children in the experimental (89%) and the control (89%) groups were male. Over half of them in each group (65% vs 65%) were first born; and approximately half of them (51% vs 54%) had no siblings. An averaged age of the autistic children in the experiment group was less than that in the control group ( $38.8 \pm 9.6$  vs  $44.7 \pm 9.4$ ) (See Table 2).

**Table 2** Demographic Characteristics of the Autistic Children

| Characteristics   | Experimental group |                           | Control group   |                           | <i>t</i> | $\chi^2$          |
|-------------------|--------------------|---------------------------|-----------------|---------------------------|----------|-------------------|
|                   | <i>n</i><br>(%)    | <i>M</i><br>( <i>SD</i> ) | <i>n</i><br>(%) | <i>M</i><br>( <i>SD</i> ) |          |                   |
| Gender            |                    |                           |                 |                           |          |                   |
| Male              | 33<br>(89)         |                           | 33<br>(89)      |                           |          | .64 <sup>a</sup>  |
| Female            | 4<br>(11)          |                           | 4<br>(11)       |                           |          |                   |
| Birth order       |                    |                           |                 |                           |          |                   |
| First-born        | 24<br>(65)         |                           | 24<br>(65)      |                           |          | .00 <sup>ns</sup> |
| Followings        | 13<br>(35)         |                           | 13<br>(35)      |                           |          |                   |
| Number of sibling |                    |                           |                 |                           |          |                   |
| 0                 | 19<br>(51)         |                           | 20<br>(54)      |                           |          | .90 <sup>ns</sup> |
| 1                 | 10<br>(27)         |                           | 12<br>(32)      |                           |          |                   |
| >1                | 8<br>(22)          |                           | 5<br>(14)       |                           |          |                   |
| Age (months)      |                    | 38.8<br>(9.6)             |                 | 44.7<br>(9.4)             | 2.66*    |                   |

<sup>a</sup> = probability of Fisher's exact test.

<sup>ns</sup> = the difference was not statistically significant.

\**p* < .05

### Description of the Perceived Self-Efficacy in Autistic Child Care Scores

The mean scores and standard deviations of the perceived self-efficacy in autistic child care of both experimental and control group were described, as shown in Table 3 and illustrated in Figure 5.

**Table 3** Means and Standard Deviations of Perceived Self-Efficacy in Autistic Child Care of the Experimental and Control Groups as a Function of Measuring Time

| Group              | Pre-test |         | Post-test            |         |                      |      |                       |      |
|--------------------|----------|---------|----------------------|---------|----------------------|------|-----------------------|------|
|                    |          |         | 4 <sup>th</sup> week |         | 8 <sup>th</sup> week |      | 12 <sup>th</sup> week |      |
|                    | (n = 37) |         | (n = 37)             |         | (n = 36)             |      | (n = 36)              |      |
|                    | M        | SD      | M                    | SD      | M                    | SD   | M                     | SD   |
| Experimental group | 51.72    | 10.67   | 86.17                | 9.80    | 88.31                | 8.28 | 92.96                 | 5.32 |
| Control group      | 52.6545  | 12.6449 | 52.6497              | 12.6434 |                      |      |                       |      |

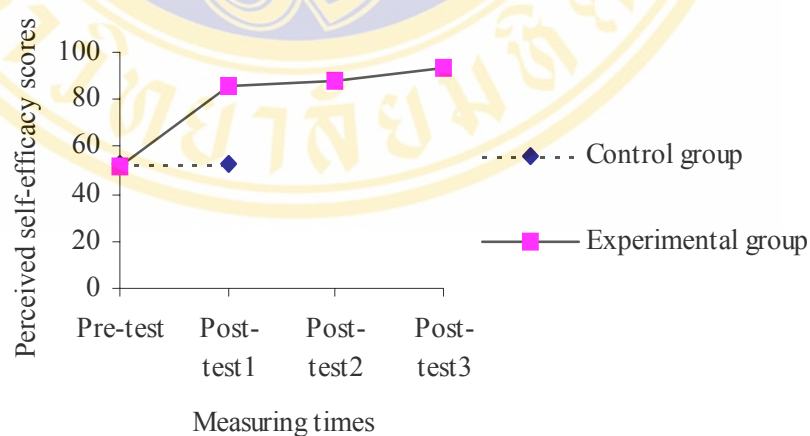


**Figure 5.** Perceived self-efficacy scores in the experimental and the control groups as a function of measuring time.

### An Examination of the Assumption for Statistics Used

As shown in Table 1 and 2, the variables of the child-care assistant and the child's age were found to be significantly different between the experimental and control groups. Thus the correlation between these two variables and the post-test scores (dependent variable) was examined to see if there were linear relationships among them. The result showed that the relationship between the child's age and the post-test scores was marginally significant ( $p = .047$ ), as seen in Table 4.

**Table 4** Intercorrelations for Number of Care Assistant, Child's age and Post-test Self-Efficacy Scores

|              | Assistant | Child's age | SE post-test |
|--------------|-----------|-------------|--------------|
| Assistant    | -         |             |              |
| Child's age  | .138      | -           |              |
| SE post-test | .174      | -.232*      | -            |

\*  $p = .047$

Then, in addition to pre-test scores, the covariate that should be put in to the ANCOVA included the child's age. Next, the assumption that there is no interaction between the covariate pre-test scores, the covariate child's age, and the post-test scores was checked. The analysis revealed that, as seen in Table 5, there was no significant interaction between the covariates and the post-test scores. However, it was noted that each covariate of the pre-test scores and the child's age were not significantly related to the post-test scores. Thus, the assumption of using ANCOVA was not met. As a result, t-test was used to compare the post-test scores between the experimental and the control groups in order to answer the hypothesis I.

**Table 5** Analysis of Covariance of Post-test Self-Efficacy Scores as a Function of Group Condition, With Pre-test Self-Efficacy Scores and the Child's Age as Covariates

| Sources of variation        | <i>df</i> | Type III<br><i>Sum of Square</i> | <i>Mean Square</i> | <i>F</i> | <i>p-value</i> |
|-----------------------------|-----------|----------------------------------|--------------------|----------|----------------|
| Corrected Model             | 5         | 21017.34                         | 4203.47            | 31.83    | .00            |
| Intercept                   | 1         | 192.39                           | 192.39             | 1.46     | .23            |
| Group (intervention)        | 1         | 1972.51                          | 1972.51            | 14.94    | .00            |
| Pre-test scores             | 1         | 126.84                           | 126.84             | .96      | .33            |
| Child's age                 | 1         | 90.05                            | 90.64              | .68      | .41            |
| Group*Pre-test* Child's age | 1         | 82.12                            | 41.06              | .311     | .73            |
| Error                       | 68        | 8980.23                          | 132.06             |          |                |
| Total                       | 74        | 386546.27                        |                    |          |                |
| Corrected Total             | 73        | 29997.57                         |                    |          |                |

## Results by Research Hypotheses

**Hypothesis I: The caregiver who participated in the empowerment program had more perceived self-efficacy in autistic child care than those who did not.**

The mean scores of perceived self-efficacy in autistic child care measured at the fourth week after completing the empowerment program were found significantly different in both experimental and control group. Independent t-test revealed that the post-test scores in the experimental group was significantly higher than that in the control group ( $t = -12.74, p < .001$ ), as shown in Table 6.

**Table 6** Group Differences for Post-test Self-Efficacy Scores at 4<sup>th</sup> Week between the Experimental and the Control Groups

| Group        | <i>n</i> | Post-test scores |           | <i>t</i> | <i>p-value</i> |
|--------------|----------|------------------|-----------|----------|----------------|
|              |          | <i>M</i>         | <i>SD</i> |          |                |
| Experimental | 37       | 86.17            | 9.80      | -12.74   | .000           |
| Control      | 37       | 52.65            | 12.64     |          |                |

**Hypothesis II: The perceived self-efficacy in autistic child care of the caregiver who participated in the empowerment program continued increasing at the 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> week after completing the program.**

The mean scores of perceived self-efficacy in autistic child care of the experimental group as the post-test scores at the 4<sup>th</sup>, 8<sup>th</sup>, 12<sup>th</sup> week after completing the program, as shown in Figure 5 (See page 64), illustrated the increasing scores overtime. To test whether the differences of the post-test scores existed at each point of the measuring time (that is, at the 4<sup>th</sup>, 8<sup>th</sup>, 12<sup>th</sup> week after completing the program), an analysis of variance (ANOVA) was conducted. The result revealed that the differences did exist ( $F = 6.78, p < .01$ ), as shown in Table 7.

**Table 7** One-way Analysis of Variance for Effects of the Empowerment Program on Perceived Self-Efficacy in Autistic Child Care at the 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> Weeks after the Program

| Sources of variance | <i>df</i> | SS      | MS     | <i>F</i> | <i>p-value</i> |
|---------------------|-----------|---------|--------|----------|----------------|
| Between group       | 2         | 875.33  | 437.67 | 6.78     | .002           |
| Within group        | 106       | 6846.67 | 64.59  |          |                |
| Total               | 108       | 7722.00 |        |          |                |

To determine which post-test scores differed from each other, a post-hoc test using the Scheffe test was conducted. The result indicated that the differences were found between the scores measured at the 4<sup>th</sup> and 12<sup>th</sup> week ( $p < .05$ ), as shown in Table 8.

**Table 8** Means Difference of Post-test Self-Efficacy Scores as a Function of Measuring Time

|                       | 4 <sup>th</sup> week | 8 <sup>th</sup> week | 12 <sup>th</sup> week |
|-----------------------|----------------------|----------------------|-----------------------|
| 4 <sup>th</sup> week  | -                    |                      |                       |
| 8 <sup>th</sup> week  | -2.14                | -                    |                       |
| 12 <sup>th</sup> week | -6.79*               | -4.65                | -                     |

\*  $p < .05$

## CHAPTER V

### DISCUSSION

This chapter presents a discussion on research findings, which includes a discussion of the results of the empowerment program on promoting perceived self-efficacy.

**Hypothesis I: The caregiver who participated in the empowerment program had more perceived self-efficacy in autistic child care than those who did not.**

It was found that caregivers of autistic children who participated in the empowerment program had significantly higher scores of perceived self-efficacy than caregivers who did not participate in the program ( $p < .001$ ), which answered the proposed hypothesis. The results of this study confirmed the effectiveness of the empowerment program on perceived self-efficacy in caring autistic children of caregivers. The results of the study were congruent with a study of Chunchot (1997) on the effective results of empowerment training in experimental group of 34 nursing students in 3 days and follow up one a week for 3 weeks continuously, and the control group for 34 nursing students received no arrangement, the results found that the professional attitudes score of test group, self-esteem, the perceived self-efficacy in the experimental group increased more than before program participation and more than the control group with statistically significance level. This was congruent with Skulnum (2001), who studies the effects of the process of empowerment be able to enhance the perceived self-efficacy among 60 mothers of heart disease children, and the results of studies found that the mothers who participated in the process of empowerment having the perceived self-efficacy in taking care of their own children increased more than mother who did not participated in the program.

It was also consistent with Tsay & Hung (2000), who studied the effect of empowerment program on promoting empowerment level, self-care self-efficacy and

decreasing depression in patient with end-stage renal disease. And also, it was congruent the study of Ducharme, Le Vesque, Gendron and Legault (2001), who studied the development and evaluation an empowerment program to increase empowerment and self-efficacy and to decrease stress and physiological distress of family caregivers. And the study of Anderson and colleagues (1995) used an empowerment program to explore the effect of empowerment education on self-efficacy in patients with diabetes. These researcher found that patients who received a 6-week empowerment program and higher self-efficacy in several areas elated to control of their diabetes than patients who were assigned to a wait-list for the program. In addition, self-efficacy improved in the control group after receiving the program.

This was congruent with Pillino and colleagues (1998), who studied the increasing of the perceived self-efficacy using process of empowerment in preparing the orthopedic patients before surgery. The 39 patients in the experimental group received knowledge both before and after surgery and have been trained following VCD, whereas the control group of 35 patients received knowledge as usual. The results showed that the perceived self-efficacy of the experimental group is more increased with the statistically significance level than the control group.

The empowerment program, which combined the empowerment process of Gibson (1995) and perceived self-efficacy concept of Bandura (1986, 1997), was arranged into activities that promoted perceived self-efficacy on autistic child care in caregivers. Those activities included supplemental knowledge, correct perception, training essential skills to care autistic children. All activities were administered throughout the group process with emphasis on patient-centered and mutual participation between caregivers and the researcher.

The empowerment process composed of 4 steps as follows: 1) discovering reality 2) critical reflection 3) taking charge and 4) holding on. According to the process of empowerment, Gibson did not explain the procedures to enhance perceived self-efficacy, so the researcher integrated four sources of perceived self-efficacy: enactive mastery experiences, vicarious experiences, verbal persuasion and physiological and affective states in the empowerment process. Using these sources of self-efficacy indicated above, Resnick (2004) suggested that there were three

processes are involved in the ultimate formation of self-efficacy. This formation will be described as follows:

**1. In discovering reality process**, the researcher arranged the process of giving information concerning autistic disorder and the appropriate care, exchanging the caring experiences with other caregivers. This process could help caregivers to change the way of thinking from anxiety, confusion to positive thinking that all problems could be solved, and to cooperate with group members in seeking the most effective method of autistic child care. This is the analysis of task requirements of Resnick that caregivers considered of what it take to perform an caring activity at various level.

**2. The critical reflection** in the empowerment process. In critical reflection process, the researcher encouraged the caregivers to look back and analyze caring situation in the past which lead to the clearer understanding of child's problem and gain personal control. This process resulted in shifting from being not able to care autistic children to being more certain in child care to help the improvement of children's symptoms. This is the attributional analysis of experience of Resnick that involved the individual's judgments or attributions about why a particular performance level occurred. For example, a caregiver might believe that she was able to encourage autistic child to eat by her/himself when tired because she knew the correct method to encourage the child.

**3. This is taking charge and holding on** in the empowerment process. In the process of taking charge and holding on, the researcher brought the sources of perceived self-efficacy of Bandura (1997) to be guideline. This process began with the activities under sources of self-efficacy including vicarious experiences, enactive mastery experiences, verbal persuasion and physiological and affective states which was proved to be effective in promoting in perceived self-efficacy. This is the assessment of personal and situational resources/constraints of Resnick. The individual caregiver also considered the specific resources constraints for performing the task at various levels. This assessment included consideration of personal factors such as a skill level, anxiety, or desire, as well as situational factors, such as competing demands or distractions that impinge on future performance. It's congruent with other researches (Cheng & Boey, 2002; Gitlin et al.,2001; Fitzgerald et al., 1989;

Fisher & Laschinger, 2001; Master, et al., 1993; Oetker- Block, et al., 1992; Tang & Cheng, . 2002; Samranchaiyatham, 1998; Sakulnum, 2002). So it could be concluded that four sources of self-efficacy are universal to enhance perceived self-efficacy.

In summary, the process of empowerment enable the caregivers to accepte the real situation, recognize the problems and self, manage situation effectively which finally promote perceived self-efficacy in autistic child care.

**Hypothesis II: The perceived self-efficacy in autistic child care of the caregiver who participated in the empowerment program continued increasing at the 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> week after completing the program.**

In long term effect, the results indicated that perceived self-efficacy scores increased from 86.17 at the 4<sup>th</sup> week post-program to 88.31 at the 8<sup>th</sup> week and went over more to 92.96 at 12<sup>th</sup> week post-program. However, there was only statistically significant difference between the 4<sup>th</sup> and 12<sup>th</sup> week. This finding could indicate that the caregivers in the experimental group still continually perceived self-efficacy in autistic child care.

The perceived self-efficacy at the 4<sup>th</sup> week comparing with the 8<sup>th</sup> week were not statistically significant different. This evidence could explain that after the 4<sup>th</sup> week, caregivers encountered with the chronic symptoms and slow development of autistic children so their perceived self-efficacy was slowly increased. The encouragement and re-practice were used to promote perceived self-efficacy again. Therefore, the perceived self-efficacy scores in the 3<sup>rd</sup> post-test was increased.

This study demonstrated that self-efficacy can be enhanced and sustained at least 3 months. The findings were congruent with the statement of Bandura (1997) that perceived self-efficacy could be enhanced and sustained for a long time but Bandura did not confirm that how long this perceived self-efficacy sustains.

The results of this study were congruent with a study of Sathirapanya (2001) on the effectiveness of empowerment program on enhancement quality of life, self-esteem, self-efficacy among ischemic stroke patients and caregivers. The results revealed that the experimental group had higher mean scores of quality of live, self-

esteem and self-efficacy than the comparison group at the 2<sup>nd</sup>, 4<sup>th</sup>, 12<sup>th</sup> and 24<sup>th</sup> week post-test ( $p < .001$ ). This was congruent with Pensirinapa (1995) who studied the effects of empowerment program on prevention smoking among secondary school students in Supanburi Province. The researcher and teachers arranged 5 days program for 48 student leaders from 12 classrooms. They were trained to arrange activities and plan for prevention of smoking for classmates. The results showed the experimental group of students is positively changed which the statistically significance level of self-esteem, self-efficacy, immediately after program and after the period of follow up.

Autism is the chronic illness. Booster can be an effective tool for maintaining or increasing the perceived self-efficacy. Other researches in chronic illness demonstrated that the booster intervention was an effective tool, such as Weinger (1999) studied the effect of a behavioural program of coping skill training to improve self-efficacy in youths with diabetes. The coping skill training was given in small group of 2-3 adolescents who were of similar age. It's sessions lasted 1-1.5 hours, and adolescents attended 4-8 initial weekly sessions and subsequent monthly booster sessions. The results indicated that general self-efficacy was greater in the experimental group than in the control group at 6 months.

From the concept of self-efficacy theory, it stated that one had expectation or confidence on his own self-efficacy and knowing what to do to achieve the goals expected, he would initiated and hold on the appropriated behaviours to reach the goal. However, this study limited only perceived self-efficacy. The caring behaviour of caregivers should be examined in the further study.

This finding could indicate that the empowerment program had influence on the increasing of perceived self-efficacy in caregivers of autistic children.

## CHAPTER VI

### CONCLUSION

This chapter presents the conclusions of the research and the recommendations derived from the findings.

#### **Summary and Conclusion of the Study**

This study aimed at testing the effect of empowerment program among caregivers of autistic children. It especially sought to determine perceived self-efficacy. The study was conducted over a six-month period (September 2004 to February 2005) at Child and Adolescent Mental Health Institute.

The sample included 74 caregivers who were purposively selected into the experimental (37 participants), and the control (37 participants) groups. The experimental group received the empowerment program while the control group did not. The empowerment program comprised of four phases: 1) discovering reality, 2) critical reflection, 3) taking charge, and 4) holding on. These phases were applied throughout the experimental group for 3 hours each day within 5 days and monthly boosted for 3 months. The measurement of dependent variable, perceived self-efficacy, was conducted in both the experimental and the control group at pre-program and 4<sup>th</sup> week post-program, after that the measurement was conducted in the experimental group at 8<sup>th</sup> and 12<sup>th</sup> week post-program.

Descriptive statistics were used to analyze demographic characteristics, t-test and analysis of variance were conducted to test the research hypotheses. The summary of findings is as follows:

Demographic characteristics of the caregivers. The results revealed that the mean of age was 38 years old. Female and housewife were the majority of participants. Most of the participants were mothers. Marital status was mostly married. Mean of education was 10.9 years. Mean of monthly income and family monthly income were 5837.8 and 25094.6 Baht. The caregivers spent averaged 19.2 hours a day on taking care of the autistic children and most of them did not have care assistant.

Characteristics of the autistic children. Mean of age was 41.7 months. Most of autistic children were male, first child of the family and no sibling.

The findings of the effect of empowerment program demonstrated that caregivers who obtained the program had a significantly higher perceived self-efficacy than those who did not at post-program at .001 level. Comparing perceived self-efficacy in the caregivers who participated the program in each time, the results indicated that they had significantly higher the 4<sup>th</sup> week post-test score of the perceived self-efficacy than that the pre-test score at .01. Also the 4<sup>th</sup> week and the 12<sup>th</sup> week post-test scores were significantly higher than the pre-program at .05 level.

## **Implications and Recommendations**

### **Implications for Nursing Practice**

The result of this study indicated that the empowerment program could increase the perceived self-efficacy in caregivers of autistic children. The finding confirms the appropriateness of applying this program to the caregivers of autistic children. The empowerment program is considered a new innovation of nursing practice for caregivers of autistic children. The program contains important nursing information and it clearly indicates procedures and nursing methods. The caregivers having children with autism should be motivated to attend the empowerment program at the first start of treatment session. At this stage, they are quite stressed and cannot adjust themselves. There are very frustrated and confused about the disease, symptoms and treatment, particularly if they had received information about their children's sickness, which further increased their stress and decrease their self-confidence to solve the problem, leading to disability in problem solving and managing themselves and their children. So promoting self-efficacy in caregivers of autistic children is the important nursing care. Therefore, nurses should appreciate the value of an empowerment program in helping caregivers to perceive their own abilities, in order to achieve their goals. For this reason, the nurses should help, arranging and encouraging the caregivers of autistic children, through such a systematic pattern; that they can get together to exchange their ideas and successful experiences in caring for their children, to discuss and find out the appropriate solutions for problem-solving.

## **Recommendation for Further Studies**

1. The child-caring behavior of caregivers who enrolled in the empowerment program should be examined in the further study.
2. The sustainability of perceived self-efficacy should be assessed through out a year after the program in further study.
3. The perceived self-efficacy in care of autistic children questionnaire was first developed by researcher, although content validity and reliability were examined and satisfied. The statistics used to examine would be robust. The construct validity of the perceived self-efficacy for caregivers of autistic children should be further examined.
4. Randomized controlled trial and repeated measures designs should be designed in further research in order to get the stronger results between the control and the experimental groups. Repeated measures should be measured in further study.
5. The research assistant should not know who are in the experimental and the control groups in further research.

## **Contribution to Knowledge Development**

The findings revealed that the empowerment program could increase the perceived self-efficacy in caregivers of autistic children and sustained at least 12 weeks. These findings were the innovation and will be used as the basis to develop further as a practice theory to guide nursing practices. The quasi-experimental pre-test post-test design was used to study. The researcher develop the empowerment program for caregivers of autistic children from the empowerment process of Gibson (1995) and perceived self-efficacy theory of Bandura (1986, 1997). The results were congruent with other researches and supported the process of empowerment that could promote the perceived self-efficacy. This study supported the theoretical validity of Gibson's empowerment process (1991, 1995) that the empowerment process was the cognitive process that the person was perceived of abilities as desired, be able to solve problems and manage sources of benefit under their control (Gibson, 1991). Empowerment process will be occurred when there is an acceptance of each other between health care providers and clients. The results of empowerment could control environmental factor which impacted to that person and could develop perceived self-

efficacy (Gibson, 1991; Wallerstein & Bernstein, 1998; Pellino et al., 1998; Mishra et al., 1998) and can also develop health behavior (Ellis-Stoll & Pokes-Valwter, 1998; Gibson, 1995; Wallerstein & Bernstein, 1988). However, this research did not study about caring behavior.

This study was the empirical knowledge to extend nursing knowledge for promoting the perceived self-efficacy in other groups of caregivers.



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## **APPENDIX A**

### **EMPOWERMENT PROGRAM FOR CAREGIVERS OF AUTISTIC CHILDREN**

#### **Objectives**

At the end of the program, caregivers are increased

1. perceived self-efficacy in being partnership in care of autistic children.
2. perceived self-efficacy in advocacy.
3. perceived self-efficacy in efficient dealing with health care system.
4. perceived self-efficacy in learning to persist.
5. perceived self-efficacy in negotiation.

#### **Target Group**

Caregivers whose autistic children have the age 2-5 years old and received first treatment at Child and Adolescent Mental Health Institute, Kalaya Rajanakarin, were 74 persons.

#### **Operation**

Group participation has 8 sessions, first 5 sessions will be a group session in every day, each session will take about 3 hours, times will be from 9.00 am to 12.00 am. The final 3 sessions will be group session in every 4 weeks. Times used will be approximately 3 hours for each session, and times will be from 9.00 am to 12.00 am.

#### **Setting**

Child and Adolescent Mental Health Institute, Rajanakarin.

## Methods

The following methods were:

### 1. Discovering reality

This step aimed to help caregiver's responses emotionally, perception of wisdom, the right and suitable behavior, and the researcher arranged the process of giving information concerning disease, the problems found during the care, tendency of disease, to have the reality of hope, the right and suitable care and exchanging the care's experiences with other caregivers. This can help caregivers to change the ways of thinking from worry, confusing, anxiety, to positive thinking by bringing the received information to be beneficially used and originated the ways of thinking that all problems can be solved, trying to cooperate in seeking for the most effective method of autistic child's care.

Times used was 30 minutes.

### 2. Critical Reflection

This step is the time for researcher helping the caregivers to look back to the problems by assessment and the analyzed the idea of care's situation or what was happened during the care in all aspects leading to the cleared understanding, helping the caregivers of empowerment in personal control, helping to change from the old feeling that self can not help the care to autistic child to the thinking that all things have been performed in child's care is most important to help improvement of child's symptom. This step is helping the caregivers the perceived self-strength and self-capabilities.

The times used was 30 minutes

### 3. Taking charge

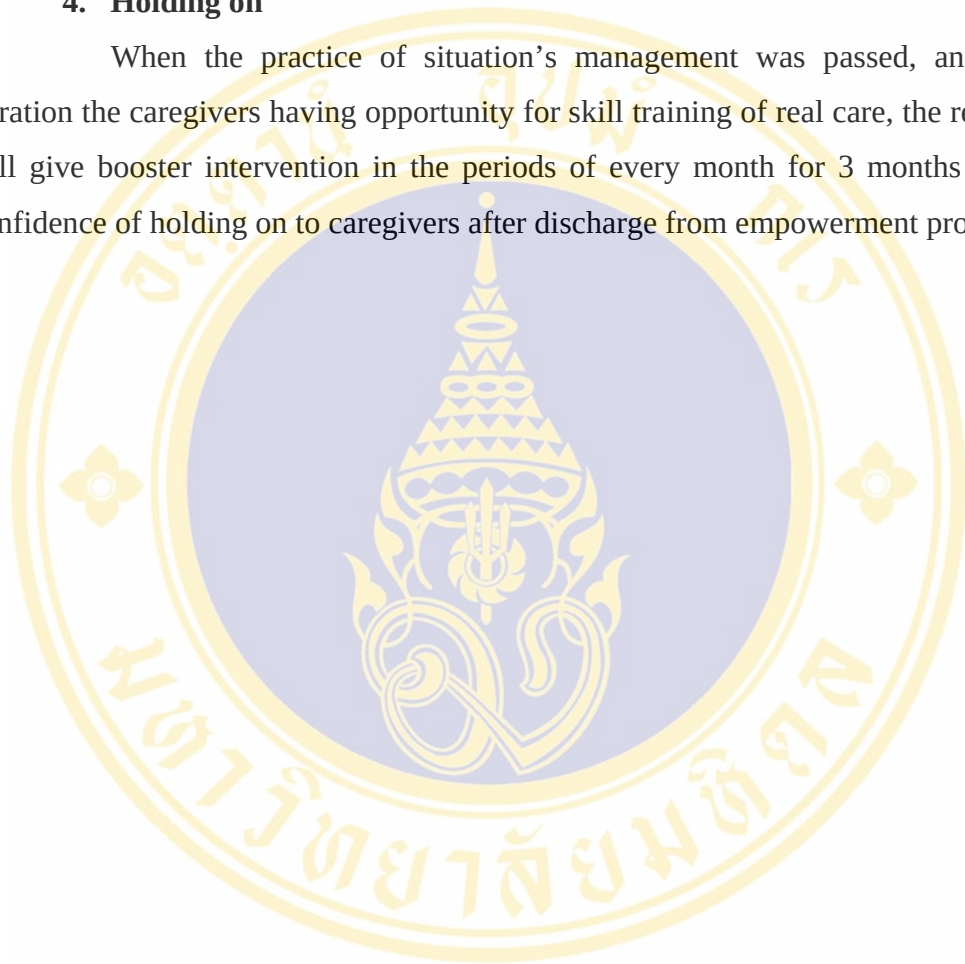
This step aimed to help caregivers of abilities in child's care. The researcher brought the encouragement method the perceived self-efficacy of Bandura (1997: 80-107) to be guideline in this step of empowerment because speaking in empowerment, allowing for opportunity to real practice, vicarious experiences, and the arrangement of situations the ways the caregivers are mental ready, having good intention, all of these caused empowerment to persons the perceived self-efficacy (Bandura, 1997: 477).

Intervention on this step, it is necessary for health care team to respect and accept the role of caregivers as partnership in care that means giving authority to caregivers to take part in the care.

Times used was 1 hour and 30 minutes

#### **4. Holding on**

When the practice of situation's management was passed, and during duration the caregivers having opportunity for skill training of real care, the researcher will give booster intervention in the periods of every month for 3 months to boost confidence of holding on to caregivers after discharge from empowerment program.



## APPENDIX B

### GENERAL INFORMATION QUESTIONNAIRE

Date.....

Code.....

#### Part I Demographic Data of Caregivers

1. Gender      ☐ Male      ☐ Female
2. Age.....years old.
3. Relationship with children.....
4. Marital status
 

☐ Single  
☐ Separated or divorced

☐ Couple  
☐ Widow
5. Years of education.....
6. Occupation .....
7. Monthly income ..... Baht.
8. Family monthly income ..... Baht.
9. Caring a day ..... hours.
10. Experience in taking care of autistic children
 

Yes
No

.....

#### Part II Demographic Data of Autistic Children

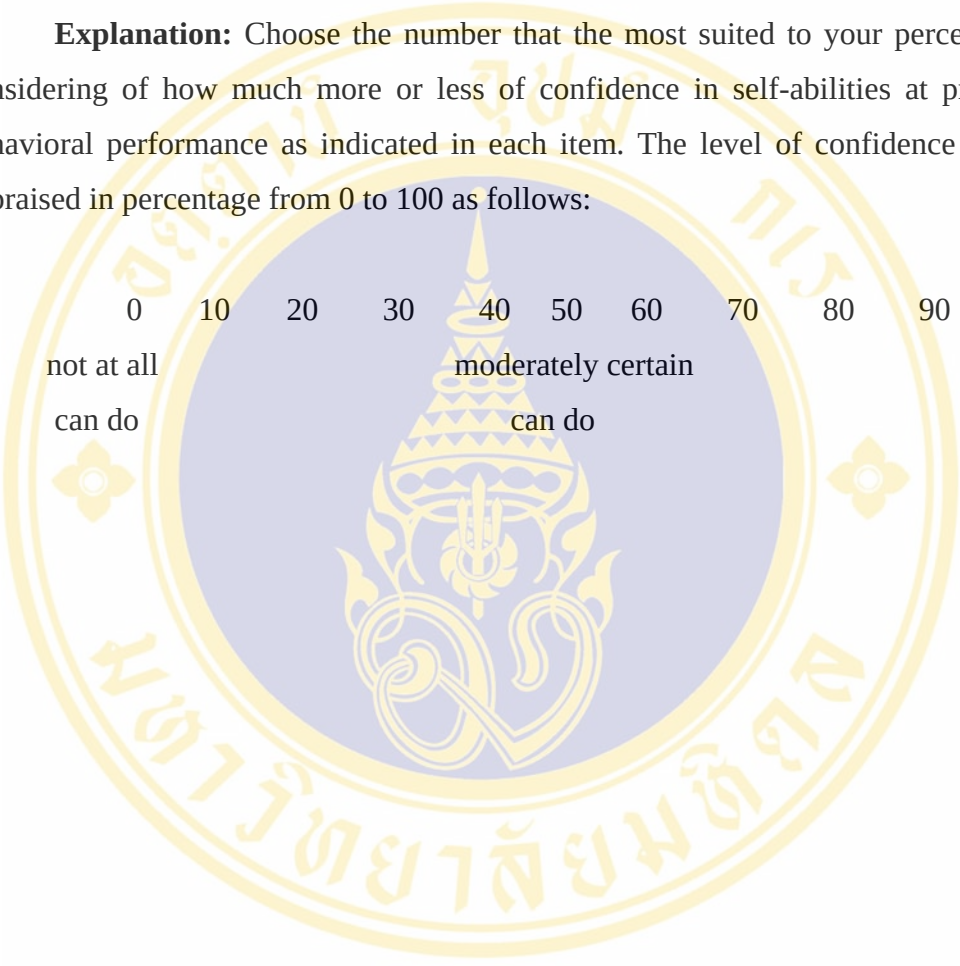
1. Gender      ☐ Male      ☐ Female
2. Date of birth    Date..... Month.....Year.....
3. Birth order .....

.....

## APPENDIX C

### PERCEIVED SELF-EFFICACY QUESTIONNAIRE

**Explanation:** Choose the number that the most suited to your perception by considering of how much more or less of confidence in self-abilities at present in behavioral performance as indicated in each item. The level of confidence must be appraised in percentage from 0 to 100 as follows:



|            |    |    |    |    |            |    |    |    |    |         |
|------------|----|----|----|----|------------|----|----|----|----|---------|
| 0          | 10 | 20 | 30 | 40 | 50         | 60 | 70 | 80 | 90 | 100     |
| not at all |    |    |    |    | moderately |    |    |    |    | certain |
| can do     |    |    |    |    | can do     |    |    |    |    | can do  |

## APPENDIX D

### THE LIST PANEL OF EXPERTS

The content of the Empowerment Program for caregivers of autistic children and Perceived Self-Efficacy Scale were validated by five experts as below:

Prof. Dr. Alisa Wacharasindhu

Department of Psychiatry

Faculty of Medicine, Chulalongkorn University

Dr. Kusumawadee Cumkeang

Child and Adolescent Mental Health Institute, Kalaya Rajanakarin

Department of Mental Health, Ministry of Public Health

Dr. Supapak Petrasuwan

Faculty of Nursing

Srinakarinthawirote University

Miss Bhawinee Onnak

Child and Adolescent Mental Health Institute, Kalaya Rajanakarin

Department of Mental Health, Ministry of Public Health

Mrs. Bhomareong Sayawaranonth

Department of Psychiatry

Faculty of Medicine, Chulalongkorn University

## APPENDIX E

### INFORM CONSENT SHEET

คำชี้แจงสำหรับผู้ดูแลและการคุ้มครองสิทธิของผู้ดูแลและเด็ก (สำหรับผู้ดูแลกลุ่มทดลอง)

ดิฉันชื่อ นางภัทราบุลย์ พุทธิรักษา เป็นนักศึกษานิเทศศาสตร์เอกทางการพยาบาลของ คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล ขณะนี้กำลังทำวิจัยเรื่อง “โปรแกรมการสร้างพลังใจในผู้ดูแลต่อการส่งเสริมการรับรู้สมรรถนะของตนเองในการดูแลเด็กออทิสติก” ซึ่งเป็นการศึกษาเกี่ยวกับการให้ความรู้ ฝึกทักษะผู้ดูแล และส่งเสริมให้ผู้ดูแลมีส่วนร่วมในการดูแลเด็กออทิสติก โดยประยุกต์กระบวนการสร้างพลังใจ เพื่อให้ผู้ดูแลมีความมั่นใจในการช่วยเหลือเด็กออทิสติกที่บ้าน ได้อย่างต่อเนื่องและมีประสิทธิภาพ

ท่านเป็นผู้ดูแลท่านหนึ่งที่อยู่ในข่ายที่จะเข้าร่วมโปรแกรมการดูแลเด็กออทิสติกโดยการสร้างพลังใจได้ และถ้าท่านยินดีที่จะเข้าร่วมการวิจัย ดิฉันขอความร่วมมือตอบแบบสอบถามและแบบประเมินเกี่ยวกับความเชื่อมั่นของตัวท่านในการปฏิบัติกรดูแลเด็กออทิสติกในขณะนี้ จากนั้นท่านจะได้รับการอบรมการสร้างพลังใจในการดูแลเด็กออทิสติกตามกำหนดการของโปรแกรมเป็นเวลาต่อเนื่องกันวันละ 1 ครั้ง ครั้งละ 3 ชั่วโมง จำนวน 5 วัน หลังจากนั้นดิฉันจะจัดให้มีการทบทวนอย่างต่อเนื่องอีก 3 ครั้ง คือ เดือนที่ 1 2 และ 3 และดิฉันจะขอให้ท่านตอบแบบสอบถามและแบบประเมินก่อนรับการอบรมในเดือนที่ 1 2 และ 3 ช่วงการทบทวน ทั้งนี้ดิฉันขอรับรองว่าจะเก็บข้อมูลดังกล่าวเป็นความลับ และจะเปิดเผยในรูปผลสรุปงานวิจัยเป็นภาพรวม ในกรณีที่ต้องมีการเปิดเผยข้อมูลเหล่านี้ต่อหน่วยงานต่างๆที่เกี่ยวข้อง ดิฉันจะกระทำในกรณีที่จำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ดิฉันคาดว่า ผลการวิจัยนี้จะประโยชน์โดยตรงแก่เด็กออทิสติกและตัวท่าน และสามารถนำไปเป็นวิธีการให้การพยาบาลเพื่อส่งเสริมให้ผู้ดูแลเด็กออทิสติกสามารถดำเนินชีวิตได้เหมาะสมกับสภาพความเจ็บป่วยของเด็ก อย่างไรก็ตาม ในขณะที่ท่านเข้าร่วมโปรแกรม ท่านอาจเกิดความไม่สบายใจอันเนื่องมาจากการวิจัยนี้ ท่านมีสิทธิที่จะยุติการเข้าร่วมกลุ่มหรือยุติการตอบแบบสอบถามและแบบประเมินได้ตลอดเวลาตามที่ท่านต้องการโดยไม่มีผลกระทบใดๆต่อตัวท่านและเด็กในความดูแลของท่าน

หากท่านมีข้อสงสัยใดๆ ที่เกี่ยวข้องกับการวิจัยครั้งนี้ ดิฉันยินดีที่จะตอบให้เข้าใจ และไม่ว่าท่านจะเข้าร่วมในการวิจัยครั้งนี้หรือไม่ก็ตาม เด็กของท่านจะยังคงได้รับการรักษาพยาบาลจากเจ้าหน้าที่ของสถาบันฯตามปกติ ถ้าหากท่านมีข้อสงสัยในระหว่างการเข้าร่วมวิจัย ดิฉันยินดีตอบข้อสงสัยของท่านตลอดเวลา โดยติดต่อมายังหมายเลขโทรศัพท์ 02-2762691 หรือ 01-8085861

ขอขอบคุณในความร่วมมือ

(นางภัทราบุลย์ พุทธิรักษา)

คำชี้แจงสำหรับผู้ดูแลและการคุ้มครองสิทธิของผู้ดูแลและเด็ก (สำหรับผู้ดูแลกลุ่มควบคุม)

ดิฉันชื่อ นางภัทรานุสย์ พุทธรักษา เป็นนักศึกษาปริญญาเอกทางการพยาบาลของ คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล ขณะนี้กำลังทำวิจัยเรื่อง “โปรแกรมการสร้างพลังใจในผู้ดูแลต่อการส่งเสริมการรับรู้สมรรถนะของตนเองในการดูแลเด็กออทิสติก” ซึ่งเป็นการศึกษาเกี่ยวกับการให้ความรู้ ฝึกทักษะผู้ดูแล และส่งเสริมให้ผู้ดูแลมีส่วนร่วมในการดูแลเด็กออทิสติก โดยประยุกต์กระบวนการสร้างพลังใจ เพื่อให้ ผู้ดูแลมีความมั่นใจในการช่วยเหลือเด็กออทิสติกที่บ้านได้อย่างต่อเนื่องและมีประสิทธิภาพ

ท่านเป็นผู้ดูแลท่านหนึ่งที่อยู่ในข่ายที่จะเข้าร่วมโปรแกรมการดูแลเด็กออทิสติกโดยการสร้างพลังใจได้ และถ้าท่านยินดีที่จะเข้าร่วมการวิจัย ดิฉันขอความร่วมมือท่านตอบแบบสอบถามและแบบประเมินเกี่ยวกับความเชื่อมั่นของตัวท่านในการดูแลเด็กออทิสติกในขณะนี้ จากนั้นดิฉันจะขอให้ท่านตอบแบบสอบถามและแบบประเมินในอีก 5 สัปดาห์ข้างหน้า ทั้งนี้ดิฉันขอรับรองว่าจะเก็บข้อมูลดังกล่าวเป็นความลับ และจะเปิดเผยในรูปผลสรุปงานวิจัยเป็นภาพรวม ในกรณีที่ต้องมีการเปิดเผยข้อมูลเหล่านี้ต่อหน่วยงานต่างๆที่เกี่ยวข้อง ดิฉันจะกระทำในกรณีที่จำเป็นด้วยเหตุผลทางวิชาการเท่านั้น หลังจากนั้นดิฉันจะจัดโปรแกรมการให้ความรู้ ฝึกทักษะการดูแล และส่งเสริมให้ท่านได้มีส่วนร่วมในการดูแลเด็กออทิสติกจากการประยุกต์กระบวนการสร้างพลังใจเป็นเวลา 5 ครั้ง ครั้งละ 3 ชั่วโมง เพื่อให้ท่านมีความมั่นใจในการช่วยเหลือเด็กออทิสติกที่บ้านได้อย่างต่อเนื่องและมีประสิทธิภาพ

ดิฉันคาดว่า ผลการวิจัยครั้งนี้จะเป็นประโยชน์โดยตรงแก่เด็กออทิสติกและตัวท่าน และสามารถนำไปเป็นวิธีการให้การพยาบาลเพื่อส่งเสริมให้ผู้ดูแลเด็กออทิสติกสามารถดำเนินชีวิตได้เหมาะสมกับสภาพความเจ็บป่วยของเด็ก อย่างไรก็ตาม ในขณะที่ท่านเข้าร่วมกลุ่ม ท่านอาจเกิดความไม่สบายใจอันเนื่องมาจากการวิจัยนี้ ท่านมีสิทธิที่จะยุติการเข้าร่วมกลุ่มได้ตลอดเวลาตามที่ท่านต้องการ

หากท่านมีข้อสงสัยใดๆ ที่เกี่ยวข้องกับการวิจัยครั้งนี้ ดิฉันยินดีที่จะตอบให้เข้าใจ และไม่ว่าท่านจะเข้าร่วมในการวิจัยครั้งนี้หรือไม่ก็ตาม เด็กของท่านจะยังคงได้รับการรักษาพยาบาลจากเจ้าหน้าที่ของสถาบันฯ ตามปกติ ถึงแม้ว่าท่านจะได้ตอบรับการวิจัยแล้วท่านยังคงมีสิทธิจะยกเลิกการเข้าร่วมการวิจัยหรือยุติการตอบแบบสอบถามและแบบประเมินได้ตลอดเวลาตามที่ท่านต้องการโดยไม่มีผลกระทบใดๆ ถ้าหากท่านมีข้อสงสัยในระหว่างการเข้าร่วมวิจัย ดิฉันยินดีตอบข้อสงสัยของท่านตลอดเวลา โดยติดต่อมายังหมายเลขโทรศัพท์ 02-2762691 หรือ 01-8085861

ขอขอบคุณในความร่วมมือ

(นางภัทรานุสย์ พุทธรักษา)

### แบบฟอร์มใบยินยอมให้ทำการวิจัย

การวิจัยเรื่อง โปรแกรมการสร้างพลังใจในผู้ดูแลต่อการส่งเสริมการรับรู้สมรรถนะของตนเองใน  
การดูแลเด็กออทิสติก

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

ก่อนที่จะลงนามในใบยินยอมให้ทำการวิจัยนี้ ข้าพเจ้าได้รับคำอธิบายจากผู้วิจัยถึงวัตถุประสงค์  
ของการวิจัย วิธีการวิจัย อันตราย หรืออาการที่อาจเกิดขึ้นจากการวิจัย รวมทั้งประโยชน์ที่จะเกิดขึ้น  
จากการวิจัยอย่างละเอียด และมีความเข้าใจดีแล้ว

ผู้วิจัยรับรองว่าจะตอบคำถามต่างๆที่ข้าพเจ้าสงสัยด้วยความเต็มใจ ไม่ปิดบัง ซ่อนเร้น  
จนข้าพเจ้าพอใจ

ข้าพเจ้ามีสิทธิที่จะบอกเลิกการเข้าร่วมในโครงการนี้ เมื่อใดก็ได้ และเข้าร่วมการวิจัยนี้ด้วย  
ความสมัครใจ และการบอกเลิกการเข้าร่วมโครงการนี้จะไม่ผลต่อการรักษาโรคที่เด็กในความดูแล  
ของข้าพเจ้าพึงจะได้รับต่อไป

ผู้วิจัยรับรองว่าจะเก็บข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าเป็นความลับ และจะเปิดเผยได้ใน  
รูปที่เป็นผลสรุปการวิจัย การเปิดเผยข้อมูลของข้าพเจ้าต่อหน่วยงานต่างๆที่เกี่ยวข้องจะกระทำได้  
เฉพาะกรณีที่ทำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ผู้วิจัยรับรองว่า หากเกิดอันตรายใดๆอันเนื่องจากการวิจัยดังกล่าว ข้าพเจ้าจะได้รับการ  
รักษาพยาบาลโดยไม่คิดมูลค่าตามมาตรฐานวิชาชีพ และจะได้รับการชดเชยรายได้ที่สูญเสียไปใน  
ระหว่างการรักษาพยาบาลดังกล่าว

ผู้วิจัยรับรองว่าหากมีข้อมูลเพิ่มเติมที่ส่งผลต่อการวิจัย ข้าพเจ้าจะได้รับการแจ้งให้ทราบ  
โดยไม่ปิดบัง ซ่อนเร้น

ข้าพเจ้าได้อ่านข้อความข้างต้นแล้วและมีความเข้าใจดีทุกประการ และได้ลงนามในใบยิน  
ยอมนี้ด้วยความเต็มใจ

ลงนาม ..... ผู้ยินยอม

ลงนาม ..... พยาน

ลงนาม ..... พยาน

ในกรณีที่ผู้ยินยอมตนให้ทำการวิจัยไม่สามารถอ่านและเขียนหนังสือได้ ผู้วิจัยจะต้องทำใบยินยอมตนในขณะที่ผู้ยินยอมตนมีสติสัมปชัญญะและระบุข้อความไว้ตามได้รับการยินยอมในนี้ว่า ข้าพเจ้าไม่สามารถอ่านหนังสือได้ แต่ผู้วิจัยได้อ่านข้อความในใบยินยอมนี้ให้ข้าพเจ้าฟังจนเข้าใจดีแล้ว ข้าพเจ้าจึงลงนามหรือประทับลายนิ้วหัวแม่มือของข้าพเจ้าในใบยินยอมนี้ด้วยความเต็มใจ

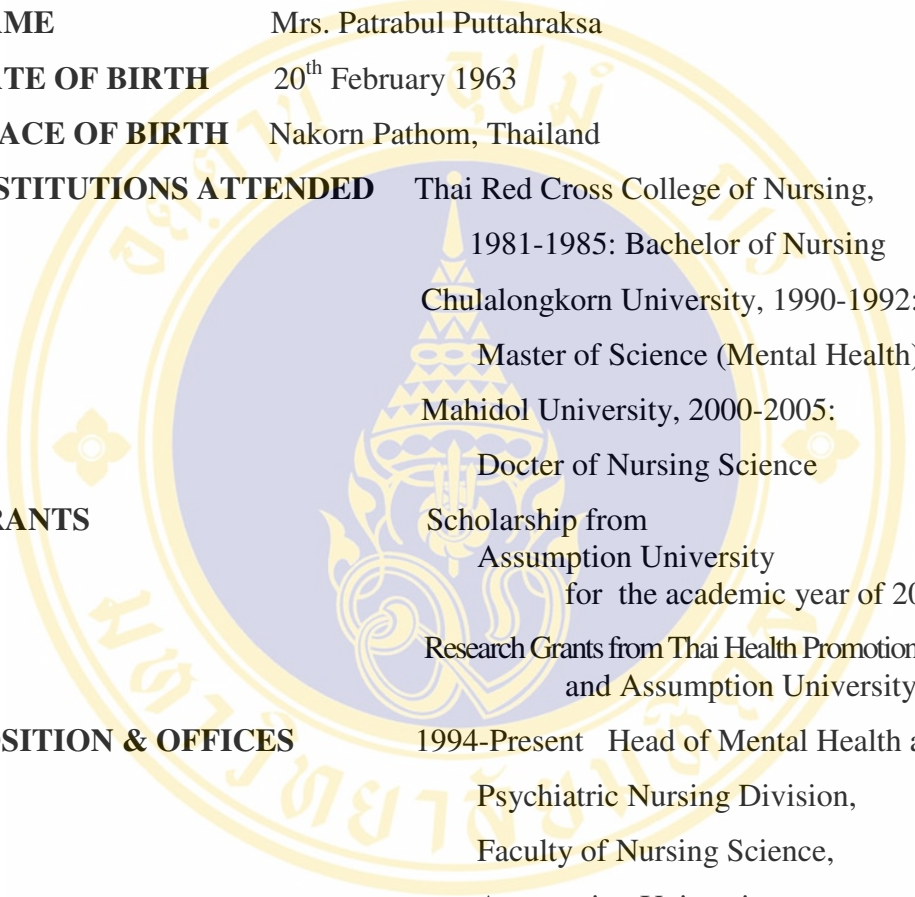
ลงนาม ..... ผู้ยินยอม

(หรือประทับลายนิ้วหัวแม่มือ)

ลงนาม ..... พยาน

ลงนาม ..... พยาน

## BIOGRAPHY



|                               |                                                                                                                                                                                                                  |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                   | Mrs. Patrabul Puttahraksa                                                                                                                                                                                        |
| <b>DATE OF BIRTH</b>          | 20 <sup>th</sup> February 1963                                                                                                                                                                                   |
| <b>PLACE OF BIRTH</b>         | Nakorn Pathom, Thailand                                                                                                                                                                                          |
| <b>INSTITUTIONS ATTENDED</b>  | Thai Red Cross College of Nursing,<br>1981-1985: Bachelor of Nursing<br>Chulalongkorn University, 1990-1992:<br>Master of Science (Mental Health)<br>Mahidol University, 2000-2005:<br>Doctor of Nursing Science |
| <b>GRANTS</b>                 | Scholarship from<br>Assumption University<br>for the academic year of 2000-2004<br>Research Grants from Thai Health Promotion Foundation<br>and Assumption University                                            |
| <b>POSITION &amp; OFFICES</b> | 1994-Present Head of Mental Health and<br>Psychiatric Nursing Division,<br>Faculty of Nursing Science,<br>Assumption University                                                                                  |
| <b>HOME ADDRESS</b>           | 973/1 Soi Vijitchai, Pracha-udith Road,<br>Huaykwang, Bangkok, Thailand                                                                                                                                          |