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The Effectiveness of a Parental Education Intervention About a Child-oriented Approach to Toileting for Healthy Thai Toddlers

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**THE EFFECTIVENESS OF A PARENTAL EDUCATION INTERVENTION
ABOUT A CHILD-ORIENTED APPROACH TO TOILETING FOR HEALTHY
THAI TODDLERS**

by

ON-ANONG THAMMAJINDA

EVIDENCE-BASED PRACTICE PROJECT REPORT

Submitted to the College of Nursing
of Valparaiso University,
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in partial fulfillment of the requirements

For the degree of

DOCTOR OF NURSING PRACTICE

2013

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5/9/2013

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5/10/13

Date

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DEDICATION

I dedicate this project affectionately to my loving, understanding, and supporting mother, Boonruang. She has always been there for me for my whole life. Thank you for keeping your promise to take good care of yourself because you know your illness will affect my study.

To my husband, Viroj, my best friend, my lover, my rock of support, my biggest fan and my statistical consultant. I could not have done this without your love and support. Thank you for taking best care to mom throughout my study and patiently wait for my return.

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Finally, I am truly indebted to my Thai friends in the U.S., my American friends, and the staff and faculty at the College of Nursing for their warmth and kindness. Their hospitality made me feel “at home away from home.”

PREFACE

This EBP project, an integral requirement of the Doctor of Nursing Practice degree, concerns toilet training (TT), which is an important milestone in child development. Since parental participation in the TT process is crucial, ascertaining the parental readiness to pledge toilet training is an important step. The project was conducted in Thailand purposed to enhance knowledge and self-efficacy of parents of healthy Thai toddlers through a parental education intervention about TT. Toilet training guidelines from the American Academy of Pediatrics were implemented. Child achievement in toileting skills was assessed at the end of the project after a 12 week follow-up of TT by their parents.

The DNP student expects that the findings from this EBP project will be a foundation for healthcare professionals who provide anticipatory guidance to parents. Moreover, this EBP project intervention can be a model for a parenting program that aims to enhance parenting roles through an effective parental education.

This project was supported by Payap University's grants for professional development.

On-Anong Thammajinda, M.Sc., B.Sc., R.N.

DNP Student

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ABSTRACT

Toilet training (TT) is a necessary developmental task that all healthy children must ultimately achieve. The Centers for Disease Control and Prevention (2001) noticed that *E. coli* can be spread to playmates by toddlers who are not toilet trained. Studies showed parental participation in the TT process is crucial and parental readiness to pledge to TT is an important step for training. In Thailand, very few studies have been conducted about TT a toddler, and all of the studies are descriptive. The purpose of this evidence-based practice project was to determine the effectiveness of a parental education intervention about TT, in a Thai context, based on guidelines recommended by the American Academy of Pediatrics (AAP) as to parental knowledge, self-efficacy, and child achieved in toileting skills. A single group pretest/posttest design to measure outcomes was conducted at the kindergarten school in Chiang Mai, Thailand. Participants ($N = 36$) were parents of toddlers aged 18 to 48 months. Questionnaires were used to assess participants' knowledge and self-efficacy relevant to TT. Participants were encouraged to initiate TT their children after a parental education intervention. The progression of toileting skills progression was evaluated every 2 weeks for 12 weeks by using a potty log that was maintained by parents. Thirty-six participants completed pretest/posttest questionnaires that included a 30-question knowledge test in TT healthy children and the self-efficacy assessment tool. Paired-sample *t*-tests were conducted to analyze and compare the mean pretests to the mean posttests scores. The paired-sample *t*-tests demonstrated that the parental education intervention significantly increased participants' knowledge ($p < 0.001$) and self-efficacy after the intervention ($p < 0.001$). Of the 33 participants included in the 12 week follow-up, 78.78% (26) of children achieved toileting skills. It can be concluded that improvements were seen after the parental education intervention. The number of children who achieved toileting skills gradually increased as time passed, demonstrating the success of this project. The best-practice guidelines in TT of healthy toddlers in a Thai context for health care professionals, parents and other caregivers are expected to be carried out.

Keywords: toilet training, child-oriented, parent education

CHAPTER 1

INTRODUCTION

Toilet training (TT) is an important milestone in child development. Since parental participation in the TT process is crucial, ascertaining the parental readiness to pledge TT is an important step. Parental education strategies and TT guidelines were reviewed and implemented in a parental education intervention. Parental knowledge and self-efficacy enhancement were assessed before providing TT to their healthy toddlers. In addition, the number of children who achieved toileting skills was assessed at the end of 12 week follow-up. The primary aim of these assessments is to determine if the EBP implementation project was successful, effective, equitable, timely, and needs to be modified or discarded (Gowlinski, 2007).

Background

The early years of a child's life are very important for his or her health and development (CDC, 2011). Erikson (1963) notes the toddler stage represents autonomy (independence) versus shame or doubt. Toddlers are developing physically and becoming more mobile. They begin to assert their independence by walking, running, and making their own decisions about picking toys to use, clothes to wear, or foods to eat. Toilet training (TT) is an important milestone in toddler development and it is a critical task for achieving independence and self-esteem of a child (Stadtler, Gorski & Brazelton, 1999). Although this task may seem to be a simple milestone, it is not easy to manage. TT could be the greatest challenge for parents or caregivers. Parents may become confused and frustrated with conflicting advice from various resources such as friends, relatives, and media. In addition, children are unique individuals who are not be ready for a TT at the same age and may respond differently to the various training styles. Therefore, parental education that enhances parental knowledge about providing

care to promote child development at an appropriate age and time should be delivered by expert.

There are many TT methods available such as Brazelton (1962) child-oriented method, Foxx and Azrin (1973) method, The Spock's (1946) method, and assisted infant TT. The Brazelton child-oriented approach (Brazelton), which uses physiologic maturity, ability to understand and respond to external feedback, and internal motivation to assess child readiness for a TT seems able to teach TT to healthy children. The American Academy of Pediatrics (AAP) and the Canadian Paediatric Society (CPS) recommend the child-oriented approach in its guidelines for TT (Klassen et al., 2006). The Brazelton child-oriented approach results in quick, successful TT and it is easier to understand and more accepted by parents. However, because toddlers and their families are unique, recommendations about the ideal time or optimal method must be adjusted (Brazelton et al., 1999).

Parents are a child's first and most influential teachers and profoundly impact all domains of growth and development. Canadian Mental Health Association (CMHA) indicates that parents who are committed to their children's well-being have the responsibility to love unconditionally, nurture, guide, educate, encourage, and protect their children from birth to adulthood (CMHA, n.d.). Children feel accepted and loved by the important people in their lives. They feel comfortable, safe and secure, and open to communication (CMHA). Therefore, parents' involvement in promoting their child healthy growth and development is critically important.

Because parents shape the quality of a child's development, health care professionals, through parental education, can be instrumental in supporting children's developmental outcomes and parents' well-being (Bunting, 2004). The National Parenting Education Network (NPEEN) describes that the goal of parental education is to strengthen families by providing relevant, effective education and support and

encouraging an optimal environment for the healthy growth and development of parents/caregivers and children (NPEN Core Principles, n.d.). With regards to Healthy People 2020 (2011), emerging issues in early and middle childhood include implementing and evaluating multidisciplinary public health interventions that address social determinants of health by fostering knowledgeable and nurturing families, parents, and caregivers. Parents, health professionals, educators, and others can work together as partners to help children grow up to reach their full potential (CDC, 2011). Therefore, healthy children who demonstrate readiness for TT should be trained with parents involved. Additionally, health professionals should provide guidance about TT methods and identify children who have difficulty reaching developmental milestones (Choby & George, 2008).

Individuals prepared as doctoral nurse practitioners (DNPs) have important roles to play as part of the health care team. The role of the DNP is composed of a number of components. These components include practice, leadership, research, education, and health and public policy (Chism, 2009). DNPs receive additional preparation about the evaluation and implementation of evidence-based practice. They search for the current best evidence and take the appropriate action that is guided by the evidence. The goal of evidence-based practice is to promote optimal healthcare outcomes, which are based on critically reviewed clinical evidence, for individual patients, families, and communities (Chism). DNPs may therefore directly impact the overall improvement of patient care through their skill in evaluation and implementation of evidence-based practice. In this project, the DNP student has a role in health promotion to facilitate assisting families with the issue of promoting child development by offering family support, thus giving children the best chance to reach their potential. This will be accomplished through the provision of parental training that can help families have healthy lifestyles and optimize child development, mitigating the possible adverse effects of TT. With the DNP

guidance, parents can be trained to provide appropriate TT at home.

Statement of the problem

In the US prior to 1950, TT began when toddlers were younger than 18 months of age. As a consequence of the diaper, TT has been delayed to 24-36 months of age (Bakker & Wyndaele, 2000). Schum, Kolb and McAuliffe (2002) suggest that TT readiness skills are not obtained until after the child's second birthday. Accepted norms of TT relate more to cultural differences than scientific evidence (Kiddoo, 2012); however in Thailand, training starts before the age at which the child is able to sit properly or before age of 18 months (Ngamrungrirund & Plubrukarn, 2011). The youngest age at which normal Thai infants start to be toilet trained was 4 months (Benjasuwantep & Ruangdaraganon, 2011). Thai parents begin TT their children based on a parent readiness rather than on child readiness. Most Thai infants were initially trained when they showed urging signs (Benjasuwantep & Ruangdaraganon, 2011) which other signs of readiness to TT was not assessed. Furthermore, because many Thai parents work outside the home to produce needed income, children are enrolled in daycare at an early age. Hence, TT is a necessary task for children who will enroll or have been enrolled to the daycare or preschool.

Meanwhile, parents do remain with unclear guidance about when to initiate TT (Vermandel, Van Kampen, Van Gorp & Wyndaele, 2008). There are substantially no data in Thai language on which readiness skills should guide parents in determining when to begin training. In the US, Taubman, Blum, and Nemeth (2003) suggested that there is no benefit of intensive training before 27 months of age otherwise, stool toileting refusal and constipation of the child may occur. However, studies demonstrated that the ideal age to initiate TT is unique to each child and family (Brazelton et al., 1999; Kiddoo, 2012; Rogers, 2007). Schmitt (2004a) noticed that TT done badly could lead to medical complications, including dysfunctional voiding, constipation, and even child abuse.

Therefore, parents should be able to assess when their child is ready and know how to promote toileting skills of their children (Kiddoo, 2012).

Currently, it is reported that a lack of TT in a child at an appropriate time may lead to several health problems. Health problems related to a lack of TT in child include physical (e.g. infection, lower urinary tract dysfunction) (Bakker & Wyndaele, 2000), psychological (e.g. child lacks of self-esteem and independence, parents/caregiver burnout), social (e.g. ruin child-caregiver relationship) (Hinde, Hjertenson & Broberg, 1995, as cited in Bakker & Wyndaele, 2000, p. 248), and economic (e.g. cost of diaper) (Choby & George, 2008) problems. Children's feces and urine may contain over 100 viruses, including live polio and hepatitis from vaccine residues. The CDC notes that toddlers, who are not toilet trained, as well as their family members and playmates, are at high risk of becoming infected with *E.coli* (Hepburn, 2011). With the implementation of the diaper, several studies document an astonishing increase in diaper rash from 7% in 1955 to 78% in 1991 (Cetta, Lambert, & Ross, 1991). The AAP and The American Public Health Association recommend that parents should not dispose of their child's diapers in the regular trash because it may spread disease and contaminate the ground water (Hinds, 1988).

Delaying TT might cause an increased risk for developing problems with incontinence and infections (Barone, Jasutkar & Schneider, 2009). When toddlers become dependent on diapers, it seems they do not learn how to recognize the need to go to the bathroom. Therefore, their inability to control their bladder and bowels at an early age may affect their bladder control and bowel control when they are grown (Barone et al.). Delaying TT may hinder participation in various activities, especially when children are not being toilet-trained while their playmates are toilet trained. For example, they may have some limitation to participate some social activities such as swimming in the pool (Fox19 Web Staff, 2011).

Evidence shows that child-oriented TT is currently best practice; however, the use of child-oriented TT method for Thai children in Thai context has not been evaluated. The evidence from the literature shows that all children would benefit from a more structured TT routine, including sitting on the potty/ toilet as normal part of their day and starting more formal training when they are physically ready (Rogers, 2007). DNPs are perfectly suited to make culturally sensitive adaptations to child-oriented TT and evaluate its effectiveness.

Purpose of the EBP project

In the US, best practice is the Brazelton child-oriented TT approach which has been recommended, based on evidence, by the AAP (2004). In Thailand, little research has been conducted about facilitating achievement of healthy child toileting skills by implementing an evidence-based practice to improve the utilization of evidence and practice through parent- child interaction interventions. Moreover, TT in Thailand begins without assessing for child's readiness for training (Benjasuwantep & Ruangdaraganon, 2011). Since parental participation in the TT process is crucial, ascertaining the parental readiness to pledge toilet training is an important step. Therefore, the purpose of this EBP project was to provide Thai parents an educational intervention, in a Thai context, based on TT guidelines recommended by the American Academy of Pediatrics. Based on best evidence, the DNP student implemented and evaluated parental education using effective strategies to improve parent-child interactions that resulted in successful TT. While child-oriented TT was in accordance with guidelines from valid, reliable sources such as the AAP, adaptations to the guidelines were made so that the project was culturally sensitive in a Thai context. The question, for this EBP project, in the PICOT format, was: In parents and caregivers of healthy toddlers in Thailand, how does a child-oriented toilet training method affect parental knowledge, parental self-efficacy, and the achievement of children in toileting skills? A one day educational intervention was

conducted that involved 36 parents. To evaluate the EBP project, the DNP student measured parental knowledge, self-efficacy, and the number of children who successfully achieved TT within 3 months.

Significance of the Project

Developmentally appropriate TT is well described in the non-Thai literature, and most recommendations about TT include the importance of the readiness of a child. The most commonly recommended TT methods are the child-oriented approach of Brazelton child-oriented method (Brazelton, 1962) and the Azrin and Foxx method (Fox & Azrin, 1973). Both methods were found to quickly result in successful TT and are popular TT methods in the United States and several European nations (Choby & George, 2008) but the child-oriented approach is easier to understand and more accepted by parents than the Azrin and Foxx method (Klassen et al., 2006). In Thailand, parent-centered approach has been utilized with no guidelines specific to TT available for them to use with their children (Ngarmrungrund & Plubrukarn, 2011). TT starts before the age at which the child is able to sit properly as early as 4 months of age (Benjasuwantep and Ruangdaraganon, 2011). Many Thai parents learn how to TT their children from their experiences and/or resources available on the internet that may lead to misunderstanding and malpractice (Ngarmrungrund & Plubrukarn). Moreover, factors that may lead to the postponement of TT include an access to disposable diapers, parents work outside the home to increase household income. Regarding to these factors, DNPs and other health professionals need strategies to support and advise Thai parents about TT and having realistic expectations of their children. Parents, mostly mothers, play an important role in training their child toileting skills (Klassen et al.). The DNP student can make significant contributions to reduce the uncertainty and frustration of parents or caregivers who are about to start training their children by providing information about a proper time to start training, the TT method, and

consultation while training their child. Regular discussions with parents of healthy children about TT guidelines that include concrete and simple advice must be brought up as naturally as teaching about other developmental milestones.

According to the TT guidelines of the AAP (2011) and the CPS (2000), child readiness preparation for child-oriented TT approach can be brought up as early as from the age of 18 months. Recommendations (Gorski, 1999a, 1999b, 1999c) for parents, clinicians, and day care providers are concrete and simple and could be implemented in everyday life to TT healthy children. Based on this knowledge, there will be an increased interest to further evaluate the TT process in different sociocultural settings because differences in methods used as well as outcomes have been identified (Horn, Brenner, Rao, & Cheng, 2006; Schum et al., 2002). There is now a need for evaluating evidence-based interventions regarding the TT process in healthy Thai toddlers through parental education.

CHAPTER 2

FRAMEWORKS AND REVIEW OF LITERATURE

Evidence-based practice (EBP) has been defined by Sackett, Straus, Richardson, Rosenberg, and Haynes (2000) as the integration of best research evidence with clinical expertise and patient values. The importance of combining the best available evidence with clinical judgment is apparent, and a pivotal role for patient-centered care, have been emphasized in this definition. To achieve solid evidence-based practices, Melnyk and Fineout-Overholt (2011) recommend seven steps (Table 2.1)

For this EBP project, articles about the best practice in parent education and TT were searched and appraised. Moreover, a theoretical framework facilitating the implementation of a parental educational intervention by guiding EBP development through the seven-step process was used (Melnyk & Fineout-Overholt, 2011). The theoretical framework and review of the literature are described in this chapter.

Theoretical Framework

Social Cognitive Theory

In social cognitive theory (SCT), it is emphasized that cognition plays a critical role in individuals' capabilities to construct reality, self-regulate, encode information, and perform behaviors which enable them to achieve changes that benefit themselves or a group (Bandura, 1993). From the theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences (Bandura). Social cognitive theory is rooted in a view of human agency in which individuals are agents proactively engaged in their own development and can make things happen by their actions (Pajares, 2002). Self-efficacy is the concept for which SCT is the most widely known. It consists of an individual's belief about his or her

Table 2.1

The Seven Steps of EBP Process

Step	Description
0	Cultivate a spirit of inquiry
1	Ask clinical questions in PICOT format
2	Search for the best evidence
3	Critically appraise the evidence
4	Integrate the evidence with clinical expertise and patient preferences and values
5	Evaluate the outcomes of the practice decisions or changes based on evidence
6	Disseminate EBP results

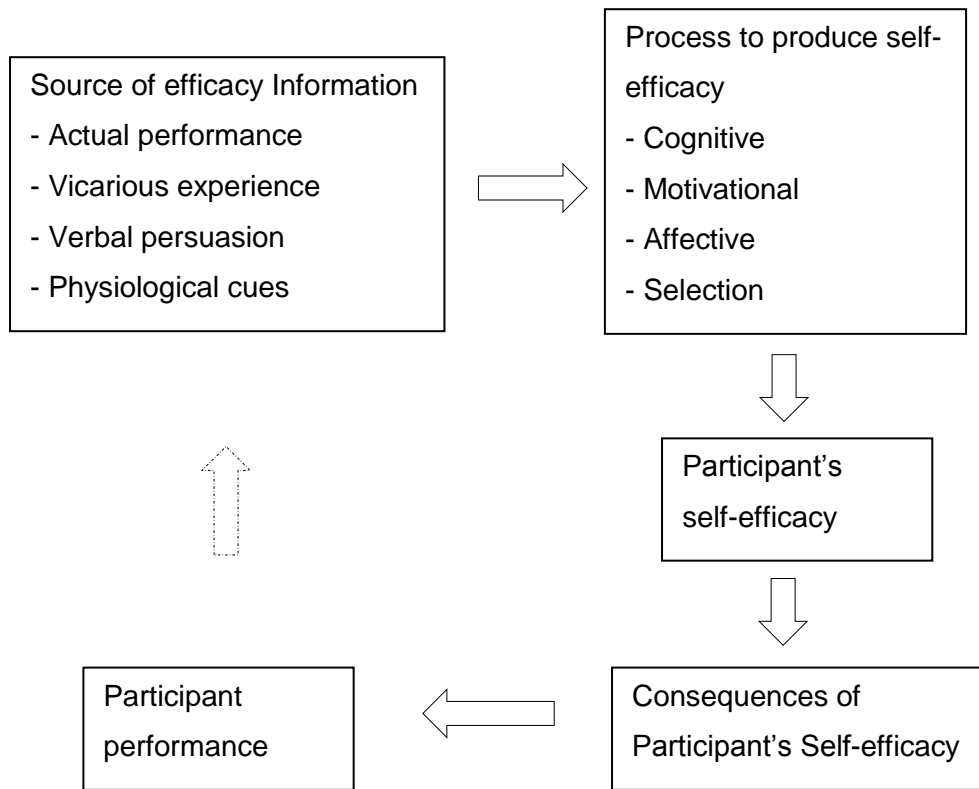
Note. Adapted from “The Steps of EBP Process” by B.M. Melnyk and E. Fineout-Overholt, 2011. *Evidence-based practice in nursing and healthcare: A guide to best practice*. Copyright 2011 by LWW.

capacity to influence the quality of functioning and the events that affect one's life (Glanz, Rimer, & Viswanath, 2008). As a concept, self-efficacy has shown potential for wide application in learning and development situations. It can enhance human accomplishment and well-being in countless ways. It is a concept which is simultaneously realistic and humanistic.

In 1977, Albert Bandura introduced the concept of self-efficacy, which he described as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1986, p. 2). Self-efficacy plays an essential part of SCT (see Figure 2.1), which primarily focuses on the ways in which humans learn to model the behavior of others through observational learning. There are four components of observational learning including: (a) attentional processes (b) retention processes, (c) motor reproduction processes, and (d) reinforcement and motivational processes. Since Bandura first introduced the construct of self-efficacy, the prevalence of studies involving self-efficacy is extensive in nursing and science research. For instance, when searching for publications about the topics relevant to self-efficacy from three online databases (CINAHL, MEDLINE, and PsycINFO), over 48,150 articles are found. There are over 400 articles based on the topics of parental self-efficacy.

Bandura (1986) described four sources of self-efficacy. These include actual performance, vicarious experiences, verbal persuasion, and physiological cues. *Actual performance*, or an individual's past experience, is the most important part of self-efficacy. An experience of success will lead to increased self-efficacy and a failure in some task will lower an individual's self-efficacy. The most effective source to enhance a sense of efficacy is through mastery experience, that is, the experience of overcoming obstacles through perseverant effort (Bandura, 1997a). However, Bandura notes that individuals who have only easily achieved successes may be easily discouraged by

Figure 2.1 Process to Produce Self-efficacy



Note. Adapted from “Process to Produce Self-efficacy” by A. Bandura, 1986, *Social foundations of thought and action: A social-cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

failure. *Vicarious experiences* are experiences whereby individuals watch and learn from an observation by a model individual who is similar to them.

Self-efficacy can be enhanced by observing role models who succeed, thus fostering in individuals their beliefs that they also can do it. Observing the failures of others instills doubts about one's own ability to master similar activities (Bandura, 1997a). *Verbal persuasion* is a support from effective social persuaders to strengthen self-efficacy (Bandura). If individuals are persuaded to believe in themselves, they will exert more effort and increase their chances of success. Effective social persuaders try to arrange things that bring success and avoid prematurely placing individuals in situations where they are likely to fail. *Physiological cues* are the body signs that can be part of efficacy. Individuals rely on their physical and emotional states to judge their capabilities (Bandura). Tension, anxiety, and depression are signs of personal deficiency. Personal interpretation of the meaning of various bodily signs can be interpreted differently by two different people. Therefore, reducing stress and depression, building physical strength, and learning how to interpret physical sensations can increase individual's self-efficacy.

Efficacy beliefs influence how individuals feel, think, motivate themselves, and behave (Bandura, 1993). Self-efficacy beliefs produce these effects through four major processes: (a) cognitive, (b) motivational, (c) affective, and (d) selection processes (Bandura). The effect of self-efficacy on cognitive processes takes a variety of forms. Individuals with high self-efficacy are more likely to set their personal goals by appraising their capabilities. These individuals guide their actions by visualizing successful outcomes instead of focusing on personal deficiencies or thinking of things that might go wrong. The stronger the perceived self-efficacy, the higher the personal goal individuals set up to challenge themselves (Bandura). Some individuals regard ability as an acquirable skill that can be increased by gaining knowledge and competencies.

However, personal accomplishments require not only knowledge and skills but self-efficacy (Bandura). Individuals who motivate themselves by forming beliefs in their abilities, setting goals, and planning how to achieve their goals tend to have high self-efficacy. Individuals will have a strong self-motivation if they believe they can attain their goals and see the progression of their work. In addition, individuals with high self-efficacy can determine the goals they set for themselves, how much effort they expend, how long they persevere, and how resilient they are when confronted with failures and setbacks (Bandura). Self-efficacy influences the level of stress or depression. Individuals with self-efficacy who experience threatening or difficult situations are likely to find strategies to cope with those situations. Efficacy beliefs regulate emotional states in several ways. For example, individuals who believe they can manage threats are less distressed by them; but, those who lack self-efficacy are more likely to magnify risks. Individuals with high self-efficacy lower their stress and anxiety by acting in ways that make the environment less threatening (Bandura). Furthermore, beliefs of personal efficacy can shape the course lives take by influencing choice of activities and environments. Most people avoid activities that may exceed their coping abilities but people with high self-efficacy are ready to confront challenging activities and select situations that they believe they are able to handle.

Parenting and self-efficacy. Bandura (1997a) has noted that efficacy beliefs form a major base for parental practices, and the work of others has supported his claim. Efficacy-regulated processes play an important role in the development of parental efficacy (Gross, Fogg & Tucker, 1995). De Montigny and Lacharité (2005) note that Bandura's four sources of self-efficacy affect parental self-efficacy. It has been shown that a mother who has experiences in childcare prior to becoming a mother has the strongest predictor of maternal self-efficacy (Gross, Rocissano, & Roncoli, 1989). Parent training programs have also been found to influence parental self-efficacy (Gross &

Fogg, 2001; Tucker, Gross, Fogg, Delaney & Lapporte, 1998). Moreover, Reece and Harkless (1998) found that positive reinforcements given through verbal persuasion by quality social support could enhance parental self-efficacy. Parents with a strong perception of parental self-efficacy put much effort, perseverance, and persistency into the tasks associated with parenting their children (Bandura).

Research has found parental self-efficacy to be associated with child developmental outcomes (Coleman & Karraker, 1998; Jones & Prinz, 2005). Parents with high levels of parental self-efficacy demonstrate high levels of parental competence, which resulted in positive developmental outcomes in their children. In comparison, parents with low parental self-efficacy tend to perform ineffective and detrimental parenting behaviors, which lead their children towards poorer developmental outcomes (Coleman & Karraker, 2003). According to the concept of self-efficacy, parental self-efficacy should consist of knowledge regarding parenting roles in enhancing their children's well-being and a level of confidence (Coleman & Karraker, 1998). Within the family context, parents perceive that children are dependent on them; therefore, they have responsibilities to care for their children. According to Bandura (1993), parents can also create the development of their child's efficacy by being responsive to communicative behavior and creating opportunities for efficacious actions by providing an enriched physical environment, freedom for exploration, and varied mastery experiences. There is a need to develop strategies to increase parental self-efficacy such as offering a training program on parent-child relationship (Gross et al., 1995) or supporting parenting skills (Ballenski & Cook, 1982), and facilitating the development of a child through parent-child relationship (Reece, 1993).

Application of Theoretical Framework to EBP Project

Since SCT is relevant for designing health education and health behavior programs, it was used for providing the basis for intervention strategies used to design,

implement, and evaluate this project. The aim of the EBP project was to enhance parental knowledge and parental self-efficacy through a parental educational intervention about toilet training their toddlers to result in positive developmental outcomes of children. Parental self-efficacy is the primary factor in perceived-parenting role. Once parents have set a goal for their child's achievement in toileting skill, parents must believe that they have the capacity to meet this goal. In order to meet this goal, parents must gain knowledge and skills in TT a child, and the efficacy to self-regulate the progress towards that goal. Evidence-based nursing strategies to provide a new practice of TT by parents should result in greater parental self-efficacy, therefore improving parent-child relationships and promoting development and cognitive growth of both parents and children. An application of Bandura's four sources of self-efficacy to the strategies used in this EBP was established by the DNP student (Table 2.2). The DNP student focused the intervention on providing the knowledge about TT by using all four processes to produce self-efficacy (Table 2.3). The project design was structured to take advantage of all the information sources to maximize the effectiveness of the intervention. However, there are factors during TT that can lower parental self-efficacy such as parental personal traits and behaviors, regression associated with child's acute illness, and child temperament, which may lower parental self-efficacy during TT practice. Therefore, motivational strategies provided by the DNP student throughout the project were planned to enhance parental self-efficacy.

Strengths and Limitations of the Theoretical Framework for EBP Project

Applying the self-efficacy concept in this project proposed to enhance parental self-belief of efficacy in their parenting role of TT their toddlers. Ardelt and Eccles' (2001) noted that parental self-efficacy can produce a direct positive influence on a success of a child. Some parents may not believe in their ability to TT their children due to a lack of knowledge, skills and experience. A lack of parental self-efficacy may explain some of

Table 2.2

Application of Bandura's Sources of Self-efficacy to EBP Project

Processes	EBP Interventions
(a) actual performance	The DNP student asked parents to share their previous experiences in TT with their own children either success or fail. A discussion was arranged. An experience of success led to increased self-efficacy. However, the truth about each child is unique was emphasized to individuals who have failed in TT a child to realized that each child has their own characteristics.
(b) vicarious experiences	Meanwhile, some parents were sharing their previous experience, others also experienced by watching and learning through an observation by a model parent who is similar to them. They can enhance their self-efficacy by observing role models who succeed. However, observed the failures of others instills doubts about one's own ability to master similar activities thus the DNP student fostered parents' beliefs that they also can do it throughout the parent education intervention.

Table 2.2 Application of *Bandura's Sources of Self-efficacy to EBP Project (continued)*

Processes	EBP Interventions
(c) verbal persuasion	<p>Verbal persuasion is a support from effective social persuaders to strengthen self-efficacy. Parents were persuaded to believe in themselves and increased their chances of success by the DNP student. Parents who were successful in TT their previous child, and other family members were an effective social persuader. The DNP student arranged things that bring success and avoided prematurely placing individuals in situations where they were likely to fail such as provided knowledge, booklet, and access to the DNP student when they confronted difficulties in TT a child.</p>
(d) physiological cues	<p>The DNP student provided strategies to solve some emotional problems that may occurred during TT a child. Anger management, relaxation, reducing stress and depression, and motivational strategies were mentioned. The DNP student observed parents' signs of self-efficacy improvement from their communication and commitment to reach the goal of child achievement in TT.</p>

Table 2.3

Application of Theoretical Framework to EBP Project

Processes	EBP Interventions
(a) cognitive is a thinking processes involved in the acquisition, organization and use of information.	Participants were provided opportunities to be successful in TT their child. The DNP student provided the appropriate information about TT that was presented in the most conducive format to maximize the chances of success. It is believed that individuals regard ability as an acquirable skill that can be increased by gaining knowledge and competencies. Additionally, participants' previous experiences about TT, determined as sources of self-efficacy, were asked to share during a discussion.
(b) motivational processes is an activation to action	Participants were motivated by the DNP student to believe in their abilities, setting goals, and planning how to achieve their goals in TT their child. Participants were advised to praise their children and support them in any circumstance during the TT implementation to enhance child's self-confidence and efficacy. The motivational strategies were provided until the end of the implementation phase of the project.

Table 2.3 *Application of Theoretical Framework to EBP Project (continued)*

Processes	EBP Interventions
(c) affective is a process regulating emotional states and the elicitation of emotional reaction.	The project information was given to participants including both benefits and barriers. Participants were reminded that personal accomplishments require not only knowledge and skills but also their belief about their capabilities. Stress or depression was noticed and strategies to cope with those situations were guided.
(d) selection processes is an individual's decision making process	Participants had opportunities to ask a question and discuss TT content and the project. They also had an opportunity to discuss within the group to assist their decision making to engage or not engage in.

the parental behaviors in growing their child. Self-efficacy can have on a parent's educational success. However, regarding the dynamic change of self-efficacy as new knowledge arises, skills are developed by frequently practice and task experiences change then the degree of self-efficacy can be changed. Therefore, to apply self-efficacy concept as a foundation for this project in purpose to enhance parent self-efficacy through the parent education intervention in combination with strategies to maintain their perceived of self-efficacy throughout the project will beneficial to the both parents and children in this project.

EBP Model of Implementation

The EBP model serves as the foundation for evidence-based nursing practice (Schmidt & Brown, 2012). Rogers (2003) describes the theory of diffusion of innovations (TODOI) to explain the way that new ideas and technologies are diffused and adopted in a community. Diffusion is "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p.5). Diffusion is a special type of communication concerned with the spread of messages that are perceived as new ideas. An innovation is an idea, practice, or object that is perceived as new by an individual (Rogers & Scott, 1997). New ideas or practices commonly produce varying degrees of uncertainty or suspicion within a social system and thus are adopted at differing rates. The rate of adoption of innovation is influenced by the perceived attributes about the innovation (Rogers & Scott). The characteristics which determine an innovation's rate of adoption are: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability to those people within the social system. Communication is the process by which messages get from one individual to another in order to reach a mutual understanding. Interpersonal channels are more effective in forming and changing attitudes toward a new idea, and thus in influencing the decision to adopt or reject a new idea. Most individuals evaluate an

innovation, not on the basis of scientific research by experts, but through the subjective evaluations of near-peers who have adopted the innovation. A change agent is an individual who deliberately tries to bring about a change or innovation-decision in a direction that is deemed desirable by a change agency. Change always involves the exercise of interpersonal influence (Kritsonis, 2004).

Application of the EBP Model

The TODOI model has been chosen to guide this project. Rogers' (2003) theory of diffusion of innovation model tends to be an appropriate model to guide the application of child-oriented TT for Thai parents. Using a variety of strategies (channels), the DNP student communicated with a group of parents and caregivers, as well as preschool staff and colleagues. The DNP student influenced parents'/caregivers' innovation-decisions to adopt the child-oriented TT in their practice. Parents/caregivers decision-making is based on time and will pass from first knowledge of child-centered TT to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of their decision. It is understandable that the adoption of the new practice will vary among the parents/caregivers. Some of them may adopt this approach to TT earlier than other members of a social system. Additionally, the rate of adoption of child-oriented TT may influenced by the number of members of the system that adopt the innovation in a given time period. For example, grandparents play an important role in Thai culture and may advocate traditional methods of TT, thus delaying the adoption of child-centered TT. The adoption of an innovation grows slowly and gradually in the beginning. It will then have a period of rapid growth that will taper off and become stable and eventually decline (Rogers). Therefore, the DNP student as a change agent will keep motivating them and giving important information throughout the time of implementation. However, limitations of the model such as the pro-innovation bias and individual blame bias are being recognized.

The communication among the group in the social system can be benefit or disadvantage to the project. Therefore, the innovators' perception of the benefit of the child-oriented toilet training strategy should be emphasized. Application of TODOI will assist in using educational strategies to promote the new practice of child-oriented toilet training in Thai parents.

Literature Review

Literature Search

The literature review is an important method to establish best practice by learning from findings of previous studies and practice guidelines about the topic of interests. It provides a consideration of what has been done, identifies the gaps in research, share knowledge, and provides recommendations for further study (Schmidt & Brown, 2012).

Identify sources examined for relevant information. To assure best practice, a variety of sources were searched. Finding evidence-based practice and guidelines to facilitate achievement of child toileting skills by implementing an education program about child-oriented TT that enhances parental knowledge and self-efficacy was central to this project. The focus for this literature review was to explore the evidence for effectiveness of current TT practice in healthy children. In addition, the evidence of the effective teaching strategies to provide education in TT that can enhance parents' or caregivers' knowledge and self-efficacy were searched.

Search engines. Searches of Cumulative Index of Nursing and Allied Health Literature (CINAHL), Educational Resources Information Center (ERIC), Medline via EBSCO, PsycINFO, ProQuest Nursing & Allied Health Source, Science Direct, JBI connect, Cochrane Library and PUBMED databases were conducted in addition to a manual search of individual journals such as Paediatrics and Journal of Nursing Practice. Internet searches were also conducted using Google Scholar. Websites relevant to the topic of interest included American Academy of Pediatrics Website,

Canadian Paediatric Society Website, and Best Practice by the BMJ Evidence-Centre.

Keywords. The keywords used to search were: toilet train* or potty train*, toileting, toilet train* and infant or toddlers, toilet train* and healthy children, potty train* and healthy infant or toddlers and method or procedure. These search terms were used in various combinations in order to yield the most results in the databases.

Inclusion/exclusion criteria. During an initial search, all available publications from earliest year to 2012 were searched. Criteria for inclusion were: (a) research designs except a case report, (b) children age under 5 years old or defined as toddlers or preschool, (c) provide intervention on TT method for a healthy child, (d) child's achievement or failure in TT was one of the measured outcomes, and (e) the studies must have been published in English or Thai. Criteria for exclusion are: (a) studies of TT in children with co-morbidities that affect quality of life such as children with developmental delayed, disabilities, or the treatment of children with enuresis and/or encopresis, and (b) publications written in languages other than English and Thai. Case reports were excluded because it was determined as low-quality evidence. Because this project was conducted with a group of parents who have healthy toddlers, studies involving children with chronic diseases or disability were omitted. The sample also involved toddlers, so evidence involving children older than 5 years old was excluded. The DNP student conducted her project in Thailand so previous studies about TT in Thai children both in Thai and English language are accepted.

A flow chart in Figure 2.2 represents the literature search for the project, through a comprehensive search from earliest year to 2012 in all available databases stated above, 1,785 publications relevant to TT were located. One systematic review on toilet training was reported by the Agency for Healthcare Research and Quality (AHRQ) in 2006. Then, the search was limited to year 2005 to present year 2012, whereby 103 studies were identified. After limiting searches to studies of TT for a specific group of

infants and toddlers, 51 studies and articles were relevant to the EBP project. Of these, 20 studies were excluded because they involved TT method for child with special needs. Other reasons for excluding another 21 studies in healthy children were: 8 duplications, 10 studies of TT in child with health conditions such as encopresis and enuresis, and 3 publications that were repeated with different keywords or some publications that were about the same groups of children, but discussed different outcomes were excluded together with no abstract and titles unrelated to the subject under review. It is interesting that all of the studies found were descriptive designs and most of them were literature review. Through an extended literature search, 10 potential studies relevant to TT methods for a healthy child were reviewed: 7 potential relevant articles that met the criteria of inclusion, the AHRQ systematic review report, 1 guideline from AAP, and 1 guideline from CPS. These were read in full and included in the relevant evidence appraisal. These 10 publications were reviewed and rated.

Levels of evidence. Levels of evidence for included articles were rated based on the rating system for the hierarchy of evidence identified by Melnyk and Fineout-Overholt (2011). The levels of evidence found for this project and number of rated paper are presented in Table 2.4.

Appraisal of relevant evidence. All 10 studies were appraised for the level of evidence as presented in Table 2.5. Of these 10 publications include: 1 systematic review (level I) and 2 practice guidelines (level I), and 7 studies (levels II=1, V=3, VI=2, & VII=1). Additionally, there is sufficient evidence from guidelines published by professional organizations using expert opinion to support the use of a child-oriented TT.

Guidelines

In a report from the AHRQ, Klassen et al. (2006) evaluated the evidence determining the effective methods of TT. Using 10 questions that compose the Critical

Figure 2.2 Flow Chart of the Literature Search

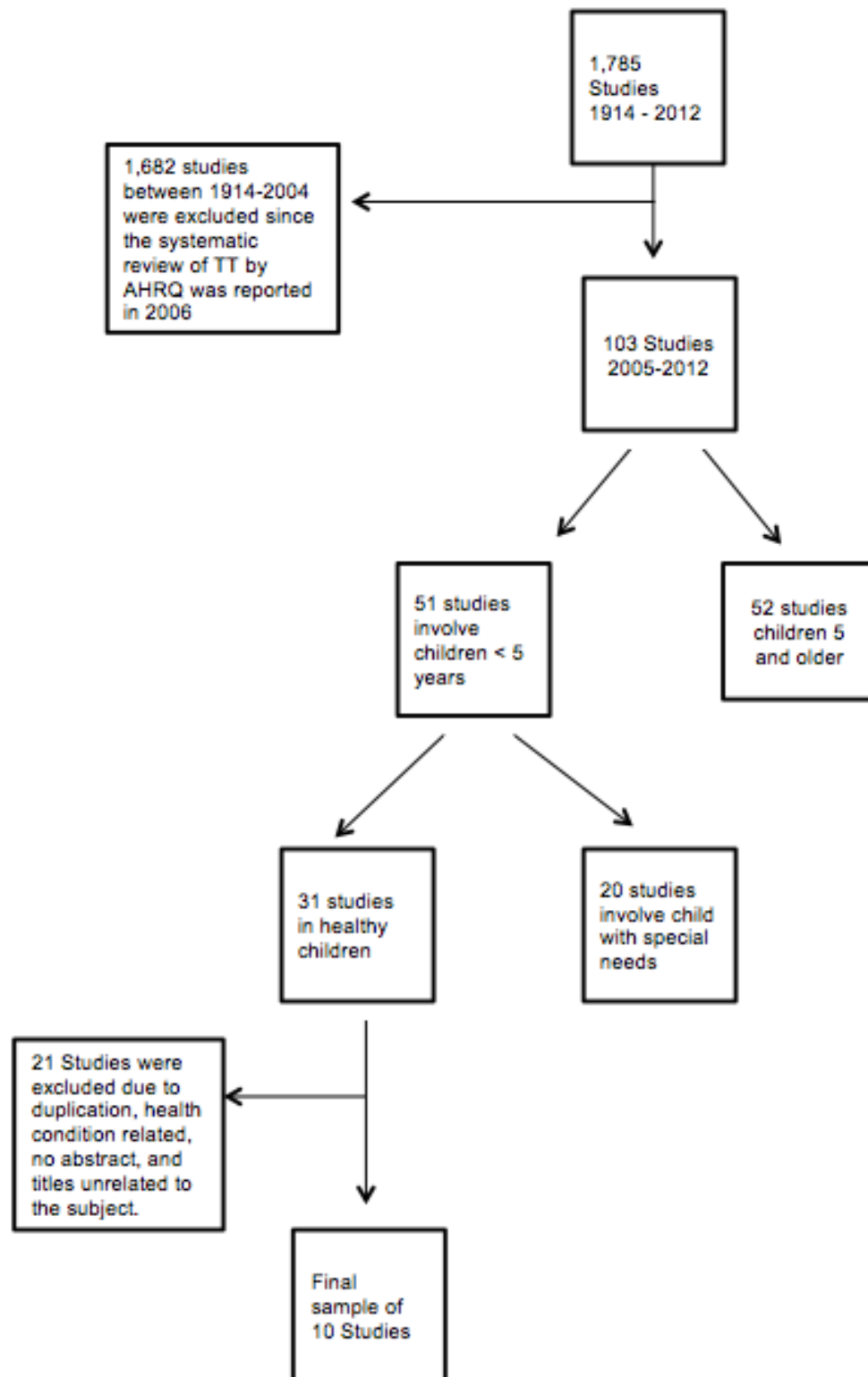


Table 2.4

Rating System for the Hierarchy of Evidence for Intervention/Treatment Question

Level	Description	Total
Level I	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCT's), or evidence-based clinical practice guidelines based on systematic reviews of RCT's.	3
Level II	Evidence obtained from well-designed RCT.	1
Level III	Evidence obtained from well-designed controlled trials without randomization.	-
Level IV	Evidence from well-designed case-control and cohort studies.	-
Level V	Evidence from systematic reviews of descriptive and qualitative studies.	3
Level VI	Evidence from a single descriptive or qualitative study.	2
Level VII	Evidence from the opinions of authorities and/or reports of expert committees.	1

Note. Adapted from “Rating System for the Hierarchy of Evidence for Intervention/Treatment Question” by B.M. Melnyk and E. Fineout-Overholt, 2011. *Evidence-based practice in nursing and healthcare: A guide to best practice.* Copyright 2011 by LWW.

Table 2.5

Relevant Evidence Appraisal

Publications	Level of Evidence
Klassen et al. (2006)	I
American Academy of Pediatrics Guidelines (2000)	I
Canadian Paediatric Society Guidelines (2000)	I
Vermandel, Weyler, Watchter, & Wyndaele (2008)	II
Vermandel, Van Kampen, Van Gorp & Wyndaele (2008)	V
Ngarmrungnirund & Plubrukarn (2011)	V
Mota & Barros (2008a)	V
Koc, Camurdan, Beyazova, Ilhan, & Sahin (2008)	VI
Jansson, Danielson, & Hellström (2008)	VI
Choby & George (2008)	VII

Appraisal Skills Programme (CASP) checklists was used to conduct this systematic review. Klassen et al. examined the following: (a) the effectiveness of the TT methods, (b) which factors modify the effectiveness of TT, (c) if the TT methods are risk factors for adverse outcomes, and (d) the optimal TT method for achieving bowel and bladder control among patients with special needs. Although they looked at patients with special needs, they also included studies involving healthy children in their systematic review. The search was greatly detailed in this systematic review. For instance, the authors used search terms such as “toilet training” “potty training” and “toilet training and procedure.” The authors looked for the appropriate sort of papers in databases such as MEDLINE, EBM Reviews, EMBASE, CINAHL, PsycINFO, and related websites. To assure rigor, two reviewers assessed each study to determine whether or not it should be included in the sample. In total, initial searching identified 1,481 studies; however, duplicate studies, multiple publications, incorrect study design, incorrect intervention, published in foreign language other than English, incorrect population and no outcomes studies were excluded from a full review. Finally, 35 studies were reviewed by using Downs and Black score and the Jadad scale to critique observational studies and randomized trial, respectively. Nine studies of TT method in healthy children including six observational studies (Bakker, Van Gool, Van Sprundel, Van Der Auwera, & Wyndaele, 2002; Brazelton, 1962; Butler, 1976; Foxx & Azrin, 1973; Kaufmann, 1972; and Taubman, 1997) and three randomized trials (Candelora, 1977; Matson & Ollendick, 1977; and Taubman, Blum & Nemeth, 2003). The results of the review have been separated based on the four objectives of this systematic review. Focusing on the TT method for healthy children, four of nine studies (Butler, 1976; Candelora ; Foxx & Azrin; Kaufmann; and Matson & Ollendick) used Azrin and Foxx method, four studies (Brazelton; Kaufmann; Taubman, 1997; and Taubman et al.) used child-oriented approach, and one did not state any specific method (Bakker et al.). Findings showed that both a Brazelton child-

oriented method and Azrin and Foxx's method are suitable and resulted in successful TT in healthy children. However, there was no comparison between the Brazelton child-oriented approach and the Azrin and Foxx method. The Brazelton child-oriented approach involves a gradual training focusing on a combination of both child and parent's willingness to TT. The child must show physiological and behavioral readiness prior to begin TT. Current published TT guidelines, AAP and CPS, were cited for their recommendation of the use of a Brazelton child-oriented approach in their guidelines. Meanwhile, the Azrin and Foxx method seems to result TT success more quickly, but the method is more intense and the data about sustainability of the TT was not discussed.

The findings from the report of AHRQ by Klassen et al. (2006) demonstrate that the most important findings from this systematic review provide strong evidence to support the relevant issues in TT for both healthy children and children with special needs. In the conclusion, the authors comment that there was limited information about the sustainability of the training but, it did not limit the conclusions. Because the PICO question for this EBP project does not differ from that of the review, then findings from the systematic review can inform clinical decision-making for the project. The authors' recommendations focused on the role of healthcare worker to implement evidence-based interventions to promote the child developmental milestone in toilet training of both healthy children and mentally handicapped. They suggested that future research opportunities include standardizing definitions of "toilet trained," "success," and "failure" and adapting them to cultural differences when appropriate, conducting trials that directly compare two toilet training methods, such as the Brazelton child-oriented approach and Azrin and Foxx method, within the same population, accurately describing the populations in terms of mental and/or physical challenges, using current diagnostic standards, conducting toilet training programs with children suffering from behavioral disorders such as attention-deficit disorder and oppositional defiant disorder, and

determining if toilet training is affected by factors such as age, sex, race, and culture, and documenting adverse outcomes.

The AAP (2004) TT guidelines have been developed using an evidence-based approach, in collaboration with expert consensus on best practice and the best research available. The guidelines clearly identified the AAP as responsible for the development of the guidelines. The reasons for developing the guideline and its objectives are to provide information about toilet training practices at home, clinics, and daycare settings. Three groups of people, clinicians, parents, and daycare providers, who are involved with childcare may benefit from their recommendations involving the definition of TT, instruction for TT, assessment of parents and child's readiness, and specific issues in TT. Also, a discussion about the partnership needed among parents, clinicians, and daycare providers to promote successful toilet training is recommended. While the method used to formulate recommendations is not described in the guideline, there is information included on their official website (AAP, 2011). The AAP guidelines indicate that a child readiness assessment should be done prior to beginning TT. However, a child's readiness for TT can be identified from 18 months to 24 months of age. Intensive TT should begin when a child is ready after his/her second birthday. Three steps of TT include: (a) Step 1: TT with practice runs, (b) Step 2: TT with parent reminders or prompts, and (c) Step 3: TT on a child's own initiative. The AAP guidelines offer evidence-based recommendations about TT method that demonstrate the potential to maximize outcomes for healthy children. Therefore, it sounds adequate description for clinicians, daycare providers, parents and toddlers to gain the benefit from this recommendation (Gorski, 1999a, 1999b, 1999c). The potential risks and harms that may occur as a result of recommended management is not stated in the guidelines but common events that could occur during the TT such as setbacks of a child and accidents were mentioned. Hence, helpful tips and suggestions were provided. The

AAP, which recommends a child-oriented approach based on expert opinion (Schmitt, 2004a, 2004b, 2004c), advises to begin TT when the child is 18 months of age because the child will have developed a physical readiness. It is suggested that the child must be interested in the process. The AAP recommends that parents reward children with praise and positive reinforcement instead of treats.

The CPS, a national association of pediatricians in Canada, provides nurturing excellence in healthcare, advocacy, education and research relevant to the children. Practice guidelines convey the opinion and recommendations of the CPS (Clifford & Gorodzinsky, 2000). These recommendations are aimed at child and youth health professionals including pediatricians, family physicians, and others as well as policy makers (CPS, 2013). The reasons for developing the TT guidelines and its objectives are clearly stated. The guideline was developed by the community pediatric committee to provide concrete knowledge for pediatricians to help facilitate the TT process. The principle and members of a committee were named in this guideline. Relevant papers were listed for pediatricians to read from a primary source if needed. The recommendations included in the guideline can be found easily and clearly presented with appropriate and reliable references. Physicians should inform parents about the 'child-oriented' approach before the process starts plus their preparedness to offer anticipatory guidance to parents as the child learns toileting skills. The content in these guidelines include timing, child's readiness for TT assessment, child-oriented approach technique, common adverse effects of toilet refusal and recommendations for TT for children with special needs. The CPS notes that TT has changed over the time and differs between cultures; therefore, a discussion about the appropriate time to start TT and parents' expectations should be done at the child's first year visit so that TT timing is individualized. Later, the information about the child's readiness assessment and the child-oriented approach should be provided. The guidelines tend to help pediatricians

take appropriate actions when counseling for parents of a toddler and it may assist advance practice nurses when providing advice about TT to the parents of a child. Additionally, TT guidelines, using simple words that are easy to understand, is available for parents to train their children at home. The guidelines can be easily accessed at the Canadian Paediatric Society website (<http://www.cps.ca/en/documents/position/toilet-learning>).

Comparisons of TT Approaches

Vermandel, Van Kampen, Van Gorp, and Wyndaele (2008) reviewed the literature about TT in healthy children. The authors stated that all available literature on TT was searched. The data were summarized from literature based on the topic of interests including publications on signs of readiness for TT, TT methods, the description of being toilet trained, TT problems, and predictive factors for success. Data focused on three different TT methods: (a) intensive-structured approach, (b) child-oriented approach, and (c) the assisted caregiver method. The authors described the different type of TT include: Azrin and Foxx method, Brazelton child-oriented approach, and assisted caregiver method. The Azrin and Foxx method (Foxx & Azrin, 1973) was determined as an intensive-structured approach that provides an intensive learning procedure. The child's physiological and psychological readiness should be assessed before the TT begins. This approach needs a short training time that helps reduce compulsive parental pressure. However, the training method may raise the child's emotional problem from the rushed and rigid training and may even cause behavioral problems. In addition, the Azrin and Foxx method is in need of professional supervision because regression may occur if parents over correct. The barriers to practice were the need to increase of fluid taking by children and the lack of specialized trainers. In the other hand, the Brazelton (1962) child-oriented approach was described as a gradual training method focused on a child's and parent's readiness. With this approach, the child's physiological and

behavioral readiness, neurological maturity to cooperate, and the voluntarily participation of a child are needed. This approach is relaxed with no any coercion or pressure involved. The Brazelton child-oriented approach provides less parents-child conflict and anxiety and is less education time from parents, thus it is very attractive to parents. Parents should demonstrate their willingness to train their children prior to beginning TT. The disadvantages of the child- oriented approach could be the parents' frustration and that children complete TT at an older age when compared to other approaches. Lastly, the assisted caregiver method (as cited by Vermandel et al., 2008) has been used to assist the infant TT by holding them over the potty chair when urination and defecation. Age initiation for this approach could be as younger as 2-3 weeks but an average age was 4-6 months. Parents, using the assisted caregiver method to TT their children, must learn to predict the feeling of urination and defecation from body signals, subsequently placing them over the potty chair. This approach requires significant parental participation. The benefit of this method was children are toilet trained at an early age.

Moreover, Vermandel, Van Kampen, Van Gorp, and Wyndaele (2008) also found limitations regarding the definitions of terminology used in TT such as "toilet trained", "success" and "failure." These various definitions raised barriers to drawing conclusions about findings. Despite this limitation, findings from this integrative review provide information about advantages and disadvantages of each method and can assist health care providers when making decisions about implementing best practice. In addition, Vermandal, Weyler, Wachter, and Wyndaele conducted a small ($N = 39$) single-blind RCT to compare the daytime wetting alarm diaper (WAD-T) with timed potty training (TP-T) in children age of 20-36 months. Authors recommended that parents should have clear understandings of their children's development, behavior, and readiness for TT before the TT begins. This study incorporated both a child-oriented approach and the Azrin and Foxx method with the daytime WAD-T method. Results from this study not

only support WAD-T method, but authors noticed that the use of child-oriented approach helps parents using this method to recognize and respond to the cue of having just urinated or urinating. The authors recommended that TT topics provided to parents during an education session should include information about child development, behavior, and TT readiness assessment. Moreover, parent training strategies to enhance parental knowledge and practice in TT included a home visit before starting the TT and daily phone contact to offer help and information as needed. Techniques included using a doll to teach the child about toileting, using positive reinforcement with hugs, effusive praise, smiles, or applause when the child urinated in the potty and abstaining from negative feedback when accidents occurred were also presented in this study can be used as a guideline for parental training for TT.

In a study based on integrative reviews, Choby and George (2008) discussed two methods of interest: the Brazelton child-oriented approach and Azrin and Foxx method. The authors indicated that both methods are similar in the success of a child in TT. The Brazelton child-oriented approach focused on the child's interest in TT and the readiness of a child. The Brazelton child-oriented approach is more accepted by parents and physicians than other methods; however, it took longer time to complete the training using Azrin and Foxx method. In comparison, the Azrin and Foxx method provided rapid training but its acceptability is less than other methods due to its intensive and parent-oriented practice. Both methods have been used by parents with different purposes. Parent who prefer a quick training are likely to choose the Azrin and Foxx method whereas parents with less time for TT during the day may prefer the Brazelton child-oriented method. Although this study was an expert's opinion, which is the weakest evidence in the rating system for the hierarchy of evidence identified by Melnyk and Fineout-Overholt (2011), comments were not biased. Many up-to-date and reliable resources were cited.

There are no random clinical trial studies that compare TT methods. Some clinical trials comparing the same method with different approaches (Vermandal, Weyler, Wachter, & Wyndaele, 2008) or a discussion to compare TT methods (Choby & George, 2008) have been conducted. From these studies (Choby & George, 2008; Vermandal, Van Kampen, Van Gorp, & Wyndaele, 2008; Vermandal, Weyler, Wachter, & Wyndaele,), it can be concluded that time it takes to TT children using the Brazelton child-oriented approach is similar to Azrin & Foxx method; however, the Brazelton child-oriented approach is less intense and is easier to understand in comparison to Azrin and Foxx method. The Brazelton child-oriented approach does not require professional supervision like the Azrin and Foxx method and does not need parent significantly involvement like the assisted caregiver method. The Brazelton child-oriented approach is more acceptable to parents to practice TT with their child at home.

Culture and Approaches to TT

Culture plays an important role in the approach used for TT. For example, in Thailand the typical approach to TT is parent-centered. Ngarmrungrirund and Plubrukarn (2011) surveyed 295 caregivers to determine the method used to achieve daytime TT in Thai children aged 2 to 3 years. The cross-sectional descriptive study involved the use of questionnaires for data collection. Parents of children with health conditions and developmental delay were excluded. The researchers found that Thai children start TT at age between 12 to 23 months. Additionally, children who start TT after age 18 months achieved toileting skills within 6 months, which was less than those who began before age 18 months. It is interesting to note that most parents preferred using parent-centered method rather than child-oriented approach. The authors suggested that parents and caregivers should performed TT regarding to children's readiness and based on good parent-child relationship. Strength of this study is that it shows the trend of TT in Thailand based on Thai culture. However, previous a study by

Vermandel, Van Kampen, Van Gorp and Wyndaele (2008) indicated that the assisted caregiver method or parent-centered approach requires significantly parent involvement because TT started before children are physically and emotionally ready. Therefore, parents are required to assist their children at any time when they need toileting. Children cannot develop their independence with this type of approach.

Similarly, Mota and Barros (2008a) reviewed the literature about TT healthy children from neonates to 19 years of age. Their search of the literature focused on aspects of parents' expectations, methods available and methods actually used to achieve TT and also associated morbidities was indicated. Search strategies and the criteria for the selection of the studies to be included in the review were identified. Eighty-five of 484 articles were read in full and included in this review of literature. Among the various types of TT strategies mentioned in the study of Mota and Barros, the two principal methods of TT, the Brazelton child-oriented approach and the Azrin and Foxx method were mentioned. The Brazelton child-oriented approach was described as designed to minimize conflict and anxiety and emphasize the importance of flexibility. Meanwhile, the Azrin and Foxx method was a more intensive and structured approach. However, a comparison of those two methods was not described. Authors also indicated that different cultures have different methods of TT and distinct expectations about when bladder and bowel control should be achieved. The differences between the opinions and the expectations of parents, daycare staffs, and healthcare providers should be considered. Appropriate guidance can help prevent family conflicts between parents and child, parents and other family members such as grandparents, and parents and daycare staffs. So, it is important for healthcare providers to provide information about TT with families and daycare staffs was recommended.

The patterns of TT and factors affecting the TT, including timing and duration in different sociocultural groups, have also been studied (Koc, Camurdan, Beyazova, Ilhan

& Sahin, 2008). A cross-sectional survey of 745 children was conducted in Turkey in three different settings: (a) urban, (b) semi-urban, and (c) rural. The study groups were parents of a child age under 5 years old who had been toilet trained for over the past 3 months. A questionnaire, composed of 25 items, was used for data collection. The factors that might affect timing and duration in each group were analyzed by using *t*-test, ANOVA and logistic regression analysis. There were primarily three different TT methods used. One approach was a rewards method that included praising the child, buying toys or chocolate, and making a telephone call to grandparents. A second approach was based on a punishment method that included scolding and spanking. This approach was used more often in the rural setting. Lastly, a modeling approach was used by letting the child be observed by older siblings, parents, or friends when urinating in a toilet. Children were then praised by the observers for success. A limitation of this report is that child achievement in TT of each method was missing. However, it was found that in Turkey, there are differences of TT among cultures. Additionally, parents' level of education affected the initiation age as they started TT their children. Parent who had higher levels of education began TT later than those parents who had lower levels of education. As a result of their findings, the authors recommended a child-oriented approach. Strength of this study is that findings support the use of a child-oriented approach with cultural difference groups.

A qualitative study by Jansson, Danielson and Hellström (2008) involved interviewing parents about how their children achieved bladder control, which was conducted in a child health care center in Sweden. Twenty-one parents of toilet-trained children were recruited. Interviews focused on timing, daily routines during the training, child willingness, and factors influencing the initiation of TT their children. A qualitative content analysis method was used to analyze data, and the authors clearly explained and confirmed methods used to assure a trustworthy of study. The demographic data of

participants and their children were presented. Findings showed that all parents felt responsible for TT their child. Most of them believed the time to start TT would come naturally to the child; however, they also sought information about TT to help the child when the time had come. In addition, parents stated the child's cooperation including cognitive skills, and personal traits play an important role in TT their child. These findings are intended to illustrate the experiences of parents in TT their children as indicated in the study purpose. It seems clear that the importance of the research is to enhance readers' understanding of parents' feelings and experiences in TT. The authors noticed their findings similar to the previous studies in TT methods of Brazelton (1962). Moreover, opportunities for future research and implementation for clinical practice were recommended. The authors suggested that healthcare staff needs to provide guidance about TT a child based on this new knowledge to reduce parent's uncertainty and frustration during the training. A further study of TT children in different sociocultural settings and in a various age of a child should be conducted.

These studies (Jansson et al., 2008; Koc et al., 2008; Mota & Barros, 2008b; and Ngarmrungrund & Plubrukarn, 2011) provided information about child's readiness to start TT in four different countries. Although TT a child at early age is common in many cultures, no benefit of an early initiation of TT was seen. Moreover, the use of punishment still occurs in some cultures, however there was no report of the benefit of using this method. The use of rewards and modeling method during TT a child were indicated as an effective strategy in TT.

Construct Evidence-Based Practice

Synthesis of Critically Appraised Literature

Approaches to TT. Various TT methods are available: Brazelton child-oriented approach, Azrin and Foxx method, and assisted caregiver method. The Brazelton child-oriented approach, which uses physiologic maturity, ability to understand and respond to

external feedback, and internal motivation to assess child readiness for a toilet-training (Choby & George, 2008) has been recommended by many organizations involved in childcare including the AAP and the CPS. The child-oriented approach is very attractive to parents, has less parent-child conflict and anxiety, and demands less education time from parents (Vermandel, Van Kampen, Van Gorp & Wyndaele, 2008). The recent guidelines of the AAP and CPS are still based on the child-oriented approach. Meanwhile, Azrin and Foxx method is much more intensive and structured (Klassen et al., 2006). Azrin and Foxx developed a more aggressive method to facilitate training in less than a day. Parents must be prepared for an intense, regimented routine, which may not suit every child's temperament if they prefer to apply this approach to TT their children (Lang, 2008). Additionally, an assisted caregiver method required more parent involvement more than other methods.

Brazelton (1962) described the unselected records of TT results of 1,170 children from upper-middle class families over ten years during 1951 to 1961. All parents received anticipatory guidance from healthcare workers at the 9 months visit of a child. Then, mothers from the record gave their children a thoughtful environment and the children were given more freedom to train themselves at their own speed. Brazelton described how he determined children and parents were ready to begin TT. Most records show that parents begin TT at approximately 18 months of age. Daytime continence for all was achieved by a mean age of 28.5 months and nighttime continence by 33.3 months. The first child of the family had later training than the subsequent siblings, and boys took longer nighttime training than girls. He also found that the child-oriented TT helps to prevent residual symptoms.

Brazelton (1962) developed a child-oriented TT program that focused on gradual TT. Toilet readiness is a combination of both child and parent willingness to participate in toilet training. The parent responds to the child's signals that the child is ready to

begin toilet training. In addition, the parent must be willing to toilet train the child and be aware of training obstacles, such as the child attending daycare or any physical or mental disabilities the child may have. The child must be physiologically and behaviorally ready to toilet train. Examples of child readiness include exhibiting some degree of bladder and bowel control, having the neurological maturity to co-operate, and voluntarily participate in toilet training. It is believed that these components are not developed until the child is approximately 18 months old. To toilet train the child, the child should become familiar with his own chair and sit on it while fully clothed. Once co-operation has been established, the child may sit on the chair without a diaper. The next step is to empty the diaper contents into the chair while explaining to the child that this where eliminations go. Once the child understands the chair, the child can be encouraged to use it independently and can begin wearing training pants.

Polaha, Warzak, and Dittmer-Mcmahon (2002) surveyed pediatricians' current practice in providing TT method guidance to first time learners during visits. Participants were 103 pediatricians in Nebraska, USA. The results showed that 72% of pediatricians recommended a gradual, passive, more child-oriented approach to TT as suggested by Brazelton. The child-oriented approach has been recommended as one of effective TT method for a child without a professional supervision (Connell-Carrick, 2006; Kiddoo, 2012; Kinsevix & Friedhoff, 2000; Mota & Barros, 2008a; Stadtler et al., 1999). The child-oriented approach has been popular among parents and pediatrics regarding to a simple instruction, child-centered, less parent-child conflicts.

Child's readiness and initiation age. Schum et al. (2002) suggested that TT readiness skills are not obtained until after the child's second birthday; however, in Thailand, training starts before the age at which the child is able to sit properly (Ngarmrungrunirund & Plubrukarn, 2011). Moreover, Blum, Taubman and Nemeth (2003) suggested that there is no benefit from intensive training before 27 months of age

otherwise, stool toileting refusal and constipation of the child may occur. Parents should be able to assess when their child is ready. Studies demonstrated that each child and family are unique for the ideal age for TT varies (AAP, 2003; Mota & Barros, 2008b; Schum et al.). Additionally, Schmitt (2004c) noticed that toilet training done badly can lead to medical complications, including dysfunctional voiding, constipation, and even child abuse. Stadler et al. (1999) stated that there is a consensus of agreement that a child's readiness for TT should be assessed before the beginning of the TT. Parents should not force a child to start TT if they do not show physiological, emotional, behavioral readiness and not willing to start TT. The evidence shows that all children would benefit from a more structured TT routine (Bakker & Wyndaele, 2000). Kaerts, Van Hal, Vermandel and Wyndaele (2012) reported findings from a literature review about readiness signs used to define the time to begin TT. They identified 21 signs of readiness for TT of a child age from 1.5 months to 24 months. The readiness signs from studies mentioned above associated with the TT method of Brazelton child-oriented approach. In addition, Horn et al. (2006) conducted a cross-sectional survey of 779 parents to get information about the appropriate age for initiating TT. They found that race and income were independent predictors of belief in age at which to initiate TT.

Possible common adverse effects of TT. Taubman (1997) studied the use of a child-oriented TT approach in 482 healthy children from middle- and upper- class families. The prospective cohort study found that 22% of children experienced at least one month of stool toileting refusal and 13% developed stool withholding during training. Twenty-nine children with these conditions required an intervention. While setbacks and accidents are not adverse effects, they can initiate emotional problems for parents and children. The AAP suggests remaining positive throughout the process, praising a child for progress without being negative when there is a setback. Punishment must not be applied in any circumstances.

Toilet training in Thailand. Benjasuwantep and Ruangdaraganon (2011) interviewed the parents of 47 infants in Thailand. The authors found the youngest age at which the children of this group start to be toilet trained was 4 months. A parent-assisted method seems to be a popular method that has been used by Thai parents. The findings associated with the study of Rogers (2007) in reviewing the influences of age, culture and beliefs on TT. Rogers found in Asian and African countries, TT begins at younger age than in the Western countries. Most of the children in the study of Benjasuwantep and Ruangdaraganon started TT when they showed urging signs. The method of assisted infant toilet training was used and 48.9% of children were trained successfully within 1 month by age 12 months. Children of a well-educated parents started TT later than children whose parents have lower levels of education. Although a parent-assisted method seems successful, it requires more parents' attention and involvement. Moreover, regarding to the DNP student's experiences in pediatrics for 22 years, many parents/caregivers lack or have less knowledge about initiating the training, assessing child and parent readiness for the training includes physiological and emotional readiness, and method of training. Therefore, the best practice to TT is to provide to parents/caregivers of children in Thailand effective educational strategies based on the best available evidence.

Parental self-efficacy. In addition, parents play an important role in assisting their children to reach their developmental milestones (Sanders, 1999). Efficacy beliefs are a major basis for parental practices (Bandura, 1997b). Constructing parental efficacy is a crucial task for healthcare workers who work with families. Hence, parent perception of self-efficacy can be a strong influence for adequate parental practices. Since parents should be involved in TT their children, information about TT should be provided before the TT begins. This EBP project aims to facilitate child toileting skills through parent education. Therefore, studies about parental self-efficacy were searched through the

similar search engines. The keywords for searching were self-efficacy, confidence and both keywords in combination with parent, parenting, training and education. Studies about the parental self-efficacy in training and/or education were review to construct the EBP project.

In 2005, the concept of perceived parental efficacy was analyzed by De Montigny and Lacharite (2005). The concept analysis aimed to clarify the meaning of perceived parental efficacy and distinguish it from other related concepts including parental confidence and parental competence. A sample of 30 articles relevant to self-efficacy from nursing practice and psychology were reviewed. Different methods of concept analysis were used such as Walker and Avant (2005), Rodgers and Knalf (2000), and Morse, Mitcham, Hupcey, and Tason. (1996). The authors defined perceived self-efficacy as “beliefs or judgments a parent holds of their capabilities to organize and execute a set of tasks related to parenting a child” (De Montigny & Lacharite, 2005, p. 387). Antecedents of parental self-efficacy include: (a) previous mother’s childcare experiences which strengthens parental self-efficacy for being a mother of a toddlers, (b) observation and modeling from expert that allow transmission of competencies with the attainment of the others such as parent training programs have found to influence perceptions of parental self-efficacy, and (c) quality of social support and positive reinforcement can enhance perceived parental efficacy. Changes in emotional or physiological aspects can reduce parent’s perception of efficacy combined with child’s personality trait or behaviors also affected parental self-efficacy. Difficult children can increase parent’s feeling of being incapable. The consequences of parental self-efficacy include: (a) resilience to adversity, (b) ability to cope with environmental demands, and (c) the belief of accomplishment any assigned tasks. De Montigny and Lacharite recommended implications for influencing parental self-efficacy through the components identified by Bandura (1997a, 1997b). Parent education interventions should enhance

parental self-efficacy by providing knowledge through observational, modeling teaching strategies, and frequently influencing their beliefs of capabilities through verbal persuasion. Supporting parents during the training and providing help if needed is also a way to build self-efficacy. The methods to enhance parental self-efficacy such as providing anticipatory guidance, offering training program on parenting role, offering opportunities to model, role play and practice skills were recommended for future study.

Gross et al. (1995) studied the effectiveness of a parent training program for promoting parent-child relationships. In total, 23 families with children age 2 to 8 years old were included. Those families were randomly assigned to three groups: 10 families in experimental group, 6 families in control group and 7 families in the “drop out” group. Measures of parental self-efficacy, child behavioral difficulty, depression, parental stress, and parental satisfaction were completed by parents. A parent-toddler interaction were videotaped and rated by researchers. Two 10-week training interventions were developed and assigned to families. The results demonstrated that parental self-efficacy was significantly increased after the training intervention, parent-child relationships were better than before the training, and that parenting stress was decreased. Findings from this study affirmed the consistent of self-efficacy theory by Bandura and practice. Therefore, parental self-efficacy enhancement is a major base for parental practices.

Best Practice Recommendation

Although TT is strongly influenced by cultural variations, it is universally seen as a milestone in child development, being one of the first challenges a child faces in acquiring independence. Two published national guidelines from the AAP and CPS recommend the child-oriented approach. In general the Brazelton child-oriented approach and Azrin and Foxx method are suitable to teach TT in healthy children (Klassen et al., 2006). Both methods result in quick, successful toilet training; however, the Brazelton child-oriented approach is easier to understand and more accepted by

parents than the Azrin and Foxx method. Because families and children are unique, recommendations about the ideal time or optimal method must be adjusted. Both guidelines recommended that children be physically ready to begin TT when they are 18 months of age, the children show interest in TT, and the type of potty chair or potty seat should make children feel comfortable and secure. Therefore, healthy children who demonstrate readiness for TT should be trained with parents involved.

Guidelines for Toilet Training

This EBP project will involve the use of effective implementation strategies to improve the utilization of evidence and practice through parent-child interaction interventions. An education program about child-oriented toilet training that enhances parental knowledge and self-efficacy will be implemented. The guidelines for TT in this EBP project were prepared in accordance with the child-oriented approach guidelines from AAP and adapted to guide Thai parents/caregivers about how to TT their healthy toddlers. Parents can help their children get ready without waiting until 2 or 3 years of age to start the training. The child's readiness preparation was shown in Table 2.6

Answering the Clinical Question

The question in the PICOT format is: In parents and caregivers of healthy toddlers in Thailand, how does a child-oriented toilet training method affect their knowledge, self-efficacy, and achievement of child in toileting skills? Therefore, the project to facilitate achievement of child toileting skills by implementing a child-oriented toilet training approach guidelines to improve the utilization of evidence and practice through parent-child interaction interventions should be conducted. The result of this project will support and guidance a new TT guideline for Thai toddlers.

Table 2.6

Guidelines for a Child-Oriented Approach to Toilet Training

Preparation Phase	
At Age 18 Months.	<p>Begin teaching about “pee”, “poop”, and how the body works.</p> <ul style="list-style-type: none"> -Teach the word “pee”, “poop”, “potty”, and so on. -Make it clear to the child that everyone makes pee and poop. -Point out when dogs or other animals are doing pee or poop. -Clarify the body’s signals when you observe them: “your body wants to make some pee or poop” -Praise the child for passing poop in the diaper. -Don’t refer to poop as “dirty” or “yucky” or “stinky.” -Change diaper for the child when he wet so he will come to the parent for a diaper change. -Change the child often so he/she will prefer a dry diaper. -Teach the child to come to the parent whenever he/she is wet or soiled
At Age 21 Months	-Teach the child what the toilet and potty-chair are for.
Begin teaching about the potty and toilet	<p>Demonstrate by dumping poop from diapers into the toilet.</p> <ul style="list-style-type: none"> -Portray using the toilet and potty-chair as a privilege. -Have the child observe toilet-trained children use the toilet or potty-chair (an older toilet-trained sibling can be very helpful). -Give the child a potty chair. Encourage the child to sit there with clothes on for fun activities such as play, snacks and television. Help the child develop a sense of ownership (“my chair”). -Put the potty chair in the bathroom and have the child sit on it when the parent sits on the toilet.

Table 2.6 *Guidelines for a Child-Oriented Approach to Toilet Training (continued)*

Preparation Phase	
At Age 24 Months.	-Read toilet training books and watch toilet learning videos.
Begin using teaching aids.	-Help the child pretend she's training a doll and stuffed animal on the potty chair. It's also a chance to show your child how to wipe properly from front to back.
	-Introduce underwear as a privilege. Buy special underwear and keep it in a place where the child can see it.
Intensive Phase	
	1. When your child is ready, help him/her get used to the potty. Let him/her sit on the potty while he/she is fully dressed.
	2. Daily, have the child sit on the chair fully clothed when the parent uses the toilet. Parents may read or offer treats to the child while he or she sits but allow the child to leave at will (usually no longer than 5 minutes, parent should encourage a child to get up before he/she even asks to).
	3. After 1 to 2 weeks cooperation, remove the child's diaper and have him or her sit on the potty. Make no demands or attempts to catch anything.
	4. When the child is comfortable with the potty and eliminates in his or her diaper, take the child to the potty, empty the diaper into it and explain that this is where bowel movements go.
	5. If the child appears to understand, take the child to the potty several times a day (usually more than 3 times a day).
	6. As interest grows, remove diapers and pants for short periods, place potty nearby and encourage the child to use it at will and independently. Periodic reminders may be given.

Table 2.6 *Guidelines for a Child-Oriented Approach to Toilet Training (continued)*

Intensive Phase
7. If child is progressing then put into training pants and instructs how to raise and lower them.
8. Teach your child to wash his/her hands after using the toilet.
*Nap and night training is left until later if it does not occur simultaneously with daytime control.
Steps in TT. When the child can do all activities in a child-oriented TT, parent should follow the steps below to enhance child's independence.
Step 1: TT with practice runs (parent walks child to potty)
Step 2: TT with parent reminders or prompts
Step 3: TT on a child's own initiative

CHAPTER 3

IMPLEMENTATION OF PRACTICE CHANGE

When planning evidenced-based projects, the doctorally prepared nurse must consider many factors to ensure a successful implementation. Without assuring the feasibility of the implementation plan, the validity and reliability of the outcomes from the EBP may be questionable. Studies have reported that parent knowledge and self-efficacy are part of a larger outcome in children's growth and development (Grusec, Hastings, & Mammone, 1994; Smetana, 1994). Toilet mastery is truly a developmental milestone in a child's life. Therefore, every child who demonstrates readiness for TT should be trained with parents involved. This EBP project involved the use of effective implementation strategies to improve the utilization of evidence and practice through parent-child interaction interventions. The project was prepared in accordance with guidelines from valid, reliable sources like the AAP, to guide Thai parents/ caregivers how to TT their children. The purpose of this EBP project was to facilitate achievement of child toileting skills by implementing an education program about child-oriented approach that enhanced parental knowledge and self-efficacy. Achievement of toileting skills by the children was assessed, using a potty log, a parental diary of child TT behavior. The sample and setting, outcomes, intervention, planning, recruitment, data collection, and protection of human subjects are described in this chapter.

Sample and Setting

The project was conducted at a private kindergarten school in San Sai District, Chiang Mai Province, Thailand. The kindergarten was fully accredited by the Thai Ministry of Education. The kindergarten population included 20 full-time teachers and 265 students. The student population was evenly distributed between boys

and girls who were between 1 to 6 years old. The kindergarten collaborates with universities and a vocational college in Chiang Mai as a practical site.

To ensure the validity of the quantitative data of this single group pretest/posttest design, purposive sampling focused on particular characteristics of a sample that were of interest. According to Burns and Grove (1993), a population is defined as all elements that meet the sample criteria for inclusion in a study. For this EBP project, the target population was the parents/caregivers of children who were aged 18-48 months entered the kindergarten during the first semester of 2012, and showed signs of TT readiness. Potential subjects were assessed for readiness according to the qualifications for the TT program. Because the purpose of this EBP project was to determine the effectiveness of implementing a new educational program about child-oriented approach that enhances parental knowledge, practice, and self-efficacy that resulting in achievement of child toileting skills, parents of a child who demonstrated signs of TT readiness composed the target population. Individuals were considered eligible for participation if they met the following inclusion criteria: (a) a parent or legal caregiver of a child who is between 18 and 48 months of age, (b) competent to understand Thai language, (c) their child has never been toilet trained or has failed training and training has been discontinued for over a month, (e) willing to participate in a 12 week intervention (during September-November, 2012), (d) the child has no history of developmental delay and serious health problems that could interfere with the training, and (f) the child meets criteria for TT. Criteria for TT of the child include: (a) ability to sit and walk, (b) some understanding of verbal commands, and (c) psychologically ready by demonstrating an interest in TT before training begins (Brazelton, 1962). Data of the parent readiness and child readiness for TT were assessed through the Inclusion Criteria Screening Form. Parents of the children who did not meet criteria for readiness were excluded from the program. In fact, one approach to dealing with selection bias

within a study is to select control group that is as similar as possible to the training group (Polit & Beck, 2008) but given the timeframe of study it was not realistic to include a control group.

Purposive sampling or judgmental sampling was used based on the belief that researcher's knowledge about the population can be used to handpick sample members (Polit & Beck, 2008). Moreover, purposive sampling is suitable for a study of newly developed instruments that can be effectively pretested and evaluated with a purposive sample of a specific type of people (Polit & Beck). A purposive sample is simply one that is selected according to the purpose of the data gathering and by identifying the people or objects that will yield the most valid and appropriate data for the evaluation. For this EBP project, a purposive sample of parents who have a child who is 18 to 48 months old plus other inclusion criteria that best suits to the project was utilized with this project. Thirty-six participants were recruited to the project.

Outcomes

The DNP student measured both child and parent outcomes to determine the effectiveness of the project. The primary outcome was the effectiveness of a child-oriented approach to the success and sustainability of child toileting skills over 12 weeks of intervention. This was measured by using a potty log. A child was assessed if he/she meet criteria's of achieving in TT if the parent reports that the child: (a) anticipates toilet needs by restlessness or vocalization, (b) pulls clothes up and down without help, (c) sits without help for long enough to complete voiding, (d) wiping alone, (e) washes hands, (f) passes urine/stool on the toilet every time, (g) sometimes goes to the toilet of own accord, and (h) dry during the day.

Secondary outcomes related to parental knowledge and self-efficacy were measured. Knowledge and self-efficacy are seen as an important determinant of their likelihood to undertake such actions (Bandura, 1993). In this EBP project, it was

assumed that positive personal beliefs about efficacy for helping their toddler succeed in TT are associated with increased parental knowledge and practice. Parents' perceptions of personal skills and knowledge shape their ideas about the kinds of involvement activities they might undertake (Hoover-Dempsey & Sandler, 2005). Parents are believed to be motivated to engage in involvement activities if they believe they have knowledge that will be helpful in specific domains of involvement activity (Green, Walker, Hoover-Dempsey & Sandler, 2007). Then, these factors were assessed prior to involving in activities. The outcomes of knowledge and self-efficacy were measured as pretest and posttest using instruments designed by the doctoral student.

Additionally, parental satisfaction with the program was evaluated to identify program strengths and areas for improvements. This outcome was measured by a questionnaire. A parental education program evaluation to evaluate parental satisfaction with the parental education provided by the DNP student was measured at the end of a half-day parental education intervention. A parental satisfaction evaluation was measured again at the end of the 12 week follow-up to determine their satisfaction with the TT program. Both surveys were anonymous as personal information was not collected for either tool. Findings demonstrated the practical use of the guidelines, teaching materials (booklet), and the educational strategies, as well as areas of improvements.

Intervention

The intervention consisted of two parts. The first part was a half-day educational program for parents or caregivers. The second part of the intervention was a 12-week follow-up.

The educational intervention. The parental educational intervention, "The Potty Time Program", based on the child-oriented TT approach (Brazelton, 1962) was developed as an intervention for this EBP project. The format of the "Potty Time"

program was consistent with self-efficacy theory (Bandura, 1997a). That is, parents receive self-efficacy information through verbal persuasion (mutual support and reinforcement from the DNP student and among participants), and vicarious learning (viewing and discussing about the TT method).

The program included information about: (a) methods to toilet train a child, (b) parent readiness, and (c) child readiness. Information about motivational strategies, anger management, and problem solving were included in this program. A nonexperimental, pretest/posttest design was used to evaluate changes in parental knowledge, perceived self-efficacy on TT their child and the achievement of TT by children. Participants were assigned to receive a half-day intervention. Their knowledge and self-efficacy were assessed before and after the “Potty Time” program. During the “Potty Time” program, participants received information about TT through an interactive learning, watched a videotaped of a child-oriented approach and received a “Potty Time” booklet developed by the DNP student. Then, participants were encouraged to begin TT their child at home as soon as possible in addition with daily record the potty log. Participant’s satisfaction with the “Potty Time” program was measured after the session. They were asked to evaluate (a) the degree to which the program helped improve their confidence to train their child, (b) the usefulness of the specific principles taught in the program, (c) the usefulness of the program format (i.e. videotape, group discussions, or individual counseling) and (d) the overall difficulty level of the program principles and format.

12 week follow-up. Over the course of 12 weeks, parents were expected to implement a child-centered approach to TT their child. During this time they maintained a potty log that was designed by the DNP students. Every 2 weeks, the DNP student was at the kindergarten to collect a potty log. This also afforded parents the opportunity to ask for additional information or advise. Participants were also allowed to contact the

DNP student when they confronted a problem related to the TT throughout the program. At the end of the project in week 12th, participants completed the Parental Satisfaction Evaluation following the end of the project.

Planning

Planning began by gaining access to setting where the EBP project could be implemented. The parental education program required collaboration with the kindergarten school. A letter of introduction from the dean of college of nursing, Valparaiso University (see Appendix A) and introduction about the project (see Appendix B) was sent to the school principal. The meeting with the school administration team was arranged when the DNP student met with the principal. The school principal was informed about an overview and explanation of the project. The information about the kindergarten, target population and feasibility for implementing the intervention at the kindergarten were collected. A mutual plan was developed regarding to the best interests of the target population and stakeholders. Brief descriptions of the parental educational intervention, the Potty Time program, and of the core module of the Potty Time program were provided during the meeting. Potential benefits of the program were further discussed with the school administrators. The DNP student was provided with time to discuss questions and received feedback from the administrators. Once the DNP student got permission from the kindergarten (Appendix C), then all materials used in the project were prepared and developed.

Planning also involved many activities related to the design, materials, and implementation of the project. How these plans were implemented is discussed in what follows. Participants were recruited and notified about the project and education program when Valparaiso University and Chiang Mai University's ethics committee approves the project proposal (see Appendices D and E). The recruitment process was performed as described below then a half-day education program was provided in the next two weeks.

On the teaching day, participants were assessed for their knowledge and self-efficacy before and after providing an education. The educational program was evaluated at the end of the teaching. Participants were influenced to start TT their child as soon as possible. Using a potty log that is maintained by parents, the DNP student evaluated the child progress on toileting skills every 2 weeks until they achieved in TT or at the end of the project during the 12th week. The DNP student made phone calls to remind participants to bring a potty log to the DNP student at the kindergarten on every other Wednesday throughout the project. The kindergarten locates only 2 miles from the DNP student's office so it is convenient to meet with parents and collect a diary every other week to assess the child's progress. Parents were allowed to call the DNP student anytime regarding to the project. In addition, at the end of the project, parents were required to complete the parental satisfaction evaluation form. This form was attached in a "Potty time" booklet then at the end of the project parent can completed the form and returned to the DNP student via mail (envelops with stamps were provided since the training day) or given directly to the DNP student at the kindergarten. All data were analyzed afterward. Since this project planned under a mutual agreement, good collaboration with the preferred setting, the standard research method, and a well-implementation plan that brought this project met expectations (see Table 3.1).

Recruitment

Parents/legal caregivers of healthy children were recruited using a purposive sampling. A flyer (see Appendix F) was posted at the kindergarten's information board for a week after both Valparaiso University and Chiang Mai University ethics committee had approved the project proposal. The DNP student spent 5-10 minutes to announce about the project during a special event which most parents and caregivers joined the activities on a mother's day at the kindergarten.

To recruit possible participants, an assessment of child readiness is needed

Table 3.1

Implementation Schedule

Date and Time	Objective	Activities	Remark
Friday 07/13/2012	IRB approval	- Documents were sent for IRB approval at Chiang Mai University.	The result was announced on 07/21/2012
Monday 08/06/2012	Project Announcement	- Flyer was posted at the school's information board.	
Friday 08/10/2012	Project Announcement	-The DNP student announced about the project during a mother's day special event at the kindergarten.	(August 12th is a mother's day in Thailand. The school arranges a special activity that parent and student are involved)
Tuesday- Friday 08/14/2012 – 08/17/2012 at 7.00-9.30 am and 3.00-5.00 pm	Recruitment	- An interview was arranged (using an Inclusion Criteria Screening Form). The parent received full information about the project and signed an informed consent.	The DNP student was available at the kindergarten from 7.00 am to 9.30 am and 3.00 pm to 5.00 pm for recruitment.
08/20/2012		The form was sent to the parent who did not meet with the DNP student	To increase number of participants
Saturday 09/01/2012	Education session	-Registration and welcome session 8.30 - 8.45 am -Demographic questionnaire was given 8.45 - 9.00 am -Pretest * -Lecture about child growth & development 9.00 - 10.00 am -Break -TT method and related topics 10.00 - 10.15 am 10.15 –11.15 am -Posttest -Education session 11.15 –11.30 am evaluation	*A TT booklet was given after the participant returned the pretest answer sheet.

Table 3.1 *Implementation Schedule (continued)*

Date and Time	Objective	Activities	Remark
Every other Tuesday 10.00 am OR 7.00 pm	Follow-up	-The researcher will call the parent asking for a child's toileting skills progression and remind the parent to bring a daily record form (a potty log) to the kindergarten on the next day.	The researcher will be available at the kindergarten if the parent/ caregiver have any question regarding to the TT.
Every other Wednesday 7.00 am – 5.00 pm	Follow-up	-The researcher will collect a daily record form (a potty log) from the parent to assess child's toileting skills progression at the kindergarten every 2 week.	The researcher will be available at the kindergarten on every other Wednesday in case the parent has any question regarding to the TT for the researcher.
Monday 11/26/2012	To evaluate the success of a child's toileting skills. -To evaluate parents' experiences and satisfaction to the guidelines (Benefits and barriers)	-A parent satisfaction evaluation will be sent to parents/ caregivers via mail or given directly to the parent at the kindergarten.	
Friday 11/30/2012		Last day for parents/ caregivers, who has not returned the daily record form (potty log) and a post-survey questionnaire, to return it to the researcher even via mail or directly to the researcher at the kindergarten.	

because various readiness skills are associated with successful training (Brazelton et al.). The DNP student recruited potential participants by waiting in the lobby of the kindergarten during the hours those parents came to pick up their children. The DNP student approached parents, introduced herself, and explained the purpose of the project. When a parent indicated an interest in participating in the project, the DNP student asked the questions (see Appendix G) whether parent's readiness and child's readiness were presented. To reach as many parents as possible, an Inclusion Criteria Screening Form was also given to parents of a toddler who were unable to meet with the DNP student at the lobby through mail. Parents' willingness to participate the EBP project if they are eligible was included in the mail. Parents who were willing to participate in the project and met criteria for inclusion were contacted by telephone calls. An interview using the Inclusion Criteria Screening Form and providing information were done during a telephone call. An appointment to sign a consent form (see Appendix H) was made before the parent educational program starts. Participants' information was kept strictly confidential. All data were coded and stored in a locked file cabinet that only the DNP student can access to the data.

Data

The DNP student was responsible for the collection of all data to control the threat to internal validity of instrumentation. Participants' information was kept strictly confidential. All data were coded and stored in a locked file cabinet that only the DNP student can access to the data.

Measures and their reliability and validity. This project involved the use of a single group pretest/posttest design measured both child and parental outcomes. Regarding to the study design, threats to internal validity of a single group pretest/posttest design include history, maturation, testing, instrumentation, and selection were concerned. The DNP student tried to minimize threats to internal and

external validity as much as possible. The threat of history in this study was controlled by avoiding a long time lapse between a pretest and a posttest. The maturation of children could be the threat to internal validity of this project because the abilities of toddlers grow quickly. Therefore, to address this type of threat to internal validity, the DNP student assessed the progression of toileting skills every 2 weeks during 12 weeks follow-up through a parental diary of child TT behavior. However, the child change during the intervention both permanent changes such as physical growth and temporary changes such as fever may change the way a child would react to the independent variable, TT. Therefore, the DNP student may not be able to determine if the cause of the discrepancy is due to time or the independent variable. In addition, seven experts (see Appendix I) who have knowledge and experiences in the field of childcare and who involve in education validated the validity of the content of the questionnaires to control threat to internal validity, statistical regression. Letters for a permission to review all data materials were sent to all experts and their institutions (see Appendix J). The data collection materials were amended as suggested by experts before using with the study. All questionnaires followed such guidelines in order to promote clarity and accuracy of data collection. The questionnaires were carefully checked for completeness and accuracy immediately following the intervention. The following 7 instruments were administered to parents over the 12 weeks.

Inclusion criteria screening form. This form (see Appendix G) was developed to screen potential subjects to determine their initial eligibility for and interest in a project. It includes 21 questions of a yes/no question and short answers regarding to inclusion and exclusion criteria. Contact information including mailing address and phone numbers was asked so that the DNP student could contact participants regarding to the participation in the project. This information was kept confidential and was not shared with anyone else. This tool was utilized at the beginning of recruitment process before

the informed consent be signed.

Demographic questionnaire. Child and parent demographic information was assessed using a questionnaire (see Appendix K). Child demographic information collected includes gender, age, date of birth, child's health status, and experience of being toilet-trained. In addition, questions pertaining to the child's general medical history and current medication use were included. Parental/caregiver information survey includes relation to child, age, marital status, educational levels, number of other children in their house, hours per day each parent spend with their child, household income, and experience of providing TT to a child. Demographic questionnaire will be designed in structure format.

Parental self-efficacy questionnaire. Parental self-efficacy was measured both pre-and post-intervention using the Parental Self-Efficacy Questionnaire (see Appendix L). The scale to assess parental self-efficacy is adapted from General Perceived Self-Efficacy Scale by Schwarzer and Jerusalem (1995) and developed based on a guide to constructing self-efficacy scales by Bandura (2006). The scale was permitted to use in non-commercial research and development purposes (see Appendix M). The scale for assessing the capabilities and readiness of participants consisted of 12-item Likert-type scale for rating parental self-efficacy in managing a range of tasks and situations relevant to implementing child-oriented approach with their children. The scale consisted of scores ranging from 1 to 4, with a score of 4 representing very confidence and a score of 1 representing not at all confidence. This tool was back-translated by two experts who have been practicing in healthcare and fluency in English and Thai language (see Appendix I). In addition, a Thai version of this tool was reviewed by five experts who have been practicing in the area of pediatric nursing and childcare for validity. Suggestions offered were helpful in improvement of the questionnaire.

Parental knowledge pretest/posttest questionnaires. The tool to measure

parental knowledge in TT (see Appendix N) was developed based on the information and guidelines for TT healthy children of the AAP. The content of child-oriented approach, signs of parent readiness, signs of child readiness, and evaluation of the success of toilet-trained child was included in the test. It consisted of 30 total true/false and multiple-choice questions. The knowledge test was also reviewed by three experts for validity. This test was tested for reliability with a different group of parent. Participants did this test at the beginning of the teaching day before the “Potty Time” program start. The knowledge pretest was readministered as a posttest to ascertain whether a program has resulted in 'change', outcome of knowledge measures need to be assessed both before and after participation in the program. The posttest was given to participants at the end of the “Potty Time” program on the teaching day.

Potty log. A record (see Appendix O) to assess the child’s toileting skills progression and to evaluate participants’ practice in promoting TT to the child, which may indicate the relationship between the intervention and the success in TT of a child, was administered during the 12 week follow-up. This tool was developed based on the AAP guidelines and the study by Schum et al. (2002) about the TT skills. Five experts were asked to provide feedback on a potty log. It was adjusted based on experts’ comments prior to use in this project. This tool was maintained by parents/caregivers at home and return to the DNP student every two weeks at the kindergarten.

Education program evaluation. To determine if the teaching strategies met participants’ learning needs about TT, and evaluation form (see Appendix P) was devised by the DNP student. Participants completed an education program evaluation at the end of the teaching day. This tool consists of 12 items of Likert-type rating scales to assess participant’s satisfaction and comments in education program. The scale consisted of scores ranging from excellent, good, fair, poor and not applicable.

Parental satisfaction evaluation. A parental satisfaction evaluation (see

Appendix Q) was completed by participants at the end of the training program, week 12th. This tool consists of nine questions to assess child achievement in TT over 12 weeks period in addition with 5 open-end questions about parents' experiences, barriers and benefits of the child-oriented TT they have confronted during training their child was carried out to identify program strengths and areas for improvements.

Collection. Data were collected during September to November 2012. Some parents were asked questions using an Inclusion Criterion Screening Form by the DNP student at the kindergarten. In addition, an Inclusion Criterion Screening Form was mailed to the parents/ legal caregivers who cannot meet the DNP student at the kindergarten depending on the time and their convenience. Parents and legal caregivers completed the Inclusion Criterion Screening Form at home and returned to the DNP student by mail or gave it directly to the DNP student at the kindergarten. The information assisted in getting the number of target population and excluded those who do not meet the basic criteria such as parent/ caregiver of a child who is toilet-trained. The form was returned directly to the DNP student at the kindergarten one week after a week of recruitment. After reviewing returning screening form, eligible samples were invited to participate through telephone calls. A meeting to sign consent was arranged. Evaluation of participants' knowledge was assessed through pretest/posttest questionnaires. The questionnaires were developed based on information from experts in the field, and from the literature on TT methods, self-efficacy, and motivational strategies. The structured parental self-efficacy questionnaire was used to assess the changes in self-efficacy of participants in implementing TT both prior to and after participating in a "Potty Time" program. The DNP student provided a "Potty Time" program for parents/caregivers. The participants began assess their child readiness, prepared materials and environment for a practice at their place after the "Potty Time" program has finished. The effectiveness of the TT program was evaluated by measuring

the parent satisfaction evaluation at the 12th week of the training program. The DNP student mailed the Parental Satisfaction Evaluation form to the parent/ caregiver then they returned the completed form to the DNP student by mail or gave directly to the DNP student at the kindergarten (see Table 3.2).

Management and analysis. Data was inputted by the DNP student into a Statistical Package for the Social Sciences (SPSS) program. Descriptive statistics were used to describe the demographics of the sample and the primary and secondary outcome variables. The paired *t*-test was used to analyze the secondary outcome variables of the different of parental knowledge and self-efficacy before and after a training program. A percentage was used to express parental satisfaction of the program.

Protection of Human Subjects

The DNP student has been certified for successfully completed the National Institutes of Health (NIH) web-based ethics training course “Protecting Human Research Participants” to ensure protection of human subjects involved in this project. Institutional Review Board (IRB) approval was obtained from Chiang Mai University and Valparaiso University before the project begins and any data are collected. The DNP student explained the planned project activities, procedures that would be used to collect the data, and assured that there would be no potential risk or cost involved to participants before signing the informed consent. All participants were informed of their right to voluntarily consent and withdraw participation at any time without penalty. However, initial data that was collected to identify participant personal information to allow the DNP student to track incomplete data such as demographic data and participant names was coded to ensure anonymity. Coded data was secured separately from any identifying patient information within locked drawers at the DNP student’s private office. The DNP student was the only person with access to these drawers. Identifying information was

Table 3.2

Outcome Measures

Outcome	Instrument	When Given to Parent
Recruitment	Inclusion Criteria Screening Form	August 14th-17th, 2012
Demographic data	Demographic Questionnaire	Before the educational session (9/9/12)
Parental knowledge	Parental Knowledge Pretest/Posttest questionnaires	Before and after the educational session (9/9/12)
Parental self-efficacy	Parental Self-Efficacy questionnaires	Before and after of the educational session (9/9/12)
Parent's satisfaction to the educational program	Education Program Evaluation	After the educational session (9/9/12)
Child's achievement of TT	Potty Log	Every 2 weeks for 12 weeks (9/9/12 – 11/30/13)
Parents' experiences and satisfaction to the guidelines	Parental Satisfaction Evaluation	When his/her child achieved TT or at the end of the project if his/her child has not achieved (11/30/12)

not entered in any questionnaire and questionnaires were only numbered after data was collected. Participant names and other identifying information were not indicated in any publication or presentation of the information of this project.

Time Scale

The DNP student spent 11 months to carry out this EBP project, incorporating the literature review through the entire research process until the publication of the findings. A Gantt chart is a detailed time-scale that outlined the steps in this project (Lacey, 2006) (see Appendix R) and outlined the time-frame required for this study.

Budget

A resources budget was devised for this project (see Appendix S). It includes data collection and processing costs and administrative overheads (Bond & Gerrish 2006). Funds were provided by Payap University in the grant for professional development. The DNP student presented about the EBP project to the Academic Affairs Committee of Payap University after the EBP project proposal was developed. The professional development grants is intended to help faculty member who is pursuing a doctoral degree meet expenses related to scholarly research. The amount of the grant is \$1,000. Grants are for a 12 month period and require a final report is submitted at the end of the award period.

CHAPTER 4

FINDINGS

The purpose of this evidence-based practice project was to provide Thai parents an educational intervention, in a Thai context, based on TT guidelines recommended by the American Academy of Pediatrics. Implementation of the parental education intervention helped answer the PICOT question, showing positive results on the achievement of toileting skills by healthy toddlers. The findings from the intervention will be discussed in this chapter.

Thirty-six participants volunteered to participate in the project, which included a half day education intervention and 12 weeks follow-up. All 36 participants attended the parental education intervention and completed all the questionnaires provided: the demographic questionnaire, the pre-/post intervention knowledge assessment, pre-/post intervention self-efficacy assessment, and parental satisfaction with education session. However, not all participants remained through the follow-up to the end of the project. Missing data from three participants were due to of child's illness, child's resignation from kindergarten, and moving to other area. Three other participants did not complete the potty log through the end of the project; but, their children achieved toilet training several weeks prior the missing data. These three missing data were determined as a non-ignorable data because it was an informative missingness. Therefore, a total number of participants to assess for child achievement in toileting skills were 33. Thirty participants completed the potty log over the entire 12 weeks and remained through the end of the project.

Sample Characteristics

The sample characteristics are described in Table 4.1 and Table 4.2. A total of 36 parents participated in the parental education intervention and completed all

questionnaires provided during the session. All participants were Thai with a mean age of 32.44 ($SD = 7.62$). Thirty-two participants were mothers (88.8%), while the rest of the participants were fathers (5.6%) and grandparents (5.6%). The education level of the participants included high school or lower (30.5%), diploma (13.9%), and baccalaureate degrees or above (55.6%). Employment status of the participants ranged from unemployment to full time (83%). The mean number of hours that participants cared a child per day was 10.41 hours ($SD = 4.33$). Parental expectations for child's age at achieving toileting skills was 38.23 months of age ($SD = 12.13$). Participants' children included 14 girls (38.9%) and 22 boys (61.1%). Mean age of children who had received TT by their own parents was 31.11 months ($SD = 6.16$). Child ages ranged from 18 to 46 months.

After the 12 week follow-up, although only 30 participants successfully completed a potty log but there were 3 children who achieved TT several weeks prior to the missing data. Therefore, a total number of 33 participants were included in the sample for assessing child achievement in toileting skills. A *t*-test was performed to determine if there was significant difference of demographic characteristics between the group of 36 participants at the beginning and a group of 33 participants at the end of the project. There was no statistical significant difference between both groups.

Statistical Testing

Statistical analysis was performed to answer the PICOT question: In parents and caregivers of healthy toddlers in Thailand, how does a child-oriented toilet training method affect parental knowledge, parental self-efficacy, and the achievement of children in toileting skills? An analysis carried out comparisons between pre- and post-test knowledge scores, and pre- and post- self-efficacy scores was the paired samples *t*-tests. A percentage was used to determine child success in TT.

Table 4.1

Sample Characteristics

Trait	Educational Intervention (<i>n</i> = 36)	12 Week Follow-up (<i>n</i> = 33)
Participant's age		
Range (years)	20-57	20-57
Mean (<i>SD</i>)	32.44 (7.62)	32.55 (7.86)
Caring hours		
Range (hours)	4-18	4-18
Mean (<i>SD</i>)	10.41 (4.33)	10.24 (4.34)
Home income		
Range (Baht)	4,000-140,000	4,000-140,000
Mean (<i>SD</i>)	29,400 (24,134.97)	29,281 (25,183.82)
Expected child's age to achieving TT		
Range (months)	12-60	12-60
Mean (<i>SD</i>)	38.23 (12.13)	37.69 (12.54)
Child's age		
Range (months)	18-46	18-46
Mean (<i>SD</i>)	31.11 (6.16)	30.82 (6.26)

Table 4.1

Sample Characteristics (continued)

Trait	Educational Intervention Percentage (n)	12 Week Follow-up Percentage (n)
Thai Nationality	100% (36)	100% (33)
Relation to the child		
Mother	88.8%(32)	87.8% (29)
Father	5.6%(2)	6.1% (2)
Grandparent	5.6%(2)	6.1% (2)
Marital status		
Single parent	16.7% (6)	18.2% (6)
Married	77.8% (28)	78.8% (26)
Divorce	2.8% (1)	3.0% (1)
Others	2.8% (1)	0% (0)
Education Levels		
No education	2.8% (1)	3.1% (1)
Elementary School	8.3% (3)	9.1% (3)
Primary School	8.3% (3)	9.1% (3)
High School	11.1% (4)	12.1% (4)
Diploma/Vocational school	13.9% (5)	12.1% (4)
Baccalaureate degrees or above	55.6% (20)	54.5% (18)

Table 4.1 *Sample Characteristics (continued)*

Trait	Educational Intervention Percentage (<i>n</i>)	12 Week Follow-up Percentage (<i>n</i>)
Employment Status		
Unemployment	13.9% (5)	15.2% (5)
Work for wages	16.7% (6)	18.2% (6)
Self-employed	27.8% (10)	27.2% (9)
Government officer	19.4% (7)	21.2% (7)
Private company officer	19.4% (7)	15.1% (5)
Missing data	2.8% (1)	3.1% (1)
Number of a child		
First child	69.4% (25)	66.7% (22)
Second child	30.6% (11)	33.3% (11)
Child's gender		
Female	38.9% (14)	42.4% (14)
Male	61.1% (22)	57.6% (19)

In order to understand the effect of the parental education intervention on parental knowledge, a paired-sample *t*-test was conducted to analyze and compare the pretest/posttest knowledge scores (see Table 4.2). The knowledge questionnaire consisted of 30 questions with true or false and multiple choice testing methods. The mean on the pretest was 14.92 (*SD* = 4.07), and the mean on the post-test was 24.50 (*SD* = 2.38). A statistically significant increase in parental knowledge occurred after participants received the parental education intervention ($t = 12.38, p < .001$).

The results from the self-efficacy for TT assessment tools were analyzed using the paired-sample *t*-test on the pre-intervention and post-intervention scores (see Table 4.3). The mean self-efficacy before an intervention was 39.53 (*SD* = 5.20), and the mean self-efficacy after an intervention was 44.53 (*SD* = 3.62). A statistically significant increase in participants' reported self-efficacy occurred after they received the parental education intervention ($t = 6.29, p < .001$). There was a significant difference in the scores for pre-intervention self-efficacy ($M=39.53, SD = 5.20$) and post-intervention self-efficacy ($M = 44.53, SD = 3.62$); condition $t(35) = 6.29, p = 0.001$

To determine the success of the EBP intervention, the number children who achieved success was measured for the 33 participants. Data were reported for each of the 12 weeks (Figure 4.1). It was noted, the number of child achievement in toileting skills was gradually increased as time passed. The percentage of child achieved toileting skills within 12 weeks of intervention in this study was 78.78%. Regarding to the AAP guidelines, state that it may takes 3-6 months for a child to achieve toileting skills. The number of child achieved in toileting skills was gradually increased, which determined this project was successful. There was a positive prediction for most of the children in this project may achieve toileting skills within the said time.

Table 4.2

Paired Sample t-test for Pretest/Posttest Parental Knowledge

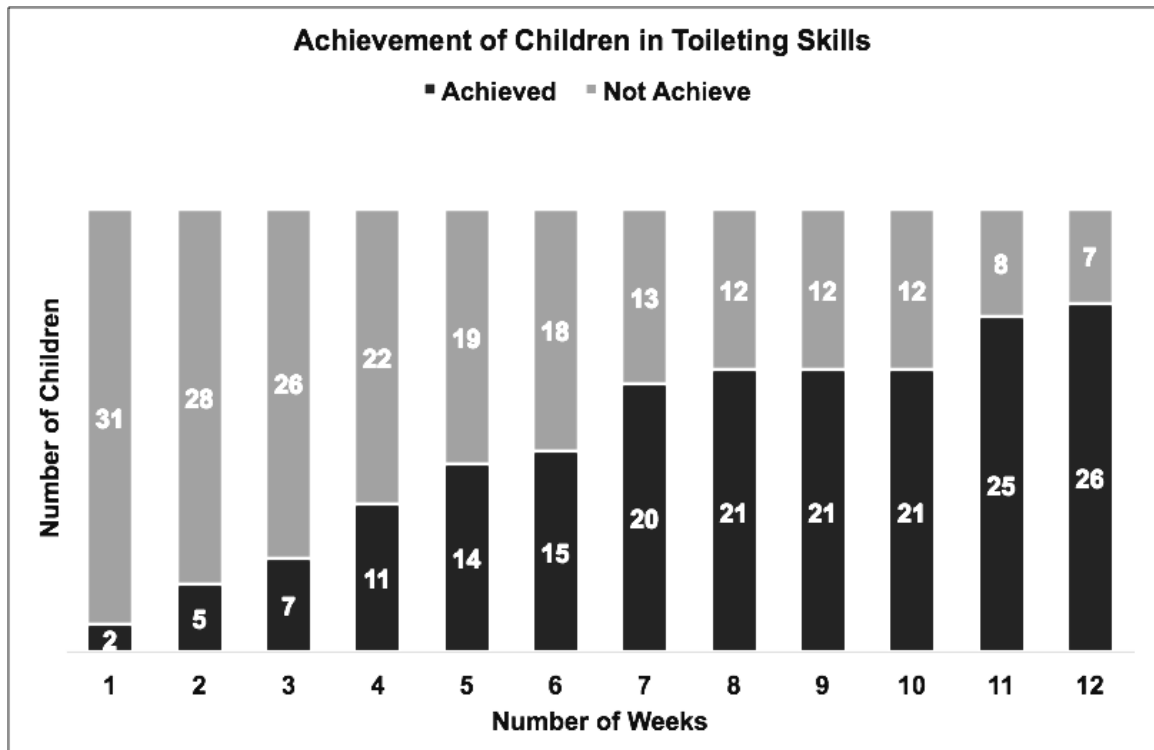
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	Sig.
Pretest	36	14.92	4.07	35	12.38	0.000
Posttest	36	24.50	2.38			

Table 4.3

Paired Sample t-test for Pretest/Posttest Parental Self-Efficacy

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>Sig.</i>
Before	36	39.53	5.20	35	6.29	0.000
After	36	44.53	3.62			

Figure 4.1 Child Achievement in Toileting Skills



$n = 33$

Participant satisfaction was evaluated at the end of the implementation process using a parental satisfaction evaluation questionnaire. Only 30 questionnaires were returned to the DNP student. Ninety percent of participants stated a TT booklet is a good resource for TT their children, while 10% of them had no comments in this issue. All participants (100%) stated the parental education intervention assisted in TT their children. Only a few participants commented about the benefit and barriers during TT their children. (see Table 4.4)

From this analysis, the pretest/posttest scores and parent's self-efficacy improvements were noted after a parental educational intervention. It can be concluded that improvements were seen after the parental education intervention. The number of children achievement in toileting skills gradually increased as time passed, which determined that this project was successful. The significance and interpretation of the results from the analysis will be discussed in Chapter 5.

Table 4.4

Parental Satisfaction Evaluation

Item	Percentage (n)			
	Yes	No	Unsure	N/A
1. Your child can indicates wet or soiled pants by crying or wriggling	100% (30)	-	-	-
2. Your child can anticipates toilet needs by restlessness or vocalization	100% (30)	-	-	-
3. Your child dry during the day	76.67% (23)	23.33% (7)	-	-
4. Your child can vocalization and/or attends toilet needs in reasonable time.	80% (24)	10% (3)	-	10% (3)
5. Your child can dresses and undresses alone	86.67% (26)	13.33% (4)	-	-
6. Your child can wiping alone	76.67% (23)	23.33% (7)	-	-
7. Your child can flushing	93.33% (28)	6.67% (2)	-	-
8. Your child can washes hands when done	90% (27)	10% (3)	-	-
9. Your child remain perform all of the above activities for days	76.67% (23)	13.33% (4)	10% (3)	-
10. A toilet training booklet is a good resource for toilet training your child	90% (27)	-	-	10% (3)
11. An educational program assist in toilet training your child	100%(30)	-	-	-

Table 4.4 *Parental Satisfaction Evaluation (Continued)*

Benefits from Education Intervention	Barriers to TT a Child
<p>1. My child is too young to practice TT. The booklet assisted me in readiness preparation.</p>	<p>1. I sometimes cannot hold in my anger when a child challenged me with screaming and not sit still on a potty.</p>
<p>2. I bought a potty training book for my child. He likes it and willing to be trained.</p>	<p>2. My child resisted me to be involved when he is using the toilet.</p>
<p>3. I can apply the motivational strategies to other situations. My child and I have a very good relationship now.</p>	<p>3. My child told me when he was done. It made me so disappointed. I taught him many times and expected him to follow my instruction.</p>
<p>4. The booklet assists me in what I should do during the training.</p>	<p>4. My child pays more attention to his toy and play with friend. He has never told me when he needs to go to the toilet. I have to observe his signs of urination or defecation which I sometimes missed it.</p>
<p>5. I like a cartoon in the booklet. My child also likes it.</p>	
<p>6. My child can do it. Thank you for this wonderful program.</p>	
	<p>5. I mostly cannot train my child on weekend. He went out and stay overnight with his father. He came back with regression. I was tired to ask for his father's assistance.</p>
	<p>6. I was unable to avoid intimidate my child. He used a potty when I told him I will call a police. He was successful in TT with this kind of method. Did I do the wrong thing?</p>

CHAPTER 5

DISCUSSION

This final chapter presents a synthesis of the project results, with a discussion of the findings, conclusions, implications and recommendations for future investigation. The evidence-based practice project examined the impact of a parental education program about child-oriented TT on parents' knowledge, self-efficacy, and toileting skills achievement of a child. During this EBP project, a single group design to determine whether participating in a parental education program has a positive effect on parental knowledge and parental self-efficacy for TT a healthy Thai toddler was used. An outcome of child success in TT was assessed as a result of parent provided TT based on knowledge received from the parental education intervention.

Explanation of Findings

A pretest/posttest was used to examine the PICOT question. The sample included 36 parents of healthy toddlers meeting the criteria of inclusion. The DNP student also investigated the child's toileting skills achievement after 12 weeks of intervention. All participants completed the Inclusion Criteria Screening Form (see Appendix G), the Demographic Questionnaire (see Appendix K), the Parental Self-Efficacy Questionnaire (see Appendix L), Parental Knowledge Pretest/Posttest Questionnaires (see Appendix N), and Education Program Evaluation (see Appendix P). All parents attended a half-day educational intervention. The Demographic Questionnaire, the Parental Self-Efficacy Questionnaire and the Parental Knowledge Questionnaire were completed before the parental educational intervention began. The Parental Self-Efficacy Questionnaire and Parental Knowledge Questionnaire were again completed when the parental educational intervention finished. Parents also completed an Education Program Evaluation at the end of a half-day intervention. Parents were

encouraged to TT their children as soon as their children demonstrated TT readiness. The number of children who achieved toileting skills was recorded every 2 weeks for 12 weeks. Lastly, parents were completed a Parental Satisfaction Evaluation (see Appendix Q) at the end of the 12 week follow-up and returned to the DNP student.

Descriptive data were obtained for the demographic data reflecting frequencies, percentages, ranges, means, and standard deviations. All participants were Thai with a mean age of 32 years. The majority of participants were mothers. Over 50% of participants held baccalaureate degrees or above and most of them worked full time. The mean number of hours that parents cared for their children was 10 hours per day. Most participants expected that, in general, children should achieved toileting skills at age 36 months. The number of boys involved in this study was more than girls. The mean age of children who had received TT by their own parents was 31 months of age.

Knowledge and self-efficacy. The scores on the Parental Self-Efficacy Questionnaire and Parental Knowledge Pretest/Posttest Questionnaires for TT significantly increased after the parental education intervention. The statistical analysis revealed statistical significance with p values < 0.001 that are accountable for the increase in the scores between the pre- and post-intervention scores on the Parental Knowledge Pretest/Posttest Questionnaire and the pre- and post-intervention scores on the Parental Self-Efficacy Questionnaire. Findings from this EBP project showed parents of children who achieved TT demonstrated high self-efficacy.

The increases in knowledge and self-efficacy are consistent with research findings. For example, in a study by Coleman and Karraker (1998), the researchers found parental self-efficacy to be associated with child developmental outcomes. This corresponds to findings in the EBP project because parental self-efficacy scores of the participants in this EBP project were significantly increased.

Achievement of TT. When data were analyzed for the outcome of toileting skills achievement at the end of the 12 week follow-up, 78.78% of children achieved toileting skills. Similarly, Jones and Prinz (2005) examined the potential roles of parental self-efficacy in parent and child adjustment and the role of parental cognitions in understanding behaviors and emotions within families. They found that as a parent's level of parental self-efficacy increases, a parent is more likely to exhibit positive attitudes, outlooks, and beliefs. Findings from this EBP project demonstrated that parents who reported high self-efficacy returned a potty log on time and commented or asked questions to promote their goal of having their children achieve toileting skills.

After the 12 week follow-up, only 30 participants successfully completed a potty log. A total of six participants' potty log data (16%) were missing at the end of the project. Reasons for leaving the project were that two children resigned from kindergarten, one child took a medical leave for months, and the remaining participants did not provide any reason for missing potty logs. However, of the six who were missing potty log data, three children achieved toileting skills several weeks into the project. Perhaps these parents found the log irrelevant because their children were potty trained. These three missing data were determined as a non-ignorable data because it was an informative missingness (Brick & Karlton, 1996). Therefore, the total number of participants assessed for child achievement was 33. The percentage of child achieved toileting skills within 12 weeks of intervention in this study was 78.78%.

According to the AAP guidelines, it may take 3-6 months for a child to achieve toileting skills. Blum et al. (2003) reported that children who start training between 18-24 months took, on average, 13-14 months to achieve toileting skills. Meanwhile, children who trained after 27 months took 10 months or less. In light of this information, limiting the follow-up time to 12 weeks in this project may explain why about 1/4 of the children did not achieve TT within the implementation period. In addition, regarding the limitation

of age at initiation of intensive toilet training was negatively correlated with duration of toilet training (Blum et al.), indicating that initiation of training at younger ages was associated with a longer duration of training. For this EBP project, analysis of data showed that 42.85% of children who did not achieve toileting skills were less than 27 months of age.

Evidence also shows that gender has a bearing on TT. During this project, seven children did not achieve TT. Of these children, 71.42% were boys. Findings from this project are similar to a study by Schum et al. (2002). They found that the median age when girls could independently enter the bathroom and urinate by themselves was 33.0 months while the median age when boys reached the same skills was at 37.1 months. There was a marked concordance between the study by Schum et al. and this EBP project, both showing that boys need longer time than girls to achieve toileting skills. Choby and George (2008) found that girls demonstrated TT skills at an earlier age than boys. On average, girls were remaining bowel-movement free overnight is the earliest attained skill, occurring around 22 months of age in girls and 25 months in boys. The ability to pull up pant is typically the last skill mastered, occurring around 29.5 months of age in girls and 33.5 months in boys. They found girls develop most skills earlier than boys. In this EBP project, two children, one girl and one boy, who achieved toileting skills within the first week of TT were at 32 and 33 months of age. Within the 12 weeks of follow-up, 85.71% of girls had achieved TT compared to 73.68% of boys. This finding demonstrated the consistency of this EBP project and the study of Choby and George (2008) that boys need more time to achieve toileting skills when compared to girls.

Parent readiness is another important aspect in successful TT. Parent readiness includes factors such as experience with TT, level of efficacy, and parenting practices. For example, Brazelton's (1962) showed that the first child of the family had later training than the subsequent siblings. However, in this EBP project, two children who were

successful at 32 and 33 months of age were firstborn children. This inconsistent finding could be explained by the fact that their parents' pre-intervention self-efficacy scores were higher compared to the scores of other parents. Additionally, these children were older at the time when TT was initiated. Unger and Waudersman (1985) addressed that high parental self-efficacy has been found to be related to specific positive parenting practices, such as responsive, stimulating and non-punitive care taking which results in child's positive outcome can be expected.

Successful TT is also dependent on child readiness. Children must have physical readiness, which is often dependent on the age of the child. The youngest child in this project was 18 months when TT was initiated and this child had not achieved toileting skills when the project ended. This finding is consistent with a study by Schum et al. (2002) who noticed that TT readiness skills are not obtained until after the child's second birthday. Blum et al. (2003) suggested that there is no benefit of intensive training before 27 months of age; however, each child and family is unique. In this EBP project, it was found that 42.85% of children who did not achieve toileting skills were less than 27 months of age.

Psychological aspects are also important in both parent and child readiness (Brazelton et al., 1999). Participants' comments, recorded in the potty log, were valuable in assessing this aspect. For example, some parents indicated that they felt too exhausted to deal with child behavior during TT. Parents burned out and became concerned about hurting their parent-child relationships. Negative parent behaviors, such as anger, seem to be a barrier for TT. Additionally, some parents did not return potty logs on dates they were due. This behavior could also be interpreted as decreasing or lack of parental self-efficacy. Also, child's traits appeared to play such an important role in two cases from the sample of this EBP project. Two parents, whose children did not achieve TT at the end of the project, reported that their children acted against them

and refused to sit on the potty or toilet. Toddlers argued and later parents did not pay attention to the toddlers, so progress was slow. Thus, parental self-efficacy can be affected by things such as parent personal traits and behaviors and child temperament.

Application of the Theoretical Framework

SCT (Bandura, 1977, 1986) framework served as a foundation for this EBP project. In this theory, it is emphasized that cognition plays a critical role in individuals' capabilities to construct reality, self-regulate, encode information, and perform behaviors. An essential concept of SCT is self-efficacy which consists of an individual's belief about his capacity to influence the quality of functioning and the events that affect his life (Glanz et al., 2008). Human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences (Bandura, 1993). The four processes to produce self-efficacy include: (a) cognitive, (b) motivational, (c) affective, and (d) selection processes. Self-efficacy primarily focuses on the ways in which humans learn to model the behavior of others through observational learning. There are four components of observational learning including: (a) attentional processes (b) retention processes, (c) motor reproduction processes, and (d) reinforcement and motivational processes. Factors that contribute to self-efficacy include: (a) mastery experiences, (b) affective states, (c) vicarious experiences, and (d) verbal persuasion.

Within this study, the parental education intervention was led by the DNP student in less controlled conditions. The DNP student provided the knowledge about TT based on the best practice in TT method and parent training strategies. Education was presented in the most conducive format to maximize the chances of success. Participants were provided opportunities to enhance their ability to TT their child. During the parent education intervention, participants were questioned to start sharing their prior knowledge and experiences in TT a child. Those who were experienced in caring a child can gain more self-efficacy from sharing their mastery experiences. Those who had

never had an experience in TT a child can gain more self-efficacy through vicarious experiences. The DNP student used positive reinforcement to enhance participants' beliefs in their capabilities to provide TT their own child throughout the parent educational intervention, and during a follow-up process both in-person meeting and a telephone call.

The DNP student provided information about the child-oriented approach to toileting healthy Thai toddlers to parents. Using a step-by-step approach by combining the use of a booklet about TT with sharing of experiences, the education was aimed to enhance parent's cognitive growth. To enhance parental self-efficacy, parents were motivated to believe in their abilities and plan how to achieve their goals in TT their child. A discussion about issues involved in TT was provided, and the content included benefits and barriers, problem solving strategies, self-motivation, and anger management. During the parental education intervention, parents were allowed to ask a question at any time and discussed the TT content and the project. They also had an opportunity to discuss with peers. Most parents seem to know each other which can be the benefit for a peers' discussion in this EBP study because parents were not shy to discuss about TT with each other. Sharing experiences can be both benefit and barrier to the enhancement of self-efficacy. For example, it was beneficial when a successful parent shared about rewarding a child during TT. However, one parent described her malpractice in punishment of a child and a child success in toileting skills. In this situation, the DNP student immediately clarified about how the punishment may have achieved toileting skills but it also contributed to a negative parent-child relationship. During the parental education intervention, it was important that parents receive correct information about appropriate methods in TT a child before initiate TT to a child. Parents in this project committed to follow the instruction given during the parental education intervention. They were satisfied with an agreement to contact the DNP student either in

person at kindergarten school, written or telephone counseling when they confront with a challenge throughout 12 weeks of TT a toddler.

During the 12 week follow-up, most parents maintained a potty log and returned to the logs, with some questions and comments, to the DNP student. The questions and comments demonstrated their active participation and intention to TT their child. For instance, a parent said “I do not know how to have my child sit still on the potty but I will keep trying.” Another said “Today, my child told me that he needs a potty just a second before he wet his pant. I’m glad that I did not show any disappointed as I was but praised him for letting me know.” These comments demonstrated their understanding about key aspects of child-oriented approach provided and an intention to reach their goal. Some parents attached a message with the potty log asking about child behaviors that were directed against the parent during TT. The DNP student provided counseling and told the parent to meet with the DNP student in person at kindergarten for more information if needed. Continuing support and motivation can enhance parental self-efficacy and decision-making. The best thing about providing counseling was that it was an effective strategy to retain participant in this study.

During this EBP project, the DNP student found parental knowledge and self-efficacy were significantly increased after the parental education intervention. Bandura (1997) indicated that if an individual’s knowledge is enhanced then his/her self-efficacy is improved. Findings from this EBP project support previous investigations by Bandura showing that parental education interventions can influence parental knowledge and knowledge enhancement effect parental self-efficacy. Additionally, the findings from this EBP project supported a study by Samuelson (2010), who indicated that effective training programs should result in improved parental self-efficacy, enhanced parent-child relationships, and reduced parenting stress. Parental self-efficacy enhancement is a major base for parental practices. The findings from this EBP project had similar results

to many studies (Gross et al., 1995; Kaminski, Valle, Filene, & Boyle, 2008; Samuelson, 2010; Smith, Brooks-Gunn, and Kelbanov, 1997) that the outcome on a child development/success can be predicted when increased parental knowledge about parenting skills and increased parental self-efficacy were seen after the parental education intervention. The findings from this EBP project affirmed the social cognitive theory (Bandura, 1977), that individual's self-efficacy can be improved through cognitive process. Parental education interventions that enhance parental knowledge and self-efficacy is a best fit strategy for parental education program about TT healthy toddlers in Thailand.

Applicability of the Evidence-Based Practice Framework

The theoretical framework chosen for this EBP project was Rogers' (2003) theory of diffusion of innovations (TODOI). The model provided a good fit with this EBP project because it provides a framework for which the adoption and use of innovations can affect social change. The TODOI has four interacting factors: (a) the innovation or new idea, (b) communication, (c) social systems, and (d) time, were identified and utilized during the implementation of the project.

Innovation. An innovation used in this EBP project was a child-oriented TT approach. Although this approach to TT has been practiced for years in Western countries, it is an innovation in Thailand because parents participating in the project had no prior knowledge and experience in child-oriented TT.

Rogers (2003) stated that innovations offering more relative advantage, compatibility, simplicity, trialability, and observability will be adopted faster than other innovations. However, relative advantage of the innovation is considered as the strongest predictor of the rate of adoption of an innovation. To increase the rate of adopting the innovation of TT and to make relative advantage more effective, the DNP

student used motivation strategies to support the participants of a social system in adopting an innovation.

Communication. To assure that communication during the parental educational intervention was effective, it included a booklet about child-oriented TT approach in Thai language that was developed by the DNP student. The booklet was a pocket size, used simple words that were easy to understand, and included content covering all necessary topics used when TT healthy toddlers. Communication was enhanced by using pictures; however, according to the limited budget, the drawing pictures were in black and white which made the booklet was less attractive. Since this parental educational intervention was delivered in a relaxed, brief format, it may have been non-threatening and supportive of the individual learning styles. Using a variety of strategies, communicate with a group of parents and caregivers.

Communication with other key people was also instrumental to the process. For example, to gain access to the kindergarten, the DNP student met with the school principal, school manager, and staffs. Persuading opinion leaders is the easiest way to foment positive attitudes toward an innovation. A greater interest in being exposed to new ideas was indicated. When the school principal was persuaded to adopt an innovation, the rest staffs exhibited excitement and readiness to learn and adopt it. Then, the DNP student got permission to access the kindergarten.

Communication with colleagues was also important to assure that questionnaires and education materials would enable the collection of information, when gathered from participants, in a standardized manner. Colleagues formed a favorable attitude toward the innovation. Subsequently, they decided to engage in activities to support the use of innovation in this project.

Social systems. The DNP student acted as a change agent by introducing a new practice of TT. The DNP student must ensure that parents, school administrators and

school staffs can get information about an innovation and perceive its usefulness. A powerful way for change agents to affect the diffusion of an innovation is to affect opinion leader attitudes. In this project, opinion leader refers to both school principal and primary caregivers of toddlers. As mentioned before, the DNP student met with the school principal and provided information about the new innovation, parental education about child-oriented approach to TT a child, in order to enhance the school principal's perception of the benefits of TT. Once the school director has adopted the innovation, then the DNP student got a permission to conduct the project at the kindergarten.

Additionally, family is an important body in the social system. Participants in this project include mother, father and grandparent. Among them there were various types of adopters, which could be one factor for children who have not achieved toileting skills. Sociocultural differences were a part of the barriers for some parents who failed to apply child-oriented TT method. In Asia including Thailand, parents and elders wield greater authority and should be treated with respect and obedience, and children must seek their parents' advice and guidance throughout their lives (Chao & Tseng, 2002). Parents, as well as other elders, wield greater authority than do younger family members and they are expected to be highly involved, responsible for decision making, and caring for children throughout their lives. The child-oriented TT approach, with its focus on child's readiness rather than parent's readiness, was in conflict with Thai culture. A challenge to parenting authority brought up when a child refused to follow parent's instruction to TT. Thai parents may have temperamental challenges that make them quick to anger because they believe in their authority over a child. Cultural sensitivity is an important skill that requires interpersonal communication. Implementing guidelines from different culture is also a challenge. Having cultural competence requires research to gain a better understanding and an informed view of the culture (McGlothlin, 2004). The DNP student can be the change agent by providing complete information about the

guidelines, defining the cultural differences of activities present in the guideline, such as the use of towel paper to wipe alone, and ignoring negative behavior of children. The role of educator of the DNP student can assist in actively involving the parents in the process (Seibert, Stridh-Igo & Zimmerman, 2002) and an adjustment of the guidelines based on cultural awareness to meet the parents' goal of child's achievement in toileting skills is recommended. Since the DNP student fully understands the parents' culture, an explanation about the guidelines using local language made it easier for parents to understand the new innovation of the guidelines. However, the DNP student gently asked the parents to convey the information and share their thoughts about the guidelines, in their own words, before concluding that they understood and accepted the new practice.

It was also noted that many of the parents knew one another because their children were all attending the kindergarten. The previous relationship between parents gave some benefits to the use of TODOI in this EBP project. Positive results lower uncertainty and also stimulate peer discussion of a new idea, as friends and neighbors of an adopter often request information about TT. Parents can learn about TT through a discussion with peers. If parents see that the knowledge about TT their child has value in their parenting role, then they are more likely to use it. The easier for some parents to see the results of an innovation through their peers, the more likely they are to adopt it. To integrate TT guidelines successfully into parental education intervention, parents should be motivated to provide helpful experiences of themselves to their peers.

The support of the school principal and staff were also instrumental in the adoption of child-oriented TT during this EBP project. Regarding to the five categories of adopter in TODOI, the school principal acted as the gatekeeper by bringing the new innovation in to the system. The school principle has the leadership role so his decision to adopt the new innovation may have influenced and affected staffs' innovativeness. Once the

school administrators and staffs adopted the innovation, the parents and students may have received some information through them. The school principal's permission to conduct the project at the kindergarten and participants' commitment to start TT as soon as the child is ready for TT were the evidence of innovation adoption.

According to the TODOI, adopter's characteristic plays a critical role in determining whether or not an innovation will be adopted by a given social system (Rogers, 2003). Moreover, adopter's income, education levels, and occupation may affect the rate of adoption (Wejnert, 2002). In general, people tend to adopt new innovations more quickly when they can access to the information of innovation and when an innovation adopted by a highly respected individual within a community (Wejnert). Also, rural and urban areas may have some different of characteristics which may affect the rate of adoption of innovation (Tucker, 2009). The setting of this EBP project, the kindergarten, was located in an urban area. Most of parents/caregivers were from the surrounding areas. Based on demographic data, 66.6% of participants' education level was higher than high school. The mean income was 29,281.25 Thai Baht per month (approximately 1,000 US\$). Moreover, 84.4 % were employed. The majority of parents in this EBP project have high education, sufficient income and live in urban areas, thus they may tend to more open to change. Parents can access information about the innovation not only from the DNP student, but from the highly respect person, the school principal. Moreover, parents were able to get more information about TT through other sources such as internet or books easier than those who live in the rural area. The rapid rate of adoption of innovation was seen in this EBP project as the number of children achieved toileting skills gradually increased as time passed since the first week of training.

Time. Rate of adoption of innovations during the process of implementation seems to be one factor to be concerned in the diffusion of innovation. The perceived attributes of an innovation are significant predictors of the rate of adoption (Rogers, 2003). In

addition, Regarding to the limited timeframe of this project, the DNP student increased the predictability of the rate of adoption of innovations by providing the knowledge and the facts about TT guidelines to people involved in this project: school administrators, parents, and colleagues. Moreover, the DNP student allowed time for them to ask questions until they were fully informed. This EBP project offered a half-day parental education intervention in one morning on the weekend which was an appropriate time for most of the participants and a friendly environment was arranged. Additionally, there was contact with the DNP student over the following 12 weeks. This allowed time for the innovation to diffuse. Adoption was enhanced by the availability of the DNP student to parents for the purpose of answering questions and problem solving.

One is able to conclude that a type of social change occurred as a result of parental education intervention related to the invention or adoption, or rejection, of the new idea by the parent. The continued adoption of the innovation by parents was self-sustaining. The number of children who achieved success in toileting skills is evidence of the adoption of the innovation by parents.

Strengths of the Evidence-Based Practice Project

There were many strengths of this EBP project. A major strong point of this EBP project was that the project provided appropriate knowledge about TT that was presented in the most culturally sensitive, conducive format to maximize the chances of success. A variety of educational strategies were implemented to teach parents about TT because learning and teaching are the interaction between what parents know, the new information they encounter, and the activities they engage in as they learn. Parents construct their own understanding through experience and interactions with content and peers. Active participation during the parental education intervention enhanced learner's cognitive skills as described by Bandura's (1977) social cognitive learning theory.

Another strength of the EBP project was that the design of the parental education intervention was based on an extensive literature review. The use of guidelines, intervention booklet, telephone calls and group discussion, were helpful strategies to enhance parents' ability to facilitate TT their child in this EBP project.

It appears that an unexpected strength of the EBP project was the motivation of parents to implement child-centered TT. Parents practiced new skills with their own children at home. The fact that parent is child's first teacher became very evident during this project. Parents learned parenting roles in TT their child at an appropriate time from the health professional, the DNP student. Some of this commitment may have been due to the fact that parents could review the TT method using the booklet at their convenience.

According to SCT (Bandura, 1977), motivation should be provided throughout the process. The telephone calls and counseling provided by the DNP student through the 12 weeks follow-up were instrumental in motivating parents. These strategies strengthened the project, and it is clear that without this follow-up, parents would have been less likely to maintain the potty logs.

Another strong point of the EBP project was that parents learned to use adequate positive reinforcement consistently and not to use punishment. Parents used more praise and incentives, more appropriate discipline, and more positive verbal discipline. From a potty log maintained by parents, parents stated in the comment section that they understood a concept of child-centered in TT. Parents focused on child's readiness rather than parent-centered approaches. The educational program provided in this project did not only change parental knowledge and skills but it may also change parent's behavior. Findings of the present project show that the parental education had a positive impact on parenting practices and parents' perception of their child's behavior. Regarding to the first of Erikson's psychosocial stages, basic trust versus basic mistrust

(Erikson, 1963). Basic trust develops when children are reared, cared for, and educated in an environment of love, warmth, and support. An environment of trust reduces the opportunity for conflict between child and parent/caregiver because the care that parents provide for their children impacts all areas of their early and later development (Erikson). Therefore, a parental educational intervention focuses on positive reinforcement and no punishment can be applied in the program that promoting parenting roles and child's social-emotional development.

Gul and Ali (2010) recommended investigators must assess, identify, and implement strategies to diminish barriers that may prevent them from participating and the program goals should matched the participants' goals. A common way to facilitate convenient data collection is to conduct the assessment procedures at opportune times, such as after the participant's work hours, on weekends and in places such as the person's home or childcare centre (Gross & Fogg, 2001). In this project, the time and place of the session was indicated as one of the highest motivating factors for parents to join the study because they had to collect their children anyway.

The DNP program in Thailand has been developing for Thai APNs. The role of DNP in Thailand has been unclear. The DNP student is an expert who engages in the role components of clinician, consultant, educator, leader, and researcher using the processes of critical thinking, communication, change, and lifelong learning to target the needs of persons, nursing/nursing practice, and organizations/systems (College of Nursing, Valparaiso University, 2012). As educator and clinician, the DNP student provided knowledge of the new innovation of TT guidelines and behavioral modification. Counseling was provided throughout the project as a role of a consultant of the DNP student. Meanwhile, the roles of change agent, leader, and researcher were also presented within every process of the project. As researcher, significant time and work was devoted to developing the instruments to assure their utility. Conducting the EBP

project through the integration of evidence-based practice, scientific knowledge, and science-based theory in TT a healthy toddlers with Thai parents involved in the project demonstrated the roles of the DNP prepared-nurse to Thai community.

In addition, this EBP project provided a half-day parental education intervention. A booklet and a potty log were utilized as a material for parent to record their practice and child progress in toileting skills. Most parents were satisfied with these useful tools because it assisted them during TT their child. The potty log was easy for them to record their child activities during practice. In addition, The DNP student found the use of telephone consultation upon parents' agreement was an important strategy to keep participants practicing their children and maintaining a potty log.

Limitations of the Evidence-Based Practice Project

Although several strengths were noted, this EBP project also had some limitations. This EBP project was conducted overseas, so approval from Institutional Review Board from both Valparaiso University and Thailand was necessary. The Thailand IRB approval process requires the DNP student to complete specific forms with supporting documents. The process took about 6 weeks for the project proposal to be approved. In addition, any changes to the project after approved required about a month for a new IRB approval. This seems to be a barrier for the DNP student to adjust her project proposal when needed after an approval.

The other notable limitation was the duration of implementation had on attrition. The EBP project required for 12 weeks participation to maintain the log. Failing to retain an adequate number of study participants in the project poses a threat to interpretation of study results and its external validity (Polit & Beck, 2008). The time length increased a chance of losing participant and the continued adoption of the innovation of a parent. The problem of maintaining a potty log, some parents forgot to return the potty log to the DNP student as appointed according to several factors. Reasons for not returning the

potty log were the child missed kindergarten on the due date, a potty log was placed in the child's bag without any notice, and parent was on a vacation but still kept practicing with a child, then they postponed the date to return the log. The DNP student interacted with parents who did not return the logs through telephone calls, which caused an increase of the budget. The continued adoption of the innovation is self-sustaining so strategies to propel diffusion must be applied. Factors such as personal, contextual, cultural and research-related factors affect someone's decision to participate in a project (Gul & Ali, 2010).

The EBP project was also limited by the unexpected outbreak of hand and mouth disease. This caused the loss of two participants. It also accounted for some of the regression of TT behaviors in children. Unfortunately, there was no way to anticipate this complication. Although the outbreak did have an effect on the project, the effect was small and a sufficient sample was obtained.

Implications for the Future

During this EBP project, the effectiveness of a parental educational intervention was examined. Improvements were seen after the parental education intervention. This EBP project has implications for the future based on the findings and lessons learned from the implementation of the project.

Practice

From the findings, it was shown that many Thai parents lack of knowledge of and experience in child-oriented approach for TT healthy toddlers. Parents completing parental education likely developed more child-friendly beliefs and attitudes that may have resulted in an increased willingness to understand and accept children's developmental capabilities, emotions, or intentions. Best practices found from literature reviews, healthcare providers can increase their chances of delivering information that will strengthen parent capabilities to TT their child. In clinical practice, DNPs and other

healthcare providers should provide anticipatory guidance regarding to child-oriented approach to TT a child and allow parents to express their thoughts about TT prior to beginning TT their child to reduce parents' uncertainty and frustration during the training.

Theory

Findings indicate that parenting role in TT requires active parent involvement. Combining knowledge and self-efficacy significantly enhances child achievement in TT at an appropriate time. There is a suggestion for healthcare providers to engage parents in a discussion about TT their child in respect to their parenting goals because children learn the TT process most frequently from their parents. Most parents participating in this project agreed that the parental education intervention enhanced their confidence and that materials provided during the parental education intervention were useful guides for them while providing TT to their child. Hence, the use of self-efficacy concept (Bandura, 1977, 1986) and Roger's (2003) TODOI were useful for this EBP project.

Some relevant aspects of adult learning for parents in this EBP project were noted. Parents learned more effectively through experiential techniques of education such as discussion and immediate problem solving than from directives or lecturing (Knowles, 1975). Chao (2009) stated that to facilitate learning in adult learners, a thorough understanding of how they are motivated to learn, what and how barriers to learning are formed. If the adult is expected to learn something, the instructor must discern that person's readiness to learn. The readiness to learn is closely linked to the person's developmental tasks and social roles. Brookfield (1987) stated that adults learn best when an action process is involved. In this EBP project, parents volunteered to participate in the project and received opportunities to learn about TT their toddler through a more self-directed learning strategy. Parents integrated experiences to enhance learning for themselves and peers in the class. Finally, parents were motivated to turn their learning into action. Findings of parent self-efficacy and knowledge

enhancement after parental education intervention are relevant to the adult learning theory which can be the foundation for the future research.

Research

Since family systems are complex as they interact within various cultural and political contexts, there is also a need for international research to better understand how to best support and educate families to successfully encourage the development of their toddlers within different cultures. It requires that support and information should be provided to parents of a toddler that enables them to promote their child's healthy development. Further study of an effectiveness of information to be obtained from different sources such as leaflets, books, videotapes and the Internet should be conducted. Additionally, more research is needed to explore the duration to achieve toileting skills of a healthy Thai toddler. Although it was indicated in the literature that 12 weeks of follow-up was the minimum time need for a child to develop toileting skill, studies that have a longer follow-up, 6 months or more, are recommended. Such studies would better show the factors associated with the outcome of TT a toddler. Strategies for retaining participants should also be researched.

Education

The parent training strategies used during a parental educational intervention can easily be incorporated into other educational program. Parents and educators should meet together to identify common concerns, decide which to focus on, and address a strategy for addressing them.

In nursing education, particularly pediatric nursing courses, the growth and development of children and childhood illnesses have been emphasized. Anticipatory guidance and counseling programs to enhance parenting behavior and child development should be given more attention. Nursing education plays an important role

in the preparing a well-educated nurse. Nurse educator should implement EBP research in their nursing course.

The use of the TODOI (Rogers, 2003) should be emphasized in the education of family nurse practitioners. The theory can be used to accelerate the adoption of important programs that typically aim to change the behavior of a social system. For example, during parenting programs, interventions to promote a child development or child health problem can be developed. Family nurse practitioners can implement interventions for people in a social system (parents, primary caregivers, and teachers) with the goal of adoption. Understanding the target population and the factors influencing the rate of adoption are key components for the family nurse practitioner to have a successful health promotion.

Conclusion

Results from the evidence-based practice project indicate that the parental education intervention really does have an effect self-efficacy level. Specifically, the results show that when participants attend education about TT, the knowledge and self-efficacy scores increase. Among the disciplines involved with parental training, many studies (Gross et al., 1995; Kaminski et al., 2008; Samuelson, 2010) show that the important issue in parental training to promote child healthy development is to build strong parent–child relationships. Factors influencing the success or failure of the EBP project may include a well-prepared project plan, an effective communication with individuals involved in the social system, and strategies to enhance the rate of adoption of an innovation. Whatever the approach to parental education about TT, the development of positive parent-child interactions must be emphasized. Parents need to learn that negative feedback and punishment during TT are not recommended. Instead, praise, positive reinforcements, and rewards for successful attempts are indicated. Effective teaching strategies for parents and caregivers should be a priority to ensure

their motivation and engagement in learning. Parents' confidence should be enhanced before giving TT to their toddlers. In addition, strategies to build a strong parent-child relationship should be included in a training program. Doctorally prepared nurses can play an important role by providing parents with anticipatory guidance during a well-child visit.

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BIOGRAPHICAL MATERIAL

Ms. Thammajinda graduated from Payap University in Thailand with a Bachelor of Science degree in nursing in 1991. She has worked at McCormick Hospital, Chiang Mai, Thailand as a registered nurse at the pediatric ward. In 1997, she earned Master of Science degree in pharmacology from Chiang Mai University in Thailand. Currently, Ms. Thammajinda is working at Payap University, McCormick Faculty of Nursing as a lecturer for pediatric nursing. She decided to further her education and pursue the Doctor of Nursing Practice in 2010. She received a professional development grant from Payap University and the University scholarship from Valparaiso University, College of Nursing. She is a licensed professional nurse of New York and Indiana State. She became interested in health promotion, more specifically in child development and parenting education, during her clinical experiences in the Doctor of Nursing Practice program. She has presented the topic of the effectiveness of a parental education intervention about a child-oriented approach to toileting for healthy Thai toddlers at both local and international conferences. Her topic has been published in the international conference proceedings in November 2012. Recently, she received the Doctorate of Nursing Practice Student Award 2013 from the College of Nursing, Valparaiso University. During these experiences, she recognized the beneficial of promoting child development to children health, and their family. As a DNP graduate, she is committed to professional development and lifelong learning.

ACRONYM LIST

AAP: American Academy of Pediatrics

AHRQ: Agency for Healthcare Research and Quality

CDC: Centers for Disease Control

CMHA: Canadian Mental Health Association

CPS: Canadian Paediatric Society

DNP: Doctor of Nursing Practice

EBP: Evidenced-based practice

NPEN: National Parenting Education Network

SCT: Social Cognitive Theory

TODOI: The Theory of Diffusion of Innovations

TT: Toilet Training

APPENDICES***Appendix A***

Letter of Introduction from Dean of College of Nursing



Valparaiso
University

phone: 219.464.5289
fax: 219.464.5425
www.valpo.edu/nursing

College of Nursing
Office of the Dean
LeBien Hall
836 LaPorte Avenue
Valparaiso, IN 46383-4534

July 9, 2012

Greetings!

I am writing on behalf of On-Anong Thammajinda who is enrolled as a student in the Doctor of Nursing Practice Program at Valparaiso University College of Nursing, Valparaiso, IN USA. Ms. Thammajinda is enrolled in NUR 799A Doctor of Nursing Practice Project and is conducting an evidence-based practice project. She will be implementing this required project in Thailand.

Dr. Nola Schmidt is serving as Ms. Thammajinda's project adviser. She is involved in each aspect of the project and is providing guidance through distance technology. Given that the project materials will be used in Thailand, it is most helpful if you can review them for internal consistency and validity. Thank you very much for assisting Ms. Thammajinda in this manner. Your involvement is greatly appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Janet M. Brown".

Janet M. Brown Ph.D., RN
Dean and Professor
Valparaiso University
College of Nursing

Appendix B

Letter of Invitation

An Opportunity for Parents to Learn about Child-Oriented Toilet Training

Hello. My name is On-Anong Thammajinda. I am a nurse and a Doctor of Nursing Practice student at Valparaiso University. I will be conducting an evidence-based practice project at Veeraya Kindergarten School. This project will include parents/caregivers of healthy children age between 18 to 36 months attending a preschool program during the 2012 year. The purpose of this project is to determine the effectiveness of parental education about a child-oriented toilet training approach on parental/caregiver knowledge and self-efficacy for assisting their children in reaching their developmental milestone. Since toilet mastery is truly a developmental milestone in a child's life. It is also can be one of the most difficult developmental phrases that both parents and child experience together. Healthy children who demonstrate readiness for toilet training should be trained with parents involved. Parents may become confused and frustrated with conflicting advice from various resources such as friends, relatives, and media. It is important to be prepared to address these issues.

I hope that the results from this evidence-based practice project will reinforce the importance of providing parental education and a guideline to parents/ caregivers, who directly interact with a child. Currently, published toilet training in America recommends a child-oriented approach. The American Academy of Pediatrics (AAP) strongly recommends child-oriented toilet training approach guidelines and suggests that the process should begin only when the child demonstrates signs of readiness. This evidence-based practice project is a great opportunity to increase your knowledge and confidence about toilet training your child.

In regards to the specifics of this project, one educational session will focus on the different topics related to toilet training your child. The session will be held on Saturday, September 1, 2012 from 8.00 am to 12.00 pm. Short tests will be used to evaluate your knowledge and confidence regarding to toilet training a child. These tests will occur before and after the educational session. You will also record your child's toileting behaviors everyday until he or she has achieved toileting skills. There will also be opportunities for you to meet with a nurse to discuss how toilet training is progressing. The information from this project will hopefully be used to help educate parents and caregivers of a child in the future. Your participation in taking these tests and the specifics of this project is completely voluntary. You may withdraw from the project at any time. Also, any data will be kept confidential and your name will not be disclosed. If you have any further questions, please feel free to contact me. I want to thank you for your time and your consideration.

Sincerely,


On-Anong Thammajinda

Phone Number: 081 288 6473

E-mail: on-anong.thammajinda@valpo

Appendix C

Letter of Agreement

 Valparaiso University	phone: 219.464.5289 fax: 219.464.5425 www.valpo.edu/nursing	College of Nursing Office of the Dean LeBlon Hall 836 LaPorte Avenue Valparaiso, IN 46383-4534
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AGREEMENT BETWEEN

**THE LUTHERAN UNIVERSITY ASSOCIATION, INC d/b/a
VALPARAISO UNIVERSITY COLLEGE OF NURSING
AND
VEERAYA KINDERGARTEN SCHOOL**

On-Anong Thammajinda, currently enrolled in the Doctorate of Nursing Practice program at Valparaiso University (hereinafter called "University"), has expressed interest in collaborating on an evidence-based project experience at Veeraya Kindergarten School (hereinafter called "Agency"), as discussed with Mr. Sommanat Thong-Ngarm, for the purposes of fulfilling objectives for NUR799A, B, C Doctorate of Nursing Practice Project. On-Anong Thammajinda will be interacting at the Agency between the dates May 28, 2012, to May 8, 2013.

The following points of agreement are understood by authorized representatives of the University and the Agency.

It is understood by the University that:

1. the University be responsible for a program of study for graduate level Doctorate of Nursing Practice program and will provide competent faculty to coordinate the student's plan of learning. The faculty member will make on-site visits as needed to:
 - a. evaluate the student's progress toward meeting course objectives,
 - b. maintain a collegial relationship between the University, preceptor, and agency,
2. the University will provide verification, upon request, that the student:
 - a. holds current licensure to practice nursing,
 - b. carries professional liability insurance coverage,
 - c. is free from communicable disease (current Mantoux, proof of rubella immunity), and is in good health (health record), and
 - d. holds current CPR certification
 - e. has a clear background check and drug test.

It is understood by the Agency that Mr. Sommanat Thong-Ngarm will facilitate efforts to meet the following objectives:

Course objectives:


- 1) Create a proposal addressing a significant clinical problem in the health care environment based on a critical analysis of theoretical and scientific evidence and an assessment conducted in my clinical setting.

Continue


- 2) Collect, manage, and analyze outcome data throughout project to guide decision-making. Implement project by effectively communicating practice changes in the clinical setting while successfully collaborating with interdisciplinary health care providers.
- 3) Conduct ongoing assessment to monitor change and make adaptations as necessary to facilitate transition to new health care practices while recognizing the effect of change on the behaviors of individuals and organizations.
- 4) Provide feedback to representatives and management in the clinical setting regarding the project and outcomes.
- 5) Critically analyze the process and outcomes of project.
- 6) Disseminate findings from the project.
- 7) Participate in a collegial manner while providing peer review.

Neither the University nor the student will receive compensation from the Agency for services given during clinical experience.

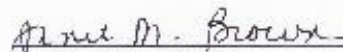
A faxed signature shall be deemed an original one for all purposes.


Saumana Thong Ngah
Veveye Kindergarten School

28/5/12
Date


Anne Cory, Ph.D., RN
Faculty

5-18-12
Date


Janet M. Brown, Ph.D., RN
Dean

5/15/12
Date

Appendix D

Valparaiso University IRB Approval



phone: 219.464.5481
fax: 219.464.5425

Institutional Review Board
836 LaPorte Avenue, Office 120
Valparaiso, Indiana
46385

To: On-Anong Thammajinda

From: Julie Brandy
Chair, IRB

RE: The Effectiveness of a Parental Education Intervention About a Child-oriented Approach to Toileting
Healthy Thai Toddlers

Date: July 11, 2012

The IRB has approved the above study as expedited research on July 11, 2012. The project was reviewed in accordance with all research statues and regulations pursuant to Federal regulations, 45 CFR 46.101(b).

The researcher has approval of this project until one year from the identified date.

If additional protocol changes are needed, approval must be sought from the IRB prior to implementing those changes. Please submit a new expedited request to the IRB for consideration.

When the project is completed, notify the Office of IRB. If the research protocol needs to extend beyond one year, written approval must be sought from the IRB.

Good luck with your work. Please retain a copy of this letter for your records

Appendix E

Chiang Mai University IRB Approval



No.066/2012

CERTIFICATE OF ETHICAL CLEARANCE
Research Ethics Review Committee
Faculty of Nursing, Chiang Mai University

The Research Ethics Review Committee of the Faculty of Nursing, Chiang Mai University declares approval of

Research Project Title : The Effectiveness of A Parental Education Intervention About A Child - Oriented Approach to Toileting for Healthy Thai Toddlers

Principal Investigator : Mrs. On - Anong Thammajinda

Participating Institution : DNP student of the College of Nursing, Valparaiso University, Valparaiso, Indiana 46383 USA.

The above research project does not violate rights, well being, and/or endanger human subjects and is justified to conduct the research procedures as proposed.

This clearance is valid from the date of approval to July 19, 2013

Date of approval July 20, 2012

Handwritten signature of Professor Dr. Wichit Srisuphan in blue ink.

.....
(Professor Dr. Wichit Srisuphan)
Chair, Research Ethics Review Committee
Faculty of Nursing, Chiang Mai University

Handwritten signature of Associate Professor Dr. Thanaruk Suwanprapisa in black ink.

.....
(Associate Professor Dr. Thanaruk Suwanprapisa)
Dean of Faculty of Nursing, Chiang Mai University

Appendix F

A flyer

ขอเชิญเข้าร่วมโครงการวิจัย**..ทำอย่างไรจึงจะสอนลูกวัยเตาะแตะให้นั่งกระโถนเป็น..**

ขอเชิญคุณพ่อ คุณแม่ หรือผู้ปกครอง ที่มีบุตร..

✦ อายุ 1 1/2 - 4 ปี

✦ บุตรยังไม่สามารถขับถ่ายในกระโถนได้ด้วยตนเอง



เข้าร่วมโครงการวิจัย โดยท่านจะต้องเข้ารับการฝึกอบรม 1 ครั้ง และท่านจะได้รับแจกหนังสือคู่มือและอุปกรณ์เพื่อช่วยในการส่งเสริมพัฒนาการของเด็ก

สมัครเข้าร่วมโครงการวิจัยและสอบถามรายละเอียดเพิ่มเติมได้ที่

อ.อรอนงค์ ธรรมจินดา โทรศัพท์ 081-2886473

** แจ้งความจำนงทางในวันศุกร์ที่ 24 สิงหาคม 2555 รับจำนวนจำกัด 50 ท่าน หรือ ไม่มีค่าใช้จ่าย**

Appendix G

Inclusion Criteria Screening Form

Inclusion Criteria Screening Form

Please take a moment to answer the following questions. If you have any questions, please ask.

1. Your relation to the child: Mother Father Other _____
2. Do you and your child live in the same house? Yes No
3. How old is your child? _____ years _____ months
4. Has this child been toilet-trained Yes No
 If YES, the result of the training is Success (then stop answer the question) Failed.
 If failed, has the training ended for more than a month? Yes No
5. Does this child have any medical condition? Or developmental delay Yes No
 If so, please state _____
6. Do you willing to provide toilet training to your child? Yes No

Please answer "YES" or "NO" regarding to this child performance.		YES	NO
7.	Does your child show interest in using the potty or asking to use the potty?		
8.	Is your child trying to imitate what other children or family members are doing, especially using the potty?		
9.	Is your child having regular bowel movements at about the same time each day?		
10.	Does your child staying dry for at least two hours at a time during the day?		
11.	Is your child uncomfortable in dirty diapers or asking to wear underwear instead of diapers?		
12.	Is your child able to say (or sign) simple one-word expressions, like 'poop' and 'potty'?		
13.	Does your child able to follow simple instructions?		
14.	Is your child generally cooperative and not in a very negative phase where he says 'no' to everything?		
15.	Is your child telling you when he is about to urinate or have a bowel movement?		
16.	Is your child able to sit down quietly for 4-5 minutes at a time?		
17.	Is your child showing you, either with his facial expressions or his posture, that he is about to urinate or have a bowel movement?		
18.	Is your child able to walk to the bathroom?		
19.	Is your child able to help take off his diaper and undress himself?		
20.	Is your child happy to please you or proud when s/he does something that pleases you?		
21.	Is your child in a stable and fairly predictable routine, and not experiencing a big change in his life or usual routine, like the arrival of a new baby, change in daycare, or family move?		

Please provide your mailing address and phone number so that I can contact you in regarding to the participation in the project. This information will be kept confidential and does not share with anyone else.

Address*: _____

Phone*: _____ E-mail address (if any): _____

Thank you!

Inclusion Criteria Screening Form (Thai)

Code # _____

แบบสอบถามเพื่อคัดกรองอาสาสมัคร

คำชี้แจง แบบสอบถามนี้เป็นแบบสอบถามเพื่อทราบข้อมูลเบื้องต้นเกี่ยวกับบุตรหลานที่อยู่ในความดูแลของท่าน ขอความกรุณาตอบตามความเป็นจริง ข้อมูลที่ท่านให้จะเป็นความลับและใช้ประโยชน์สำหรับการวิจัยนี้เท่านั้น โดยจะไม่มีผลกระทบต่อเด็กในความดูแลของท่านและตัวท่านแต่อย่างใด

กรุณากรอกที่อยู่และหมายเลขโทรศัพท์ที่สามารถติดต่อท่านได้ในกรณีที่ท่านมีคุณสมบัติครบถ้วนตรงตามข้อกำหนดของโครงการวิจัย

ชื่อ-นามสกุล _____ เป็นผู้ปกครองของ ค.ญ / ค.ช. _____

ที่อยู่ _____

เบอร์โทรศัพท์ ที่ติดต่อได้ _____ ช่วงเวลาที่สะดวกให้ติดต่อ _____ น. ถึง _____ น.

กรุณาตอบคำถามต่อไปนี้ (หากท่านตอบในข้อที่มีเครื่องหมาย * ให้หยุดตอบคำถามและส่งแบบสอบถามคืนแก่ผู้วิจัย)

1. ความสัมพันธ์ของท่านกับเด็ก มารดา บิดา อื่นๆ(ระบุ) _____
2. ท่านอาศัยอยู่ในบ้านเดียวกันกับเด็กหรือไม่ ใช่ ไม่ใช่ \
3. บุตรหลานของท่านที่จะเข้าร่วมโครงการมีอายุ _____ ปี _____ เดือน
4. เด็กในความดูแลของท่านเคยได้รับการฝึกขับถ่ายหรือไม่ เคย ไม่เคย
ถ้าท่านตอบว่า "เคย" ปัจจุบันนี้เด็กสามารถขับถ่ายในกระโถนหรือห้องน้ำได้เอง ใช่* ไม่ใช่
5. เด็กในความดูแลของท่านเคยได้รับการบอกกล่าวจากแพทย์ว่ามีปัญหาด้านสุขภาพหรือพัฒนาการหรือไม่
ไม่มี มี โปรดระบุ _____
6. ท่านต้องการฝึกขับถ่ายให้แก่บุตรหลานของท่านหรือไม่ ต้องการ ไม่ต้องการ

กรุณาทำเครื่องหมาย ✓ ลงในช่องที่ตรงกับความเป็นจริงมากที่สุด	ใช่	ไม่ใช่
7 เด็กแสดงความสนใจโดยการนั่งกระโถนเล่นหรือบอกอยากมีกระโถนใช้		
8 เด็กแสดงท่าทางเลียนแบบเด็กอื่นหรือสมาชิกในครอบครัวคนอื่นในการใช้กระโถนขับถ่าย		
9 เด็กมีการขับถ่ายเป็นเวลาทุกวัน		
10 เด็กมีระยะห่างในการขับถ่ายปัสสาวะส่วนใหญ่ นานอย่างน้อย 2 ชั่วโมง		
11 เด็กงอแงเมื่อผ้าอ้อมสกปรกหรือบอกว่าอยากใส่กางเกงสำหรับเด็กแทนผ้าอ้อมกระดาษ		
12 เด็กแสดงกิริยาต่างๆเพื่อบอกความต้องการก่อนการขับถ่าย เช่น ทำหน้านิ่ง มือกุมท้อง		
13 เด็กสามารถทำตามคำบอกต่างๆได้ เช่น "เอาผ้าอ้อมมาให้แม่หน่อย" เด็กก็หยิบผ้าอ้อมมาให้		
14 เด็กเข้าใจความหมายของคำว่า "ไม่" เพื่อปฏิเสธที่จะทำสิ่งที่ไม่ต้องการอย่างมีเหตุผล เช่น เมื่อขึ้นของเล่นให้แล้วเด็กบอกว่า "ไม่เอา" แล้วสนใจกิจกรรมอื่นโดยไม่แสดงอาการโกรธ		
15 เด็กสามารถพูดบอกท่านเมื่อต้องการปัสสาวะหรืออุจจาระ เช่น พูดว่า "ฉี่ฉี่" "อึ"		
16 เด็กสามารถอยู่นิ่งหรือนั่งอยู่กับที่ได้นานประมาณ 4-5 นาทีเป็นอย่างน้อย		
17 เด็กสามารถแสดงออกทางสีหน้า และท่าทางเมื่อต้องการขับถ่าย		
18 เด็กสามารถเดินไปห้องน้ำเองได้ หรือเดินได้เองอย่างอิสระ โดยไม่ต้องช่วยงูงเดิน		
19 เด็กสามารถถอดผ้าอ้อม และ/ หรือถอดกางเกงเอง โดยมีผู้ปกครองช่วยเหลือเพียงเล็กน้อย		
20 เด็กแสดงความภาคภูมิใจ และพอใจเมื่อได้ช่วยเหลือท่าน		
21 ขณะนี้เด็กอยู่ในสภาวะแวดล้อมปกติ ไม่มีการเปลี่ยนแปลงในชีวิตประจำวัน เช่น มีทารกคลอดใหม่ในบ้าน ย้ายโรงเรียน ย้ายบ้านใหม่ หรือบิดามารดาแยกทางกัน		

ขอขอบคุณในความร่วมมือ กรุณาส่งแบบสอบถามในซองที่แนบมาและส่งคืนที่ศูนย์วิจัยเด็ก ภายในวันศุกร์ที่ 18 สิงหาคม 2555

Appendix H

Consent Form

I understand that I am being asked to join an evidence-based practice project. This project will be held at Veeraya Kindergarten School. This project will look at the effects of an educational program on parents'/caregivers' knowledge and confidence. If I join this project, I will attend a half-day educational session and will be completing a total of six questionnaires both before and after the educational session throughout the study. I will also record my child's toileting behaviors everyday until he or she has achieved toileting skills. There will also be opportunities for me to meet with a nurse to discuss how toilet training is progressing. I may use extra personal and/ or work time to come to the educational sessions during this project.

I am 18 years old and older. I am a parent/ caregiver of a healthy child age between 18 to 36 months, who is attending a preschool program at Veeraya Kindergarten School.

The risks of the project will be the same as every day risks. Information from this study will help me, other parents, or caregivers in toilet training their child in the future.

I understand that joining this project is totally voluntary. I may leave the project at any time. There is no penalty for leaving. If I stop attending the project, it will have no effect on my child or me.

I understand that the project information will be private. No personal information will be used in the tests. Information will be kept locked in a draw, and the researcher will only have access to it. My name will not be given out and personal information will be destroyed at the end of the study. General information may be used in nursing journals or presentations.

If I need to, I can call On-Anong Thammajinda at 081 288 6473. I can e-mail her at on-anong.thammajinda@valpo.edu. Questions about the way the research study is being done should contact Nola Schmidt. She can be reached at nola.schmidt@valpo.edu.

The project has been explained to me. I have read and understand this consent form. My questions have been answered. By signing this form, I agree to join the project.

Signature of Subject

Date

Signature of Investigator

Date

Letter of Invitation with Consent Form (Thai)

เอกสารสำหรับผู้เข้าร่วมโครงการวิจัย

ส่วนที่ 1 เอกสารคำชี้แจงแก่อาสาสมัคร/ ผู้เข้าร่วมโครงการวิจัย

ชื่อโครงการวิจัย ผลของโปรแกรมการสอนผู้ปกครองในการฝึกการขับถ่ายด้วยวิธีการมุ่งเน้นความพร้อมของเด็กวัยหัดเดินสุขภาพดีชาวไทย (The Effectiveness of A Parental Education Intervention About A Child-Oriented Approach to Toileting for Healthy Thai Toddlers)

ชื่อคณะผู้วิจัย นางอรอนงค์ ชรรณจินดา นักศึกษาปริญญาเอก
คณะพยาบาลศาสตร์ มหาวิทยาลัยวลลาปาริโซ ประเทศสหรัฐอเมริกา

ผู้วิจัยขอเชิญท่านเข้าร่วมโครงการวิจัย เนื่องจากบุตรหรือเด็กวัยหัดเดินในความปกครองของท่านอยู่ในช่วงวัยที่เหมาะสมในการฝึกการขับถ่าย โดยผู้วิจัยจะอธิบายให้ท่านทราบเกี่ยวกับรายละเอียดของการวิจัยก่อน ถ้าท่านมีข้อสงสัยใดๆ เกี่ยวกับการวิจัย รวมทั้งสิทธิของท่าน กรุณาซักถามจากผู้วิจัย หากท่านตัดสินใจเข้าร่วมการวิจัยครั้งนี้ ท่านจะได้รับเอกสารคำชี้แจงแก่อาสาสมัคร/ผู้เข้าร่วมโครงการวิจัย และสำเนาเอกสารแสดงการยินยอมของอาสาสมัคร/ผู้เข้าร่วมโครงการวิจัยที่ท่านลงลายมือชื่อกำกับไว้ 1 ฉบับ คณะผู้วิจัยมีความยินดีที่ท่านได้สละเวลาในการรับฟังคำอธิบาย ดังต่อไปนี้

วัตถุประสงค์การวิจัย

เพื่อศึกษาผลของการสอนผู้ปกครองในการฝึกการขับถ่ายด้วยวิธีการที่มุ่งเน้นความพร้อมของเด็กวัยหัดเดินสุขภาพดี ที่มีอายุระหว่าง 18 เดือน ถึง 36 เดือน และกำลังศึกษาอยู่ในโรงเรียนอนุบาลวิรัช อ.สันทราย จ.เชียงใหม่ จำนวน 50 ราย

ประโยชน์ที่ท่านและผู้ที่เกี่ยวข้องจะได้รับจากการวิจัย

ท่านจะได้รับทราบความรู้เกี่ยวกับการฝึกการขับถ่ายแก่เด็ก พัฒนาการของเด็กวัยหัดเดิน และวิธีการฝึกการขับถ่ายด้วยวิธีการที่มุ่งเน้นความพร้อมของเด็ก โดยไม่ต้องเสียค่าใช้จ่ายใดๆ เพิ่มเติม ท่านจะได้รับรู้มือการฝึกการขับถ่ายแก่เด็ก และสนุกสนานกับความก้าวหน้าทักษะการขับถ่ายของเด็ก หากบุตรหรือเด็กวัยหัดเดินในความปกครองของท่านสามารถฝึกการขับถ่ายได้สำเร็จ จะช่วยให้ท่านประหยัดค่าใช้จ่ายในครอบครัวจากการซื้อผ้าอ้อมสำเร็จรูป และลดความเสี่ยงต่อการติดเชื้อโรคที่มาจาก การขับถ่ายไม่เหมาะสม ทั้งต่อสมาชิกในครอบครัวและเพื่อนเล่นของเด็กด้วย นอกจากนี้ผลการวิจัยที่ได้ยังจะเป็นประโยชน์ทั้งต่อบุตรหรือเด็กวัยหัดเดินในความปกครองของท่านและต่อผู้อื่นโดยรวม คือ เด็กที่ฝึกการขับถ่ายได้สำเร็จจะเกิดความภาคภูมิใจในตัวเอง มีความมั่นใจในศักยภาพของตนเองมากขึ้น และยังเป็นการส่งเสริมเด็กให้มีความคิดอิสระเป็นตัวของตัวเองอีกด้วย สำหรับประโยชน์ต่อผู้อื่น และสังคม การฝึกให้เด็กขับถ่ายด้วยตนเองจะช่วยรักษาสิ่งแวดล้อมในการลดปริมาณขยะจากการใช้ผ้าอ้อมสำเร็จรูป การศึกษานี้จะเป็นแนวปฏิบัติแก่ผู้ปกครองเด็กหัดเดินราย

อื่นๆในการฝึกการขับถ่ายที่เหมาะสมแก่เด็ก จนสามารถฝึกเด็กให้ขับถ่ายด้วยตนเองได้อย่างถูกต้อง โดยศึกษาจากผลการปฏิบัติของท่านในครั้งนี้ และในฐานะที่ผู้วิจัยเป็นอาจารย์พยาบาล ยังจะสามารถนำข้อมูลจากการศึกษาในครั้งนี้ไปเป็นข้อมูลในการจัดการเรียนการสอนทั้งภาคทฤษฎีและภาคปฏิบัติของนักศึกษาพยาบาลในประเด็นการส่งเสริมพัฒนาการของเด็กวัยหัดเดิน และเป็นแนวทางในการวิจัยเกี่ยวกับการฝึกขับถ่ายแก่เด็กหัดเดินชาวไทยครั้งต่อไป

กิจกรรมและระยะเวลาที่ท่านต้องมีส่วนร่วมในการวิจัย

ระยะเวลาในการดำเนินโครงการ ระหว่างเดือนกันยายน ถึงเดือนพฤศจิกายน พ.ศ. 2555

1. ท่านจะได้รับการประเมินความพร้อมในการฝึกขับถ่ายแก่บุตรหรือเด็กวัยหัดเดินในความปกครองของท่าน

2. ผู้วิจัยจะขอให้ท่านกรอกเอกสารและลงบันทึกไว้เป็นหลักฐานเกี่ยวกับข้อมูลส่วนบุคคล ข้อมูลส่วนบุคคลของบุตรหรือเด็กวัยหัดเดินในความปกครองของท่าน ความพร้อมของเด็กในการเข้ารับการฝึกการขับถ่ายตามข้อกำหนดของการฝึกขับถ่ายแบบมุ่งเน้นความพร้อมของเด็ก พฤติกรรมของเด็ก ใช้เวลาประมาณ 15 นาที

3. ผู้วิจัยจะรวบรวมข้อมูลของท่านและแจ้งให้ท่านทราบหากท่านมีคุณสมบัติตรงตามข้อกำหนดในการคัดเลือกตัวอย่างการศึกษาในครั้งนี้ และลงลายมือชื่อกำกับในเอกสารแสดงการยินยอมของอาสาสมัคร/ ผู้เข้าร่วมโครงการวิจัย

เมื่อท่านได้รับทราบรายละเอียดของการวิจัย และตกลงที่จะเข้าร่วมโครงการวิจัย ได้ลงลายมือชื่อกำกับในเอกสารแสดงการยินยอมของอาสาสมัคร/ ผู้เข้าร่วมโครงการวิจัยแล้ว

1) ท่านจะได้เข้าร่วมโครงการอบรมความรู้เรื่องเกี่ยวกับการฝึกการขับถ่ายแก่เด็กด้วยวิธีการฝึกขับถ่ายด้วยวิธีการที่มุ่งเน้นความพร้อมของเด็กโดยผู้ปกครอง ในวันที่อาทิตย์ที่ 9 กันยายน พ.ศ. 2555 เวลา 8.30 – 11.30 น. ที่โรงเรียนอนุบาลวิรัช อ.สันทราย จ. เชียงใหม่ ใช้เวลาทั้งหมด 3 ชั่วโมง ผู้วิจัยจะโทรศัพท์เตือนท่าน 1 วันก่อนเข้าร่วมการอบรม โดยกิจกรรมที่ท่านจะได้รับในการอบรมครั้งนี้ประกอบด้วย

1.1) ก่อนการอบรม ท่านจะได้บันทึกข้อมูลส่วนบุคคลของท่านและบุตรหรือเด็กวัยหัดเดินในความปกครองของท่าน และรับการประเมินความรู้และการรับรู้สมรรถนะแห่งตนในการฝึกขับถ่ายแก่เด็กวัยหัดเดิน

1.2) ระหว่างการอบรม ท่านจะได้รับคู่มือการฝึกขับถ่ายแก่เด็กวัยหัดเดิน ความรู้จากผู้วิจัยเกี่ยวกับพัฒนาการของเด็กวัยหัดเดิน และการฝึกการขับถ่ายแก่เด็กวัยหัดเดินด้วยวิธีการที่มุ่งเน้นความพร้อมของเด็ก ทั้งนี้ท่านจะได้รับฟังการบรรยาย แลกเปลี่ยนประสบการณ์ และฝึกทักษะจำเป็นในการฝึกขับถ่ายแก่เด็ก เช่นเทคนิคการเสริมกำลังใจ และการจัดการความโกรธ

1.3) หลังการอบรมท่านจะประเมินความพึงพอใจของท่านต่อโครงการอบรมความรู้เรื่องเกี่ยวกับการฝึกการขับถ่ายแก่เด็กด้วยวิธีการฝึกขับถ่ายด้วยวิธีการที่มุ่งเน้นความพร้อมของเด็กโดยผู้ปกครอง และรับการประเมินความรู้และการรับรู้สมรรถนะแห่งตนในการฝึกขับถ่ายแก่เด็กวัยหัดเดินอีกครั้งหนึ่ง เพื่อประเมินความพร้อมของท่านในการฝึกขับถ่ายแก่บุตรของท่านต่อไป

2) ท่านจะได้รับการสนับสนุนให้เริ่มการฝึกการขับถ่ายโดยมุ่งเน้นความพร้อมของเด็ก แก่บุตรหรือเด็กวัยหัดเดินในความปกครองของท่าน โดยนำความรู้ที่ได้จากการเข้าอบรมไปปฏิบัติทันทีที่ท่านและเด็กพร้อม โดยท่านจะประเมินความพร้อมในการฝึกขับถ่ายแก่เด็ก ด้วยตัวของท่านเอง ทั้งนี้ท่านจะบันทึกความก้าวหน้าทักษะการขับถ่ายของเด็กทุกวัน จนกระทั่งเด็กสามารถขับถ่ายได้ด้วยตนเองตามข้อกำหนดของวิธีการการฝึกการขับถ่ายโดยมุ่งเน้นความพร้อมของเด็ก

3) วันอังคารทุก 2 สัปดาห์ ผู้วิจัยจะโทรศัพท์นัดหมาย เพื่อสัมภาษณ์ประสบการณ์ในการฝึกปฏิบัติและเก็บบันทึกความก้าวหน้าทักษะการขับถ่ายของเด็ก โดยท่านสามารถนัดพบกับผู้วิจัยที่โรงเรียนอนุบาลวิริยาได้ตามเวลาที่ท่านสะดวก ตลอดโครงการท่านจะได้รับการนัดหมายประมาณ 6 ครั้ง หรือน้อยกว่า ขึ้นอยู่กับเวลาในการเริ่มฝึกขับถ่ายแก่เด็ก

4) สัปดาห์สุดท้ายของเดือนพฤศจิกายน ท่านจะได้รับแบบประเมินโครงการเพื่อประเมินความพึงพอใจของท่านต่อโครงการฝึกการขับถ่ายโดยมุ่งเน้นความพร้อมของเด็ก ตลอดระยะเวลา 12 สัปดาห์ของการศึกษา

ความเสี่ยงที่อาจจะเกิดขึ้นกับท่านจากการเข้าร่วมโครงการวิจัย

กิจกรรมที่ท่านจะได้รับจากการเข้าร่วมโครงการวิจัยครั้งนี้เป็นกิจกรรมที่ไม่มีรายงานยืนยันว่าก่อให้เกิดอันตราย เนื่องจากเป็นการเข้าร่วมอบรมเพื่อเพิ่มความรู้และทักษะในการส่งเสริมพัฒนาการด้านการขับถ่ายแก่เด็กวัยหัดเดิน ความเสี่ยงที่อาจจะเกิดขึ้นกับท่านจึงเป็นความเสี่ยงที่อาจเกิดขึ้นได้ในชีวิตประจำวันทั่วไป

การยุติการเข้าร่วมโครงการวิจัยของท่าน

การเข้าร่วมโครงการวิจัยครั้งนี้ขึ้นอยู่กับการตัดสินใจของท่าน ถ้าท่านไม่สมัครใจท่านไม่จำเป็นต้องเข้าร่วม ท่านมีสิทธิที่จะถอนตัวออกจากโครงการวิจัยได้ตลอดเวลา และผู้วิจัยจะยุติการวิจัยถ้าท่านไม่สามารถเข้าร่วมโครงการวิจัยได้ต่อไป โดยจะไม่มีการสูญเสียผลประโยชน์ใดๆที่ท่านและบุตรหรือเด็กวัยหัดเดินในความปกครองของท่านควรจะได้รับ

การปกป้องรักษาข้อมูลที่ได้จากการเข้าร่วมโครงการวิจัยของท่าน

ไม่มีบุคคลใดทราบข้อมูลส่วนตัวของท่าน ข้อมูลจะถูกเก็บไว้เป็นความลับ ดำเนินการอย่างรัดกุม ปลอดภัย และใช้รหัสแทนชื่อจริงของท่าน การนำข้อมูลไปอภิปรายหรือพิมพ์เผยแพร่จะกระทำในภาพรวมของผลการวิจัยทั้งหมด ท่านมีสิทธิตามกฎหมายที่จะเข้าถึงข้อมูลส่วนตัวของท่าน หากท่านต้องการใช้สิทธิดังกล่าว กรุณาแจ้งคณะผู้วิจัย

บุคคลที่ท่านสามารถติดต่อได้ถ้ามีข้อข้องใจเกี่ยวกับการเข้าร่วมโครงการวิจัยครั้งนี้

ถ้าท่านมีคำถามเกี่ยวกับการวิจัยนี้ท่านสามารถติดต่อผู้วิจัยได้ตลอดเวลาคือ อาจารย์ช่อรอนงค์ ชรรณจินดา ได้ที่ บ้านเลขที่ 75 หมู่ 3 ต.สันทรายหลวง อ.สันทราย จ.เชียงใหม่ 50210 โทรศัพท์ 053 492046, 081 288 6473

ส่วนที่ 2 เอกสารแสดงการยินยอมของอาสาสมัคร/ ผู้เข้าร่วมโครงการวิจัย

ข้าพเจ้า นาย/ นาง/ นางสาว.....
มีความยินดีในการเป็นอาสาสมัคร/ ผู้เข้าร่วมโครงการวิจัยครั้งนี้ โดยข้าพเจ้าได้รับทราบ และ
ทำความเข้าใจเกี่ยวกับรายละเอียดของการวิจัยเป็นที่เรียบร้อยแล้ว ข้าพเจ้าขอลงลายมือชื่อกำกับไว้
เป็นหลักฐานว่ายินยอมเข้าร่วมโครงการวิจัยด้วยความสมัครใจ

ลงนาม.....อาสาสมัคร

(.....)

ลงนาม.....ผู้วิจัย

(.....)

ลงนาม.....พยาน

(.....)

วันที่.....เดือน.....พ.ศ.....

Appendix I

Experts' Information

Experts**1. Sarinthip Chawaphanth, R.N., Ph.D.(Nursing)**

Assistant Professor, Lecturer,

McCormick Faculty of Nursing, Payap University, Chiang Mai, Thailand.

2. Chamaimone Srisurak, Ph.D.(Education Locality Development)

Lecturer, Head of the Early Childhood Education Program Faculty of Education,
Chiang Mai Rajabhat University, Chiang Mai, Thailand.

3. Natad Assapaporn, Ph.D.(Curriculum and Instruction)

Lecturer, Director of Santisuksa Demonstration Daycare Center

Faculty of Education, Chiang Mai University, Chiang Mai, Thailand.

4. Vallee Na Nakorn Somvong, R.N.

Manager of Vallee Nursery, Chiang Mai, Thailand.

5. Naiyana Muangdate, R.N.

Pediatric Nurse, McCormick Hospital, Chiang Mai, Thailand.

Experts on GSE back-translation**1. Prathana Langkarpint, R.N., Ph.D.(Nursing)**

Assistant Professor,

Assistant to President for International Affairs

Payap University, Chiang Mai, Thailand.

2. Peeranuch LaSures, R.N., Ph.D.(Nursing)

Lecturer,

McCormick Faculty of Nursing, Payap University, Chiang Mai, Thailand.

Appendix J

Letters to Organization and Experts

บันทึกข้อความ

คณะพยาบาลศาสตร์มหาวิทยาลัยวลัยปาโรโซ

17 กันยายน 2555

เรื่อง ขออนุญาตเรียนเชิญบุคลากรในสังกัดเป็นผู้ทรงคุณวุฒิตรวจสอบเครื่องมือในงานวิจัย

เรียน คณบดีคณะพยาบาลศาสตร์แมคคอร์มิค มหาวิทยาลัยพายัพ

สิ่งที่ส่งมาด้วย หนังสือแนะนำตัวจากคณบดี คณะพยาบาลศาสตร์มหาวิทยาลัยวลัยปาโรโซ

เนื่องด้วย ดิฉันอาจารย์อรอนงค์ ธรรมจินดา นักศึกษาปริญญาเอก คณะพยาบาลศาสตร์ มหาวิทยาลัยวลัยปาโรโซ รัฐอินเดียน่า ประเทศสหรัฐอเมริกา ได้ดำเนินการวิจัยเพื่อวิทยานิพนธ์ เรื่อง “ผลของโปรแกรมการสอนผู้ปกครองในการฝึกการขับถ่ายด้วยวิธีการมุ่งเน้นความพร้อมของเด็กวัยหัดเดินชาวไทยที่มีสุขภาพดี” (The Effectiveness of a Parental Education Intervention about a Child-oriented Approach to Toileting for Healthy Thai Toddlers) ซึ่งการศึกษาในครั้งนี้เป็นส่วนหนึ่งของกระบวนวิชา NUR 799A Doctor of Nursing Practice Project โดยการประยุกต์ใช้หลักฐานเชิงประจักษ์ (evidence-based practice) ในการปฏิบัติการวิจัยทางการพยาบาล

ดิฉันจึงใคร่ขอเรียนเชิญ ผู้ช่วยศาสตราจารย์ ดร. ศรีนทร์ทิพย์ ชวพันธุ์ อาจารย์ในสังกัดคณะพยาบาลศาสตร์แมคคอร์มิค มหาวิทยาลัยพายัพ เป็นผู้ทรงคุณวุฒิตรวจสอบเครื่องมือสำหรับงานวิจัยของดิฉันในครั้งนี้ด้วย

ดิฉันหวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณเป็นอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ



(นางอรอนงค์ ธรรมจินดา)

นักศึกษาระดับปริญญาเอก

คณะพยาบาลศาสตร์มหาวิทยาลัยวลัยปาโรโซ รัฐอินเดียน่า ประเทศสหรัฐอเมริกา

โทร.081-2886473

สำเนาเรียน - ผู้ช่วยศาสตราจารย์ ดร. ศรีนทร์ทิพย์ ชวพันธุ์

บันทึกข้อความ

คณะพยาบาลศาสตร์ มหาวิทยาลัยวลัยปาโรโซ

19 กันยายน 2555

เรื่อง ขออนุญาตเรียนเชิญบุคลากรในสังกัดเป็นผู้ทรงคุณวุฒิแปลเครื่องมือวิจัย

เรียน คณบดีคณะพยาบาลศาสตร์แมคคอร์มิค มหาวิทยาลัยพายัพ


สิ่งที่ส่งมาด้วย หนังสือแนะนำตัวจากคณบดี คณะพยาบาลศาสตร์มหาวิทยาลัยวลัยปาโรโซ

เนื่องด้วย ดิฉันอาจารย์อรอนงค์ ธรรมจินดา นักศึกษาปริญญาเอก คณะพยาบาลศาสตร์ มหาวิทยาลัยวลัยปาโรโซ รัฐอินเดียน่า ประเทศสหรัฐอเมริกา ได้ดำเนินการวิจัยเพื่อวิทยานิพนธ์ เรื่อง “ผลของโปรแกรมการสอนผู้ปกครองในการฝึกการขับถ่ายด้วยวิธีการมุ่งเน้นความพร้อมของเด็กวัยหัดเดินชาวไทยที่มีสุขภาพดี” (The Effectiveness of a Parental Education Intervention about a Child-oriented Approach to Toileting for Healthy Thai Toddlers) ซึ่งการศึกษาในครั้งนี้เป็นส่วนหนึ่งของกระบวนวิชา NUR 799A Doctor of Nursing Practice Project โดยการประยุกต์ใช้หลักฐานเชิงประจักษ์ (evidence-based practice) ในการปฏิบัติการวิจัยทางการพยาบาล

ดิฉันจึงใคร่ขอเรียนเชิญ ดร.พิรณช ลาเซอร์ อาจารย์ในสังกัดคณะพยาบาลศาสตร์แมคคอร์มิค มหาวิทยาลัยพายัพ เป็นผู้ทรงคุณวุฒิแปลเครื่องมือวิจัยจากภาษาอังกฤษเป็นภาษาไทยสำหรับงานวิจัยของดิฉันในครั้งนี้ด้วย

ดิฉันหวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณเป็นอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ



(นางอรอนงค์ ธรรมจินดา)

นักศึกษาระดับปริญญาเอก

คณะพยาบาลศาสตร์มหาวิทยาลัยวลัยปาโรโซ รัฐอินเดียน่า ประเทศสหรัฐอเมริกา

โทร.081-2886473

สำเนาเรียน - ดร.พิรณช ลาเซอร์

Appendix K

Demographic Questionnaire

Demographic Questionnaire

Instruction: Please take a moment to complete the following questions. If you have any questions, please ask. Thank you.

1. Your relation to a child: Mother Father If other, describe: _____
2. Your age: _____ years Your gender: Male Female
3. Your Marital Status:
 - Single
 - Married
 - Separated
 - Divorced
 - Widowed
 If other, describe: _____
4. The highest education level you have completed
 - No schooling completed
 - Nursery school to 6th grade
 - 7th, 8th or 9th grade
 - 10th, 11th or 12 th grade
 - high school diploma or the equivalent
 - Bachelor's degree or higher
5. Your employment status: Are you currently?
 - Employed for wages
 - Self-employed
 - Government employee
 - State enterprise employee
 - Employee of a private company
 - Retired
 - unemployed
6. Approximate total family income per month _____
7. How many hours per day do you spend your time with this child? _____ hours
8. Your expectation of child's achievement in toileting skills at age _____ years _____ months
9. Child's Gender: Male Female
10. This child is the First child Second child Third child Other, _____
11. Your child's age: _____ years _____ months
12. How many *other children* live in the home? _____ What are their ages? _____
13. Have you been told by the physician that your child may has a serious health problem or a developmental delay? No Yes (describe) _____
14. your child currently on any medication (describe) _____

THANK YOU

Demographic Questionnaire (Thai)

Code # _____

แบบสอบถามข้อมูลทั่วไป

กรุณาตอบคำถามต่อไปนี้ โดยทำเครื่องหมาย ✓ ลงใน หน้าข้อที่ตรงกับความเป็นจริง

- ความสัมพันธ์ของท่านกับเด็ก มารดา บิดา อื่นๆ(ระบุ) _____
- ท่านอายุ _____ ปี (เศษปีที่เกิน 6 เดือนนับเพิ่มเป็น 1 ปี) เพศ หญิง ชาย
- สถานภาพสมรส โสด สมรส แยกกันอยู่ หย่าร้าง หม้าย อื่นๆ
- ระดับการศึกษาสูงสุดของท่าน
 - ไม่ได้เรียนหนังสือ
 - ประถมศึกษา
 - มัธยมศึกษาตอนต้น
 - มัธยมศึกษาตอนปลาย หรือเทียบเท่า
 - อนุปริญญา หรือเทียบเท่า
 - ปริญญาตรี หรือสูงกว่า
- อาชีพของท่าน
 - รับจ้างทั่วไป
 - ประกอบอาชีพส่วนตัว
 - รับราชการ
 - รัฐวิสาหกิจ
 - ทำงานบริษัท หรือ หน่วยงานเอกชน
 - เกษียณ
 - ไม่ทำงาน
- รายได้เฉลี่ยของครอบครัวท่านประมาณ _____ บาท/เดือน
- จำนวนชั่วโมงโดยประมาณที่เด็กอยู่ในความดูแลของท่าน _____ ชั่วโมง ต่อวัน
- ท่านคาดหวังว่า เด็กควรจะใช้กระโถนได้ด้วยตนเอง (ถอด-ใส่กางเกง+ทำความสะอาด ชักโครกหรือราดน้ำ และล้างมือโดยไม่ต้องขอความช่วยเหลือจากท่าน หรือช่วยเหลือน้อยที่สุด) เมื่ออายุเท่าใด _____ ปี _____ เดือน

คำถามเกี่ยวกับเด็กในความดูแลของท่าน

- เพศของเด็ก หญิง ชาย
- เด็กเป็นบุตรคนที่ คนแรก คนที่ 2 คนที่ _____
- อายุของเด็ก _____ ปี _____ เดือน
- นอกจากเด็กคนนี้ ยังมีเด็กอายุต่ำกว่า 18 ปี ที่อาศัยอยู่ในบ้านเดียวกับเด็กจำนวน _____ คน อายุ _____ ปี
- เด็กในความดูแลของท่านเคยได้รับการบอกกล่าวจากแพทย์ว่ามีปัญหาด้านสุขภาพหรือพัฒนาการหรือไม่
 - ไม่มี มี โปรดระบุ _____
- เด็กกำลังรับประทานยาใดอยู่ในขณะนี้หรือไม่ (ถ้ามี โปรดระบุ) _____

ขอขอบคุณในความร่วมมือตอบแบบสอบถาม

Appendix L

Parental Self-Efficacy Questionnaires

Parental Self-Efficacy Questionnaires

Directions: Each of these questions should be answered in the context of providing child-oriented toilet training approach to a child. Please check ✓ in the table regarding to your response in each question. Please be sure to answer all 12 questions. All information will be confidential. Do not include your name on this questionnaire. Thank you for your participation.

How to grade your confidence:

- 4 = you feel **very confident** about this with your child.
- 3 = you feel **confident** about this with your child.
- 2 = you feel **a little bit confident** about this with your child.
- 1 = you feel **not at all confident** about this with your child.

Items	Level of Confidence			
	4	3	2	1
Items				
1. I know how to manage toilet training.				
2. I can make a plan to toilet train my child.				
3. I know when my child ready to toilet train.				
4. I have the ability to toilet train my child.				
5. I can always manage toilet training even when difficult problems may occur during the training.				
6. I can follow the toilet training instruction.				
7. I can choose appropriate materials for toilet training.				
8. I am ready to confront unexpected events that may occur during the training.				
9. I can remain clam and think of a solution when facing difficulties.				
10. I can find more information about toilet training from the researcher when I need it.				
11. I can tell any problem about toilet training to the researcher when I need help.				
12. I am confident that I can toilet train my child				

Adapted from General Perceived Self-Efficacy Scale by Ralf Schwarzer & Mathias Jerusalem, 1995.

Parental Self-Efficacy Questionnaire (Thai)

Code # _____

Post Intervention

แบบสอบถามการรับรู้สมรรถนะการฝึกขับถ่ายแก่เด็กที่มีสุขภาพดีของผู้ดูแล

คำชี้แจง แบบสอบถามนี้มีวัตถุประสงค์เพื่อสอบถามความเชื่อมั่นในการฝึกขับถ่ายแก่เด็กของผู้ดูแลเด็ก
กรุณาพิจารณาข้อความแต่ละข้อแล้วให้ท่านใส่เครื่องหมาย ✓ ลงในช่องระดับความเชื่อมั่นที่ตรงกับความรู้สึก
ของท่านมากที่สุด

- มาก หมายถึง ท่านมีความเชื่อมั่นมาก ว่าท่านสามารถปฏิบัติกิจกรรมนั้นได้
- ปานกลาง หมายถึง ท่านมีความเชื่อมั่นปานกลาง ว่าท่านสามารถปฏิบัติกิจกรรมนั้นได้
- น้อย หมายถึง ท่านมีความเชื่อมั่นน้อย ว่าท่านสามารถปฏิบัติกิจกรรมนั้นได้
- ไม่มั่นใจ หมายถึง ท่านไม่มีความเชื่อมั่น ว่าท่านสามารถปฏิบัติกิจกรรมนั้นได้

ข้อความ	ระดับความเชื่อมั่น			
	มาก 4	ปานกลาง 3	น้อย 2	ไม่มั่นใจ 1
1. ฉันมีความรู้และทราบถึงวิธีฝึกการขับถ่ายให้เด็ก				
2. ฉันสามารถวางแผนในการฝึกขับถ่ายแก่เด็กได้				
3. ฉันรู้ว่าควรเริ่มฝึกขับถ่ายให้แกเด็กเมื่อใด				
4. ฉันมีความสามารถเพียงพอในการฝึกขับถ่ายให้แกเด็ก				
5. ฉันสามารถฝึกขับถ่ายให้แกเด็กได้ถึงแม้จะมีปัญหาอุปสรรค				
6. ฉันสามารถปฏิบัติตามคำแนะนำเกี่ยวกับวิธีการฝึกขับถ่ายได้				
7. ฉันสามารถเลือกใช้อุปกรณ์ในการฝึกขับถ่ายให้แกเด็กได้อย่างถูกต้อง				
8. ฉันพร้อมที่จะเผชิญกับปัญหาใหม่ๆที่อาจเกิดจากการฝึกการขับถ่ายของเด็ก				
9. ฉันมีความอดทนมากพอและหาทางแก้ไขเมื่อมีปัญหากเกิดขึ้นระหว่างการฝึก				
10. ฉันกล้าที่จะถามคำถามเพิ่มเติมจากผู้สอนได้เมื่อสงสัยหรือไม่เข้าใจเกี่ยวกับการฝึกขับถ่ายให้แกเด็ก				
11. ฉันกล้าบอกความต้องการหรือปัญหาของฉันเกี่ยวกับการฝึกขับถ่ายแกเด็กให้ผู้สอนได้				
12. ฉันมีความมั่นใจในการฝึกขับถ่ายให้เด็ก				

(Adapted from General Perceived Self-Efficacy Scale by Ralf Schwarzer & Mathias Jerusalem, 1995.)

Appendix M

A General Self-Efficacy Scale's Formal Permission Letter



Freie Universität Berlin, Gesundheitspsychologie (PF 10),
Habelschwerdter Allee 45, 14195 Berlin, Germany

Fachbereich Erziehungs-
wissenschaft und Psychologie
- Gesundheitspsychologie -

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Permission granted

to use the General Self-Efficacy Scale for non-commercial research and development purposes. The scale may be shortened and/or modified to meet the particular requirements of the research context.

<http://userpage.fu-berlin.de/~health/selfscal.htm>

You may print an unlimited number of copies on paper for distribution to research participants. Or the scale may be used in online survey research if the user group is limited to certified users who enter the website with a password.

There is no permission to publish the scale in the Internet, or to print it in publications (except 1 sample item).

The source needs to be cited, the URL mentioned above as well as the book publication:

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp.35-37). Windsor, UK: NFER-NELSON.

Professor Dr. Ralf Schwarzer
www.ralfschwarzer.de

Appendix N

Parental Knowledge Pretest/Posttest Questionnaires

Knowledge Pre-Post Test Questionnaire

Instruction: This test contains true/false and multiple-choice question. Please choose the best answer for each response. Make sure that your response is clearly marked.

Objective: To assess parent's knowledge in toilet training includes its; definitions, process, signs of child readiness and problem-solving during the training.

Item	Question	Answer		Researcher use ONLY
		True	False	
1	Toilet training should begin when the child is ready.			
2	Toilet training can start when a child says or signs a few basic words such as mama, papa and bye-bye.			
3	A child should be toilet-trained when s/he can stand and walk with help.			
4	A child must demonstrate independence by saying "no" before start toilet training.			
5	Every child must start toilet training from a potty then move to the toilet when they achieved toilet-training.			
6	Toilet training should not be started when a child experiencing a major life changes such as new sibling, new child-care situation, or new school.			
7	A toilet-trained child refers to the abilities of a child to urinate or defecate in the toilet or a potty with the parent help with clean-up and flushing.			
8	If a child cannot wash his/her hands after toileting, it means s/he has not achieved toilet training.			
9	Parents should not punish a child when the accidents occur.			
10	Parents should praise for child's achievement.			
11	Parents should give their children laxatives, suppositories, or enemas if they encounter difficulty pushing on passing out feces.			
12	Once a child is toilet trained, s/he will not regress.			

13. At what age is a child usually ready to begin toilet training?

- Around 9 months.
- Around 1 years.
- Around 2 years.
- Around 3 years.

14. Which of these are signs that indicate a child may be ready to toilet training?

- Child is able to pull clothes up and down.
- Child can sit, stand and walk independently.
- Child is able to follow simple instructions.
- Child is able to keep a diaper dry for 2 hours
- All of the above.

15. What should the parent do when a toileting accidents occurs during a training?
 - a. Act disappointed.
 - b. Give up and stop training.
 - c. Tell a child to clean dirty stuffs.
 - d. Reassure the child that it is an accident and move on.
16. What condition is not a common problem that may occur during toilet training?
 - a. Vomiting.
 - b. Stool holding.
 - c. Constipation.
 - d. Hiding.
17. How long does it take for a child to master the process of using the toilet?
 - a. 2 weeks.
 - b. 1 month.
 - c. 3 months.
 - d. Any of the above.
18. Which is a helpful technique for easing nighttime bedwetting?
 - a. Have a child use the toilet just before bed.
 - b. No fluids or drinks before going to bed.
 - c. Use diaper during the nighttime.
 - d. None of the above.
19. If a child fail to achieve toilet training, when is the best time to restart after a break in training?
 - a. after a day.
 - b. after a week.
 - c. after a month.
 - d. after 6 months.
20. Which child may be ready to begin toilet training?
 - a. Patrick is 30 months old shows interest in using the toilet, demonstrate independence by saying "no", stay dry for only an hour, able to tell his parent any time when he is urinating and defecating.
 - b. Paul is 27 months old able to recognize a sense of urination and defecation, walk to the potty chair, pull up/down his diaper, just has a new sister age 2 weeks.
 - c. Peter is 20 months old, able to get to bathroom, pull up/down his underwear, shows sign when he needs to release urine or stool, show desire to wear grownup underwear.
 - d. Philip is 18 months old, able to sit calmly for 4-5 minutes, understand a simple instruction such as "put a toy in a box", and has diarrhea for 2 days.

21. What is the “red flag” regarding to toilet training skills?
 - a. A child is able to sit on a potty for only 3-5 minutes.
 - b. A child remains wet bedding at age 7 years old.
 - c. A child has not achieved toileting skills after 4 months of training
 - d. A child unable to control daytime wetting at age 3 years old.
22. Which parent’s activities should be avoid during a preparation phase of toilet training?
 - a. keep a potty in the living room.
 - b. discard a used diaper in the trash.
 - c. have a child sitting on a potty while s/he is eating.
 - d. Allow a child to sit fully clothed on the potty chair.
23. At the beginning of the training, how many time per day a child should practice sitting on a potty?
 - a. once
 - b. twice
 - c. three times
 - d. four times
24. What is an appropriate response when you are upset by a toilet accident?
 - a. Shout at a child.
 - b. Spank on a child’s bottom.
 - c. No nighttime story telling.
 - d. Ask for help from family member
25. Which is an appropriate positive reinforcement ?
 - a. Praise a child only during a toilet training process.
 - b. Storytelling about a potty time.
 - c. Give a sticker whenever a child is asking for.
 - d. Buy a new toy for a child when he/she achieved at any steps of toilet training.
26. Which is not a proper method to introduce a potty to a child?
 - a. Let a child choose his/her own potty.
 - b. Buy a fancy and expensive potty.
 - c. Let a child sit on a potty rather than a chair
 - d. Allow a child to decorate his/her won potty with stickers
27. At the beginning of the toilet training, what activity should be provided?
 - a. Have a child sitting on a potty for 3-4 times per day.
 - b. Provides a glass of water at least 15 minutes before a potty time.
 - c. Have a child sit on a potty at least 2 hours after the previous potty time.
 - d. Provides bare-bottom method for 8 hours per day

28. Which activity a parent should do in advanced phase of toilet training?
- Let a child clean a potty alone
 - Praise a child only when s/he completed all steps of the training.
 - Parent decrease reminding a child to use a potty
 - Tell a child to use adult toilet.
29. How to prevent constipation that may occurs during a toilet training?
- Have a child drinking more cow's milk.
 - Have a child sitting on a potty at a convenient time.
 - Parent being a vegetable eater role model.
 - Not allow a child to stand up from a potty until finish
30. During a toilet training, parent should regularly maintain which of the following activity?
(select all that apply)
- Activate a child to use a potty when it is a potty time.
 - Giving sticker when a child achieved each step of toilet training.
 - Praise a child when telling the need of toilet use.
 - Perform disappointed when accident occurred.
 - remind a child to wash hands.

Parental Knowledge Pretest/Posttest Questionnaires (Thai)

Code # _____

แบบทดสอบความรู้ เรื่อง การฝึกขับถ่ายแก่เด็กวัยหัดเดิน (Post-test) ☆

คำชี้แจง แบบทดสอบนี้มีวัตถุประสงค์เพื่อทดสอบความรู้ของผู้เข้ารับการอบรมเกี่ยวกับการฝึกขับถ่ายแก่เด็กวัยหัดเดิน ในหัวข้อเกี่ยวกับการประเมินความพร้อมของเด็ก วิธีการฝึกขับถ่ายของเด็ก ปัญหาและการแก้ปัญหาระหว่างการฝึก แบบทดสอบแบ่งเป็นสองส่วนคือ 1) แบบเลือกตอบ(ถูก/ผิด) 12 ข้อ และ 2) แบบเลือกตอบ 13 ข้อ

ส่วนที่ 1 ให้ใส่เครื่องหมาย ✓ หน้าข้อที่ท่านเห็นว่าถูก และ เครื่องหมาย ✗ หน้าข้อที่ท่านเห็นว่าผิด

- ___ 1 การฝึกขับถ่ายแก่เด็กควรเริ่มเมื่อผู้ปกครองมีความพร้อม
- ___ 2 การฝึกขับถ่ายแก่เด็กควรเริ่มเมื่อเด็กสามารถสื่อสารให้ผู้อื่นเข้าใจได้
- ___ 3 การฝึกขับถ่ายแก่เด็กควรเริ่มเมื่อเด็กเริ่มหัดเดินโดยต้องมีผู้ใหญ่ช่วยจูงเดิน
- ___ 4 ก่อนจะเริ่มการฝึกขับถ่ายเด็กต้องเข้าใจคำว่า "ไม่" เพื่อบอกในสิ่งที่ไม่ต้องการทำ
- ___ 5 เด็กควรเริ่มฝึกขับถ่ายจากการนั่งกระโถนก่อน แล้วจึงนั่งบนโถส้วมหรือชักโครกเมื่อสามารถฝึกขับถ่ายได้คล่อง
- ___ 6 การฝึกขับถ่ายแก่เด็ก สามารถเริ่มได้ทุกเวลา แม้ว่าจะมีการเปลี่ยนแปลงในชีวิตประจำวัน เช่น มีเด็กทารกใหม่ในบ้าน การเริ่มไปโรงเรียนใหม่หรือการย้ายโรงเรียน หรือย้ายบ้านใหม่ เป็นต้น
- ___ 7 เด็กที่ฝึกขับถ่ายสำเร็จ คือเด็กที่สามารถขับถ่ายได้เองในห้องน้ำหรือกระโถนโดยมีผู้ปกครองช่วยเช็ดทำความสะอาด และกดชักโครกให้บางครั้ง
- ___ 8 ถ้าเด็กไม่ล้างมือหลังจากการขับถ่าย ถือว่าเด็กยังฝึกการขับถ่ายไม่ครบขั้นตอน
- ___ 9 ผู้ปกครองควรแสดงสีหน้าหรือท่าทางให้เด็กเห็นว่าไม่พอใจ เมื่อเด็กปัสสาวะหรืออุจจาระรดกางเกงในระหว่างการฝึก
- ___ 10 ผู้ปกครองควรชมเชยเมื่อเด็กสามารถฝึกขับถ่ายได้สำเร็จในแต่ละขั้นตอน
- ___ 11 หากเด็กมีอาการท้องผูก หรือถ่ายอุจจาระลำบาก ผู้ปกครองควรจัดหายาระบาย ยาสอด หรือทำการสวนอุจจาระให้แก่เด็ก
- ___ 12 เมื่อเด็กสามารถฝึกขับถ่ายได้สำเร็จจะไม่มีอะไรมาเปลี่ยนแปลงความสามารถด้านการขับถ่ายของเด็กได้อีก

ส่วนที่ 2 ข้อ 13 – ข้อ 20 ให้ท่านวงกลมล้อมรอบคำตอบที่ท่านเห็นว่าถูกต้องที่สุด

13. โดยทั่วไป เด็กจะมีความพร้อมในการฝึกการขับถ่ายเมื่ออายุเท่าใด?
- ก. ประมาณ 9 เดือน
- ข. ประมาณ 1 ขวบ
- ค. ประมาณ 2 ขวบ
- ง. ประมาณ 3 ขวบ

Code # _____

14. ข้อใดต่อไปนี้มีผู้ใช้สัญญาณแสดงความพร้อมในการรับการฝึกการขับถ่ายของเด็กวัยหัดเดิน
- ก. เด็กปัสสาวะทุกชั่วโมง
 - ข. เด็กนั่งอยู่ที่โถนานๆ
 - ค. เด็กชอบเล่นเลียนแบบพ่อแม่
 - ง. เด็กมักถ่ายอุจจาระก่อนนอนทุกวัน
15. ผู้ปกครองควรทำอย่างไรหากเด็กปัสสาวะหรืออุจจาระรดกางเกง ระหว่างการฝึกขับถ่าย
- ก. แสดงท่าทางผิดหวัง เพื่อให้เด็กรู้ว่าไม่ควรทำอีก
 - ข. เลิกฝึกขับถ่ายแก่เด็กไประยะหนึ่ง จนกว่าเด็กจะพร้อม
 - ค. ให้เด็กทำความสะอาดเสื้อผ้า และพื้น ที่สกปรก ด้วยตัวเอง
 - ง. บอกเด็กว่าเป็นเรื่องปกติที่อาจเกิดขึ้นได้ และจูงใจให้เด็กฝึกขับถ่ายต่อไป
16. อาการไม่พึงประสงค์ในข้อใดถือเป็นความผิดปกติที่เกิดขึ้นระหว่างการฝึกขับถ่ายแก่เด็ก
- ก. ท้องผูก
 - ข. อาเจียน
 - ค. กลั้นอุจจาระ
 - ง. ปฏิเสธการใช้ห้องน้ำ
17. ในการฝึกควบคุมการขับถ่ายแก่เด็ก ตั้งแต่เริ่มฝึกจนฝึกสำเร็จควรใช้ ระยะเวลาประมาณเท่าใด
- ก. 2 สัปดาห์
 - ข. 1 เดือน
 - ค. 3 เดือน
 - ง. ไม่มีกำหนดเวลาแน่นอน
18. ข้อใดเป็นวิธีการที่เหมาะสมที่สุดในการป้องกันการขับถ่ายรดที่นอนเวลาหลับของเด็ก
- ก. พาเด็กเข้าห้องน้ำก่อนนอน
 - ข. งดดื่มน้ำหรือนมก่อนนอน
 - ค. ให้เด็กใส่ผ้าอ้อมสำเร็จรูปเวลานอน
 - ง. ปลุกเด็กลุกเข้าห้องน้ำทุก 2 ชั่วโมง
19. ถ้าการฝึกขับถ่ายครั้งก่อนหน้าไม่ประสบความสำเร็จ ควรเว้นระยะการฝึกอย่างน้อยนานเท่าใด ก่อนเริ่มการฝึกขับถ่ายแก่เด็กครั้งใหม่
- ก. 1 วัน
 - ข. 1 สัปดาห์
 - ค. 1 เดือน
 - ง. 6 เดือน

Code # _____

20. เด็กรายใดต่อไปนี้มีความพร้อมในการฝึกการขับถ่าย
- เด็ก อายุ 2 ปี 6 เดือน แสดงอาการสนใจการใช้ห้องส้วมของพ่อ มีความเป็นตัวของตัวเอง ปัสสาวะบ่อย ทุกชั่วโมง สามารถบอกผู้ปกครองได้เมื่อต้องการปัสสาวะหรืออุจจาระ
 - เด็ก อายุ 2 ปี 3 เดือน รู้ตัวเมื่อปวดปัสสาวะหรืออุจจาระ สามารถเดินได้คล่อง ถอดเสื้อผ้าเองได้ มีน้องสาวอายุ 2 สัปดาห์
 - เด็ก อายุ 1 ปี 8 เดือน สามารถเดินได้คล่อง ถอดเสื้อผ้าเองได้ งอแงเมื่อถูกใส่ผ้าอ้อม สามารถบอก ผู้ปกครองได้เมื่อต้องการปัสสาวะหรืออุจจาระ
 - เด็ก อายุ 1 ปี 6 เดือน สามารถนั่งนิ่งๆ ได้นาน 4-5 นาที เข้าใจคำสั่งง่ายๆ เช่นเมื่อแม่บอกให้เก็บของเล่น ใส่กล่อง มีอาการใช้ ถ่ายเหลวมา 2 วัน
21. ผู้ปกครองควรปรึกษาแพทย์ในกรณีใดต่อไปนี
- เด็กนั่งกระโถนได้นาน 3 - 5 นาที
 - เด็กยังปัสสาวะรดที่นอน เมื่ออายุครบ 7 ปี
 - เด็กฝึกขับถ่ายไม่สำเร็จภายในเวลา 4 เดือน
 - เด็กยังควบคุมการขับถ่ายตอนกลางวันไม่ได้เมื่ออายุ 3 ขวบครึ่ง
22. ข้อใดเป็นสิ่งที่ผู้ปกครองควรระวังในขั้นการเตรียมความพร้อมในการฝึกขับถ่ายแก่เด็ก
- เก็บกระโถนไว้ในห้องนั่งเล่น
 - ห่อผ้าอ้อมที่เปื้อนอุจจาระทิ้งถังขยะ
 - ให้เด็กนั่งเล่นในกระโถนขณะทานอาหาร
 - สอนเด็กนั่งกระโถนโดยยังสวมเสื้อผ้าครบ
23. ในขั้นเริ่มฝึก ผู้ปกครองควรให้เด็กนั่งกระโถนอย่างน้อยวันละกี่ครั้ง
- 1 ครั้ง
 - 2 ครั้ง
 - 3 ครั้ง
 - 4 ครั้ง
24. ถ้าท่านรู้สึกโกรธเมื่อเห็นเด็กเล่นอุจจาระท่านควรทำสิ่งใดต่อไปนี
- พูดเสียงดังให้เด็กหยุดเล่นอุจจาระ
 - ตีมือเด็กเบาๆ เพื่อให้เด็กรู้ว่าทำให้ท่านไม่พอใจ
 - ไม่เล่นิทานให้เด็กฟัง เมื่อเด็กขอร้องเพื่อเป็นการลงโทษ
 - ขอให้บุคคลอื่นในครอบครัวดูแลเด็กแทน จนกว่าท่านจะรู้สึกปกติ
25. ข้อใดเป็นวิธีการเสริมแรงบวกที่ถูกต้องและเหมาะสม
- ชมเชยเด็กจนกระทั่งเด็กฝึกสำเร็จแล้ว จึงหยุดชมเชย
 - เล่านิทานเรื่อง "อู๋ อู๋ ไอ้โฮ" ให้เด็กฟังซ้ำๆ เมื่อเด็กขอ
 - ให้สติ๊กเกอร์เป็นรางวัลทุกครั้งที่เด็กขอ แม้จะไม่ได้ทำความดี
 - ซื้อของเล่นเป็นรางวัลแก่เด็กเมื่อเด็กผ่านขั้นตอนการฝึกในแต่ละขั้นตอน

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26. ข้อใดไม่ใช่การเตรียมเด็กให้คุ้นเคยกับการใช้กระโถน
- ก. ชวนเด็กไปเลือกซื้อกระโถน
 - ข. เลือกซื้อกระโถนราคาแพง
 - ค. ให้เด็กนั่งกระโถนแทนเก้าอี้
 - ง. ให้เด็กตกแต่งกระโถนด้วยสติ๊กเกอร์
27. เด็กควรได้รับการฝึกอย่างไร ในการฝึกขั้นเริ่มต้น
- ก. นั่งกระโถนอย่างน้อยวันละ 3-4 ครั้ง
 - ข. ตื่นน้ำแก้วโต 15 นาทีก่อนการนั่งกระโถน
 - ค. นั่งกระโถนหลังการปัสสาวะครั้งก่อน 2 ชั่วโมง
 - ง. ถอดกางเกงตลอดเวลา อย่างน้อยวันละ 8 ชั่วโมง
28. ผู้ปกครองควรปฏิบัติอย่างไรในการฝึกขับถ่ายขั้นก้าวหน้า?
- ก. ให้เด็กทำความสะอาดกระโถนเอง
 - ข. ชมเด็กเมื่อทำสำเร็จครบขั้นตอนเท่านั้น
 - ค. ลดความถี่ในการกระตุ้นเด็กให้ใช้กระโถน
 - ง. ให้เด็กเปลี่ยนจากการใช้กระโถนไปใช้ชักโครก
29. ผู้ปกครองสามารถป้องกันอาการท้องผูกที่อาจเกิดขึ้นระหว่างการฝึกได้โดยวิธีใด
- ก. ให้เด็กดื่มนมมากๆ
 - ข. ให้เด็กนั่งกระโถนตามเวลาที่สะดวก
 - ค. ทานผัก ผลไม้ ให้เด็กดู และชักชวนให้เด็กทานตาม
 - ง. อนุญาตให้เด็กลุกจากกระโถนเมื่อขับถ่ายสำเร็จแล้วเท่านั้น
30. ข้อใดเป็นกิจกรรมที่ผู้ปกครองควรทำอย่างสม่ำเสมอระหว่างการฝึก (เลือกได้มากกว่า 1 ข้อ)
- กระตุ้นเด็กให้ใช้กระโถนเมื่อเด็กปวดปัสสาวะ หรืออุจจาระ
 - ให้สติ๊กเกอร์ดาวเมื่อเด็กสามารถฝึกขับถ่ายได้ในแต่ละขั้นตอน
 - ชมเด็กเมื่อเด็กบอกว่าต้องการขับถ่าย
 - แสดงความผิดหวังหรือไม่พอใจ เมื่อเด็กฉี่รดกางเกง
 - เตือนให้เด็กล้างมือทุกครั้งหลังการขับถ่าย

Appendix O

Potty Log

Potty Log

Date _____ **Code #** _____

Today your child performed the following activities.

✦ Anticipates toilet needs by restlessness or vocalization	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Pulls clothes up and down without help	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Sits without help for long enough to complete voiding	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Wiping alone	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Washes hands	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Passes urine/stool on the toilet every time	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Sometimes goes to the toilet of own accord	<input type="checkbox"/> No	<input type="checkbox"/> Yes
✦ Dry during the day	<input type="checkbox"/> No	<input type="checkbox"/> Yes

Today you performed the following activities

Encourage the child to use the potty when s/he wants and/or feels the need to urinate or have a bowel movement.

Reinforce your child's success at each step.

Praise the child when s/he tell you

Not express your disappointed for accident

Remind your child to wash his/her hands after using the toilet (only when the child did not wash their hands).

Additional information

.....

.....

.....

Appendix P

Education Program Evaluation

Educational Program Evaluation						
Please answer the following questions						
Item	Exc.	Good	Fair	Poor	N/A	Comment
1. The facilities were appropriate for the event						
2. This course achieved the educational objectives, as stated in the educational materials						
3. This course met with your expectations						
4. The presenter was knowledgeable and well prepared						
5. The presenter was an effective teacher						
6. The materials and activities were useful.						
7. There was sufficient opportunity to ask questions						
8. There was sufficient opportunity for hands-on learning						
9. The program provided me with new knowledge						
10. The program provided me with new skills						
11. The overall quality of program						
12. Please rate how you would use the information obtained in this course in toilet training your child (please circle). a) Will Not Use b) 1 - 25% c) 25 - 50% d) 50 - 75% e) 75 - 100%						
Comments: _____ _____ _____						

Education Program Evaluation (Thai)

แบบประเมินความพึงพอใจ						
โครงการอบรมเรื่อง การฝึกขับถ่ายแก่เด็กหัดเดินแบบเน้นความพร้อมของเด็ก						
คำแนะนำ ให้ใส่เครื่องหมาย ✓ หน้าข้อที่ตรงกับความเห็นของท่านมากที่สุด						
ข้อความ	ระดับความพึงพอใจ					ความเห็นเพิ่มเติม
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด	
1.สถานที่ในการจัดอบรมเหมาะสม						
2.เนื้อหาตรงกับวัตถุประสงค์ของโครงการฯ						
3.เนื้อหาและกิจกรรมตรงกับความต้องการของท่าน						
4.วิทยากรมีความรู้ในเรื่องที่บรรยาย						
5.วิทยากรมีวิธีการสอนที่ทำให้เข้าใจเนื้อหาดีขึ้น						
6.คู่มือและกิจกรรมต่างๆในการอบรมมีประโยชน์ต่อการเพิ่มความ รู้ความเข้าใจ และสามารถนำไปใช้ได้จริง						
7.วิทยากรเปิดโอกาสให้ท่านได้สอบถามปัญหา						
8.ท่านได้รับโอกาสให้เรียนรู้ตามความเหมาะสม						
9.การอบรมช่วยเพิ่มพูนความรู้เกี่ยวกับการฝึกขับถ่ายแก่เด็กแบบ เน้นความพร้อมของเด็กแก่ท่าน						
10.การอบรมช่วยให้ท่านมีทักษะในการฝึกขับถ่ายแก่เด็กแบบเน้น ความพร้อมของเด็กเพิ่มขึ้น						
11. ความพึงพอใจโดยรวมต่อการอบรม						
12. ท่านคิดว่าความรู้ที่ได้จากการอบรมสามารถนำไปใช้ในการฝึกขับถ่ายแก่เด็กในความดูแลของท่านได้ .. ก) นำไปใช้ไม่ได้ ข) ใช้ได้ 1 - 25% ค) ใช้ได้ 25 - 50% ง) ใช้ได้ 50 - 75% จ) ใช้ได้ 75 - 100%						
ความคิดเห็นเพิ่มเติม:						

Appendix Q

Parental Satisfaction Evaluation

Parental Satisfaction Evaluation

Please answer the following questions Your child can

Item	Yes	No	Unsure
1. Indicates wet or soiled pants by crying or wriggling			
2. Anticipates toilet needs by restlessness or vocalization			
3. Dry during the day			
4. Vocalization and/or attends toilet needs in reasonable time.			
5. Dresses and undresses alone			
6. Wiping alone			
7. Flushing (toilet use only)			
8. Washes hands			
9. remain perform all of the above activities for days			

10. How do you find a toilet training booklet is a good resource for toilet training your child?

11. How do you find an educational program assist in toilet training your child?

12. Do you find any benefits during toilet training your child?

13. Do you find any barriers during toilet training your child?

14. Additional comments:

Thank you

Parental Satisfaction Evaluation (Thai)

แบบประเมินความพึงพอใจ

โครงการให้ความรู้ผู้ปกครองในการฝึกขับถ่ายแก่เด็กหัดเดิน โดยมุ่งเน้นความพร้อมของเด็กเป็นหลัก
 กรุณาตอบคำถามต่อไปนี้ ให้ใส่เครื่องหมาย ✓ ในช่องที่ตรงตามความคิดเห็นของท่านมากที่สุด

หลังจากเริ่มการฝึกขับถ่ายให้แก่เด็กจนถึงปัจจุบันเด็กในความปกครองของท่าน	ทำได้	ทำไม่ได้	ไม่แน่ใจ
1. บอกหรือแสดงอาการให้ท่านทราบว่าผ้าอ้อมหรือกางเกงเปียกหรือเปื้อน			
2. บอกหรือแสดงอาการให้ท่านทราบว่าต้องการเข้าห้องน้ำ			
3. กางเกงหรือผ้าอ้อมที่ใส่อยู่แห้งตลอดวัน			
4. บอกหรือเข้าห้องน้ำเอง เมื่อต้องการใช้ห้องน้ำได้อย่างเหมาะสม			
5. ถอดกางเกงได้เองเมื่อต้องการขับถ่าย และใส่กางเกงเองเมื่อขับถ่ายเสร็จแล้ว			
6. เช็ดก้น/ล้างก้น ทำความสะอาดได้เอง			
7. กดชักโครก/ ราดน้ำได้เอง			
8. ล้างมือได้เองโดยไม่ต้องบอก			
9. ทำกิจกรรมข้างต้นได้อย่างสม่ำเสมอ			

10. ท่านมีความเห็นว่าคู่มือฝึกการขับถ่ายแก่เด็กมีประโยชน์ในการนำไปฝึกการขับถ่ายแก่เด็กได้จริงหรือไม่อย่างไร

11. ท่านมีความเห็นว่าโปรแกรมการให้ความรู้เกี่ยวกับการฝึกขับถ่ายแก่เด็กหัดเดินแบบเน้นความพร้อมของเด็กเป็นสิ่งสำคัญช่วยให้ท่านสามารถฝึกการขับถ่ายแก่เด็กได้จริงหรือไม่อย่างไร

12. จากประสบการณ์ของท่าน ท่านพบข้อดีระหว่างการฝึกขับถ่ายแก่เด็กอย่างไรบ้าง

13. ท่านพบปัญหาและอุปสรรคจากการฝึกขับถ่ายแก่เด็กอย่างไรบ้าง และวิธีการแก้ปัญหาของท่าน

14. ข้อเสนอแนะเพิ่มเติม

ขอขอบคุณในความร่วมมือ

Appendix R

Time Scale

Month	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Literature Review	>	>										
Research Question and Design		>	>									
Ethical Approval			>	>								
Access and Sampling				>	>							
Data Collection					>	>	>					
Data Analysis							>	>	>			
Prepare Findings Reports									>	>	>	
Dissemination of Results											>	>

Appendix S

Budget

Items / Resources	Calculations	Estimated Total Cost (Baht)
Parent Education Session		
Postal Charges	3 x 200	600
Travel Costs – Petrol	1,000	1,000
<i>Equipment</i>		
Managing media (Video tape)	1,000	1,000
Potty	250 x 50	12,500
Booklet	80 x 50	4,000
<i>Stationary</i>		
Paper	120 x 5	600
Envelopes	200	200
Pens	100 x 3	300
Extra	1,000	1,000
<i>Instrument for data collection</i>		
Photocopying	1,000	2,500
Printing	500	
Binding	1,000	
Refreshments	30 x 50	1,500
Presentation materials (poster & slides)	5,000	5,000
Research Reports for publications	10,000	10,000
Total Estimated Cost		40,300

Note: 1 US Dollar = 31 Thai Baht