THE EFFECT OF PARENT INVOLVEMENT-CHILD BEHAVIORAL MANAGEMENT PROGRAM AMONG CHILDREN WITH ADHD

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A Dissertation Submitted in Partial Fulfillment of the Requirements
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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาพยาบาลศาสตรดุษฎีบัณฑิต
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Thesis Title	THE EFFECT OF PARENT INVOLVEMENT-CHILD BEHAVIORAL MANAGEMENT PROGRAM AMONG CHILDREN WITH ADHD
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Field of Study	Nursing Science
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อุบล วรรณกิจ : ผลของโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น. (THE EFFECT OF PARENT INVOLVEMENT-CHILD BEHAVIORAL MANAGEMENT PROGRAM AMONG CHILDREN WITH ADHD) อ.ที่ปรึกษาหลัก : รศ. ดร.จินตนา ยูนิพันธุ์, อ.ที่ปรึกษาร่วม : ผศ. ดร.ชนกพร จิตปัญญา

การวิจัยกึ่งทดลอง แบบสองกลุ่มวัดก่อนและหลังการทดลองนี้ มีวัตถุประสงค์เพื่อศึกษาประสิทธิผลของโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น กลุ่มตัวอย่างเป็นเด็กสมาธิสั้นวัยเรียน อายุ 6-12 ปี และผู้ปกครองของเด็กสมาธิสั้น จำนวน 64 คน ซึ่งได้รับการสุ่มอย่างง่ายโดยใช้ตารางเลขสุ่มเข้ากลุ่มทดลองและกลุ่มควบคุม กลุ่มละ 32 คน กลุ่มทดลองได้รับโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วม การดูแลตามปกติและรับยาตามแผนการรักษา ส่วนกลุ่มควบคุมได้รับการดูแลตามปกติและรับยาตามแผนการรักษา โปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมนี้ใช้แนวคิดการจัดการพฤติกรรมของ Goodman & Scott (1997) ประกอบด้วยการจัดการพฤติกรรม 8 สัปดาห์ 4 ระยะคือการประเมินความต้องการ,การวิเคราะห์พฤติกรรม, การปรับพฤติกรรม,และการประเมินผล เครื่องมือที่ใช้วัดอาการสมาธิสั้นคือแบบประเมิน SNAP-IV ซึ่งได้ตรวจสอบความตรงตามเนื้อหาจากผู้ทรงคุณวุฒิ ค่า CVI= 1.00 ค่าความเที่ยง ครอนบราคแอลฟา = 0.76 ผู้ปกครองของเด็กสมาธิสั้นเป็นผู้ใช้แบบประเมินก่อนและหลังการทดลอง เพื่อเปรียบเทียบอาการสมาธิสั้นของเด็กทั้งสองกลุ่ม วิเคราะห์ข้อมูลโดยใช้สถิติทดสอบ t (independent t-test, paired t-test)

ผลการศึกษาพบว่า อาการสมาธิสั้นของเด็กกลุ่มที่ได้รับโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมต่ำกว่า กลุ่มที่ได้รับการดูแลตามปกติอย่างมีนัยสำคัญทางสถิติที่ระดับนัยสำคัญ .05 อาการขาดสมาธิ (t=-5.208, p-value=.000) ซนอยู่ไม่นิ่ง/หุนหันพลันแล่น (t=-3.534, p-value =.001) , ส่วนอาการดื้อต่อต้านพบว่าลดลงอย่างไม่มีนัยสำคัญทางสถิติ (t= -1.549, p-value=.127) สำหรับอาการสมาธิสั้นในเด็กกลุ่มที่ได้รับโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมลดลงอย่างมีนัยสำคัญทางสถิติที่ระดับ .05; อาการขาดสมาธิ (t=9.933, p-value=.000),, ซนอยู่ไม่นิ่ง/หุนหันพลันแล่น (t=12.544, p-value =.000) และอาการดื้อต่อต้าน (t=6.030, p-value =.000) ผลการวิจัยนี้ยืนยันว่าโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมมีประสิทธิภาพในการลดอาการสมาธิสั้น

สาขาวิชา พยาบาลศาสตร์ ลายมือชื่อนิสิต .....
ปีการศึกษา 2562 ลายมือชื่อ อ.ที่ปรึกษาหลัก .....
ลายมือชื่อ อ.ที่ปรึกษาร่วม .....

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KEYWORD: Attention Deficit Hyperactivity Disorder Symptoms Behavioral management Parent involvement School-age children

Ubon Wannakit : THE EFFECT OF PARENT INVOLVEMENT-CHILD BEHAVIORAL MANAGEMENT PROGRAM AMONG CHILDREN WITH ADHD. Advisor: Assoc. Prof. JINTANA YUNIBHAND, Ph.D., Dip. APPMHN Co-advisor: Asst. Prof. CHANOKPORN JITPANYA, Ph.D.

This quasi-experimental pretest-posttest control group design aims to examine the effectiveness of the Parent Involvement-Child Behavioral Management Program (PICBMP) in reducing symptoms among ADHD children. Sixty-four children aged 6-12 years with ADHD were randomly assigned to either the experimental or control group by using a random number table, consisting of thirty-two participants in each group. The participants in the experimental group participated in the PICBMP and usual care with medication, while those in the control group received the usual care with medication. The PICBMP based on Behaviorally-based treatment (Goodman &Scott, 1997), consists of eight weeks of behavior management which included four-phase; needs assessment, behavior analysis, behavior modification, and evaluation. Standardized measures of Swanson, Nolan, and Pelham-IV (SNAP-IV) were applied to evaluate the ADHD symptoms (CVI= 1.00, Cronbach's alpha = .76) among parents before and after receiving either the PICBMP or usual care. Independent t-test and paired t-test were used for data analysis, with a p-value <.05.

The results found that ADHD symptoms in children who received the PICBMP were significantly lower than in the children who received the usual care compared to pretest and posttest; inattention (t= -5.208, p-value= .000), hyperactivity/impulsivity (t=-3.534, p-value =.001). However, there was no significant lower in the oppositional defiant subset(ODD) (t= -1.549, p-value=.127). The ADHD symptoms in the experimental group decreased significantly after receiving the PICBMP; inattention (t=9.933, p-value=.000), hyperactivity/impulsivity (t=12.544, p-value =.000), ODD (t=6.030, p-value =.000). This finding supports the effectiveness of the PICBMP in reducing ADHD symptoms.

Field of Study:	Nursing Science	Student's Signature .....
Academic Year:	2019	Advisor's Signature .....
		Co-advisor's Signature .....

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I wish to express my profound gratitude to Prince of Songkla University for the grant of a study leave and encouragement throughout the long period of this study. My special thanks go to my colleagues and friends who encouraged me and had to shoulder burden my duties during my absence.

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Ubon Wannakit

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER I
INTRODUCTION

Background and Significance of the study

Attention-deficit/ hyperactivity disorder (ADHD) is a heterogeneous neurodevelopmental disorder that is characterized by symptoms of inattention, hyperactivity, and impulsivity, affecting 5 to 12 percent of children worldwide (APA, 2013b). The prevalence of ADHD in Thailand ranges from 5 to 8 percent (Pornnoppadol, 2018), with a high incidence of 8.1 percent in school-age children (Visanuyothin, P., T., C., & Arunruang, 2013), with most in the Southern region estimated at 11.7% (Pornnoppadol, 2018). Moreover, the incidence of ADHD is increasing eachyear. The Child and Adolescent Mental Health Rajanagarindra Institute reported 4,637, 4,726, and 4,847 cases from 2017 to 2019, while the Songkhlarajanagarindra Psychiatric Hospital has reported 1,143, 1,214, and 1,332 cases respectively (SKPH year report, 2019). Also, the economic burden caused by ADHD ranges from 143 to 266 millions of dollars (Caye, 2019), with education and healthcare bearing the main costs (CHADD, 2017). These statistics indicate significant problems in the health care system.

ADHD symptoms consist of inattention, hyperactivity, and impulsivity. In school-age children, inattention is manifested as difficulty sustaining attention, failing to complete tasks, being disorganized, losing things, being easily distracted, and experiencing consequent academic difficulties. Moreover, severe inattention undermines school performance, reducing the effectiveness of positive support from

teachers and peers. Hyperactivity is exhibited as fidgeting, leaving the seat, restlessness, having difficulty playing quietly, and excessive talking. Elevated hyperactivity is associated with disruptive and rule-breaking behaviors that increase negative exchanges with parents, teachers, and peers (Sasser, Kalvin, & Bierman, 2016). Impulsivity includes blurting out answers to questions, difficulty waiting for one's turn, interrupting others' conversations, and the emergence of oppositional behavior that leads them to be rejected by peers, as well as poor self-esteem (Cooper, 2014). These core symptoms are crucial health problems that are associated with significant impairment in academic and social function. Especially in school-age children, these impacts can be devastating to their future life, especially if they do not get effective treatment at school-age, as they can have persistent symptoms and experience a high degree of comorbidity in adolescence and adulthood. The symptoms can result in multiple negative impacts, drug abuse, and long-term economic burden to families and society (Biederman et al., 2011).

The important nursing outcome for ADHD is to reduce ADHD symptoms (Harpin, 2017). Worldwide standards of nursing care in Western countries used multimodal treatment and interventions follow guidelines such as the National Institute for Health and Care Excellence Guideline (A. Thapar, 2015). Medication is mostly employed to treat school-age children. Nursing care includes specific assessment, prescription, medication monitoring, psychoeducation, counseling, behavior modification, and providing intervention such as behavioral management,

psychosocial intervention, and multimodal treatment (Harpin, 2017; Ryan, 2009).. In Thailand, children with ADHD are treated at child psychiatric clinics at tertiary hospital or psychiatric hospitals. The psychiatric hospital provide treatment for ADHD children which includes medication, psychoeducation, behavior modification, parent training, school management, psychotherapy, and family therapy (CAMRI, 2016). The Child and Adolescent Mental Health Rajanagarindra Institute (CAMRI) established a clinical practice guidelines for ADHD. The guidelines recommended for a multidisciplinary team, flow of care, and intervention for children such as, parent training, and summer camps. Children with ADHD have been treated as outpatients in such clinics. Songkhlarajanagarindra Psychiatric Hospital is a psychiatric specialty hospital in the Southern region of Thailand. Medication is the most widely used treatment by the psychiatrist. Nursing care for ADHD children includes assessment, psychoeducation, counseling, and behavior modification in some cases.

Although guidelines of care for ADHD children exist, there are differences between interventions used in Thailand and standard treatments applied in Western countries. The number of interventions in Thailand were limited compared to Western countries, comprising only parent training, behavior modification, and summer camps. Moreover, these interventions could not be implemented consistently with some receiving interventions, but others without access. In recent years, parent training has been conducted at Songkhlarajanagarindra Psychiatric Hospital, while behavior modification has been provided for some cases only once in/ 1-2 months. These

evidences showed insufficient of nursing care to reach outcome. Moreover, the information record of child psychiatric clinic found the number of adolescent who had symptoms persisting (severe level score of SNAP-IV) increase every year in 2017-2019 was 30.5% , 43.5% , and 46.4% respectively (SKPH, 2019). Moreover, the CAMRI reported the number of children and adolescent with ADHD had symptoms persisting (since they had low self-esteem) increase every year in 2016-2018 was 171, 287, and 294 cases respectively (Nunthayut, Panita, & Natha, 2018). These evidences indicated that nursing care for ADHD children had to be improve and develop intervention to solve this problem.

Research in the U. S. and other countries has confirmed that behavioral management is a successful intervention for reducing ADHD symptoms (E. Coles, 2007b; Garrick Duhaney, 2003; Johnston, Hommersen, & Seipp, 2008; Mitchell, 2010; Rajeh, Amanullah, Shivakumar, & Cole, 2017). The meta-analysis by Fabiano et al. (2009) also indicated that behavioral treatments are highly effective in reducing ADHD symptoms. Others have found significant reduction in ADHD symptoms over time after behavioral management with parent involvement in the program (L. J. Pfiffner & L. M. Haack, 2014; Rogers, Wiener, Marton, & Tannock, 2009). Therefore, the intervention of behavioral management involving parents in the program might alter the levels of ADHD symptoms by reducing the ADHD clinical indications in Thai children as well.

To develop an effective intervention for ADHD, it is necessary to identify

factors associated ADHD symptoms. Many studies indicate that ADHD symptoms are predicted by a child's behavior problems, parent behaviors, and parental stress (Ahia, 2012; Egmond-Fröhlich, Weghuber, & Zwaan, 2012; Ghanizadeh, 2014; Paulo A. Graziano, McNamara, Geffken, & Reid, 2011; Metcalf, 2016b). ADHD children who have a high level of behavioral problems usually receive a high score in ADHD symptoms (P. A. Graziano, McNamara, Geffken, & Reid, 2013; Kaidar, Wiener, & Tannock, 2003). Several studies have indicated that aggressive behavior is associated with symptoms of hyperactivity/impulsivity while some show these behaviors associated symptom severity (Santosh & Mijovic, 2004; Winstanley, Eagle, & Robbins, 2006). Also, it was found that a high level of socially inappropriate behavior was associated with symptoms of both inattention and hyperactivity/impulsivity (Staikova, Gomes, Tartter, McCabe, & Halperin, 2013). Moreover, Sasser et al. (2016) found that ADHD children who are more aggressive, or whose parents are inconsistent or ineffective with discipline, are more likely to have clinically significant and stable ADHD symptoms, to show more antisocial activities and poorer graduation and employment rates in late adolescence. From these pieces of evidence, the current program should focus on managing aggressive, distractive, and socially inappropriate behavior. Hence, this study tries to solve the obstacles of current nursing care by developing the Parent Involvement- Child Behavioral Management Program (PICBMP) which is designed to manage aggressive behavior, and distractive and socially inappropriate behavior using behavior management while enhancing parent

involvement in the care of the ADHD child.

Research Objective

To compare differences in symptoms between children with ADHD who received the Parent Involvement-Child Behavioral Management Program treatment and the control group.

Research Question

Are there significant differences in symptoms between children with ADHD who received the intervention and those in the control group before and after completing the Parent Involvement-Child Behavioral Management Program?

Theoretical Framework

The behaviorally-based treatment was developed by Goodman and Scott in 1997, and was used as a conceptual framework in this study. It provides a useful conceptual framework for practicing behavioral management with children who have behavior problems like ADHD. Robert Goodman and Scott (1997) developed the behaviorally-based treatment from 3 theories: Classical conditioning (Pavlov 1927) and Operant conditioning (Skinner, 1938)-a behavior modification technique; and social learning theory (Bandura, 1960s) – parent's skill learning and parent-child relationship.

Operant conditioning involves response-contingent effects using positive and negative reinforcement, and extinction. This may be to increase desired behavior through rewards or to reduce undesired behavior through punishment (Robert Goodman & Scott, 2012). Social learning theory; parent learn techniques of behavior

modification by observing the therapist and discussion. Moreover, parents learn positive communication through the group activities and group Line. Finally, parents can built good relationship with children through learning each other.

Behavioral methods in practice are strategies to apply behavior management which include assessment, negotiation of goals with parents and children, techniques of behavior modification, implementation, and evaluation.

Assessment: a functional analysis is performed. The Antecedents, Behavior itself, and Consequences (ABC) are carefully characterized in great detail and concentrate on the here and now of what happens (Goodman & Scott, 2012).

Negotiation of goals with parents and the young person specify the target behaviors as precisely as possible.

Techniques of behavior modification include; 1) to increase desired behaviors such as positive reinforcement and negative reinforcement, 2) to reduce undesired behaviors including stimulating changes for extinction, 3) differential reinforcement of incompatible behavior. Implementation includes maintaining all techniques, planning, negotiating with the child or adolescent, addressing beliefs and emotional states of family members, and adapting the program according to the level of progress.

Evaluation of behaviorally-based therapies: evaluate the whole process of behavioral management.

From this practical guide of the behavioral base treatment, the PICBMP was developed. The PICMP is a procedure to provide care for ADHD children and their

parents that aims to manage child behavior through parent involvement. This program intervenes with factor associated ADHD symptoms. The program was created to reduce behavioral problems such as aggressive, distractiv, and socially inappropriate behavior in ADHD children. It also aims to improve parenting skills in childcare. The PICBMP consists of 4 phases, covering an 8 week program as follows:

Phase1: Needs assessment and preparedness for parents; assessing parents' needs, problems and knowledge regarding ADHD, including caring skills for ADHD children.

Phase 2: Behavior assessment and goal determination; assessing behavior problems and behavior analysis by interviewing parents and children

Phase 3: Behavior modification and parent skills for behavior modification enhancement; conducting behavior modification and reiterating and practicing parent skill in behavior modification; using group activities, and behavior modification techniques. Developing parents' skill for behavior modification and parent-child interaction.

Phase 4: Evaluation: evaluating the program using focus groups and empowering the parent to maintain application of the program for their child.

Research Hypotheses with rationales

Hypothesis: the children with ADHD who received the PICBMP would have significantly lower symptom scores than those who received only the usual care.

The PICBMP manages the two factors associated ADHD symptoms including child factors and parent factors.

1. Child factors; behavioral problems consisting of 1) socially inappropriate; which is caused by self-control defects. The PICBMP intervenes by encouraging children to learn self-control through group activities, cooperating in activities, learning turn taking, arranging daily activities with parents, and having parents help them to control and monitor themselves to follow the schedule. These strategies will help children learn self-control, and create socially appropriate behavior. Socially inappropriate associated with impulsivity (Peter M. Wehmeier, Schacht, & Barkley, 2010). Hence, if the socially appropriate decrease the impulsivity would decrease. 2) Problematic behaviors (aggressive, distractive behavior) managed by behavior modification and teach parents to practice and do behavior modification for their child. The use of behavior modification techniques helps the child to reduce undesirable behaviors and increase desirable behaviors. Child behavior can be increased by following it with rewarding stimuli (positive reinforcement) or by removing aversive stimuli (negative reinforcement). With consistent use of contingency management over time, the child's behavior can be shaped to achieve desired goals (Linda J Pfiffner & Lauren M Haack, 2014). Aggressive associated with hyperactivity/impulsivity and oppositional defiant subset (Harty, Miller, Newcorn, & Halperin, 2009), hence, if aggressive behavior decrease, hyperactivity/impulsivity and oppositional defiant symptoms would be decrease.

2. Parent factors include parenting behavior (parent childcare skills) and parent stress levels. The PICBMP instructs parents regarding caregiving skills for their

child, general knowledge about ADHD, and behavior modification for ADHD children. With the assistance of a nurse, the parent can learn the techniques of behavior modification and other strategies to take care of their child, through discussion both one-on-one and in group settings. This parent's factor link with the social learning theory which considers contingency theory principles alongside other factors, including modeling and imitation of observed behaviors (eg, parent behaviors) as well as cognitive factors (eg, parental appraisals and attributions of child behavior) (Linda J Pfiffner & Lauren M Haack, 2014). For this point, parent would have skills in behavior modification and stress management, so, when parent had good practice, aggressive, distractive and socially inappropriate would decrease. If these behavior decrease so inattention, hyperactivity/impulsivity, and opposition defiant symptoms would be decrease.

Behavioral treatment can be effective when taught in the context of an intensive behavioral program that uses operant conditioning principles to address performance deficits (Pelham et al., 2014). Research has also been done on malleable characteristics of ADHD children that may explain the effectiveness of behavior modification approaches, such as reward sensitivity (G. J. DuPaul, Evans, Mautone, Owens, & Power, 2020; Tenenbaum et al., 2018). ADHD children not only receive behavior management in the clinic but also learn care and behavior modification at home. They learn to control themselves, improve their undesirable behaviors, and create desirable behavior. The parent not only receives group and individual instruction about ADHD and behavior modification but also receives encouragement

both from nurses and other group members. As a result, they acquire the ability to take care of their child and to apply behavior modification techniques. These strategies, in turn, help ADHD children reduce their symptoms. These procedures are supported by many researchers that have indicated the effectiveness of behavior management in ADHD children (Abikoff et al., 2015; Caye, Swanson, Coghill, & Rohde, 2019; Chacko et al., 2018; E. K. Coles et al., 2019; Daley et al., 2014; Fakhruddin, ElBatawi, & El-Damanhoury, 2018; Hart et al., 2017; Li, 2018; Mohammadi, Soleimani, Ahmadi, & Davoodi, 2016; Pelham et al., 2016; Rajeh et al., 2017; Smit & Johnston, 2019; Veenman, Luman, Hoeksma, Pieterse, & Oosterlaan, 2019).

Scope of the study:

A pretest-posttest control group design was conducted to evaluate the effect of the Parent Involvement-Child Behavior Management on symptoms in children with ADHD. The study was conducted with male and female children with ADHD age 6-12 years who were treated at a child and adolescent psychiatric clinic at Psychiatric Hospital with the participation of their parents. All participants in the control group and the experimental group received medication and the usual care from a child psychiatric clinic. Participants in the experimental group also received the PICBMP program for eight weeks. The independent variable was the Parent Involvement- Child Behavioral Management program. The dependent variable was ADHD symptoms.

Operational definitions

1. ADHD symptoms are mental feature which is regarded as indicating a condition of inattention, hyperactivity, impulsivity and oppositional defiant disorder.

Inattentive symptoms include difficulty sustaining attention, making mistakes or not attending to details, having trouble listening when directly spoken to, failing to complete tasks, difficulty organizing, avoiding tasks that require ongoing mental effort, losing things, being easily distracted, being forgetful and academic difficulties.

Hyperactivity is exhibited as fidgeting, leaving the seat, running excessively, restlessness, having difficulty playing quietly, acting as if "driven by a motor," and talking excessively.

Impulsivity includes blurting out answers to questions, having difficulty waiting for their turn, interrupting others' conversations, the emergence of oppositional behavior, being rejected by peers, lying, stealing, poor self-esteem, and experiencing poor sleep patterns.

Oppositional defiant disorder refer to often loses temper, argues with adults, actively defies or refuses adult requests or rules, deliberately does things that annoy other people, blames others for his or her mistakes or misbehavior, touchy or easily annoyed by others, often is angry and resentful, spiteful or vindictive.

ADHD symptoms were measured with the Swanson, Nolan, and Pelham-IV Rating Scale (SNAP-IV) where higher scores from the cut-point (16-13-15) show more severity.

2. The Parent Involvement-Child Behavioral Management program *(PICBMP)* is a process of nursing care for children with ADHD with the participation of their parents. Nurses as a therapist who provide therapeutic group for children, did behavior modification for children, teach and empower parents. The objective of the program

was to: 1) manage behavioral problems (aggressive, distractive and socially inappropriate behavior), increase desired behavior and decrease undesired behavior in children; 2) enhance parent involvement in their child's behavioral management; 3) increasing behavior management skills of the parents in the home. The program consists of 8 weeks of behavioral management which includes 4 phases: Phase 1: Needs assessment and preparedness for parents; assess parent needs, problems, and knowledge of ADHD, ability to care for ADHD children; Phase2: Behavior assessment and goal statement: behavior analysis, negotiate target behavior, and set goals with parents and children; Phase 3: Behavior modification and parent skills in application of behavior modification enhancement: Phase 4: Evaluation; evaluation of the behavior management application, empowering parents to continue the application of behavior management for their child.

3. The usual care refers to the routine child psychiatric nursing care in a child psychiatry clinical setting. The usual care is composed of the nursing activities to promote the safety of ADHD children, establishing a therapeutic relationship, advising parents on how to care for their ADHD child, monitoring medication, establishing dates for follow up, and behavior modification as needed.

Expected benefits

Findings from this study will contribute to the effective intervention in order to reduce symptoms of ADHD. The results of this study will inspire practitioners to create new alternative interventions and develop a nursing care model for children with ADHD and their families.

CHAPTER II
LITERATURE REVIEW

This chapter presents the literature review to establish concepts including ADHD symptoms and behavior management of ADHD children. The contents include:

1. Attention Deficit Hyperactive Disorder (ADHD)
   1.1 Definition
   1.2 Epidemiology
   1.3 Etiology
   1.4 Diagnosis
   1.5 Treatment
2. Children with ADHD aged 6-12 years
3. ADHD symptoms
   3.1 Definitions
   3.2 Dimensions
   3.3 Factors associated with ADHD symptoms
   3.4 Measurement of ADHD symptoms
4. Nursing care for children with ADHD age 6-12 years old
   4.1 Nursing care for children with ADHD in the Western Countries
   4.2 Nursing care for children with ADHD in Thailand
5. Theoretical framework for behavioral management
6. The Parent Involvement – Child Behavioral Management Program for ADHD children, aged 6-12 years
7. Related research

1. Attention Deficit Hyperactive Disorder (ADHD)

1.1 Definition

Attention-Deficit/Hyperactivity Disorder- A disorder usually first diagnosed in childhood characterized by the symptoms of inattention, hyperactivity-impulsivity, or both, with "impairment from the symptoms present in two or more settings," as well as "evidence of clinically significant impairment in social, academic, or occupational functioning (APA, 2013a).

Attention-Deficit/ Hyperactivity Disorder is the name coined to describe children, adolescents, and some inattentive adults easily distracted, abnormally overactive, and impulsive in their behavior. ADHD is a neurobiological "syndrome," not a "disease," with a specific known cause. Many different factors have been suggested as the cause of ADHD. The treatment requires several different approaches, involving medical, neuropsychological, educational and parental disciplines (Millichap, 2010a).

ADHD is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development" has symptoms presenting in two or more settings, and negatively impacts directly on social, academic, or occupational functioning. Several symptoms must have been present before age 12 years (Dulcan & American Psychiatric, 2016).

Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder characterized by symptoms of inattention, impulsivity, and hyperactivity that

are inconsistent with a child's developmental level and cause impairment to their functioning (Young & Smith, 2017).

Attention deficit hyperactivity disorder (ADHD) is a heterogeneous disorder characterized by the core symptoms of hyperactivity, impulsivity, and inattention, which are judged excessive for the person's age or level of the overall development. The symptoms are present in several settings such as school/work, home life, and leisure activities. Symptoms should be evident in early life, if only in retrospect; for ICD-10, by age 7 years and for DSM-5, by age 12 years. ADHD may persist into adult life (Dalrymple, McKenna Maxwell, Russell, & Duthie, 2019).

In summary, ADHD is a neurodevelopmental disorder characterized by high levels of inattention, hyperactivity, and impulsivity that are present before the age of twelve years, seen in a range of situations, inconsistent with the child's developmental level and causing social or academic impairment.

1.2 Epidemiology

Many studies on the prevalence of ADHD around the world indicate that ADHD affects 8–12% of children worldwide (Biederman et al., 2004). In 2011, 11% of children/adolescents aged 4 to 17 years (6.4 million children) had ever received an ADHD diagnosis. Moreover, the American Psychiatric Association reported the prevalence of ADHD is around 5 % in children and 2.5 % in adults (APA, 2013a). Also, ADHD prevalence has significantly increased in the past decade, and rates as high as 7.2% -12.6% in school-aged children have been reported (R. Cohen et al., 2013). It is

more common in males than in females, with an estimated male to female ratio of approximately 2:1 (Einziger et al., 2018).

83% of those diagnosed were reported as currently having ADHD; 69% of children currently with ADHD were taking medication (6.1% , 3.5 million children). Parent reports of ADHD increased by 42% from 2003 to 2011. Prevalence of ADHD, current ADHD, medicated ADHD, and moderate to severe ADHD increased significantly from 2007 estimates. For instance, the prevalence of medicated ADHD increased by 28% from 2007 to 2011(S. N. Visser et al., 2014).

In Thailand, the prevalence of ADHD is 8. 1% of children, affecting affecting 12% of males and 4.2% of females so there are 1 million school-age children with ADHD in the country (Visanuyothin et al., 2013). The largest concentration is in the Southern region estimated at 11% of the total. Moreover, the number of children with ADHD who are treated in child and adolescent psychiatric clinics is increasing every year. The number of ADHD children who have been treated in the years 2017 to 2019 was 8,894, 8,891, and 8,792 cases respectively, as reported by the Yuwaprasat Waithayopathum Child Psychiatric Hospital. The Child and Adolescent Mental Health Rajanagarinda Institute reported 4,637, 4,726, and 4,847 cases, respectively over the same period (CAMRI year report, 2019). Similarly, Southern Institute of Child and Adolescent Mental Health reported 5,464, 5,596, and 5,691 cases respectively, and Songkhalrajanagarindra Psychiatric Hospital reported 1,143, 1,214, and 1,322 cases respectively (Department of Mental Health, 2019).

1.3 Etiology

The cause of ADHD is frequently stated as unknown or *idiopathic* but in some cases, it may be secondary to a structural brain abnormality, either traumatic or encephalitic. Both genetic and environmental factors have been indicated as causes of ADHD.

A familial, genetic factor in an estimated 80% of cases may involve the dopamine receptor and transporter genes, but gene-environment interaction is recognized as an important mechanism in the etiology of ADHD (Millichap, 2010a). ADHD runs in families: first-degree relatives of individuals with ADHD are two to eight times more likely to have ADHD than relatives of unaffected individuals. Moreover, there is at least a 50% chance that a child with ADHD will have at least one parent with ADHD and that a parent may have more than one child with ADHD. Twin studies show high heritability rates of 71–90% for ADHD. Heritability rates include genetic and gene-environment interplay, thus recognizing the importance of environmental risks (Harpin, 2017).

Environmental factors may occur in the prenatal or postnatal period. They include developmental cerebral abnormalities, infections, toxins, premature birth, encephalopathy, and nutritional and endocrine disorders. Numerous experimental studies in animals have demonstrated hyperactive behavior elicited by prefrontal cerebral lesions. Head injury, even mild in degree, in young children is correlated with learning and behavior disorders. A neurochemical basis for ADHD is also proposed

involving catecholamine neurotransmitters, a theory supported by the beneficial effects of stimulant medications. The recognition of environmental factors in the etiology of ADHD should lead to prompt intervention, improved outcomes, and in some cases, prevention of ADHD (Millichap, 2010b).

Environmental risk factors: maternal smoking during pregnancy and prenatal/ perinatal adversity have been established as risk factors for ADHD. Children with ADHD exposed to smoking during pregnancy are at risk for more severe behavioral problems, lower IQ, and poorer neuropsychological test performance than nonexposed children with ADHD, even when controlling for income level, ethnicity, and mother's age and alcohol use. In contrast, low birth weight, post-term pregnancy, small size for gestational age, fetal distress, and low Apgar scores were not found to be related to ADHD (Dulcan & American Psychiatric, 2016).

Severe head injury can result in ADHD, even when controlling for preinjury ADHD diagnosis. Lead and polychlorinated biphenyls are also related to ADHD symptoms. The interplay between ADHD and family adversity is complex. While children with ADHD are more likely to be living poverty, disruptions in caregiving and harsh discipline, the direction of effect has yet to be worked out. These psychosocial correlates may be mediated via genetic effects. Most likely, multiple genes and environmental inputs combine in a complex way in the origins of ADHD (Dulcan & American Psychiatric, 2016).

1.4 Diagnosis

ADHD is a diagnostic category in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV) and the more recent DSM-5. The broadly equivalent diagnosis used predominantly in Europe is hyperkinetic disorder, which is defined in WHO's International Classification of Diseases (10th edition; ICD-10). DSM-5 has longer symptom descriptors than those used in DSM-IV; these descriptors also capture how symptoms can manifest in older adolescents and adults. DSM-IV distinguishes between inattentive, hyperactive-impulsive, and combined subtypes of ADHD. A diagnosis of the combined subtype requires the presence of symptoms across the domains of inattention and hyperactivity-impulsivity. However, ADHD subtypes are not stable across time, and DSM-5 has de-emphasized their distinctions. ICD-10 does not distinguish subtypes; symptoms need to be present from the three separate domains of inattention, hyperactivity, and impulsivity for a diagnosis of hyperkinetic disorder (A. P. Thapar & Cooper, 2016).

The diagnosis of ADHD or hyperkinetic disorder also requires the presence of symptoms across more than one setting, e.g. home and school, and requires that the symptoms result in impairment, i.e. in academic, social, or occupational activities. Onset must be early, although DSM-5 has changed the age of onset from less than 7 (ICD-10 and DSM-IV) to before 12 years-old. The key diagnostic criteria are listed in Table 1 (Dulcan & American Psychiatric, 2016).

Table 1 DSM-V diagnostic criteria for ADHD.

A. A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development, as characterized by (1) and/or (2)

1. Inattention: Six or more of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities.

a. Fails to give close attention to details or makes careless mistakes.

b. Has difficulty sustaining attention in tasks or play activities.

c. Does not seem to listen when spoken to directly.

d. Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace.

e. Has difficulty organizing tasks and activities.

f. Avoids, dislikes or is reluctant to engage in a task that requires sustained mental effort.

g. Loses things necessary for tasks or activities.

h. Easily distracted by extraneous stimuli.

i. Forgetful in daily activities.

2. Hyperactivity and impulsivity: Six or more of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities.

a. Fidgets with or taps hands or feet or squirms in seat.

b. Leaves seat in a situation when remaining seated is expected.

c. Runs about or climbs in situations where it is inappropriate.

d. Unable to play or engage in leisure activities quietly.

e. "On the go" acting as if "driven by a motor."

f. Talks excessively.

g. Blurts out answers before questions have been completed.

h. Has difficulty waiting for his or her turn.

i. Interrupts or intrudes on others.

B. Several inattentive or hyperactive-impulsive symptoms were present before age 12 years.

C. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (e.g. at home, school, or work; with friends or relatives; in other activities).

D. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic or occupational functioning

E. The symptoms do not occur exclusively during schizophrenia or another psychotic disorder and are not better explained by another mental disorder.

1.5 Treatments

There are specific guidelines for the stepwise management of ADHD, such as those developed by the National Institute for Health and Care Excellence (NICE) and the Scottish Intercollegiate Guidelines Network (SIGN) in the UK, by the Eunethydis European ADHD Guidelines Group (EAGG) in Europe, and by the American Academy of Pediatrics (AAP) and the American Academy of Child and Adolescent Psychiatry (AACAP) in the USA. The main difference between these guidelines is that US guidance does not preclude the use of pharmacological treatment for preschool children or for those with mild ADHD - a practice that is not followed in Europe where a stepwise approach is recommended. If pharmacological treatment is prescribed, it should be in conjunction with behavioral interventions—namely, optimized classroom management strategies, parental psycho-education, and behavioral management techniques. However, there is no one-size-fits-all solution to management. Individual circumstances such as current academic or employment demands and medical history should be taken into account, and appropriate evidence-based treatments for

comorbidities should also be initiated (A. P. Thapar & Cooper, 2016). Other alternative therapies, including diet, and visual and auditory training, may be supportive but rarely have the immediate and measurable effects of pharmacotherapy (Millichap, 2010a).

Medication is the most widely used treatment for ADHD (Adler, Spencer, & Wilens, 2015; Pornnoppadol, 2018). Psychostimulants are the most studied medications used for ADHD. Hundreds of randomized clinical trials have been conducted to study the short-term efficacy and safety of psychostimulants for the treatment of ADHD in children, adolescents, and adults and have been summarized in a number of meta-analyses (Caye et al., 2019). Both stimulant medication and atomoxetine (Strattera) have been utilized to manage the symptoms of ADHD. Stimulant medications have been researched in hundreds of studies and are considered one of the best-studied psychiatric pharmacological treatments (Bachmann et al., 2017). Recently, atomoxetine has been developed as an alternative to stimulant medication, and investigations also support the short-term efficacy of this treatment in reducing ADHD symptoms. In recent years, there have been changes in both the prescription and administration of medications with the development of atomoxetine and long-lasting stimulants (Carroccia & Quinn, 2019).

Methylphenidate hydrochloride: methylphenidate is used to increase attention and reduce hyperactivity and is licensed for use in the UK for children aged six years and over. Methylphenidate comes in immediate-release (IR) and modified-

release (MR) preparations and is known by the trade names Ritalin, Equasym, Equasy XL, Concerta XL, and medikinet XL. NICE (2018) recommends that methylphenidate should be used as the initial treatment for ADHD and that this should be conducted as a trial (Pringsheim & Steeves, 2012). Stimulants have limitations since they are not an acceptable treatment choice for some families and concordance with treatment plans impacts effectiveness. There have been concerns expressed about young people taking methylphenidate with cannabis and/or alcohol but there are no contraindications to using methylphenidate with cannabis or alcohol. However, if there is a family history or past personal history of psychosis or cannabis use, methylphenidate use should be very carefully monitored (Ryan, 2009) . One meta-analysis study shows that methylphenidate has a small to moderate effect in treating response inhibition, sustained attention, and working memory that was not age-dependent. Adverse side-effects were reported to be greater in children who take methylphenidate compared to placebo which can include dry mouth, weakness, severe appetite loss, introverted behavior, and sleep disturbances (Pelham et al., 2014).

A more potent stimulant than methylphenidate, dexamphetamine (dexedrine) is licensed for use in children and young people over the age of three years and for refractory cases of ADHD. However, it is not widely used since methylphenidate is much more widely encountered in clinical practice, and because dexamphetamine carries a higher risk of misuse. Like methyphenidate, dexamphetamine is a fast-acting drug which is rapidly absorbed within one hour. Dexamphetamine is not currently licensed for use in adults (Ryan, 2009).

Atomoxetine (Strattera) is a selective noradrenaline transport blocker indicated for the treatment of ADHD. It is licensed for use by children aged over six and has been shown to be effective with both children and adults. Much research indicates that atomoxetine, a non-stimulant, is an effective treatment for core ADHD symptoms, functional outcomes, and quality of life in children diagnosed with ADHD (Caye et al.,2019). Responses to the medication build gradually over time, peaking in effectiveness at 6-9 weeks. It appears to have a similar efficacy with ADHD symptoms as methylphenidate if used for an extended period of time. Atomoxetine works by making endogenous DA and NE more available in the prefrontal cortex. It does not appear to affect the subcortical regions of the brain, meaning that there is no potential for abuse of the medication (P. M. Wehmeier, Schacht, Escobar, Savill, & Harpin, 2010). Potential side effects of the medication are headache, abdominal pain, a decrease in appetite, fatigue, nausea, vomiting, and loss of balance. Additionally, there are two known instances of atomoxetine causing premature hair loss in adolescents.

There has been no evidence that pharmacological treatment improves childrens' long-term outcomes. The effectiveness of medication is well documented in the short-term, but the beneficial effects of stimulants stop as soon as the medication wears off, which is usually 3-10 hours following administration, depending on the preparation.

Limitations of medication: stimulant medications have limitations as follows: 1) despite the well-documented short-term effects, not all children respond

positively to stimulant drugs; 2) Side effects: there are considerable individual differences in the size of the drug effect such as depressed growth, insomnia, loss of appetite, abdominal pain, and nervousness, and not all children respond favorably (Sudnawa et al., 2018). In Thailand, methylphenidate (MPH) is the only psychostimulant available and approved by the Thai Food and Drug Administration (FDA). Many children have adverse effects to stimulant medication such as decreased appetite, headache, and insomnia. There is also insufficient evidence of long-term efficacy for stimulant medication (Pornnoppadol, 2018). Thus, when medication is discontinued, symptoms usually return. Moreover, some families refuse medication.

In summary, there is significant evidence suggesting that pharmacological treatment can have a major beneficial effect on the core symptoms of ADHD (hyperactivity, inattention, and impulsivity) in approximately 80% of cases compared with placebo controls, in the short term. However, although pharmacological treatments are relatively safe, they are not without adverse side-effects, such as, suppression of growth, sleep problems, tiredness, loss of appetite, stomach upset, headaches, nausea, and increases in heart rate and blood pressure.

2. Children with ADHD aged 6-12 years

ADHD children aged 6-12 years are defined as in middle childhood, with hyperactivity, poor impulse control, or compliance problems. In middle childhood children become much more active in learning and other activities. In most societies, such children begin to spend the majority of their time creating a sense of

accomplishment. If they fail to make such achievements, then children may struggle with a sense of inferiority or low self-esteem (Dulcan & American Psychiatric, 2016).

In ADHD children aged 6-12 years, the behavioral, cognitive, and emotional streams become more separable and diagnostically recognizable. Academic underachievement and problems with social competence and acceptance emerge as the most salient impairments. Awareness of being different begins to affect the child's self-esteem, especially as it is often the result of peer rejection or name-calling. Behavioral dysregulation persists, but dysfunctions in cognition, sensory and motor, and affective domains become more evident (Metcalf, 2016a).

Most school-age children with ADHD have significant difficulties with academic performance and/ or peer relationships. These academic, social, and behavioral problems tend to vary according to subtype, with relatively independent areas of impairment for each diagnostic group. Children in the combined subtype are significantly more impaired than the other two subtypes on measures such as global impairment, overall social functioning, and tendency to be disliked by peers, whereas inattentive and hyperactive children do not differ on measures of these domains. Both combined type and inattentive individuals with ADHD are significantly more impaired than those presenting with only hyperactivity on measures of academic functioning and are more likely to be ignored by peers. Upon entry to school, children with ADHD are likely to lag in basic math concepts, pre-reading skills, and fine motor abilities (Stanford & Tannock, 2012).

ADHD children also show restricted cognitive flexibility, which may manifest as stubbornness, oppositionality, or avoidance behavior. Cognitive disorganization, impaired working memory, poor reading comprehension, and procrastination emerge in middle childhood and affect academic performance and especially homework activities. These children have difficulty starting and completing tasks and have difficulty self-monitoring. They are often clumsy with complex fine motor tasks, and in visual-motor integration, which manifests in poor handwriting and impairment in written schoolwork. Adaptive functions in daily living skills, such as maintaining personal hygiene or taking on household responsibilities, is notably immature relative to cognitive levels (Fatemi & Clayton, 2008). Although they are inattentive and distractible with chores, homework, and even on the sports field, they may spend hours transfixed watching television or playing computer and video games. They are emotionally and behaviorally very context-dependent; for instance, they may do very well with one teacher, but maybe oppositional and resistant to another. They are emotionally dysregulated, attention-seeking, difficult to satisfy, tend to overreact to current and anticipated experiences, and are especially intolerant of disappointment and negative experience (Fatemi & Clayton, 2016).

A frequent complaint of parents is emotional and behavioral immaturity, such as silliness and inappropriateness, a preference for playmates, activities, and toys that are considerably below their age and cognitive level, and a remarkable lack of insight into their behavior, while being extremely sensitive to rejection and criticism. However, it is very important to acknowledge that their emotions go both ways: they

are also often very affectionate, enthusiastic, generous, forgiving, eager to please, very responsive to individual attention especially from other adults, and are often deeply hurt and baffled by the rejection they experience from their peers (Metcalf, 2016a).

Community-based and longitudinal studies highlight symptomatic and diagnostic continuity between preschool and school. Children meeting the criteria for ADHD in preschool are likely to go on to have ADHD in middle childhood, where many new cases are diagnosed. School entry may be seen as the first major life transition of particular significance for children with ADHD. Children diagnosed after this will rarely be true de novo cases, but more likely cases where histories of subclinical symptoms and/or impairment are exacerbated by the new challenges in the academic and social environment and associated increased demands for self-regulation and effective attention management. Failure to adapt to this new and challenging environment may lead children with ADHD to fall behind in their studies, and get into trouble at school and home. There can be great difficulty creating and maintaining strong and positive relationships outside the home. At the same time, coercive cycles of interaction with parents and siblings within the home often develop. Typical patterns of comorbidity, especially aggression and noncompliance, become more apparent during these middle-childhood years (Sonuga-Barke et al., 2015).

Cognitive function failure due to core ADHD symptoms and language, and learning disabilities, found in 30–50% , lead to poor self-esteem and acting-out behavior, conflicts in family and peer relationships and increase the risk for

depression. Peer rejection may happen already to hyperactive, intrusive, impulsive preschoolers, but becomes much more evident and perceived by middle childhood, where it quickly leads to loss of self-esteem and confidence. Half of the children with ADHD suffer from peer rejection, which appears to be the primary mediator for the relationship between ADHD and depression in both younger and older children with ADHD; it is a powerful predictive factor for depression in adult ADHD, particularly in women (Metcalf, 2016a).

2.1 Problems with ADHD children

Problems associated with ADHD can be dramatic and complex. The most difficult dimensions can remain hidden unless understood. Those with ADHD often are confusing and frustrating to parents, teachers, and others who have not been educated about ADHD. ADHD is a central neurological disorder, yet those with ADHD may be incorrectly labeled "lazy, a bad kid," some may state that "they just are not trying hard enough." New perspectives can help appreciate how the neurological condition of ADHD is a disability that causes performance and behavioral issues. This is critical to obtain a better appreciation of the fact that ADHD is a disability that can impact many areas of life. The difficulties listed in the following sections pertain to those with untreated and unmanaged ADHD. They are generalizations, and the degree and types of problems follow from the type of ADHD and its severity. Those with Inattentive ADHD often have lesser levels of these difficulties than those with Combined ADHD. In addition, each person is different and will have unique strengths

and weaknesses (Carroccia & Quinn, 2019).

Children with untreated ADHD will have many problems such as:

2.1.1 Serious motivation problems: they are usually not motivated to do things except what interests them at the moment. Those with ADHD can be over-focused on the things they are interested in, and ignore or lack adequate focus on daily routine demands, causing them to be ineffective and unproductive.

2.1.2 Difficulty persisting with activities for as long as others unless they like the activity. Therefore, they have more memory problems, forget to complete tasks, and leave tasks unfinished.

2.1.3 Boredom – they are easily bored with routine activities and will struggle to maintain interest and stay focused on things they do not enjoy. This causes them to be less productive and experience more conflict with parents and teachers.

2.1.4 Disorganisation - They have more difficulties planning and thinking ahead, because of organizational difficulties. People with ADHD are notorious procrastinators.

2.1.5 Poor frustration tolerance. They do not handle stress or frustration as well as others their age. They can become easily overwhelmed, and exhibit temper tantrums or outbursts. Some can even become aggressive or destructive.

2.1.6 Difficulty controlling themselves and their emotions. They have more behavioral problems, are more hyperresponsive, and overreact to others and events around them.

2.1.7 Time management problems: This is due to their poor perception of time, forgetfulness, difficulty planning ahead, being easily distracted, excessive daydreaming tendencies, excessive rushing, and poorly anticipating the time required to complete activities.

2.1.8 Low levels of self-awareness. They tend to view themselves as having fewer difficulties than others around them (Carroccia & Quinn, 2019).

3. ADHD symptoms

The main features of ADHD are inattention, hyperactivity, and impulsivity. Because most young children may display these behaviors from time to time, it is important not to assume that every child with these symptoms has ADHD.

3.1 Definition

ADHD symptoms are mental feature which is regarded as indicating a condition of inattention, hyperactivity, and impulsivity. ADHD symptoms are grouped into three categories: inattention, hyperactivity, and impulsivity. Symptoms of ADHD tend to be noticed at an early age and may become more noticeable when the child's circumstances change, such as when they start school. Most cases are diagnosed when children are 6 to 12 years old (Fadel, 2016).

3.2 Dimensions

Three key features define attention deficit hyperactivity disorder: inattention, hyperactivity and impulsivity. The contribution of each to the individual's presentation varies from patient to patient. In some individuals, two or more features may

contribute in equal measure; in others, one feature may predominate (Dulcan & American Psychiatric, 2016). Since Oppositional Defiant Disorder often occur with ADHD symptoms. Hence, this study add the Oppositional Defiant symptoms in the subset of ADHD.

3.2.1 Inattention

Inattention is characterized as an individual moving between tasks without completing them, seemingly losing interest in one activity because they become diverted to another. Individuals with inattention are often easily distracted and forgetful, and experience difficulties when organizing activities. At school, children with ADHD may struggle to listen and be frequently distracted; in the workplace, adults with ADHD may appear as if their mind is elsewhere and their work may be messy and performed carelessly (Sonuga-Barke et al., 2015).

The inattention dimension of ADHD is most often assessed by nine specific behaviors listed in the DSM-IV and DSM-5 (APA, 2013a; Association., 2000; R. A. Barkley, 2006). These include difficulty sustaining attention, making mistakes or not attending to details, having trouble listening when directly spoken to, not following through with instructions or failure to complete tasks, difficulty organizing, avoidance of tasks that require ongoing mental effort, misplacing things, being easily distracted, and being forgetful. An investigation of the presence of ADHD diagnoses in a sample of 3,082 children age 8-15 suggests that this subtype is most common, with an overall prevalence rate of 4.4% for IA compared to 2.2% for HI and C (Froehlich et al., 2007).

Interestingly, inattention type (IA) is most common among adolescents with ADHD, as other symptoms may change or become less visible as children reach adolescence; some children who meet criteria for the C subtype shift to the IA subtype as they approach adolescence (Fatemi & Clayton, 2008). Maedgen and Carlson (2000) suggest that children with the IA subtype rate themselves lower on social knowledge than children with the combined subtype and are viewed by teachers and parents as exhibiting social passivity. Children in the IA group were nominated by peers as being shy and are observed to be socially withdrawn during playgroups. Interestingly, children within the IA group have been shown to display higher levels of appropriate behavior and lower levels of externalizing symptoms (Gaub & Carlson, 1997). It has been suggested that the IA subtype exhibits more behavioral assets than children diagnosed with hyperactivity-impulsivity (HI) or combined (C) subtypes of ADHD (Short et al., 2007). Children with IA symptoms were shown to experience much less difficulty controlling their emotions compared to children with the combined subtype (Maedgen & Carlson, 2000).

3.2.2 Hyperactivity

Hyperactivity refers to observed excessive and continuous motor activity showing difficulty self-regulating their behavior, such as sitting or continuously changing from one activity to another. These difficulties arise even in situations where there is an explicit demand for self-control. These symptoms are inappropriate for age or developmental level, and/or when it is not appropriate for the situation and/or context (APA, 2013a). Studies suggest that symptoms of hyperactivity

usually decrease with age (Huguet, Ruiz, Haro, & Alda, 2017).

The behavioral dimension of hyperactivity is defined by six symptoms listed within the DSM-IV and DSM-5. The symptoms of hyperactivity include fidgeting, leaving the seat or assigned area, running or climbing excessively or feelings of restlessness, difficulty playing quietly, acting as if "driven by a motor" and excessive talking (APA, 2000; APA, 2013). Difficulties with hyperactivity at a young age are reflected through poor impulse control or self-monitoring skills in adolescence (Smith et al., 2007). Hyperactivity is directly related to difficulties with impulsivity and is often considered to be a failure to regulate activity levels which results in higher rates of motor activity (Berlin & Bohlin, 2002).

3.2.3 Impulsivity

Impulsivity refers to the failure to inhibit impulses both behaviorally and cognitively, and thoughts that come up suddenly, without reflection, that are excessive for age or developmental level (APA, 2013a). It also includes interference in the activities of others, a tendency to interrupt others excessively, impatience, inability to wait their turn, socially inappropriate verbalizations, and multiple errors by precipitation in performing schoolwork. Impulsivity is also undoubtedly linked to risk-taking. Note that harming others is not a characteristic of children with this disorder; children with ADHDusually regretharmful behaviors they have performed. Studies suggest that impulsivity symptoms can persist into adulthood. As noted, ADHD is associated with profound adverse effects on the educational and social development of those affected (Harpin, 2005; (Huguet et al., 2017).

Symptoms of impulsivity include blurting out answers to questions, difficulty waiting for their turn, and interrupting others' conversations (APA, 2000). Impulsivity, also referred to as disinhibition, has been thought of as an underlying factor that contributes to the other core symptoms of ADHD, and is considered the best marker to distinguish children with ADHD from children without the disorder (Barkley, 2006).

The combination of the H and I symptoms into one HI dimension, as stated in the DSM, is the result of factor-analytical studies indicating that these symptoms make-up a single behavioral dimension (DuPaul, Anastopoulos, Power, Reid, Ikeda, & McGoey, 1998). A comparison of impairments associated with this ADHD subtype suggested that 80% of the HI group were rated as exhibiting behavioral impairments, 53% as exhibiting social impairments, and 23% with academic impairments. Only 4% of children in the HI group were rated as not experiencing impairments in any domain. The specifics of the impairments experienced by this group are outlined below. Behavioral impairments tend to be most common among children with high levels of HI symptoms (Gaub & Carlson, 1997). The HI and C subtypes experience more externalizing problems, such as aggressive behavior, low frustration tolerance, defiance, and disruption compared to the IA subtype (Gaub & Carlson, 1997, Short et al., 2007).

The association between impairment and ADHD symptoms has been investigated. In terms of academic impairment, inattention is more predictive than hyperactivity/impulsivity at all ages. With respect to social functioning, both with

peers and teachers, hyperactivity/ impulsivity is more predictive than inattention but only for early childhood students; at the high school level, inattention is a significant predictor of social impairment. Regarding behavioral functioning in the classroom, the pattern is mixed across dimensions and ages with HI decreasing in predictive utility across the three age groups and IA increasing in predictive utility
(Zoromski, Owens, Evans, & Brady, 2015).

3.2.4 Oppositional Defiant symptoms

Oppositional defiant disorder (ODD) defined as "a pattern of angry/irritable mood, argumentative/defiant behavior, or vindictiveness" in children and adolescents (APA, 2013) . Oppositional Defiant Disorder requires four of the following eight symptoms below to be present for at least 6 months, in a manner that is outside a range that is developmentally normative: angry and irritable mood: has unusually frequent or severe temper tantrums; is often touchy or easily annoyed by others; is often angry or resentful; argumentative and defiant behavior: often argues with adults; often actively refuses to comply with adults' requests or defies rules; often deliberately does things to annoy other people; often blames others for his or her own mistakes or misbehavior; vindictiveness: is often spiteful or resentful (CHADD, 2017).

In the context of oppositional defiant disorder and comorbidity with other disorders, researchers often conclude that ODD co-occurs with an attention deficit hyperactivity disorder (ADHD)(Fadel, 2016). Thus, assessment of ADHD symptoms as an outcome of intervention should concern the symptoms of ODD and evaluate this symptoms.

In summary, inattention involves difficulties in sustaining attention, especially in tasks that are not highly motivating to the child. Inattention tends to remain relatively stable throughout adolescence and adulthood. Hyperactivity refers to observed excessive and continuous motor activity with difficulty self-regulating their behavior. Hyperactivity usually decreases with age. Impulsivity refers to the failure to inhibit both behaviorally and cognitively, impulses, actions, and spontaneous thoughts that occur at the time, without reflection, and that are excessive for age or developmental level. Impulsivity symptoms can persist into adulthood. Oppositional defiant refer to often loses temper, argues with adults, actively defies or refuses adult requests or rules, deliberately does things that annoy other people, blames others for his or her mistakes or misbehavior, touchy or easily annoyed by others, often is angry and resentful, spiteful or vindictive. ADHD is associated with profound adverse effects on the educational and social development of those affected.

3.3 Factors associated with ADHD symptoms

Factors associated with ADHD symptoms have been examined in many studies (Ahia, 2012; Egmond-Fröhlich et al., 2012; Ghanizadeh, 2014; Paulo A. Graziano et al., 2011; Metcalf, 2016b). Results from these investigations suggest that the ADHD symptoms are predicted by a child's co-morbidity, child's behavior problems, a child's physical activity, parenting behaviors, parental stress, and less perceived family support.

3.3.1 Child's factors

Child's factors associated with ADHD symptoms include child's co-morbidity, child's behavior problems, and child's physical activit, (Ahia, 2012; Egmond-Fröhlich et al., 2012; Ghanizadeh, 2014; Paulo A. Graziano et al., 2011; Metcalf, 2016b). The child factor, especially in behavior problems, is important to symptoms severity of ADHD. Several studies indicate association between behavior problem and symptoms of ADHD.

3.3.1.1 Co-morbidity: many studies concluded that co-morbidity of ADHD made more severity of symptoms. Hurtig et al. (2007)and P. A. Graziano et al. (2013) examine the comorbidity of ADHD in association with a family environment and the severity of ADHD. The result showed that Adolescents with ADHD and comorbid disorders had more ADHD symptoms than those with ADHD alone. Common comorbidities include oppositional defiance and conduct disorder, anxiety and mood disorders, as well as emotional regulation difficulties. Other comorbid conditions include autism spectrum disorders, tic disorders, social problems, sleep difficulties, generalized intellectual impairment and/or specific learning difficulties such as dyslexia (Young & Smith, 2017).

3.3.1.2 Physical activities; many studies on physical activities indicated that physical activities reduce ADHD symptoms (Gawrilow, Stadler, Langguth, Naumann, & Boeck, 2016; Smith et al., 2013). Moreover, many studies found that physical activities reduce ADHD symptoms (Gawrilow et al., 2016; Smith et al., 2013).

3.3.1.3 child's behavior problems (aggressive behavior, distractive behavior, and socially inappropriate); many studies indicated that the children who have a high level of behavior problems will gain a high score of ADHD symptoms (P. A. Graziano et al., 2013; Kaidar et al., 2003).

Aggressive behavior in children with ADHD

Children with ADHD exhibit more aggressive behavior than children who have no ADHD. Many studies showed a positive association between aggressive behavior and ADHD symptoms (Ardıç et al., 2014; Harty et al., 2009; M. Visser, Kunnen, & Van Geert, 2010; Zucchetti, Ortega, Scholte, & Rabaglietti, 2015). The study of Harty et al. (2009) concluded that the persistence of ADHD symptoms into adolescence accounted for most group differences in verbal aggression and anger at follow-up. ADHD children often trouble to manage their emotions and less self-control, so they present verbal aggressive and /or physically aggressive behaviors to others that make them be rejected by peer. Also, they tend to have some problems with the teacher and their parents because of their aggression.

Distractive behavior

Children with ADHD exhibit abnormal apparent distractibility, they often pay more attention to events happening in and outside the classroom and less attention to their schoolwork than their normal peers. Apparent distractibility in the classroom may have multiple causes, for example, children with ADHD could have less intrinsic motivation suffer from a failure to inhibit stimuli extraneous to the task (van Mourik, Oosterlaan, Heslenfeld, Konig, & Sergeant, 2007).

Socailly inappropriate;

Many research studies indicated an association between ADHD and socially inappropriate behavior, children with ADHD have more socially inappropriate behaviors than children without ADHD (de Boo & Prins, 2007; Merrell & Boelter, 2001; Peter M. Wehmeier et al., 2010). Also, children with clinically significant symptoms of ADHD were significantly less prosocial than other children (Hay, Hudson, & Liang, 2010).

3.3.2 Parent's factors include parenting practice and parenting stress.

3.3.2.1 Parenting practice refers to managing the daily tasks of family life (eg, meals and bedtime), responding to noncompliance, dealing with sibling conflict, or solving the more complex problems encountered during adolescence requires effective parenting skills. Parenting practice may moderate the strength of the relationship between primary ADHD symptoms. (Cunningham, 2007). Many studies suggest that the relationship between parenting and child behavior was stronger in chaotic family environments. In addition, for parenting behaviors factor; studies found that parents who pay positive parenting such as a good relationship with their child, taking care of their child emotion, the ADHD symptoms score will decrease (Chan, 2013; Cook, 2015; David & DiGiuseppe, 2016; Rydell, 2010). Moreover, some studies found that families of children who experienced elevated life stressors, and parents who were more inconsistent in their discipline practices predicted more severity of symptoms (Miranda, Colomer, Fernández, Presentación, & Roselló, 2015; Sasser et al., 2016; Susan Shur-Fen, 2007).

3.3.2.2 Parenting stress refers to several elements including subjective experiences of distress (e.g., emotional pain, anxiety); a person's thoughts, beliefs, and expectations about what is "normal;" and a perceived lack of control and self-doubt. An association between ADHD and parenting stress was observed and has been replicated to affect symptoms in children with ADHD (Holman, 2014). Theule, J. et al (2012) examined the association between parenting stress and ADHD. Results confirmed that parents of children with ADHD experience more parenting stress than parents of nonclinical controls and that severity of ADHD symptoms was associated with parenting stress (Theule, 2010). Besides, several studies found that the *parent stress factor* leads to more severe ADHD symptoms (Holman, 2014; Theule, 2010).

In summary, child's behavior problems; aggressive, distractive, and socially inappropriate behaviors, child's physical activities, parent stress, and parenting practice are important determinants that influence ADHD symptoms. Hence, these factors should be significant concerning to develop effective intervention to reduce ADHD symptoms.

3.4 Measurement of ADHD symptoms

ADHD symptoms cannot be assess by using a simple biological test. The assessment of ADHD symptoms is not based upon a single scale, score, biomarker, or laboratory test. Common practice guidelines for ADHD recommend the use of a behavior rating scale (Adler et al., 2015). Presently, there are numerous rating scales available to assess ADHD symptoms.

3.4.1 The Swanson, Nolan, and Pelham-IV Questionnaire (SNAP-IV)

One of the most extensively used questionnaires in treatment studies, the Swanson, Nolan, and Pelham Rating Scale (SNAP-IV; Swanson et al., 2001) is a behavioral rating scale that measures the core symptoms of ADHD and oppositional defiant disorder (ODD) as defined by the DSM-IV (American Psychiatric Association, 2013), which can be completed by parents and teachers. The SNAP-IV is a well-used clinical and research tool, which has been used extensively to determine treatment outcome in research trials including being used as the primary outcome for the Multimodal Treatment of ADHD (MTA) study (Bussing et al., 2008; Swanson et al., 2007). The long form 90 items of the SNAP-IV assesses ADHD, oppositional defiant disorder (ODD), and overlapping symptoms of all other psychiatric disorders of childhood listed in DSM-IV and is available at http://www.ADHD.net. A short, 26-item SNAP-IV version, also referred to as the MTA version, assesses ADHD core symptoms of hyperactivity/impulsivity and inattention, along with symptoms of ODD. Symptom severity is rated on a 4-point scale. Parents and teachers respond on the scored as follows: not at all = 0, just a little = 1, quite a bit = 2, and very much = 3. The SNAP-IV scores have shown good reliability and validity across different study samples. Cronbach's alpha was between 0.94-0.97. The details of score interpretation and Thai version described in chapter 3.

3.4.2 ADHD Rating Scale-IV (ADHD-RS-IV)

The ADHD Rating Scale was developed by DuPaul et al (1994). It consists of the 18 symptom criteria from DSM-IV, and is used for children aged 5-18 years. The frequency/ severity for each symptom (item) is rated from 0 (rarely or never) , 1 (sometimes), 2 (often), to 3 (very often). The maximum score is 54. ADHD-RS-IV can be rated by parents and teachers, or be used in a clinical interview. A clinical interview gives the opportunity to ask questions about every item and give examples of various situations and circumstances, to obtain global information about the frequency, impairment, and difference compared with peers for every symptom. Cronbach's alpha is between 0.92 – 0.94

3.4.3 Conners rating scale – Revise (CRS-R)

The CRS-R was developed by Dr. Keith Conners (1977) , for repeated and/ or brief assessment of symptoms relevant to ADHD and related disorders. The revised version was updated to assess the behavior problems of children aged 3-17 who are at risk of ADHD using DSM-IV criteria. Its short form of 10 items is drawn from the Conner's Parent and Teacher Rating Scales. Each item is rated either 0 (not at all), 1 (a little), 2 (pretty much), or 3 (very much), yielding a maximum total score of 30. Psychometric properties were tested, giving a Cronbach's alpha between 0.75-0.94, Sensitivity was 0.75, and Specificity was 0.75.

3.4.4 Child Behavior Checklist (CBCL)

The CBCL was developed by Dr. Achenbach (1960) to assess behavior and emotional problems. It is the broadband behavior rating scale used for children 1-6 and adults over 90. The CBCL is a widely used caregiver report form identifying problem behavior in children. It is widely used in both research and clinical practice with young people. It has been translated into more than 90 languages, and normative data are available to integrate information from different societies. The CBCL exists in two different versions, depending on the age of the child being assessed. The parent version comprises 100 items (for children 1.6-5 years), and 113 items (for 6-18 year-olds). Responses are recorded on a Likert scale: 0 = Not True, 1 = Somewhat or Sometimes True, 2 = Very True or Often True. Cronbach's alpha was between 0.71-0.89, while Sensitivity was 0.77.

3.4.5 Brown Attention-Deficit Disorder Scales (BADDS)

The BADDS was developed by Thomas E Brown in 1996. It is a consistent measure of ADD across the life span. Based on Thomas Brown's cutting-edge model of cognitive impairment in ADD, it reliably screens for and explores the executive cognitive functioning associated with ADHD. BADDS is a self-report questionnaire that is used for screening in people aged 3 years through adult. The questions in BADDS are not driven in terms of inattention-hyperactivity-impulsivity symptoms, but instead assess functional impairment in five areas, through 40 questions. These five areas are as follows: 1) organizing and prioritizing work and activation for work;

2) focusing on tasks, sustaining this focus and shifting attention to different tasks; 3) regulating alertness and sustained effort, and the ensuing processing speed; 4) managing frustration and modulating emotions; and 5) using working memory and accessing recall. Each question has a possible score from 1 to 4. The higher the score, the greater the risk is that the individual has ADHD. All individuals who complete the BADDS questionnaire are classified into three groups: i) possible, but unlikely to have ADHD (score < 40); ii) possible, but unconfirmed ADHD, (score 40 -54); and iii) highly likely but unconfirmed ADHD (score > 55).

3.4.6 Vanderbilt ADHD Rating Scales (VADRS)

The VADRS is an assessment tool for ADHD symptoms and their effects on behavior and academic performance in children aged 6–12. This measure was developed by Mark Wolraich at the Oklahoma Health Sciences Center and includes items related to Oppositional Defiant Disorder, Conduct Disorder, Anxiety, and Depression - disorders often comorbid with ADHD. There are two versions available: a parent form that contains 55 questions, and a teacher form that contains 43 questions. Shorter follow-up versions of the VADRS are also available for parents and teachers consisting of 26 questions with an additional 12 side-effect measures. Comparison of scores from the different versions of the VADRS with other psychological measures suggests the scores have good but limited reliability and validity across multiple samples. Cronbach's alpha was between 0.91-0.94.

In summary, the assessment of ADHD in children is multifaceted and involves a thorough evaluation of symptoms in the context of multiple settings. It is advantageous to obtain information from home and school to address cross-situational DSM requirements as well as to understand differences in perceptions and behavior in the home and school setting. This study uses the SNAP-IV for the following reasons: 1) it measures ADHD symptoms based on DSM-IV criteria which is the main focus of this study; 2) the items are easy for parents to assess and limited in number; 3) its high reliability and validity score; 4) the age range is matched to school-aged children, 5) it is available online at no charge; and 6) it is widely used in clinical and ADHD research.

4. Nursing care for children with ADHD aged 6-12 years

Nursing care for children with ADHD, 6-12 years old in the Thai context differs from that in Western countries such as the US and UK. In Thailand child psychiatric nurses provide nursing care for ADHD children at child psychiatric clinics in the psychiatric hospitals, child psychiatric institutes, and/ or tertiary hospitals of the universities. In contrast, in Western countries, nurse practitioners in pediatric departments, or advanced psychiatric practice nurses, and or child and adolescent nurse specialists provide care.

4.1 Nursing care for children with ADHD in the Western countries

The nurse practitioner may act as a physician's associate, collaborating in the evaluation and follow-up treatment of the child with ADHD in Western contexts. A

nurse practitioner specializing in pediatric behavioral neurology is an invaluable member of an ADD clinic, coordinating long-term care and prescription refills, and providing advice to parents when requested between scheduled clinic visits (Millichap, 2010).

Standard nursing care for ADHD children in Western countries:

The team providing care through treatments and interventions for ADHD in the Western countries include child and adolescent psychiatrists, advanced practice psychiatric nurses, nurse practitioners, school nurses, psychologists, pharmacologists, occupational therapists, social workers, and primary care providers. These teams collaborate and communicate in planning treatment for ADHD children and their parents. Most treatments and interventions follow guidelines such as the National Institute for Health and Care Excellence (NICE) Guideline, the Scottish Intercollegiate Guidelines Network (SIGN) in the UK, The Academy of Pediatrics (AAP) Guideline, and the American Academy of Child and Adolescent Psychiatry (AACAP) Guideline in the US.

In the West, the psychiatrist mostly uses medication to treat ADHD children. Also, the psychiatrist provides an assessment with mental status examination, diagnosis, treatment, and psychotherapy. A clinical psychologist provides psychological assessment, counseling, psychotherapy, and behavior modification.

4.1.1 Nursing care: the contribution of nurse practitioners, nurse specialists, and advanced practice psychiatric nurses in behavioral management and psychosocial intervention are as follows:

1) Assessment: specific assessment of behavior problems, ADHD symptoms, cognitive functions, social behavior, impairments, and holistic assessment including physical illness, hearing and also family history, and family function.

2) Diagnosis and prescriptions: medication management, and also nursing diagnoses such as the risk of injury, interrupted family processes, impaired academic function, noncompliance to rules, anxiety, low self-esteem, unbalanced nutrition, family coping techniques, ineffective family therapeutic regimen management, and risk for impaired parenting.

3) Nursing care plan: key outcomes of nursing include patient safety, reducing ADHD symptoms, reducing behavior problems, enhancing family function, improving parenting skills.

4) Implementation: psycho-education (individual), counseling (depression/burden), monitoring medication and observing side-effects, empowering parents or caregivers, behavioral management and psychosocial intervention.

5) Evaluation: evaluating nursing activities and following the nursing processes to set goals to improve practice.

4.1.2 Intervention for ADHD children

Intervention for ADHD children and their parents includes behavioral management, psychosocial interventions, and multimodal treatment. Psychosocial intervention is a critical part of treatment for ADHD in children and adolescents. The scientific literature, the National Institute of Mental Health and many professional

organizations agree that behaviorally oriented psychosocial treatments—known as behavior therapy or behavior modification—and stimulant medication has a solid scientific basis demonstrating effectiveness (Caye et al., 2019; Chronis, Jones, & Raggi, 2006; Döpfner et al., 2015; G. J. DuPaul et al., 2020; MTA, 2004). Many meta-analysis studies and systematic reviews indicate the effectiveness of behavioral management/ intervention in reducing symptoms of ADHD (S. W. Evans, Owens, & Bunford, 2014; Fabiano et al., 2009; Fakhruddin et al., 2018; Foisy & Williams, 2011; Wright et al., 2015). Behavior modification is the only nonmedical treatment for ADHD with a large scientific evidence base.

Behavioral management

Behavioral management approaches rely on changing the behavioral contingencies in the target setting such that children are likely to increase the rate, frequency, or intensity of desired behaviors and conversely reduce undesirable behaviors. In contrast, as outlined by Evans, Owens, et al (2014), training interventions rely on the extensive practice of new or replacement behaviors until they become routine and part of the individual's daily habits. Contingencies are not manipulated as a part of training interventions and the repetitions of training and practice may or may not occur in the setting in which behavior change is targeted. The most widely researched treatment was reported to be behavioral management (BM), which includes training parents, teachers, and peers to be educated in behavioral contingencies within the respective environments in which the children are observed. Furthermore, the

combination of these behavioral training techniques has also been shown to be effective in treating ADHD symptoms (Evans et al., 2014).

1) The parent management training program (the PMT): this program focuses on teaching parents parenting strategies for handling behavior problems, implementing behavior modification programs, and improving the quality of the child-parent relationship. The main aim is to change negative interactions, coercive cycles, and processes including harsh and inconsistent parenting, between parent and child (Patterson, 1982). This is achieved through improved positive involvement with the child, parental attention on and praise for alternative good behaviors, enhanced parental communication with the child, shorter instructions, and celebration when a desirable behavior is accomplished. Treatment also includes teaching parents strategies to be constructively consistent and predictable in parenting, establishing explicit rules for behaviors and how to handle misbehavior (Enebrink et al, 2012).

Parent training has been reported to be a well-established treatment for youth diagnosed with ADHD; in fact, six studies regarding parent training were included in the review by Evans et al. (2014). Outcomes of the studies demonstrated that parent ratings of ADHD symptoms were superior to waitlist controls, routine care, and alternative treatment conditions. Results of the current studies also support findings by Pelham and Fabiano (2008), who identified twenty-two studies that demonstrated that parent behavioral training was the most robust form of behavioral treatment for ADHD at the time of publication. Limitations of the studies included an

overreliance on subjective outcome measures, few minority group participants, and an exclusive focus on elementary school-aged children (Evans et al.,2014).

2) Behavioral classroom management: are also reported to be well-established treatments for improving ADHD symptoms. Results of studies indicate that the effectiveness of a daily report card (DRC) and ongoing teacher consultation were both effective at improving behavioral goals, such as a reduction in rule-violations and oppositional defiant disorder symptoms, improvement in academic productivity, and improvement in teacher-related behavioral goals (Evans et al., 2014). Pelham and Fabiano (2008) previously identified twenty-two studies that demonstrate that behavioral classroom management is a well-established treatment, results that are in agreement with current research. Studies in behavioral classroom management also appear to have many of the same limitations as those on parent training, including the overreliance on subjective measures completed by individuals not trained in observing ADHD symptoms.

3) Behavioral peer interventions

Behavioral peer interventions have also been reported as well established treatments for ADHD. Overall, peer interventions focus on social skills training which can be broken down into traditional social skills training and behavioral peer interventions in recreational settings, such as summer treatment programs. Each treatment type was found to be effective at improving teacher ratings of ADHD symptoms as well as peer acceptance ratings. Improvement in symptoms was reported across a variety of ADHD subtypes, while gender, comorbidity, and

medication status appear to have very little impact on the effectiveness of behavioral peer interventions, meaning that behavioral peer interventions provide a reliable mechanism of change (Evans et al., 2014). The results of current studies were not fully in agreement with the 22 studies previously identified by Pelham and Fabiano (2008), who reported that office-based social skills training produced minimal effects on ADHD symptoms. When compared, it appears that the methods for measuring outcomes of behavioral peer interventions have greatly improved as the research has advanced, therefore placing it in the category of a well-established treatment.

4) **Cognitive behavioral treatments (CBTs)**: These focus on changing automatic thoughts and irrational beliefs that may guide maladaptive behaviors and using behavioral therapy approaches. Cognitive restructuring, thought stopping, behavioral activation, and exposure techniques are often used to accomplish this change, and CBT is widely used in treatments for anxiety and depression. Although the labels that characterize the theoretical mechanisms of change (e.g. CBT) are sometimes used interchangeably to refer to all psychosocial treatments, many studies in the CBT group for ADHD children reported positive outcomes.

Limitations of behavioral intervention have been discussed in many studies. The main limitations revolve around training strategies. The PMT and the SST lacked childrens' programs, the program emphasizing parent and child relationships without training for childrens' daily life skills. In addition, the combined parent training lacks intensive child skills, instead mainly emphasizing parent skills.

Psychosocial Intervention

1) Combined parent training (modified Barkley's program). Barkley (1987) states that one of the primary goals of his program is to increase parental coping strategies with their child's symptomatic behaviors, as well as reducing the level of stress in the family unit. Specifically, to improve parental management skills and competence in handling child behaviors, increasing parental knowledge of the causes and underlying principles and theories of such behaviors, and improving child compliance to parental commands is targeted (Stberg & Rydell, 2012).

2) The social skills training plus parent training (SST) program: this consists of eight modules of activities in 80-minute group sessions during consecutive weeks. Eight modules of parent training were covered during 8-week group sessions: (1) education on ADHD disease concepts; (2) concepts around behavioral treatment; (3) clarification of parenting attitudes; (4) management of children's misbehavior and emotions; (5) reduction of parents' emotional stress; (6) empathizing and giving children compliments; (7) feedback on children's performance by the leader of the child group; (8) consultation on issues regarding medication (Huang, 2015).

3) Strategies to enhance positive parenting program (STEPP) This includes a collaborative, large group format, identical BPT content, identical order of presentation of BPT content, identical videotaped vignettes to depict parenting errors; therapist facilitated questions and group discussions, modeling, and role-plays by mothers. The STEPP program encourages attendance and homework

completion relative to traditional BPT and engages mothers throughout treatment (Chacko et al, 2012).

Multimodal treatments (MTA): the aim is to address multifaceted problems by including several therapeutic strategies: 1) psycho-education comprising information, explanation, and counseling about ADHD for children; 2) psychological and behavioral strategies; 3) social support such as parent support groups, financial assistance and respite care; 4) educational strategies and support in school, including help for children with coordination difficulties; 5) discussion and consideration of pharmacotherapy (Ryan, 2009). The MTA contains limitation, for instance, parent training was not examined in isolation but rather was a component of a package including school consultation and a Summer Treatment Program for the children. The parent training also incorporated several components that are not typically included in standard parent training including ways to manage stress and anger (Wells et al., 2000). The length of the intervention led to many patients dropping out in addition to employing too many professionals to maintain the program (C. Webster-Stratton & Herman, 2008).

For the nurse practitioner in primary care, the AAP has provided overall guidelines for the management of children and adolescents with ADHD: 1) Establishment of a treatment program that recognizes ADHD as a chronic condition; 2) Specification of appropriate target outcomes in collaboration with parents, child, and school personnel; 3) Recommendations for stimulant medication and/or behavior

therapy appropriate to improve target outcomes. Nurse practitioners and advanced practice psychiatric nurses administer and provide information on medications to parents and children; 4) Evaluation of the original diagnosis when the selected management has not met desired outcomes, and use of all appropriate treatments, adherence to the treatment plan, and consideration of coexisting conditions (Vierhile, Robb, & Ryan-Krause, 2009).

5) Nurses practicing in community-based psychiatric settings are well qualified by tradition, education, and clinical experience to provide PT, but are underutilized.

6) Nurses' family health perspective emphasizing therapeutic rapport and collaboration in working with parents and families, which are essential ingredients for a successful parent behavioral management program.

7) Providing periodic systematic follow-up for the patient. The treatment program for the child or adolescent with ADHD may include any of a large number of interventions such as behavioral management, psychosocial intervention, and multimodal treatment (Vierhile et al., 2009).

8) Providing family intervention. Family interventions include functional family therapy, cognitive-behavioral family therapy, and behavioral family therapy. All of these interventions must include components with at least one parent and the child participating in some therapy sessions with the therapist included. Functional Family Therapy (FFT) is a family-based intervention program for families and youths

with behavioral problems. The core elements of this model have remained intact since 1969 as it has been implemented with youth at risk presenting with behavioral problems such as delinquency, violence, substance abuse, Conduct Disorder, Oppositional Defiant Disorder, or Disruptive Behavior Disorder (Bjornstad & Montgomery, 2010).

4.2 Nursing care for children with ADHD in Thailand

In Thailand, the principal health care setting for children with ADHD is the child and adolescent psychiatric clinic at the psychiatric hospital, or the child and adolescent psychiatric clinic at the psychiatric department in tertiary care hospitals, and university hospitals. The most specific of these clinics is the child and adolescent psychiatric clinic at the Department of Mental Health at the Ministry of Public Health. The child and adolescent psychiatric clinic of the Department of Mental Health consist of 13 psychiatric hospitals and 7 institutes of psychiatry. There are 6 institutes that specialize in child and adolescent care; the Child and Adolescent Mental Health Rajanagarindra Institute (CAMRI), Rajanukul Institute, Yuwaprasart Waithayopathum Child, and Adolescent Psychiatric Hospital, Thai Child Development Institute, Northeastern Institute of Child and Adolescent Mental Health, and Southern Institute of Child and Adolescent Mental Health. The Child and Adolescent Mental Health Rajanagarindra Institute (CAMRI) established clinical practice guidelines for ADHD children. Rajanukul Institute established an ADHD handbook for parents, teachers, and health care providers(CAMRI, 2019).

Songkhlarajanagarindra Psychiatric Hospital (SKPH) is a child and adolescent psychiatric clinic in Southern Thailand which has the highest prevalence rate of ADHD in Thailand and is increasing. The child and adolescent psychiatric clinic were established in 2009 to provide health care services for children and adolescents in 7 provinces of the Southern region. ADHD is the most common child psychiatric disorder in this hospital. Although nursing activities in this clinic try to follow the clinical practice guideline of ADHD, in practice some activities can not be performed such as behavior modification, and psychosocial intervention such as parent training programs.

The health care system for children with ADHD in these clinics can be summarized as follows.

The child and adolescent psychiatrist: 1) Assessment; parent/child interview, mental status examination, laboratory tests for the specific condition. 2) Diagnosis and treatment: most treatments are pharmaceutical starting in school-age children. 3) Psychosocial education. 4) Psychotherapy.

The clinical psychologist provides psychological testing, behavioral therapy, behavior modification, cognitive behavioral therapy, and psychotherapy.

Psychiatric nurses and /or advanced practice psychiatric nurses provide nursing care that includes:

1. Assessment - specific assessment of behavior problems, ADHD symptoms, cognitive functions, social skill, impairments, and holistic assessment including

physical illness, hearing and also family history, and family function. To assess ADHD symptoms, the most used assessment method is SNAP-IV, both parent and teacher versions.

2. Nursing diagnosis: common nursing diagnoses for: risk of injury, interrupted family processes, impaired verbal communication, noncompliance to rules, anxiety, low self-esteem, nutrition problems, family coping strategies, ineffective family therapeutic regimen management, and risk for impaired parenting.

3. Nursing care plan: key outcome goals for nursing; patient safety, reduction of ADHD symptoms, reduction of behavior problems, enhancing family function, improvement of parenting skills.

4. Implementation: psycho-education (individual), counseling (depression/ burden), monitoring medication and observing for side effects, empowering parents or caregivers, parent training program (in some child psychiatric clinics) , behavior modification for children (in some clinics), and collaboration with the teacher to continue treatment in the school setting.

5. Evaluation: child psychiatric nurses evaluate nursing activities and follow the nursing process and then set goals to improve their practice (CAMRI, 2012).

From the above lines of evidence, a summary of nursing care for children with ADHD in Western counties and Thailand is provided for comparison in Table 2.

Table 2 Comparison of nursing care between Western countries and Thailand.

Nursing activities	Western countries	Thailand	
		Child and adolescent psychiatric clinic in the Specific child psychiatric institutes	Psychiatric specialist child clinic at SKPH
Holistic assessment	✓	✓	✓
Diagnosis and prescription	✓	×	×
Psychoeducation	✓	✓	✓
Medication monitoring	✓	✓	✓
Supportive psychotherapy	✓	✓	✓
Behavioral management			
- behavior modification	✓	✓	Some cases
- The parent management training program	✓	×	×
- Behavioral classroom management	✓	×	×
- Behavioral peer interventions	✓	×	×
- Cognitive behavioral therapy	✓	×	×
Psychosocial intervention			
- The combined parent training	✓	✓ Only parent training	×
- Social skills and parent training	✓	×	×
- Strategies to enhance positive parenting	✓	×	×
Multimodal treatments (MTA)	✓	×	×
Intervention focus			
- ADHD symptoms	✓	×	×
- Behavior problems	✓	✓	✓
- Academic function	✓	✓	×
- Include parent and children	✓	✓	×
- Separate parent and children	×	✓	✓
Family therapy	✓	×	×
Community-based approach	✓	✓	×
School intervention	✓	×	×
Nursing research	✓	✓ A little	×

In summary, there are differences in nursing care between Thailand and Western countries. The gaps include: 1) many interventions are performed in Western countries but few are in Thailand 2) The guidelines are difficult to practice at home. 3) Some interventions can rarely be practiced at a clinic. For nursing research; some limitations were found: 1) the studies are mostly focused on behavior problems and academic function, thus ADHD symptoms are under question; 2) some study interventions were with parents, some with children; thus, a study where intervention includes both parents and children is required.

5. Theoretical framework for behavioral management

This study uses behaviorally based treatment as a theoretical framework for behavior management. The conceptual framework is as follows.

Behaviorally-Based treatment

The behaviorally-based treatment was developed by Goodman and Scott in 1997. Goodman and Scott developed the behaviorally-based treatment from three theories; Classical conditioning (Pavlov, 1927), Operant conditioning (Skinner, 1938), and Social learning theory (Bandura, 1960). Behavioral methods used to be based on the notion that all behaviors are learned, and so can be unlearned. However, a less extreme form of behaviorism that is perhaps more acceptable states that the expression of most behavior is influenced by antecedent events and consequent responses. Altering these may change the frequency of the behavior (Robert Goodman & Scott, 2012).

Classical conditioning involves stimulus-contingent effects. A previously neutral stimulus becomes associated with one that triggers the physiological response, and in time the new stimulus alone (now called conditioned) leads to a similar response. Treatments based on this model condition new physiological responses, such as relaxation to the stimulus (Robert Goodman & Scott, 2012).

Operant conditioning involves response-contingent effects. Responses to stimuli, or indeed behaviors of any kind, become more frequent or stronger if they lead to rewarding consequences (positive reinforcement), or to escape from unpleasant consequences (negative reinforcement). Behaviors become less frequent if previously rewarded consequences are taken away (extinction). Treatments based on this model consistently change the contingencies that follow a behavior. This may be to increase desired behavior through rewards, e.g. a chart with colored stars for keeping underwear clean without soiling, or to reduce undesired behavior through punishment, e. g. requiring the child to clean the floor after throwing dinner on it. This approach also includes ensuring that undesirable symptoms or behaviors are not unintentionally rewarded, for example, ensuring that a child is not rewarded for psychogenic abdominal pain by being allowed to stay at home from school (Robert Goodman & Scott, 1997).

Social learning theory; led to a general widening of the behavioral model to recognize the primacy of human relationships in influencing learning. In children and adolescents, Patterson confirmed the central role of parental attention in providing

rewards and showed that in families where there is little positive interaction, children may behave antisocially to get attention, even though this may be of a negative kind. Treatments based on this model increase the attention paid by carers to children when they behave desirably for example, by speaking warmly to a child who is playing quietly, and withdraw attention when the child is behaving undesirably, for example, by turning away and not talking to a child who is screaming (Robert Goodman & Scott, 2012; Robert Goodman, Scott, & Scott, 1997).

Behavioral methods in practice

Assessment: Rather than initially ascribing meaning to a behavior, a functional analysis is performed. The Antecedents, Behavior itself, and Consequences (ABC) are carefully characterized in great detail. Examples include events before a tantrum in a 4-year-old: the mother's nagging demands at bedtime, or, a sibling takes a toy from the subject. Another example is events before a panic attack in a 15-year-old who is outdoors on a big playing field, or, in a crowded market. Another is before psychogenic abdominal pain in a 10-year-old: perhaps there was an argument between parents, or, difficult homework due to hand in. Sometimes changing the antecedents alone is the best strategy. Stimulus control methods for gathering information include: detailed behavioral descriptions from parents, charts, diaries, visits to home or school to observe behavior in context or videos of the same.

Behavioral analyses thus concentrate on the here and now of what happens. The meaning to the parents of the behavior ("he's becoming a criminal like his uncle"),

and their explanations for it ("it's the chips, doctor, the junk food") may be explored, but are not part of a strict behaviorist approach.

Negotiation of goals with parents and the young person with ADHD

1. Specify the target behaviors as precisely as possible. Many parents find this difficult, having diffuse concerns such as, 'he's disobedient', 'he's a Jekyll and Hyde', 'she's sad', etc. The goal is to help the parent work out specifically what is causing concern.

2. Assess the impact of the behaviors on the child's or adolescent's life, and on that of the siblings and parents, considering the following domains: (a) Emotional/ personal impact, (b) Social, (c) Developmental, (d) Learning/competence, (e) Self-esteem. Going through this list often helps the parents review the overall impact from their child's point of view, rather than just their own. Assessing the impact may make them aware of the social impact on friendships and emotions. This is often helpful to reduce negativity, and to engage sympathy and motivation to implement the treatment program.

3. Agree with the desired outcome in behavioral terms. Again, this will not be a generality ('he should be nice to me') but more specific ('he will dress after being asked only once in the morning, without shouting at me; he will be in bed by 8.30 at night'). If a child has frequent major tantrums lasting over five minutes involving kicking and throwing, an appropriate target may be to reduce this to once a week. Total abolition is unrealistic and unnecessary.

4. Formulate the positive behaviors desired. This may not come easily to parents, who are more inclined to think in terms of stopping negative behaviors such as fighting, running, shouting, wetting the bed, etc. The desired behaviors in each case might be: to play nicely with a brother, walk calmly, speak quietly, and use the toilet properly. The major part of behavioral work is not the elimination of unwanted behavior - a child who is only aware of what not to do has no help in finding his or her direction, and if totally obedient would stay rooted to the spot- but the promotion of desired behavior in its place, so the unwanted behavior simply fades away. Once the desired behaviors have been formulated, it is possible to start formulating an intervention plan, with emphasis on how to make it clear to the child or adolescent what is desired, how to introduce it into the individual's repertoire and practice it, and how to reward it once it starts occurring.

5. Explain in a way that can be understood by everyone in the family:

(a) Why the child or adolescent is currently behaving the way they are,

framing the explanation in terms of learned habits and the circumstances maintaining them, rather than in terms of fixed character traits or inner conflicts.

(b) That this way of looking at things shows that there is a possibility for change, but this will require some change from everyone.

Techniques of behavior modification

Increase desired behaviors: *Positive reinforcement*: reward desired behavior through praise and rewards. *Negative reinforcement*: remove the aversive

stimulus after desired behavior has occurred. For example, stop nagging when a child goes to bed). *Explain underlying theory to parents, and child*: this includes helping them formulate the treatment in a way that makes sense to them and is attractive. *Train skills* with rehearsal, and role-play. *Remove interfering conditions*.

Reduce undesired behaviors: *Stimulus change*: remove or change controlling antecedent stimuli. *Extinction*. This should follow the removal of the previous reward identified with reinforcement of the behavior; for example, no longer giving attention to the misbehaving child. Parents need to be warned that for a period, the child will work even harder to get back to the previous status quo and behavior may worsen, known as the extinction burst. Ignoring may mean involving more than just parents, for example, preventing an aggressive youth from getting admiration from his peers.

Differential reinforcement of incompatible behavior. As noted above, this principle is central to much behavioral work. The desired or prosocial behavior that should be occurring is identified and rewarded, such as sitting nicely during mealtimes instead of running around, playing cooperatively instead of fighting, spending the night in the bedroom rather than wandering downstairs, etc.

Response cost. Here specified amounts of reinforcers are withdrawn from the child when he or she displays the unwanted behavior. This requires that a previous reward system be in place, involving money, points, privileges, etc. There has to be something positive to withdraw.

Over-correction. The child is required not only to put right what he or she did wrong but do more by way of restitution. A variant gets the child to over-learn a response physically incompatible with the original misbehavior; for example, repeatedly taking shoes off on entering a house having trailed mud in previously.

Implementation: To learn a new behavior, an individual must know *what* to do, *how* to do it and *when* to do it. If parents are to change their child's behavior, they too, must be equally clear. For the change to occur will require competence, or being able to do it, and repeated *performance*, which requires the will to do it. The intervention will only rarely consist of the mechanical implementation of standardized techniques for altering the frequency of behaviors. Rather, most contemporary behavioral therapy draws upon these behavioral principles but adapts them to a wider context. General measures employed include:

Planning ahead, for example, reducing school pressures on a phobic girl, avoiding taking a hyperactive boy to the supermarket, taking fight prone siblings out to the park rather than keeping them indoors.

Negotiating with the child or adolescent. Many parents make what seem to them to be reasonable demands, only to find them disobeyed, which leads to a major confrontation. Getting parents to negotiate basic situations pays big dividends. However, this requires parents to stop and listen to their children and find a compromise that achieves their goal. In return, children and adolescents learn that their views have been taken into account (Goodman & Scott, 2012; Goodman et al, 1997).

Adapting the program according to progress. This is central to behavioral approaches, where success is carefully measured, and if it does not occur then this is examined in detail and the plan revised, or a new strategy tried, or a course of action more acceptable to the parent found. This theory can be used as a behavioral management strategy for parents and children with ADHD(Robert Goodman & Scott, 2012).

Evaluation of behaviorally-based therapies: evaluate the techniques of behavior modification, outcome, behaviors in both children and parents. The therapist has to remind themselves of issues such as, relationships, motivation, and beliefs (Robert Goodman & Scott, 2012).

6. The Parent Involvement-Child Behavioral Management Program

Since ADHD symptoms have a devastating impact, reducing ADHD symptoms is a significant outcome in nursing care for ADHD children. Previous studies found that effective intervention to reduce ADHD symptoms includes medication that combines psychosocial intervention or behavioral management (Ryan & McDougall, 2009; Vierhile et al., 2009). Therefore, the researcher is interested in reducing ADHD symptoms by using parent involvement in child behavioral management. The Parent Involvement- Child Behavioral Management Program (PICBMP) manages the two factors associated with ADHD symptoms. Firstly, the factors related to the child: e. g. behavioral problems consisting of 1) socially

inappropriate behavior which is caused by self-control defects (Staikova et al., 2013). This problem intervenes by encouraging children to learn self-control through group activities, cooperate in activities, learn to wait their turn, arrange their daily activities with parents, and then parents help them to control and monitor themselves to follow the schedule. These strategies will help children learn self-control, and create socially appropriate behavior (Pleiss, 2016). 2) Problematic behaviors (i.e. aggressive behavior, distractive behavior, task not completing) are managed with behavior modification; parents are taught to practice behavior modification for their child. The parent can learn the technique of behavior modification and other strategies of taking care of their child with the nurse by discussing both in individual and group learning. Using behavior modification techniques will help the child to reduce undesirable behaviors and increase desirable behaviors. As a control for the child's co-morbidity factor, this study matched participants with no co-morbidities into the program.

Lastly, parent factors include parenting behavior (parents' child-rearing skills) and parent stress. The PICBMP teaches parents the skills required to take care of their child, knowledge about ADHD, behavior modification techniques for ADHD children which include: 1) The ability to help children control themselves (Knowledge of ADHD and caring for ADHD children, monitoring daily activities and schedule, encouraging responsibility, and positive communication and relationship) 2) behavior modification skills 3) child's academic support 4) Parent's stress management skills. These parental factors are managed by teaching parents about ADHD, caring for ADHD children, behavior modification, and stress management through individual

and group learning. The PICBMP helps parents by establishing group learning to share and discuss skills in taking care of ADHD children, behavior modification, and other problems regarding children. The PICBMP also follows up and encourages the parents to do behavior modification and take care of their child at home by advising, counseling, assisting through online chat groups and telephone.

The ADHD children not only receive behavior management from nurses but also receive care, and behavior modification from the parent. They will learn to control themselves, improve their undesirable behavior, and create desirable behavior. The parent not only receives group and individual instruction about ADHD, and behavior modification training but also receive encouraging both form nurse and group members. They will have the ability to take care of their child properly, and to perform behavior modification. These strategies will help ADHD children reduce their symptoms.

The PICBMP focuses on 3 behaviors that indicate associated with ADHD symptoms as follows:

1. Aggressive behavior implies actions where ADHD children attempt to stand up for themselves or exert power over others in ways that are hostile and violate the rights of others such as hitting, kicking, scratching, biting, pushing, throwing objects, cursing, threatening.

2. Distractive behavior refers to easy loss of attention in tasks and inability to focus on something until it is done. In this study focus is on children who "cannot finish the assignment task".

3. **Socially inappropriate behavior** is any behavior that is not in line with societal standards and expectations. This study focuses is on children blurting something out and not turn taking.

In summary, the PICBMP aims to reduce ADHD symptoms by managing factors associated with ADHD. The child-based factors include encouraging self-control through group activities, monitoring their behavior and daily life through behavior modification both from nurses and parents. This study focused on aggressive behavior, distractive behavior (not finishing task), socially inappropriate behavior (interfering with the group). The parent's factors include teaching and encouraging skills development to help take care of ADHD children, behavior management, and stress management. The PICBMP consists of 2 booklets that are used as a handbook by nurses and parents: 1) Behavioral management of ADHD children for nurses 2) Behavioral management of ADHD children for the parent. The Parent Involvement-Child Behavioral Management program (The PICBMP) consists of 8 weeks, 4 phases of behavioral management. The details of the Procedures of the PICBMP are described in chapter 3.

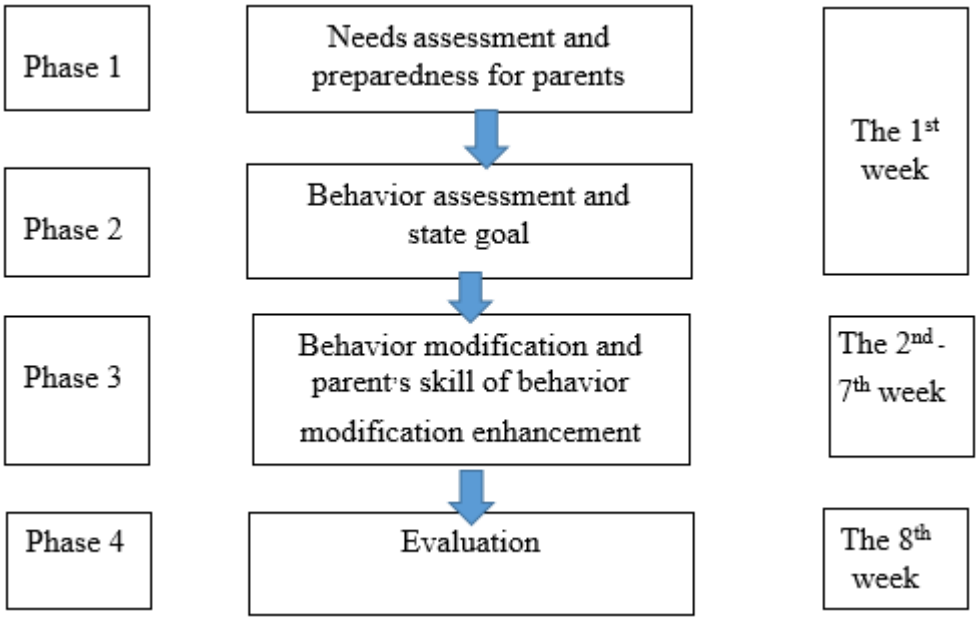


Figure 1 Steps of the PICBMP

7. Research review

Beery (1994) investigated the relationships between parent and teacher-rated disinhibition (impulsivity plus hyperactivity) and anxiety symptoms in children with ADHD and response to Methylphenidate (MPH) and behavior intervention. The result showed that a structured point system alone appeared sufficient in managing the behavior of children low in disinhibition, with MPH adding little clinically significant benefit. In contrast, highly disinhibited children displayed elevated levels of negative behaviors with behavioral management alone and improved significantly on MPH.

Swanson et al. (2001) developed a categorical outcome measure related to clinical decisions and to perform secondary analyses to supplement the primary analyses of the NIMH Collaborative Multisite Multimodal Treatment Study of Children with Attention-Deficit/Hyperactivity Disorder (MTA). Three orthogonal

comparisons of the treatment groups - combined treatment [Comb], medication management [MedMgt], behavioral treatment [Beh], and community comparison [CC])-evaluated hypotheses about the MTA medication algorithm ("Comb + MedMgt versus Beh + CC"), multimodality superiority ("Comb versus MedMgt"), and psychosocial substitution ("Beh versus CC"). The summary of SNAP-IV ratings across sources and domains increased the precision of measurement by 30%. The secondary analyses of group differences in success rates (Comb = 68%; MedMgt = 56%; Beh = 34%; CC = 25%) confirmed the large effect of the MTA medication algorithm and a smaller effect of multimodality superiority, which was now statistically significant. These secondary analyses confirm the primary findings and clarify clinical decisions about the choice between multimodal and unimodal treatment with medication.

Scahill et al. (2006) evaluated the short-term efficacy of a structured parent training program in children with tic disorders accompanied by disruptive behavior. Children with tic disorders and at least a moderate level of disruptive behavior were randomly assigned to a 10-session structured parent management training program or to continue treatment as usual. Twenty-four children (18 boys and 6 girls) between the ages of 6 and 12 years (mean 8.962.0 years) were enrolled; 23 subjects completed the study. The results suggest that parent management training is helpful for short-term improvement in disruptive behavior problems in children with tic disorders. Nonetheless, larger randomized clinical trials are needed.

E. Coles (2007a) determined the impact of behavioral intervention on the

need for medication in both home and school settings, as well as to evaluate the dose of medication required as a function of ongoing behavioral treatments in the school and home setting in children with ADHD. Results indicate that children who received behavioral consultation both at home and at school initiated medication treatment later in the school year. Also, in the home setting, fewer children initiated medication in the behavioral consultation group than non behavior consultation group.

Buckner, Lopez, Dunkel, and Joiner (2008) evaluated the short-term efficacy of a structured parent behavior management program in children with tic disorders accompanied by disruptive behavior. Children with Tic Disorders and Disruptive Behavior were randomly assigned to a 10-session structured parent management training program or to continue treatment as usual. Twenty-four children between the ages of 6 and 12 years (mean 8.962.0 years) were enrolled; 23 subjects completed the study. The results suggest that parent management training is helpful for short-term improvement in disruptive behavior problems in children with tic disorders. Larger randomized clinical trials are needed

C. Webster-Stratton and Herman (2008) tested the impact of a parent behavior-management intervention on child depressive and internalizing symptoms. One hundred eighty-one children were randomly assigned to receive a videotape modeling parenting intervention, called The Incredible Years, or to a wait-list control group. Children who received the intervention were more likely to have lower mother-rated

mood and internalizing symptoms at post-treatment, compared with children in a wait-list control group.

E. Coles, Pelham, and Gnagy (2010) evaluated the effects of differing intensities of behavior modification and medication on parents' self-reported success in managing their child's misbehavior and the attributions parents gave for success or failure. Children were randomized to receive in counterbalanced orders different levels of behavior modification, each for 3-week cycles. In addition, medication was manipulated using a medication assessment procedure. Parents reported daily how successful they were in managing their child's misbehavior and the attributions for either their success or failure. Results found that parents of children with ADHD generally felt successful in managing their child's behavior, regardless of treatment condition. In the high behavior modification condition, they were more likely to endorse items that attributed their success to their effort.

Steven W. Evans, Schultz, DeMars, and Davis (2011) utilized the CHP treatment program to evaluate its effects on middle school children with ADHD. The study evaluated 49 middle school-aged participants who were randomly split to receive CHP treatments (n = 31) or community care (n = 18) over two years. The results of the study concluded that students who received CHP showed less academic impairment and ADHD symptoms when compared to the community care recipient group. The results of these two studies show a significant improvement in overall symptoms related to ADHD across settings.

F. G. Miller and D. L. Lee (2013) conducted a study on the question 'Do Functional Behavioral Assessments Improve Intervention Effectiveness for Students Diagnosed with ADHD? A Single-Subject Meta-Analysis' to investigate the relative effectiveness of function-based and nonfunction-based behavioral interventions for students diagnosed with ADHD. Also, associations between various participants, assessment, and intervention characteristics were investigated. Eighty-two studies incorporating a total of 168 participants were included. Overall, function-based interventions were associated with significantly larger effects than non-function-based interventions. Interventions based on the functional analysis manipulations were also associated with larger effects.

Pfiffner, Villodas, Kaiser, Rooney, and McBurnett (2013) indicated in their study that behavioral management treatments are well-established, evidence-based treatments for middle childhood with attention-deficit/hyperactivity disorder (ADHD) and should be widely recommended to families. Several behavioral treatments are available that target the multiple impairments and risk factors for ADHD across settings. This study focuses on behavior management treatments developed for the home setting, known as BPT (also variously referred to as parent management training, parent training, or behavioral family therapy), as well as those home-focused treatments that include additional components to enhance generalization to other settings.

Pfiffner et al. (2013) evaluated a newly developed collaborative school-home intervention (Collaborative Life Skills Program [CLS]) for youth with ADHD. Participants included 17 girls and 40 boys in second through fifth grades (mean age-8.1 years) from diverse ethnic backgrounds. CLS was implemented by 10 school-based mental health professionals at their schools and included 3 integrated components over 12 weeks: group behavioral training for parents, classroom behavioral intervention, and a child social and independence skills group. Significant pre-post improvement was found for all measures, with large effect sizes for ADHD symptoms, organizational skills, and homework problems, and medium to large effects for teacher-rated academic skills, report card grades, academic achievement, and student engagement. Findings support the focus of CLS on both ADHD symptoms reduction and organizational skill improvement and support the feasibility of a model that utilizes school-based mental health professionals as providers.

S. W. Evans et al. (2014) completed a systematic review of the literature published between 2007 and 2013 to establish levels of evidence for psychosocial treatments for children and adolescents with ADHD. The result concludes that behavioral parent training, behavioral classroom management, and behavioral peer interventions are well-established treatments.

Gadow et al. (2014) evaluate the relative efficacy of combining parent training, stimulant medication, and placebo (Basic therapy) versus parent training, stimulant, and risperidone (augmented therapy) by examining treatment effects for attention-

deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder (CD) symptoms as well as peer aggression, symptom-induced impairment, and informant discrepancy. Children (6–12 years; N 168) with severe physical aggression, ADHD, and co-occurring ODD/CD received an open trial of parent training and stimulant medication for 3 weeks. Augmented therapy was superior to Basic therapy in reducing the severity of ADHD and ODD symptoms, peer aggression, and symptom-induced impairment, but clinical improvement was generally context-specific, and effect sizes ranged from small to moderate.

Heath, Curtis, Fan, and McPherson (2015) examined parenting stress (PST) and self-efficacy (PSE) following participation in behavioral parent training (BPT) for child treatment response. Forty-three families of children diagnosed with ADHD participated in a modified BPT program. Change in PST and PSE was evaluated using a single group, within-subjects design. Parents reported significant improvements in stress and self-efficacy. Parents of children who demonstrated a clinically significant reduction in ADHD symptoms reported lower stress and higher self-efficacy than those of children with continued impairments. The magnitude of child impairment was not associated with parent outcomes.

Jeffries DeLoatche (2015) measured the impact of Parent-Child Interaction Therapy on four preschool-aged children's problem behaviors and ADHD symptoms, parenting practices, and mothers' attitudes towards therapy. The result indicated PCIT

may partially be an effective intervention in improving children's behavior problems and ADHD symptoms.

Eichelberger, Plücka, Hautmann, Hanisch, and Döpfner (2016) developed an prevention program for externalizing problem behavior (PEP) for parents and teachers of preschool children. This secondary analysis examined the effects of both modules on preschool children with severe attention-deficit/hyperactivity disorder (ADHD) symptoms compared with children with no or mild ADHD symptoms. In the within-subject control group, design changes in child symptoms and problem behavior in specific situations at home and school during the waiting period were compared with changes during the intervention period (3 months each). Results show that parent training reduces specific behavior problems at home in children with severe ADHD symptoms and with no or mild ADHD symptoms, while teacher training reduces ADHD symptoms and ODD symptoms including specific behavior problems in the kindergarten in children with no or mild ADHD symptoms. However, in children with severe ADHD only overall problems and ODD symptoms were significantly reduced by teacher training.

Mohammadi et al. (2016) determine the effectiveness of combined Parent behavioral management training (PBMT) and medication treatment (Methylphenidate) in reducing ADHD symptoms in 6-12-year-old children, using randomized sampling. A total of 50 children with ADHD were assigned to two groups: an experimental group that received PBMT and a control group with medication treatment (Methylphenidate)

without other interventions. Findings revealed that the combined behavioral intervention of PBMT and methylphenidate treatment is more effective for the reduction of ADHD in children. The difference of means between pre-test and post-test CPRS in the experimental group was equal to 10.77, while it was only 1.88 in the control group. In addition, PBMT was more effective in the case of younger parents ($P<0.025$). However, parents' education levels did not affect behavioral intervention ($P<0.025$). The findings suggest that the combined intervention of PBMT and methylphenidate is effective in reducing the symptoms of ADHD in children.

Pelham et al. (2016) conducted a program called "Treatment Sequencing for Childhood ADHD: A Multiple-Randomization Study of Adaptive Medication and Behavioral Interventions". Children with ADHD (aged 5–12, N = 146, 76% male) were treated for 1 school year. They were randomized to initiate treatment with low doses of either (a) behavioral parent training (8 group sessions) and brief teacher consultation to establish a Daily Report Card or (b) extended-release methylphenidate (equivalent to .15 mg/kg/dose bid). After 8 weeks or at later monthly intervals as necessary, insufficient responders were rerandomized to secondary interventions that either increased the dose/intensity of the initial treatment or added the other treatment modality, with adaptive adjustments monthly as needed to these secondary treatments. The group beginning with behavioral treatment displayed significantly lower rates of observed classroom rule violations (the primary outcome) at study endpoint and tended to have fewer out-of-class disciplinary events. Further, adding medication secondary to

initial behavior modification resulted in better outcomes on the primary outcomes and parent/teacher ratings of oppositional behavior than adding behavior modification to initial medication. Normalization rates on teacher and parent ratings were generally high. Parents who began treatment with behavioral parent training had substantially better attendance than those assigned to receive training following medication. Beginning treatment with behavioral intervention produced better outcomes overall than beginning treatment with medication.

Pfiffner et al. (2016) evaluated the effects of Collaborative Life Skills (CLS) for primary-school students with ADHD) symptoms. CLS is a 12-week program consisting of integrated school, parent, and student treatments that include behavioral parent training, classroom behavioral intervention, and a child social and independence skills group. Students from schools assigned to CLS compared with those assigned to usual services had significantly greater improvement on parent and teacher ratings of ADHD symptom severity and organizational function, teacher-rated academic performance, and parent ratings of oppositional defiant disorder symptoms and social/interpersonal skills.

Luzia Flavia, Deise Lima Fernandes, Sueli, Orlando Francisco Amodeo, and Monica Carolina (2017) analyzed the use of a group CBT protocol to treat ADHD by comparing two types of treatment, unimodal (medication only) and multimodal (medication combined with CBT), in terms of their effects on cognitive and behavioral domains, social skills, and type of treatment effect by ADHD subtype. Participants were 60 children of which 48 were boys, with ADHD, inattentive subtypes, and

combined, aged 7 to 14. Combined treatment included 20 CBT sessions while all children were given Ritalin LA® 20 mg. Cognitive and behavioral outcome measures showed no differences between treatment groups. On social skills, multimodal analysis showed more improvement in frequency indicators on empathy, assertiveness, and self-control subscales and in the difficulty on assertiveness and self-control subscales. Using a group CBT protocol for multimodal ADHD treatment may improve patient adherence and ADHD peripheral symptoms.

George J. DuPaul et al. (2018) conducted a program called "Promoting Parent Engagement in Behavioral Intervention for Young Children with ADHD: Iterative Treatment Development", to describe an innovative approach for reducing barriers to BPT access. Specifically, we invoked an iterative, 5-step process of intervention development and revision to modify an existing face-to-face BPT program and develop an online version. Results indicated that the revised program and online versions (a) increased parent engagement with BPT, (b) enhanced accessibility, (c) produced favorable parent acceptability and feasibility ratings, and (d) resulted in improved child outcomes.

Steven W. Evans, Owens, Wymbs, and Ray (2018) conducted a systematic review on "Evidence-Based Psychosocial Treatments for Children and Adolescents With Attention-Deficit/ Hyperactivity Disorder". The results found that Behavior Management including BPT, BCM, BPI, and combinations thereof are still well-established for preschool and elementary school-age children, but BPT for adolescents

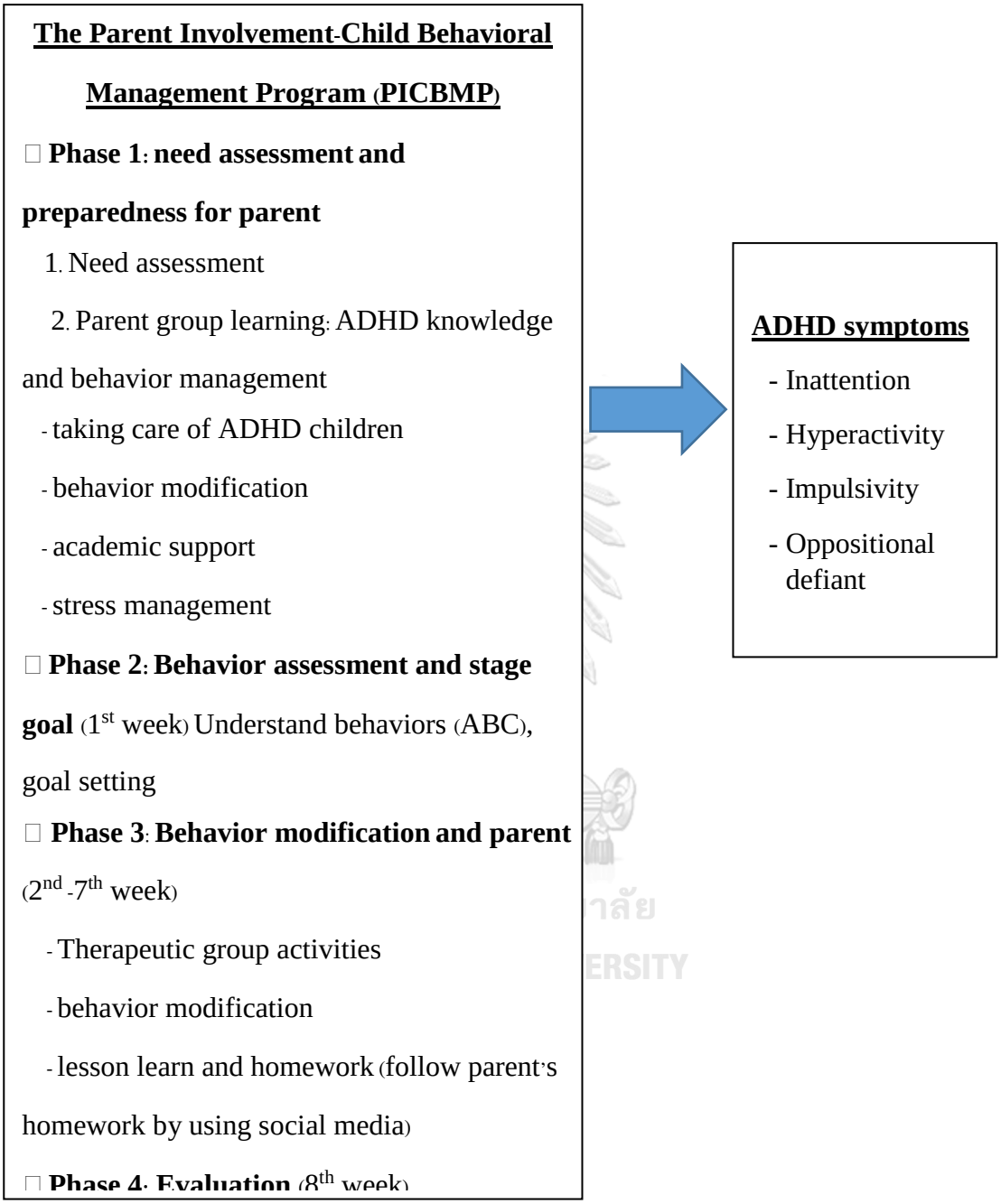
met criteria for possibly being efficacious. Also, BPT for elementary-aged children modified for maternal risk factors (i.e., ADHD, depression, being single) is at the experimental level. The recent behavior management literature provides new information about modality, developmental level, generalization, and adaptations which will be considered next. The evidence regarding training interventions is mixed and suggests that the amount of training and the skills being trained have an impact on outcomes.

E. K. Coles et al. (2019) conducted a study followed by participants in a summer treatment setting (with behavioral therapy intervention) into the subsequent school year to investigate whether the same pattern would extend to the natural school and home settings. There were 127 unmediated children with ADHD between the ages of 5 and 13 randomly assigned to receive or not receive behavioral consultation (BC) at the start of the school year. The results show a 40% reduction in total methylphenidate exposure for the school year. BC and No BC groups did not significantly differ on the end-of-year teacher or parent ratings of behavior, which were positive. Moreover, BC and No BC groups did not differ significantly in terms of the cost of treatment; although children in the BC condition accrued additional costs via the BC, these costs were offset by the associated delay and reduction in medication use. These results add to a growing literature suggesting that the use of low-intensity behavioral intervention as a first-line treatment reduces or eliminates the need for medication in children with ADHD.

Veenman et al. (2019) investigated the effectiveness of the Positivity & Rules Program (PR program), a behavioral program for teachers targeting ADHD symptoms in the classroom involving both student-focused and classroom-focused programs. Primary school children with ADHD symptoms (N = 114) were randomly assigned to the PR program (n = 58) or control group (n = 56). Teacher and parent ratings were used to assess behavioral, social, and emotional functioning at baseline, during, and after the intervention. Intervention effects were assessed using intention-to-treat multilevel analyses. Results found that teachers reported positive effects on ADHD symptoms and social skills.

In summary, results of most studies surveyed show that behavioral management treatments are well-established, evidence-based treatments for middle childhood with attention-deficit/ hyperactivity disorder and should be widely recommended to families.

Figure 2 Conceptual framework of the study



CHAPTER III
RESEARCH METHODOLOGY

This chapter describes the methodology used including research design, population and sample, instrumentation, protection of the rights of human subjects, data collection, and data analysis.

Research design

This is a quasi-experimental study using a pretest-posttest control group design. In this design, participants were randomly assigned (R) to the experimental or the control group. A pretest assessment about ADHD symptoms was performed on both groups (O_1: experimental group, O_3: control group). The participants in the experimental group received the Parent Involvement-Child Behavioral Management Program (X), medication and usual care while the participants in the control group received medication and usual care. The posttest evaluation of ADHD symptoms (O_2: experimental group, O_4: control group) was concluded after 1 month completing eight weeks of the PICBMP. The design diagram is as follows:

R	**O_1**	**X**	**O_2**	experimental group
R	**O_3**		**O_4**	control group (Campbell & Stanley, 1963)

Remarks

R = randomized assignment sample into an experimental or control group.

O_1 = ADHD symptoms scores of the experimental group on the day of recruitment into the study.

O_2 = ADHD symptoms scores of the experimental group after completing the PICBMP.

O_3 = ADHD symptoms scores of the control group on the day of recruitment into the study.

O_4 = ADHD symptoms scores of the control group after completing the experimentation.

X = the PICBM program for children with ADHD and their parent.

Setting

The study was conducted in a child and adolescent psychiatric clinic, Songkhlarajanagarindra Psychiatric Hospital, Songkhla, Thailand. After receiving the IRB approval of Research Ethical Board of the hospital (IRB approval number was 10/2562). The eight weeks of session of the PICBMP were conducted on Saturday and Sunday at the activity rooms of the child and adolescent psychiatric clinic which is available on holidays. The room is convenient for parents and children because it consists of a big room and small rooms. The big room was used for children's group activities. The small room was used for parents' group discussions and the parents could sit in this room while observing the children's activities. There was a counter for served beverage for parents and children.

Population and sample

Population

The target population in this study were children with ADHD and their parent.

1. Children with ADHD aged 6-12 years old who were treated in the child and adolescent psychiatric clinic in psychiatric hospitals in Thailand.

2. Parent of children with ADHD who were fathers or mothers or caregivers that have taking care of the ADHD children.

Sample

The participants in this study were:

1. Children with ADHD aged 6-12 years old who were treated in a child and adolescent psychiatric clinic in Songkhlarajanagarindra Psychiatric Hospital.

2. Parent of those children with ADHD who were fathers or mothers or caregivers that have taking care of the ADHD children and had lived in their family together at least 6 months.

Sample selection

Purposive sampling and simple random sampling were used to recruit qualified participants in the study. The following criteria were used to select the participants.

Inclusion criteria for children:

1) Age 6- 12 years.

2) Received treatment at the child and adolescent psychiatric clinic.

3) Have been diagnosed with ADHD

4) No history of physical illnesses, Autism Spectrum Disorder, Conduct Disorder, anxiety, and mood disorder.

Exclusion criteria for children: children with ADHD who did not complete the program were excluded.

Inclusion criteria for parent:

1) The father or mother or caregiver of children with ADHD who were recruited in this study
2) Continuously taking care of the child at least 6 month.
3) Able to communicate in Thai.
4) Sufficient available time to join in the program.

Exclusion criteria for parent: the parents would be excluded if they had bipolar disorder, chronic suicidal or self-injurious behavior, and substance dependence within the past 6 months.

Sample size

The sample size was determined by the power analysis and effect size determination by a previous study (J. Cohen, 2013), with a significance level of .05, a power analysis of 0.80. Previous experimental studies showed that the effect size of behavioral management on ADHD children was around 0.4 to 0.55 (S. W. Evans et al., 2014; Fabiano et al., 2009). The number of participants was 29 in each group (J. Cohen, 1988). Concerning about 10% of attrition rate, at least 32 patients were required for each group, total participants were 64. However, the study finally collected data with 30 participants each group, total participants were 60.

Sampling procedure

Purposive sampling and simple random sampling were used to select participants following the inclusion criteria. The researcher selected the sample from the medical record of HosXp database of Songkhalrajanagarindra Psychiatric Hospital. 690 ADHD children aged 6-12 years from the list of HosXp database were treated at the child and adolescent psychiatric clinic. 270 children were eligible base on inclusion criteria while 420 children had co-morbid disorder. Of the 270 eligible children, 100 had no time available to join the program, 106 parent and children did not wish to give consent. Thus, 64 children met the inclusion criteria. Next, the researcher made a list of random numbers using the random number table. 64 children and their parents were randomly assigned to the experimental group and control group. 32 ADHD children and their parents in the experimental group received the PICBMP with medication and usual care. 32 ADHD children and their parents in the control group received the usual care with medication.

Sample attrition

64 children with ADHD and their parents who fulfilled the inclusion criteria were approached to participate in the study, but 4 children were unable to participate throughout the whole process of the study. The reasons for this dropout in the experimental group, two children could not attend through 8 weeks of behavioral management. The reasons for dropouts in control groups were two parent refused to complete the SNAP-IV at post-test. The attrition rate of this study was 6.25 percent. Therefore, the final sample consisted of 60 ADHD children and their parents, 30 in the

control group who obtained the usual care with medication while the other 30 were in the experimental group who received the PICBMP with medication. The sampling procedures are presented in figure 4.

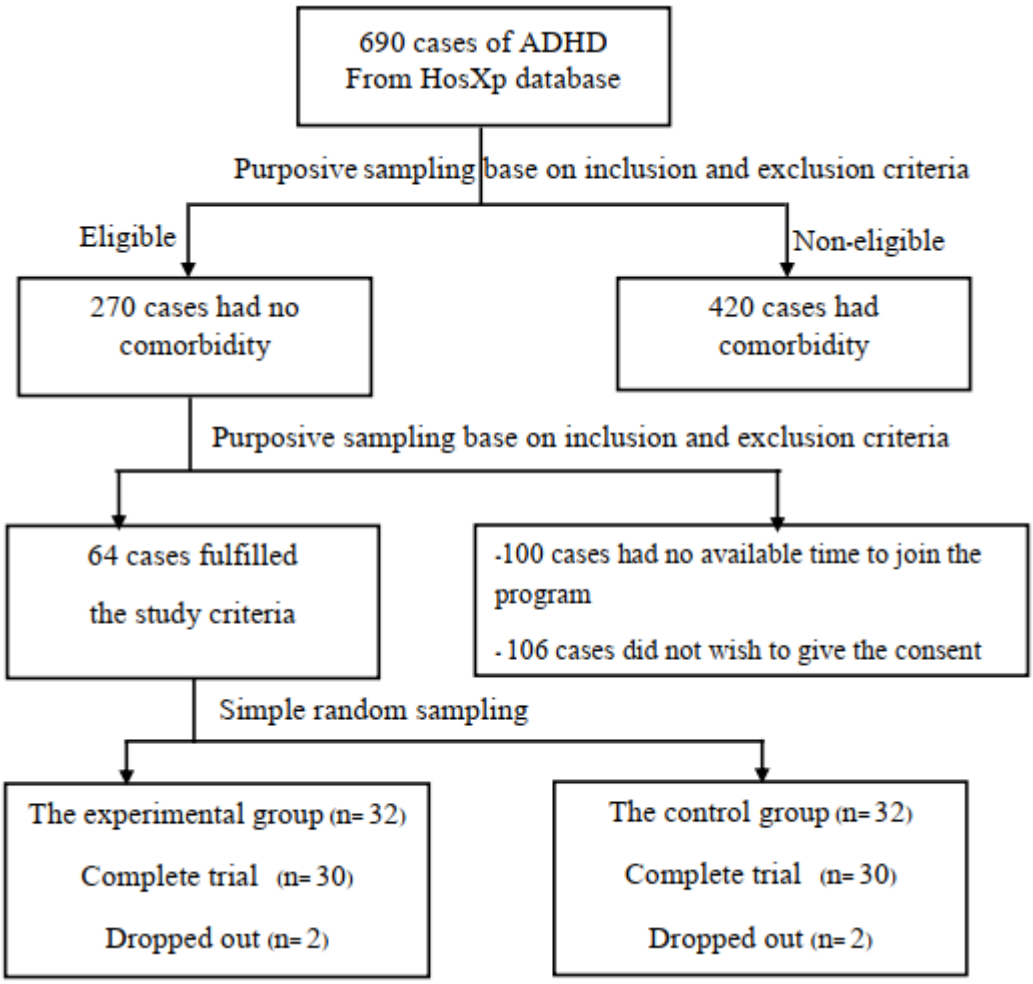


Figure 3 The sampling procedures

Sample approach method

1. The researcher individually approached the participants who met the study criteria. The researcher presented information regarding the intervention in the non-technical terms, the benefits of the intervention, and protection of human rights to seek their approval to participate in the study. Once the prospective participants

agreed to participate in the study, parents were asked to sign the consent form, and children were asked to sign the ascent form (Appendix C).

2. After grouping by random assignment, participants in the control group received the usual care from the child and adolescent psychiatric clinic, while the experimental group received a scheduled appointment to participate in the PICBMP. Both groups received medication by their psychiatrist. Also, the experimental group were given the booklet for parents (Appendix F). The control group were given the booklet for parents after finishing the program.

Research instruments

The instruments in this study consisted of 1) data collection instruments, 2) intervention instruments, and 3) the instruments for monitoring in the experiment. The content validity of instruments was examined by 5 experts, including two child psychiatrists who were expert in children with ADHD; two nurses instructor who were experts in child psychiatric nursing, and one Advanced Practice Psychiatric Nurse in child psychiatric nursing who were experts in nursing care for children with ADHD (See Appendix A). All instruments were tested for reliability as follows:

1. Data collection instruments

Two questionnaires were used to measure the outcomes of the study. They were the Personal Information Sheet and the SNAP-IV rating scales as detailed below.

1.1 The personal information sheet

The personal information sheet was developed by the researcher which was consisted of two parts;

1) Demographic data of the parent and children concerning gender, age, education, occupation, experience in previous program, family income, and supportive person.

2) The parent's problems in taking care of children with ADHD and the expectation for participating in the program. (See Appendix D).

1.2 Swanson, Nolan and Pelham-IV rating scale (SNAP-IV)

The Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) is one of the most extensively used questionnaires in treatment studies, developed by James Swanson, Edith Nolan, and William Pelham, based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) in 1983, and 1992. In its original form, the SNAP-IV had 90 items that evaluated hyperactivity-impulsiveness and inattention, as well as a variety of other psychiatric symptoms. The 26 item SNAP-IV was modified from the original SNAP-IV for the Multimodal Treatment of Children with ADHD (MTA) study of 1999. Items from the DSM-IV criteria for attention-deficit/hyperactivity disorder (ADHD) are included for the two subsets of symptoms: Inattention (items 1–9) and Hyperactivity/Impulsivity (items 10–18). Also, items from the DSM-IV criteria for oppositional defiant disorder (ODD) are included (items 19–26) because ODD is often present in children with ADHD (Swanson et al., 2007).

The SNAP-IV is currently in its 4th version, and its scores have shown good reliability and validity across multiple different study samples. Many studies of psychometric properties testing on the SNAP-IV indicated that the SNAP-IV is

reliable and valid instrument for rating ADHD and oppositional symptom (Costa, de Paula, Malloy□ Diniz, Romano□ Silva, & Miranda, 2019; Gau et al., 2009; Inoue et al., 2014; Kiani & Hadianfard, 2016; Liu et al., 2013). Cronbach's alpha was between 0.94-0.97(Swanson et al., 2007). The SNAP-IV was translated into many languages including Thai. The Thai version of the SNAP-IV was tested for psychometric properties by a team of psychiatrists (Nuttorn Pityaratstian, Thanvaruj Booranasuksakul, Dutsadee Juengsiragulwit, and Songpoom Benyakorn) in 2014 with parent and teacher of 231 children aged 4-16 (mean 8.47). This study tested the concurrent validity, sensitivity, specificity and reliability; the Cronbach's alpha was 0.93-0.96.

Parents and teachers respond on the SNAP-IV rating the severity of symptoms of children aged 4-16 years. Symptom severity is rated on a 4-point scale. Responses are scored as follows:

Not at all = 0,

Just a little = 1,

Quite a bit = 2,

Very much = 3

The scores in each of the three subsets (inattention, hyperactivity/impulsivity, and opposition/defiance) are totaled. A suggested scoring guideline is below: (Table 3)

Table 3 Score interpretation in each subset of ADHD symptoms

range score / interpretation	Subset/ Items		
	Inattention Questions 1 – 9	**Hyperactivity/Impulsivity Questions 10 – 18**	**Opposition/Defiance Questions 19 – 26**
Symptoms not clinically significant	<13	<13	< 8
Mild symptoms	13 – 17	13 – 17	8 – 13
Moderate symptoms	18 – 22	18 – 22	14 – 18
Severe symptoms	23 – 27	23 – 27	19 – 24

If desired, the average rating for each subset can be calculated by totalling the scores for the items in the subset and dividing by the number of items.

Some studies calculated by average score. Therefore, the score can calculate both sum score and average score. In this study used sum score. The cutoff point for parent and teacher showed in Table 4.

Table 4 the cutoff point score of ADHD symptoms in each subset base on response of parent and teacher

Cutoff point / **Subset**	**Parent**		**Teacher**	
	sum	**average**	**sum**	**average**
Inattention	16	1.78	23	2.56
Hyperactivity/ Impulsivity	13	1.44	16	1.78

Oppositional defiant disorder	15	1.88	11	1.38

Psychometric property testing:

In this study, the SNAP-IV Thai version was tested for content validity by 5 experts (the experts was described on the topic research instrument) . Content Validity Index (CVI) was evaluated with the content validity index for items (I-CVI) and the content validity index for scales (S-CVI) through the opinion of the content experts. The 5 experts confirmed that most of 26 items were rated to 4 (very relevant). The result confirmed that the CVI (I-CVI, S-CVI) was 1.0. The reliability was tested by submitting the questionnaire to trial use with 30 parents of ADHD children and it was calculated to have a Cronbach's alpha = 0.76. The Cronbach's alpha of each subset was tested, inattention subset had a Cronbach's alpha = 0.63, hyperactivity/impulsivity = 0.58, and oppositional defiant = 0.79.

The SNAP-IV was used to test ADHD symptoms before and after completing the intervention. Parents of the children of both groups were trained to use the SNAP-IV and were asked to assess the ADHD symptoms using the SNAP-IV rating scales.

2. Intervention instruments

The intervention instrument of this study was the Parent Involvement-Child Behavioral Management Program (the PICBMP). The PICBMP was developed using the behaviorally-based treatment by Goodman & Scott (2012) as a theoretical framework. The development process of the program was composed of 4 phases as follows:

Phase 1: Define and understand the problem and its causes

This phase focused on the review literature to understand behavioral management for school-age children with ADHD to reduce ADHD symptoms in Thailand and other eastern and western countries. The problem was clarified with stakeholders using the existing research evidence. The assessment of school-age children with ADHD, children's behavior problems, parents' knowledge, and skill in taking care of ADHD children, were performed. Also, the researcher analyzed the intervention limitation at the child and adolescent psychiatric clinic, Songkhla rajanagarindra Psychiatric Hospital. The results of the literature review revealed that behavioral management was not used as an intensive intervention, as it was only used for behavior modification in the clinic, so the intervention could not continue at home and could not involve parents engaged in behavioral management. The parents of ADHD children lack skills in behavioral management for their children. Reviewed factors related to ADHD symptoms were children's behavior problems which indicated aggressive behavior, distracting behavior, and socially inappropriate behavior. Another factor was the parental practice defined as parents' skills in taking

care of children with ADHD. Thus, the current intervention should develop an intensive behavioral management method that focuses on aggressive behavior, distracting behavior, and socially inappropriate behavior, and then emphasize and improve parents' skills for behavioral management.

Phase 2: Program development

The researcher developed this program based on behaviorally-based treatment which was developed by Goodman and Scott (2012). The behaviorally-based treatment provided the steps of behavioral management for children who have behavior problems using operant conditioning (Skinner, 1938), and social learning theory(Robert Goodman & Scott, 2012). The behaviorally-based treatment theory was reviewed in detail then derived strategies from the steps of the theory. The knowledge of ADHD, ADHD symptoms, treatment for ADHD symptoms, interventions to reduce ADHD symptoms, and parents of school-age children with ADHD, were reviewed. Also, the knowledge of behavioral modification techniques, aggressive behavior, distracting behavior, and socially inappropriate behavior were reviewed. All literature reviewed was integrated into the current intervention as the steps and activities. The PICBMP intervenes with the children and parent factors that influence ADHD symptoms. The program was created to reduce behavioral problems in ADHD children and increase parent skills in childcare. Moreover, the PICBMP not only coaches the parents to deal with ADHD children but also teaches ADHD children to overcome their impairments by increasing desired while decreasing the undesired behaviors. Learning these skills is vital and useful throughout the child's life. The

PICBMP consisted of 4 phases including needs assessment and preparedness for parents, behavior analysis and goal statement, behavior modification, and evaluation, all covering 8 weeks (as shown in Table 5).

Table 5 Descirption of the PICBMP development

Behaviorally-Based Treatment	**The Parent Involvement-Child Behavioral Management Program**		
	Phase	**Activities**	**Week / Duration**
Assessment: - assessed problems - behavioral analysis	Phase 1: Needs assessment and preparedness for parents	-Assessing parents' needs, problems, and knowledge of ADHD. -Teaching parents about ADHD, caring for ADHD children, behavioral management, and behavior modification techniques.	Week 1/ 3 hours
negotiate goals with parents and young person	Phase 2: Behavior analysis and state goal.	-Assessing and analyzing children's behavior problems. -Negotiate and set goals of behavioral management with parents and children.	Week 1/ 1 hour
Techniques of behavior modification - increase desired behaviors: positive, negative reinforcement - reduce undesired behaviors: stimulus change, extinction Implementation - maintaining doing all techniques	Phase 3: Behavior modification and enhance parent's skill in applying behavior modification	-Conducting behavior modification for children - Therapeutic group activities for children (interrelationship, categorizing, self-awareness, exercising, picture difference game, thinking, teamwork, dancing group), using behavior modification, enhancing desired behaviors. -Practicing parent's skills in behavioral management -Parent group: summarizing behavior modification techniques, lessons learned discussion. Assigning homework for children and parents - encouraging parent's behavioral management at home. - Line group consultation for parents.	Week2-7/ 2 hours/ session 1 session/ week

Behaviorally-Based Treatment	The Parent Involvement-Child Behavioral Management Program		
	Phase	**Activities**	**Week / Duration**
Evaluation	Phase 4: Evaluation	-Evaluating children's behaviors and parent's knowledge in caring for ADHD children, Focus group discussion.	Week 8/ 2 hours

The PICBMP comprised 2 booklets: 1) the Parent Involvement-Child Behavioral Management: Booklet for nurses, 2) Caring for children with ADHD: Booklet for parents

Phase 3: Program modification

The PICBMP was reviewed by five experts for content validity. Suggestions made were to add the details of behavior modification techniques, the details in therapeutic group, and the responsibility of each therapist. Other recommendations were to rewrite some sessions of the booklet for parents in simple words, the details in behavior modification techniques and positive communication for parents. In summary, all suggestions of the five experts were accepted and incorporated, the example of modification as showed in Table 6.

Table 6 modification of the PICBMP following suggestions

Contents	Suggestion	Revision
introduction	Add responsibility of each therapist clearly details.	Wrote the details of duty of each therapist step by step in each activity.
Phase2: behavior analysis	Behavior analysis maybe difficult for parent and they may not understand how to do ABC	Research created situation as an example of behavior analysis and discuss with parent.
Phase3: behavior modification	Add more details of behavior modification techniques in each behavior problems	Add details of positive and negative reinforcement, the overcorrection, token economy,
	Concern about how to create desired behavior more than catch undesired behavior.	Add objective of create desired behavior, learning from role model and group learning.
Therapeutic group activities	Add details of each group activity, how to conduct, made other nurse can easy practice and follow.	Wrote details of group activities step by step.
The booklet for parent	Concern the easy words. Behavior modification techniques in simple way for parent	Add more session of discussion with parent about those techniques both individual and group.
The instruments used in the program	Many instrument used in the program, how to make	Prepare the session for discuss

Contents	Suggestion	Revision
	parent truly understand	the instrument. Using Line group social media to confirm understanding and encourage parent.

Phase 4: Program trial phase

After the revision of the PICBMP was approved by the thesis advisor, the researcher asked for the approval of the Institutional Review Board (IRB) from the Research Ethics Committee of Songkhlarajanagarindra Psychiatric Hospital. The PICBMP got IRB approval and got permission to research at a child and adolescent psychiatric clinic for one year from 30th August 2019 to 30 August 2020 (IRB no. 10/2562). The pilot study of the PICBMP was conducted from 5 – 27 October 2019. Eight children with ADHD and eight parent of those children participated in this pilot study. The participants were provided the PICBMP 4 phases 8 session in 4 weeks. The objectives of this pilot study were to 1) confirm the feasibility of the PICBMP as to whether it works for ADHD children and their parents at the clinic; 2) assure the procedures of the program whether it would be useful to use them as a guideline or if there were some points for improvement by evaluating and interviewing stakeholders who use the program: children, parents, and nurses. The result of the pilot study showed in following details:

1) Feasibility of the program from all agreements of parents, children, and nurses confirmed that this program is good for ADHD children and their parent. It is

possible and can be good intervention in the child psychiatric clinic that ADHD children and their parents received many benefits from the program.

2) The suggestion for improvement and the revision as follow:

2.1) The behavior analysis is very difficult for parents and the example of behavior analysis is only one situation. Revision: the researcher helped parent to do behavior analysis by coaching and gave more examples. Created more example of behavior analysis in many situations.

2.2) The time schedule is limit for some parent who have no time to join the whole activities at that time. Revision: the researcher allowed the parents who cannot join the whole activities to leave some time and let them discuss in the chat Line.

2.3) The chat Line is silence and have not many comments from parents. Revision: the researcher made more information of ADHD knowledge, modification techniques, and strategies of taking care for ADHD children in the Chat Line group and then create the topic of discussion for parents and encourage them to discuss. The researcher made the chat Line group livelier by motivating or inspiring the parent to talk and comment in the group.

2.4) The mathematic group is so difficult and thinking group quite difficult for children age 6-9 years. However, the thinking group is very good for them to think about themselves. Revision; removed some group activities such as mathematic group because the children do not like it or change the proposition to be easier. Add some group activities that most children like it such as picture different

game, interrelationship group, and teamwork group. Re-arrange the questions in the thinking group into the simple way for children to think about themselves. Rearrange the reinforcement tables into one table, make it bigger, and then show on the board that all children can see it. Revise the detail of group activities for children to make it clear for nurse who use the Behavioral management of ADHD children for nurse booklet. Reconsider about the reward for children and give more explanations why they did not get the reward. Reorganize the parent group discussion into the suitable time in each week. In case of there are some parent have some question that need to provide more suggestions, the researcher make appointment in individual. Coaching how to do the homework for parent before finish the group in each week.

2.5) The reward for children is very good but all children want to get some rewards in each week. However, there are some children get the reward and some children did not get rewards.

2.6) There are so many reinforcement tables so it is hard for the second research assistant to record the whole documents.

2.7) The parent group discussion is take time in each week. The homework is not clear for some week such as deal with teacher for behavior modification in the class how parent can do.

2.8) Suggestion from children: make more picture different game and interrelationship group. Give more reward. Allow children to play during the

discussion group with parent. Do more group activities, or extend it in every semester because children love to meet their friends in the same condition.

The researcher revised the PICBMP following the suggestions from nurses, parents, and children. The evaluation guidelines helped the researcher to get answers from stakeholders.

2.2 The instrument used in the PICBMP

Two questionnaire instruments were used to assess children's behavior in experimentation. In this program, the second research assistant used the SDQ and OAS to assess behavior problems of children during therapeutic group activities. They were the Strengths and Difficulties Questionnaire (SDQ), and the Overt aggression scale (OAS).

2.2.1 The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioral screening questionnaire that includes 25 items, completed by the parents or teachers of 4-16-year-olds (Goodman, 1997). The SDQ comprise 5 scales of 5 items each. The scales include: 1) emotional symptoms subscale, 2) conduct problems subscale, 3) hyperactivity/inattention subscale, 4) peer relationships problem subscale, and 5) prosocial behavior subscale. The SDQ can be used for various purposes, including clinical assessment, evaluation of outcomes, research and screening. The SDQ is widely used to check behavior problems in children and has been translated into many languages including Thai. The Thai version of SDQ was tested for

psychometric properties the result was good validity, reliability, and tested for sensitivity, specificity, and accuracy was good The Cronbach's alpha was 0.7- 0.9.

Psychometric properties testing: the Thai version of the SDQ was tested for content validity by 5 experts, with the CVI = 0.90. The reliability was tested by submitting the questionnaire for trial use with 30 parents of ADHD children and was calculated by Cronbach's Alpha = 0.73.

2.2.2 The Overt aggression scale (OAS) is widely used in child psychiatry and translated into many languages including the Thai version. In this scale, aggression is divided into four categories: 1) verbal aggression, 2) physical aggression against objects, 3) physical aggression against self, and 4) physical aggression against others. In addition, specific interventions related to each aggressive event can be recorded on the OAS. It consists of 9 items of aggressive behavior. The Thai version of the OAS has been tested for psychometric properties.

Psychometric property testing:

The Thai version OAS was tested for content validity by 5 experts, with the CVI = 0.83. The reliability was tested by submitting the questionnaire for trial use with 30 parents of ADHD children and it was calculated by Cronbach's Alpha = 0.80.

3. The instrument for monitoring experimentation

The instrument for monitoring experimentation in this study was the checklist of parental practice. The research developed the checklist of parental practice

by use the practical guide for parent in this program and the skill of taking care for ADHD children. The checklist of parental practice is a questionnaire to check whether parents performed behavior management according to the commitment in the program. It was used by parents to check themselves and help them to practice all strategies of behavior management. The checklist consisted of 20 items of activities that parents should do to take care of their ADHD children. The 20 items consist of 6 dimension; 1) knowledge of ADHD = 2 items, 2) parent-child relationship (good relationship with children) = 2 items, 3) skill of taking care for ADHD = 6 items, 4) modification techniques = 6 items, 5) academic involvement = 2 items, and stress management =2 items.

Psychometric property testing:

The checklist of parental practice was tested for content validity by 5 experts. The CVI was 0.83. The reliability was tested by submitting the questionnaire to trial use with 30 parents of ADHD children and it was calculated with Cronbach's Alpha = 0.72.

Experimentation

The PICBMP was conducted at the activity rooms in a child and adolescent psychiatric clinic by the researcher, two research assistants, and a facilitator. The researcher worked as a therapist, the first research assistants provided the therapeutic group for ADHD children. The second research assistant assessed children's behavior problems. The protocol of the PICBMP is as follows:

The Procedure of the Parent Involvement-Child Behavioral Management Program

The Parent Involvement-Child Behavioral Management program (PICBMP) is a process of care for ADHD children and their parents that aims to manage child behavior making use of parental involvement. The PICBMP aims to reduce ADHD symptoms by managing factors that associate them. They include child-based factors: encouraging self-control through group activities, monitoring their behavior and daily life through behavior modification both from nurses and parents. This program focuses on aggressive behavior, distractive behavior (unable to finish task), socially inappropriate behavior (interfering with the group). The parental factors include: teaching and encouraging skills in taking care of ADHD children, behavior management, and stress management. The PICBMP consists of 2 booklets that are used as a handbook for nurses and parents:

1) The Parent Involvement-Child Behavioral Management Manual for the psychiatric nurse, and

2) The Caring for Children with ADHD: Guide for parents.

The PICBMP includes 4 steps as follows: 1) Needs assessment and preparedness for parents; 2) Behavior assessment and goal statement; 3) Behavior modification and enhancement of parents' skills in applying behavior modification and 4) Evaluation.

The objective of the program was to: 1) manage behavioral problems, increase desired behavior and decrease undesired behavior of children with ADHD (aggressive,

distractive and socially inappropriate behavior); 2) enhance parental involvement in the child's behavioral management by teaching parents about ADHD, and behavior modification; 3) increasing behavior management skills of the parent for their child at home by assigning homework. The program consists of 8 weeks of behavioral management.

Phase 1: Needs assessment and preparedness for parents (1st week): 3 hours

The researcher assesses the parents' needs, problems, and knowledge of ADHD, and skills in caring for ADHD children. The researcher provides group activities for the parent by teaching about ADHD, how to care for ADHD children, and behavior modification techniques.

This phase includes 2 steps as follows:

Step 1: Needs assessment: the researcher assessed parents' needs, problems, knowledge of ADHD, the skills required for caring for ADHD children, the parent-child relationship, and family attitudes towards the child's behavior. Also, the researcher reviewed the child's behavioral problems and observed the child's behaviors in an interview.

Step 2: Parent training and teaching: the program taught parents about ADHD, trained them in the skill of taking care for ADHD children, behavior modification techniques, using the SNAP-IV rating scale, the SDQ, the overt aggression scale, and the parental practice checklist.

Phase 2: Behavior assessment and goal statement (1st week): 30 minutes

The researcher assesses behavior problems and does behavior analysis by interviewing parents about their child's behavior. The researcher observes the child's behavior and collects behavioral data from the teacher, then analyzes the behaviors using the ABC.

Antecedent: The antecedent refers to the action, event, or circumstance that occurred before the behavior. Also known as the "setting event", the antecedent is anything that might contribute to the behavior. **B**ehavior: The behavior refers to what children do and is sometimes referred to as "the behavior of interest" or "target behavior." The behavior is either pivotal (it leads to other undesirable behaviors), a problem behavior that creates a danger for children or others, or a distracting behavior that removes the child from the instructional setting or prevents other students from receiving instruction. **C**onsequence: The consequence is an action or response that follows the behavior.

After the researcher and parent analyzed behaviors. The researcher negotiates with parents and child about the target behavior of therapy and then decides about the goal of behavior management together.

The researcher and research assistants provide parent group activities to teach about knowledge of ADHD, how to take care of ADHD children, train in the skills of taking care of ADHD children, behavior modification, using the SDQ, overt aggression scale, and stress management. The details as showed in Session 1.

Session 1: Phase I Needs assessment (the 1st week: 3 hours)

Objective:

1. To establish a relationship between the parents, children, and therapist.

2. To assess the parents' needs and problems.

3. To teach and train parents about ADHD, how to care for ADHD children, behavior management, and behavior modification techniques.

Nursing activities: The first 30 minutes of this session began with a program orientation and establishment of rapport between each participant and researchers (the researcher and 2 research assistants) to build trust and cooperation. The researcher assessed the parents' problems, needs and expectations, the parent's knowledge, and the parents' skills in taking care of the ADHD child. In the next 1 hour and 40 minutes, the participants were separated into 2 groups. The researcher conducted the parent training group and taught parents about ADHD, how to care for ADHD children, behavioral management, and behavioral modification techniques. The children participated in the therapeutic group conducted by research assistants.

The research assistants provided a therapeutic group for ADHD children. The therapeutic groups of this session comprised interrelationship groups 1 and 2. The group activities aimed to improve social skills, self-control, and desirable behaviors. During the group activity, children learned about how to make a relationship with other people in the right way, how to talk, wait their turn, and solve problems using a game. When children express or present aggressive, distractive, and socially inappropriate behavior, the therapist used behavior modification techniques. In the last session, for 10 minutes, the researcher instructed parents to practice these

techniques of behavioral management at home, and assigned the questionnaires and homework to parents.

Session I: Phase II: Behavior assessment and goal statement

Objective:

1. To establish a relationship between the parents, children, and therapist.

2. To assess children's behavior problems and perform behavior analysis.

3. To negotiate and set goals with parents and children.

Nursing activities: The researcher performed behavior analysis using ABC. The researcher taught parents about behavior analysis then negotiated with parents and children about target behavior and set goals for behavioral management. The researcher made an appointment with parents and asked permission to set a social media communication group (the Line group) of this project to communicate, consult, discuss, and trace homework with parents.

The results of the session 1 (Phase 1 and Phase 2);

The parent gained knowledge about ADHD. The average pre-test of knowledge of ADHD score was 10.40 while the average post-test score was 14.20 showing the parent could assess their child's behavior effectively. Most of the parents expected that this program would help them to deal with their children properly. The children's behavior problems included: 1) distracting behavior which prevented them from finishing tasks or homework, 2) aggressive behavior such as shouting, arguing, and hitting, 3) socially inappropriate acts such as blurting out, not waiting their turn.

The parents and children set goals as follows; 1) reduce the behavior problems such as aggressive, distracting behavior, blurting out, and other socially inappropriate acts, 2) increase intention to complete tasks, 3) give praise with activities and work well with their peers in the program.

Phase 3: Behavior modification and enhancement of parent's skill in applying behavior modification (2nd-7th weeks)

This step includes two main parts; behavior modification and repetition & practicing parent skills in behavior modification. ADHD children engaged in therapeutic group activities every week, 3 hours per week. The parent observe the group activities, learn, and discuss with researcher after finished the group activities.

1) Behavior modification consists of three steps that are therapeutic group activities, behavior assessment, and using behavior modification techniques.

Step 1: therapeutic groups aim to improve social skills, self-control, and desirable behaviors. The therapeutic groups consisted of an interrelationship group, a categorized group, a self-awareness group, exercise group, picture difference game, thinking group, mathematics group, teamwork group, and dancing group. The first research assistant worked as a group leader and the researcher worked as co-leader.

Step 2: assessment of aggressive, distractive, and socially inappropriate behavior; the researcher assessed aggressive, distractive, socially inappropriate behaviors during group activities. The assessment included characteristics, frequency,

and severity of the behaviors and the conditions occurring before their behaviors. In this step, the researcher worked as a therapist.

Step 3: Employing behavior modification techniques; when children present behavior problems (aggressive, distractive, socially inappropriate), the researcher used behavior modification for each individual child. The researcher demonstrated behavior modification techniques for parents who then observed and learned how to use behavior modification techniques from the researcher.

2) Repetition and practicing parent skills in behavior modification consisted of three steps:

Step 4: Review and practicing skills in behavior modification and parent-child interaction for parents; researchers discussed with parents how they used behavior modification, how to improve their skills and asked parents to discuss their experience or learning in this process. The researcher summarized behavior modification techniques and answered the parents' questions.

Step 5: Lessons learn and homework; the researcher summarized the lesson to learn in each group by encouraging children to express their opinion about learning in the group. Parents were encouraged to practice their skills in behavior modification not only in the clinic but also at home. In this step, the researcher asked parents to manage drug compliance for their child, taught parents about drug actions, and side effects.

Step 6: Researcher follow up of parent behavior management at home using social media, communicating, and advising parents about behavior management for their child.

In the PICBMP, the researcher was a therapist that provided behavior modification for children with ADHD, enhanced skills for parents, and managed the behavioral management program. Two research assistants were psychiatric nurses who graduated with at least a master's degree in mental health and psychiatric nursing, were experienced working in child psychiatry at least 5 years, and or passed postgraduate training in a child psychiatric nursing care program.

The first research assistant provided therapeutic groups for ADHD children. The second research assistant assessed the aggressive, distractive, and socially inappropriate behaviors using SDQ and OAS. During the therapeutic groups, when any ADHD children presented behavior problems, such as aggressive, distractive, or socially inappropriate behavior, the researcher (therapist) used the technique of behavior modification for those children. In the case of two children who showed a behavior problem at the same time, the second research assistant helped the researcher to do behavior modification. In the case of more than two children who showed behavior problems at the same time, the first research assistant helped the researcher and the second research assistant to apply behavior modification.

This phase conducted by Session 2-Session 7. The details as follow:

Session 2: Phase III; Behavior modification (2nd week)

Objective:

1. To assess the children's behavior problems (aggressive, distractive, socially inappropriate behavior) using ABC.

2. To decrease the behavior problems through application of behavior modification.

3. To increase the desirable behavior with the therapeutic group activities.

4. To train the parent in the real-life situations, to encourage parents to practice the skills for behavior modification in the home setting.

Nursing activities: 2 hours: the first 1 hour and 10 minutes, parents and children participated in group activities, and learned together in the group process. The last 45 minutes after taking a break, the parents and children were separated, with the children learning in therapeutic group activities while parents observed and discussed the lessons learned about behavior management with the researcher. Details as follows:

In the first 20 minutes, the researcher and the 1st research assistant provided the therapeutic group (interrelationship group) for children. The 1st research assistant worked as a group leader, the researcher as co-leader, and children as members of the group. For the interrelation group, everybody had to introduce themselves and everybody had to remember each others name. The leader asked the member to find a buddy and talk about themselves to the friend with details such as name, nickname, favorite color, etc.. The leader asked about each child one by one. In the next 30 minutes, the exercise group was provided. In this group, every member

had to act as a leader in the exercise 1 activity. The last 20 minutes was breaktime. Parents and children had a snack (fruit or dessert, juice, or milk) and went to the restroom. In this activity, children learned to share and wait their turn. Parents and children relaxed at the same time. After the break, the 1st research assistant conducted the Art group for children.

The parents observed the behavior modification techniques and learned from the researcher. The researcher used behavior modification techniques for children and demonstrated to parents at the same time. In the last session, for 10 minutes, the researcher discussed with the parents and children about lessons learned in the day's activity, encouraged parents to practice these techniques of behavioral modification at home, assigned homework, and made an appointment for the next session. The researcher gave a star sticker for children who participated well with no behavior problems in the whole session. The star sticker could be collected and exchanged for money.

The group activities aimed to improve social skills, self-control, and desirable behaviors. During the group activity, children learned about how to pay attention and participate with other people in the right way, how to talk, wait for their turn, and solved problems in a game. When children expressed aggressive, distractive, and socially inappropriate behavior, the researcher used behavior modification to address it. Meanwhile, the researcher demonstrated the techniques of behavior modification for parents and encouraged the parents to practice behavior modification techniques.

Session 3: Phase III: behavior modification (3rd week)

The objectives of this session were the same as Session 2.

Nursing activities: The content and timeline of this session are the same as session 2. The difference in this session was the therapeutic groups. For session 3, the therapeutic groups included an interrelationship group, an exercise group, and a categorized group. For the categorized group, the leader gave a picture to the members which consisted of many different objects. The member had to categorize them into groups.

Session 4: Phase III: behavior modification (4th week)

The objectives of this session were the same as Session 2.

Nursing activities: The content and timeline of this session are the same as session 2. The difference in this session was the therapeutic groups. For session 4, the therapeutic groups included: an interrelationship group, a ball game, and a home decoration group. For the ball game, the leader divided the members into 2 groups. Both groups had to race to throw a ball into a basket. The winner got a prize. In the home decoration group, the member got a worksheet which included different items scattered in the room. They then had to organize the room, such as the living room, or bedroom, to be orderly.

Session 5: Phase III: behavior modification (the 5th week)

The Objectives of this session were the same as Session 2.

Nursing activities: The content and timeline of this session are the same as session 2. The difference in this session was the therapeutic groups. For session 5, the therapeutic groups included: an interrelationship group, exercise group, and picture difference game. For the picture difference game, the leader gave a worksheet to the members which consisted of the same two pictures but with different details. The member had to find the different points in the pictures.

Session 6: Phase III: behavior modification (6th week)

The objectives of this session were the same as Session 2.

Nursing activities: The content and timeline of this session is the same as session 2. The difference in this session was the therapeutic groups. For session 6, the therapeutic groups included: an interrelationship group, teamwork group, and thinking group. The teamwork group was a race game in which the leader divided members into 2 groups. The member had to use their mouth to hold a drinking straw and take a rubber band into the straw and then pass it to the next member. The team who first finished passing the rubber band was the winner. The thinking group was for cognitive training in which the leader gave a worksheet which asked the members to think about

a situation to solve. There was one situation per worksheet and the members got different situations.

Session 7: Phase III: behavior modification (7th week)

The objectives of this session were the same as Session 2.

Nursing activities: The content and timeline of this session are the same as session 2. The difference in this session was the therapeutic groups. For session 7, the therapeutic groups included; an interrelationship group, an exercise group, and a thinking group. In the thinking group the leader gave a worksheet which asked the members to think about a situation to solve. There was one situation per worksheet and each member got different situations.

The results of Phase 3 (Session 2 – session 7);

Most of the children enjoyed the therapeutic groups. From 7 sessions of therapeutic groups, we found that the most common behavior problem was distractive behavior and most of the distractive behavior was talking with other children so those children did not finish their task in time. In the first session, most children engaged in most of the distracting, aggressive, and socially inappropriate behavior. These behavior problems decreased in the next session respectively (See chapter 4, Table 13). The children were able to increase desirable behavior such as completing the homework, remembering the teacher's orders, and controlling their behavior. The parents were satisfied with the program and learned behavior management, did the

homework and shared their experiences in the Line group. Most of the parents preferred the Line group and they asked to remain the Line group in the future to consult about problems in taking care of their ADHD children.

Phase 4: Evaluation (the 8th week)

The researcher evaluated the process of behavioral management, children's behavior, parents' knowledge, and skills of behavior management. This phase consisted of two steps as follows:

Step1: the researcher evaluated children's behaviors (aggressive, distractive, and socially inappropriate behaviors), parent's knowledge, and skills of behavior management.

Step 2: the researcher conducted a focus group to discuss with parents about learning, problems, obstacles, advantages, and disadvantages of the program. The researcher encouraged and empowered parents to do behavior management for their children continuously.

Session 8: Phase IV: Evaluation (8th week)

Objective:

1. To evaluate the children's behavior problems (aggressive, distractive, socially inappropriate behavior).
2. To evaluate the process of the PICBMP.
3. To explore the problem's using the PICBMP; advantages, disadvantages, and obstacles of the process.

4. To encourage the continuity of the parents' behavior management at home.

Nursing activities: 2 hours: the first 40 minutes, children participated in the therapeutic groups, learned together in the group process. The parents observed and learned from the therapist. The last 1 hour after taking a break (20 minutes), the parents discussed the learning experience about the PICBM program with a researcher by using a focus group. The details are as follows:

In the first 20 minutes, the researcher and the 1st research assistant provided the group activity (dance group) for children. The 1st research assistant was a group leader, the researcher a co-leader, and children were members of the group. For the dance group, everybody had to be a leader of 1 dance act (1 minute/dance) and everybody had to dance following the leader. In the next 20 minutes, the Jigsaw group was provided. In this group, the leader gave a Jigsaw game to members. Every member had to finish a Jigsaw game on time. The last 20 minutes was breaktime. Parents and children had a snack (fruit or dessert, juice, or milk) and went to the restroom. This activity, children learned to share and wait their turn while parents and children relaxed at the same time. After the break, the 1st research assistant conducted a Comics plus group for children. For the Comics plus group, the leader gave a worksheet containing cartoons, each with its different value. Children had to calculate the value of each row. Meantime, the parents attended the focus group. The 2nd research assistant helped in the focus group as the recorder. The focus group aimed to

explore the problems of using the PICBM program, obstacles, advantages, disadvantages of the program. Besides, the researcher received suggestions to improve the program as well. The researcher had to empower/encourage parents to practice behavioral management continuously at home.

The results from this session;

Parents felt satisfied with the program. They appreciated participating in the program and suggested that the clinic should maintain this program in the long-term and integrate it in the usual care to make sure that every ADHD child could get benefit from the PICBMP. The children were able to reduce their behavior problems such as poor attention, distractiong, and blurting out words. In short, they learned to control themselves. This program not only focused on the child's behavior but also required parent involvement in the child's learning process that will shape parent skills to take care of their child, use behavior modification techniques, and provide positive parent-child interactions. Advanced practice child psychiatric nurses should improve ADHD children's behavior and their parent's abilities in behavior management to manage their child's symptoms. The procedure of the PICBMP is summarized in Table 7.

Table 7 The summarization of the PICBMP

Week/ Duration	Phase/Activities	Responsible person	Instruments	Target person
Week1/ 3 hours	Phase1: Needs assessment and preparedness for parents -Assessing parent's needs, parent's problems, and knowledge of ADHD.	Researcher	-Need assessment questionnaire -knowledge of ADHD test	Parents

Week/ Duration	Phase/Activities	Responsible person	Instruments	Target person
	-Teaching parents about knowledge of ADHD, caring for ADHD children, behavioral management, and behavior modification techniques.	Researcher	-Parent's booklet	Parents
	Therapeutic group for children "interaction group1-2"	1st research assistant 2ndresearch assistant	Psychiatric nurse's booklet	Children
Week1/ 1 hour	Phase 2: Behavior analysis and state goal. -Assessing and analyzing children's behavior problems.	Researcher	Behavior analysis form	Children
	-Negotiate and set goals of behavioral management with parents and children.	Researcher	-	Parent &Children
	Therapeutic group for children "interaction group1-2"	1st research assistant 2ndresearch assistant	Psychiatric nurse's booklet	Children
Week 2-7/ 2 hours /week	Phase 3: Behavior modification and parent's skill of behavior modification enhancement - Conducting behavior modification	Researcher	Psychiatric nurse's booklet	Children
	Therapeutic group - interrelationship group, -categorize group, - self-awareness group, - exercise group, picture's -difference game, - Thinking group - mathematic group, - teamwork group, - dancing group.	1st research assistant 2ndresearch assistant	Psychiatric nurse's booklet	Children
	Behavior assessment and record	2ndresearch assistant	- SDQ - OAS	children
	-Practicing parent's skills in behavioral management	Researcher		Parents
	-Parent group: summarize behavior modification techniques, lesson learn discussion.	Researcher		Parents
	-Assigning homework for	Researcher		Parents

Week/ Duration	Phase/Activities	Responsible person	Instruments	Target person
	children and parents			
	-encouraging parent's behavioral management at home.	Researcher	Line group	Parents
Week 8/ 2 hours	Phase 4: Evaluation -Evaluating children's behaviors and parent's knowledge of caring for ADHD children, - Focus group discussion.	Researcher	-	Parents
	Therapeutic group - thinking group	1st research assistant 2ndresearch assistant		Children

Procedure in the Control Group

1. The participants who were assigned to the control group received a set of written materials on the date of data collection at baseline.

2. The participants in the control group completed questionnaires at the beginning of the program and 12th week after recruitment. Contact was kept with the control group by telephone calls at two points (start of program, and 12th week after recruitment) to remind them of dates of appointments.

3. The researcher made appointments with the subjects in the 12th week for the posttest. The time of the appointments depended on the health status of the subjects. During the time of the physician's visit, the subjects attended their usual care at a child and adolescent psychiatric clinic conducted by the psychiatric health care team.

4. The subjects got the Parent Involvement-Child Behavioral Management booklet on the day of assessment with the posttest.

Protection of human rights

The study proposal and all instruments were submitted to the Ethics Committee, Songkhlarajanagarindra Psychiatric Hospital for approval before data collection (IRB no. 10/2562). After obtaining permission to conduct a study from the administration of Songkhla rajanagarindra Psychiatric Hospital, the potential participants who met the study criteria were informed of the purpose, procedure, benefits, and risks of the study. The participants learned about behavioral management which helped them to take care of themselves and helped parents to do behavior management and take care of their child. The written information declared all the rights of the participants. The participants were informed of their rights to terminate at any time with no consequences at all. They were assured that their willingness to participate in the study had no implications for the health care services that they received. Their decisions to discontinue participating in the study did not affect their relationship with health care providers or their access to any services available at the hospital.

This intervention program presented no harm at all to the participants and did not interrupt the routine nursing care or medical care. It also provided effective nursing care to reduce ADHD symptoms of ADHD children and enhance parents' skills in behavioral management and take care of their child. Throughout the study process, the researcher attempted to avoid any possibility of discomfort, interference, over excessive response burden on the participants. Confidentiality of data collected was ensured both during and after data collection.

Data Analysis

The data were analyzed with SPSS Statistics (SPSS, Inc.). A p-value of less than .05 was considered statistically significant.

1. Data were analyzed as descriptive statistics such as frequency, percentage, means and standard deviation used to summarize the demographic data.

2. The difference of the SNAP-IV Rating Scale by t-test. Paired t-test was performed to compare the differences within the experimental group before and after completing the PIVBMP.

3. An independent t-test was performed to compare the differences of the SNAP-IV rating scale between the control group and the experimental group.

CHAPTER IV
RESEARCH RESULTS

This chapter reports descriptive demographics and clinical characteristics of the participants, descriptive statistics of variables, as well as the results of the hypothesis testing.

The purpose of this study was to investigate the effect of the Parent Involvement-Child Behavioral Management Program (PICBMP) on ADHD symptoms among children with ADHD. The sample included 64 children with ADHD and their parents who were treated at the child and adolescent psychiatric clinic, Songkhla rajanagarindra Psychiatric Hospital. The children whose characteristics met the inclusion criteria were randomized before they were assigned to either the experimental or control group, resulting in 32 children and their parents in each group. Children with ADHD in the experimental group participated in the PICBMP once a week for 8 sessions, whereas children with ADHD in the control group received conventional nursing care from clinic staff.

During the study, two patients in the experimental group dropped out because one of them failed to complete the session. One participant dropped out of the control group because the participant refused to assess the SNAP-IV rating scale. Thus, the numbers of participants in both groups were sixty. The parents rated the SNAP-IV before and after the PICBMP. The obtained data were analyzed with descriptive statistics and t-test. The research findings were presented in three parts as follows:

Part 1: Demographics and characteristics of the participants

Part 2: The results of hypothesis testing with the description of the dependent variables.

Part 3: Additional analysis

Part 1. Demographics and characteristics of the participants

Demographic characteristics of the samples on Gender, Age, Marital Status, Occupation, Education

Table 8 Children's demographic characteristics of the experiment and control groups

Characteristics	Control (N=30)	Experimental(N=30)	X^2 (df)	p-value
	Number (%)	Number (%)		
Gender				
Boys	22 (73.3)	23 (76.7)	.089	.766
Girls	8 (26.7)	7 (23.3)		
Age				
6-9 years old	14 (46.7)	19 (63.3)	1.684	.194
9-12 years old	16 (53.3)	11 (36.7)		
Mean=8.97, SD=1.67	9.05(1.8)	8.88(1.5)		
Person taking care of children				
Father and mother	22 (73.3)	18 (60.0)	.283	.186
Only mother	3 (10.0)	8 (26.7)		
Only the father	2 (6.7)	0		
Relative	3 (10.0)	4 (13.3)		
Experience in previous program participation				
No participated	27 (90.0)	28 (93.3)	.218	.640
Participated > 1	3 (10.0)	2 (6.7)		

Table 8, presents the demographic characteristics of the children with ADHD in the intervention and control group. The majority of the 60 children with ADHD aged 6-12 years old were 9-12 years old (= 53.3%) whereas the experimental group were 6-9 years old (=63.3%). Most of the children were male, present at 73.3 and 76.7 percent in control and experimental group, respectively. Most of the children in both groups had no experience participating in another intervention program. Most of the children lived with their father and mother.

Chi-square tests revealed no statistically significant difference between the control and the experimental group regarding gender, age, person taking care of children, and experience in previous program participation. This result shows that the demographic characteristics of both the control group and the experimental group were equal.

Table 9 Parent's demographic characteristics of the experiment and control groups.

Characteristics	Control (N=30)	Experimental(N=30)	X^2 (df)	p-value
	Number (%)	Number (%)		
Gender				
Male	4 (13.3)	3 (10.0)	.162	.688
Female	26 (86.7)	27 (90.0)		
Age				
25-35 years old	8 (26.7)	4 (13.3)	2.179	.336
36-45 years old	18 (60.0)	19 (63.3)		
46-60 years old	4 (13.3)	7 (23.3)		
Mean=40, SD=6.17	40(6.1)	41.5(5.3)		
Education				
Primary school	1 (3.3)	2 (6.7)	1.059	.901
High school &Vocational Cer.	4 (13.3)	2 (6.7)		
Diploma	8 (26.7)	9 (30.0)		
Bachelor Degrees	15 (50.0)	15 (50.0)		
Master Degrees /higher	2 (6.7)	2 (6.7)		
Occupation				
Government officials	16 (53.3)	14 (46.7)	1.911	.861
Company employees	2 (6.7)	4 (13.3)		
Agriculture	1 (3.3)	0		
Businessman/ merchant	4 (13.3)	5 (16.7)		
General employees	7 (23.3)	7 (23.3)		
Family income				
Insufficient	1 (3.3)	2 (6.7)	1.767	.413
Sufficient	12 (40.0)	16 (53.3)		
Sufficient & saving	17 (56.7)	12 (40.0)		
Supportive persons				
Yes	15 (50.0)	15 (50.0)	.000	1.000
No	15 (50.0)	15 (50.0)		

The 60 parents were aged from 31- 55 years old, most of the experimental group were 36-45 years old for a rate of 60 % while the figure was 63.3 % in the control group. The average age of parents = 40 (SD=6.175), and 41.5 (SD=5.302) in the control group and experimental group, respectively. The majority of parents were female at 86.7 % and 90% in the control group and experimental group, respectively. 50% of parents graduated with bachelor's degrees. Most of the parents worked as government officials for a rate of 53.3% and 46.7% in the control group and experimental group, respectively. In terms of family income, the control group was more affluent while the experimental group was sufficient.

Chi-square tests revealed no statistically significant difference between the control and the experimental group regarding gender, age, education, marital status, occupation, family income, and supportive person. This result shows that the demographic characteristics of both the control group and the experimental group were equal.

Part 2. The results of hypothesis testing with the description of the dependent variable.

Hypothesis: The children with ADHD who received the PICBMP would have significantly lower symptom scores than those who received only the usual care.

To answer the hypothesis, an independent t-test was performed. An independent t-test was used to test between-group differences when the samples differ concerning other extraneous variables. The two-samples independent t-test assume the following characteristics about the data:

(1) Independence of the observations. Each subject should belong to only one group. There is no relationship between the observations in each group.

(2) No significant outliers in the two groups

(3) Normality. The data for each group should be approximately normally distributed.

(4) Homogeneity of variances. The variance of the outcome variable should be equal in each group.

This study, the student t-test indicated that the distribution was normal on ADHD symptoms that included ADHD symptoms scores for the experimental group and control group ($p = .50$). Homogeneity of variance: the Levene's test demonstrated the equality of variance ($p = .72$) in ADHD symptoms score.

The independent t-test was used to compare ADHD symptoms between the experimental group and the control group at pretest and posttest.

Table 10 Comparison of ADHD symptoms between experimental and control group at pretest and posttest

intervention / ADHD symptoms		The PICBMP		Usual care		t	df	p-value
		Mean	S.D.	Mean	S.D.			
Inattention	Pretest	17.50	2.080	17.40	2.130	.181	58	.857
	Posttest	14.56	1.977	17.30	2.086	-5.208	58	.000*
Hyperactivity/ impulsivity	Pretest	14.63	2.311	14.53	2.300	.168	58	.867
	Posttest	12.26	2.362	14.40	2.313	-3.534	58	.001*
Opposition/ defiance	Pretest	11.80	2.510	11.36	2.355	.689	58	.493
	Posttest	10.33	2.468	11.30	2.365	-1.549	58	.127

Note: each symptom was rated on 0-3 score, the higher score showing great severity, the lower score showing improvement of symptoms

As can be seen in table 10, the T-test revealed that there was a significant difference between ADHD symptoms in the control group and the experimental group. ADHD symptoms of children with ADHD who received the PICBMP were significantly lower than the children who received the usual care pretest and posttest.

The mean score of inattention domain, hyperactivity/impulsivity domain, and the total ADHD symptom score was significantly decreased after the PICBMP when compared to the usual care.

Changes within the control group

Table 11 Comparison of ADHD symptoms before and after receiving the usual care.

ADHD symptoms	Pretest		Posttest		t	df	p-value
	Mean	S.D.	Mean	S.D.			
Inattention	17.40	2.190	17.30	2.086	.682	29	.501
Hyperactivity/ impulsivity	14.53	2.300	14.40	2.313	1.439	29	.161
Opposition/ defiance	11.36	2.355	11.30	2.365	1.439	29	.161

Note: each symptom was rated on 0-3 score, the higher score showing great severity, the lower score showing improvement of symptoms.

As seen in Table 11, the T-test revealed that there was no significant difference between ADHD symptoms before and after receiving the usual care. However, the ADHD symptom scores were slightly decreased in the inattention and hyperactivity/impulsivity domain.

Changes within the experimental group

Table 12 Comparison of ADHD symptoms before and after receiving the PICBMP.

ADHD symptoms	Pretest		Posttest		t	df	p-value
	Mean	S.D.	Mean	S.D.			
Inattention	17.50	2.080	14.56	1.977	9.933	29	.000*
Hyperactivity/ Impulsivity	14.63	2.311	12.26	2.362	12.544	29	.000*
Opposition/ Defiance	11.86	2.510	10.33	2.468	6.030	29	.000*

As indicated in Table 12, the t-test revealed that there was a significant difference between ADHD symptoms in children with ADHD before and after receiving the PICBMP. All scores for ADHD symptoms, including inattention, hyperactivity/impulsivity, and oppositional defiance were significantly decreased after receiving the PICBMP.

Part 3: Additional analysis

In this study, the additional analysis was to observe the improvement of ADHD symptoms after finishing the PICBMP overtime.

3.1 Decreasing of behavior problems in the experimental group.

During 8 weeks of the PICBMP, all behavior problems emerging were recorded by use SDQ and OAS questionnaires. The result found that all behavior problems were decreased as showed in Table 13.

Table 13 Frequency of behavior problem of children in experimental group *(n=30).*

Week / Behavior	1	2	3	4	5	6	p	8
SDQ (average frequency)								
-Restless	18	14	10	7	6	3	2	1
-Cannot finish the task	16	12	10	7	4	1	1	0
-Blurting out	12	9	7	5	4	2	1	1
-Do not wait for their turn	10	8	7	5	3	2	1	0
OAS (average frequency)								
-Verbal aggressive	4	3	2	1	2	1	0	0
-shouting	2	2	1	1	0	0	0	0
-Push other	2	1	0	0	1	1	0	0
-Physical harm	2	1	0	0	1	0	0	0

Noted: the number of behavior count in frequency, restless 18 mean that in the 2 hours of therapeutic group, the children in this group showed restless 18 times.

From Table 13, the behavior problem of children with ADHD who received the PICBMP were decreased continuously every week. For example, at the first week the children showed 18 time of restless during the group activities, and decrease into 10 at the 3rd week, then decrease to 6 at the 5th week, finally, its decrease to only 1 time at the last week. Similarly, verbal aggressive reduced from 4 times to 0. This result illustrated that the PICBMP help children to control themselves and decrease undesirable behavior.

3.2 A description of additional findings of the content analysis from the focus group.

The focus group was conducted after completion of the PICBMP. The objective of this focus group was to 1) evaluate the process of the PICBMP 2) explain the feelings of participants in, advantages, and disadvantages of the PICBMP. 30 parents participated in the focus group in the last session of the program. The researcher as a group leader that asked the question following semi-structure questions. The second research assistant as a group co-leader that record and asked some additional question if it necessary. The researcher did content analysis from records of the sessions. The conclusion of the content analysis is as follows:

1. *The PICBMP is a good program for ADHD children and parent*

Many parents agreed that the PICBMP is good and suitable for ADHD children, in particular, the steps of the activity, duration, group activity, and

discussion sessions. The examples of the program usefulness were provided by participants in the experimental group as follows.

"I learned to take responsibility for management of my children behaviors problem, learned the techniques of behavior modification, and encouragement."

"I love this program. It help me to work with my children. I knew other people in the same situation, not only just saw them but also deeply understanding them and I felt that I am not alone."

"I felt good when nurse give me many techniques through the Line group. I like to check every day what is new for today about ADHD."

"On second meeting time, we had group discussion. I thought I had friends who were in the same conditions as me. We could share problems and the way to solve it to each other. Without this program I may not think I can do it, I can deal with my child."

"This project was very useful for me and other people like us. I hope to participate the good project like this."

2. It helps parents to develop themselves

The PICMBP helps parents to work with their child properly, for instance, by using behavior modification techniques that make them reflect on themselves. They perceived the fact that everyone has their limitations even mothers and fathers. So, they learned that they have to make themselves better and continue to develop for the family.

"I learned from my child. When I try to use the techniques that you taught. At first I think it was not possible because you know I used to hear the techniques like this. After I attended more sessions I get it done. I think I can. My child is very special I just learn and observe and think in positive way with him."

"This program help me to grow up. At the first time I joined the program I think it will help my son to develop himself. Honestly, it help me to understand myself."

"I love the way you did with children. I learned from you and mothers in this group. It help me to understand many techniques. I can use the tips both from you and group. "

Many parents said after they tried to follow the practices of the program, they found that they can had more positive communications, and more positive relationships with their child. They stated that they learned many things from this program especially how to improve themselves and be more positive thinking.

3. Parents feel empowered

The parents mentioned that they did behavior management and learned from the group and their child. They feel more power and intend to continue the practice. They learned stress management and got some benefits that make them feel good.

All parents asked to establish this program in continuity at the child and adolescent psychiatric clinic. They prefer the line group application and asked to maintain it in the future as a medium for consultation.

"I felt I am lucky to join this program. I got many supporting from nurses and friends both in Line group and in the group activities. I have more power to deal with my daughter"

"I would like to express my gratefulness for your program, nurses and this clinic. I got knowledge to taking care my son especially the positive communication. I love your hug. Now, I hug my son every day and I felt we have more good relationship and it easy to ask him to do homework."

"I would like to speak for others, we would like to ask you to maintain the Line group, in case of somebody have some question or problems and then we can ask."

CHAPTER V
DISCUSSION AND RECOMMENDATIONS

This chapter reflects on the characteristics of the participants, hypothesis testing, conclusion, limitations, implications for nursing, and recommendations for future research.

Summary

The Parent Involvement-Child Behavioral Management Program (PICBMP) aimed to: 1) manage behavioral problems, increase desired behavior and decrease undesired behavior in children with ADHD (aggressive, distractive and socially inappropriate behavior), 2) enhance parents' involvement in child's behavioral management by teaching parents about ADHD, and behavior modification 3) encourage parents and children to practice behavior management at home by assigning homework. It was developed from behaviorally-based treatment theory and consisted of 4 phases, over 8 weeks, with consultation via social media line group. Phase1: needs assessment and preparedness for parents; assessing parent's needs, problems, and training the parents about knowledge ADHD, caring for ADHD children, medication management, and behavior management. Phase2: Behavior assessment and goal statement; behavior analysis, negotiating with parents and children to set goals together. Phase3: behavior modification and enhancing parents' skill in applying behavior modification. Phase 3 consists of 6 steps: therapeutic group activities, assessing aggressivity, distractive and socially inappropriate behaviors, behavior modification, demonstrating behavior modification techniques to parents,

repetition and practicing parents' behavior modification skills, enhancing parent-child interaction for parents, and summarizing lessons learned in each group and finally, encouraging parents' application of behavior management techniques at home by counseling and educating through Line group application. Phase 4: Evaluation: evaluation of the program using focus groups and empowering the parents to maintain the practices learned for their child.

The sample was composed of 60 children with ADHD and their parents receiving conventional nursing care at the child and adolescent psychiatric clinic, Songkhlarajanagarindra psychiatric Hospital. Patients whose characteristics met the inclusion criteria were included in the study. Simple random sampling using a random number table was used to assign children with ADHD and their parents into the experimental group or control group. The 30 children and their parents in the experimental group received the PICBMP + medication. The 30 children and their parents in the control group received conventional nursing plus medication. The results found that the ADHD symptoms score of children with ADHD who received the PICBMP were significantly lower than children with ADHD who received the usual care.

Discussion

Effect of the Parent Involvement-Child Behavioral Management Program

Hypothesis: the children with ADHD who received the PICBMP would have significantly lower symptom scores than those who received only the usual care.

An Independent t-test was used to test between-group differences. The results showed that the mean score of ADHD symptoms between 2 groups at pretest was not significantly different, while at posttest it was statistically different at the level of .05.

There was a significant difference between ADHD symptoms in the control group and the experimental group. ADHD symptoms of children with ADHD who received the PICBMP were significantly lower than the children who received usual care at pretest and posttest.

This means that the PICBMP is effective in reducing ADHD symptoms for school-age children with ADHD. To confirm the effectiveness, the researcher collected additional data of the SNAP-IV rating scale from the parents 2 months after finishing the program.

These findings support previous studies which indicated the effectiveness of behavior treatment (Russell A. Barkley, 2016; Chronis et al., 2006; George J. DuPaul et al., 2018; Elkins, Bond, & Curtis, 2019; Fabiano et al., 2009; Garrick Duhaney, 2003; Johnston et al., 2008; Mohammed, 2018; Veenman et al., 2019). The PICBMP demonstrated statistically significant and clinically substantial improvement in inattention symptoms and hyperactivity/impulsivity symptoms. The mean score on the ADHD symptoms (SNAP-IV) at posttest (1 month after the program) was 1.40 (mean score:calcucalted by total of 3 subset/items), which is somewhat lower than the scores obtained by Döpfner et al. (2020) in "Long-Term Course after adaptive Multimodal Treatment for Children with ADHD" on the SNAP ADHD rating scale, which was

about 1.44. However, when compared at the 8 year follow up, the scores obtained by Döpfner et al. (2020) was 0.78, which is somewhat lower than this study's score. Hence, long-term follow-up of the PICBMP needs more investigation.

This study finding confirms the effectiveness of behavior management on inattention symptoms and hyperactivity/impulsivity, with parents involved in the program, similar to the study of C. H. Webster-Stratton, Reid, and Beauchaine (2011) who investigated the combined parent and child training for young children with ADHD which was reported to have a positive effect in reducing inattentive, hyperactive, and oppositional behaviors. Moreover, many studies indicate the effectiveness of behavioral treatment in reducing ADHD symptoms (Dalrymple et al., 2019; Fabiano et al., 2009; Mitchell, 2010; Mohammad Reza, Ali Akbar, Nastaran, & Elham, 2016; Winstanley et al., 2006). So, it can be concluded that behavior modification for children that teaches them to learn how to control themselves and the group activities help them to improve their behavior. They can concentrate on the assignments and wait patiently for the group. The strategies of the PICBMP not only help children but also teach parents to apply behavior modification at home. These strategies can help children and parents improve their behaviors and control themselves.

Moreover, The PICBMP intervened with the factors influencing ADHD symptoms: children's behavior problems, parenting practice, the parent-child relationship, and parent stress. With respect to the children's behavior problems, the

program focused on modifying aggressive behavior, distractive behavior, and socially inappropriate behavior. Many studies have noted the association between these behaviors: that the more children exhibit these behaviors the greater the severity of ADHD symptoms. If this behavior is shaped and reduced, the ADHD symptoms can also reduce. Aggressive behavior is associated with the hyperactivity/ impulsivity domain. So, when children learn to control themselves through behavior modification, they can also control their aggressive tendencies, thereby decreasing the ADHD symptoms. This situation is similar to the report of the program in the last three sessions where aggressive behavior was rarely found. In fact, data indicating a decrease in aggressive behavior was found in throughout the program. The same goes for distractive and socially inappropriate behavior. Distractive behavior is associated with the inattention domain. In the PICBMP, the children learned to control themselves to finish their assignments while also studying with their peers. Thus, the inattention domain also decreased.

Regarding parent factors, the PICBMP first intervened in the parents' attitude by parent training and the use of discussion groups to establish good parent-child interactions and positive communication. These activities helped parents to look at the positive side of their child. Later, the PICBMP used behavior modification in managing real situations to demonstrate its effectiveness to the parents. By enhancing and empowering parents through not only face to face but also social media communication, the parents learned techniques of behavior modification, positive

communication, and stress management that contributed to their ability to manage their child. The effectiveness of these behavior management strategies has been indicated by many researchers who mentioned that the intensive behavioral program that use operant conditioning principles to address performance deficits can be effective, while behavior modification approaches can help staff improve behavior intervention to the long-term benefit of children (Daley et al., 2014; George J. DuPaul et al., 2018; Steven W. Evans et al., 2018; F. Miller & D. Lee, 2013; Mitchell, 2010; Pelham et al., 2014; Pelham et al., 2016).

The results of this study are supported by many previous studies that demonstrated the positive effect of behavior management on inattention symptoms, and hyperactivity/impulsivity symptoms (George J. DuPaul et al., 2018; Fabiano et al., 2009; Veenman et al., 2019; Villodas, McBurnett, Kaiser, Rooney, & Pfiffner, 2014; Wagner, 2011; C. Webster-Stratton & Herman, 2008; C. H. Webster-Stratton et al., 2011).The PICBMP focuses on the main behavior problems of ADHD i.e. distractive, aggressive, and socially inappropriate behavior. Behavior modification techniques and behavior analysis can help the parent to overcome the difficulties in taking care of their child (Lessing & Wulfsohn, 2015; Williford & Shelton, 2014). Furthermore, child behavior can be improved by following it with reward stimuli (positive reinforcement) or by removing aversive stimuli (negative reinforcement). Alternatively, behavior can be decreased by following it with aversive stimuli or by removing rewarding stimuli (i.e. extinction). With consistent use of contingency management over time, the child's behavior can be shaped to achieve desired goals. Behavior management treatment also

considers contingency theory principles alongside other factors including modeling and imitation of observed behaviors (e.g. parent behaviors) as well as cognitive factors (e.g. parental appraisals and attributions of child behavior) (Lessing & Wulfsohn, 2015; Linda J. Pfiffner & Lauren M. Haack, 2014). The parents learn behavior modification techniques, and check the behavior checklist to remind themselves of the techniques to take care of ADHD children. The line group application can help the parent consult and discuss their problems with the researcher and their peers throughout the program. Children with ADHD can learn from their peers in group activities and begin to control themselves. Hence, inattention and hyperactivity/impulsivity symptoms in the experimental group had significantly decreased.

In addition, supportive data from the parent focus group, after finishing the PICBMP, indicated that most of the parents reported that the PICBMP is suitable for ADHD children in terms of the steps of the activity, duration, group activity, and discussion sessions. They received many benefits from the strategies, especially behavior modification techniques. The PICMBP helped parents to work with their child properly, for instance, by using positive communication, and positive relationships. They learn many things from this program especially how to improve themselves and think more positively. All parents ask to establish this program continuity at the child and adolescent psychiatric clinic. They prefer the line group application and asked to maintain this channel for communication in the future to consult or discuss issues in the group.

The symptom score in the oppositional defiance disorder domain showed no significant difference between the experimental group and the control group. Even though this domain was added to the SNAP-IV and it was not the main aim of the study, this finding shows that oppositional defiance symptoms may require other strategies to improve. Oppositional defiance needs more time to modify symptoms because this domain was reduced in the follow-up period evaluation in the studies by Molina et al. (2009) and C. H. Webster-Stratton et al. (2011) which showed significant decreases in the long-term. However, researchers should take care to recheck the procedure of intervention that may help children and parents to reduce this symptom. It is important to be concerned about this symptom because more than 50% of ADHD children emerge with this symptom as a co-morbidity that increases severity (Adler et al., 2015).

Conclusion

This nursing intervention, the Parent Involvement Child Behavioral Management Program (PICBMP), provides holistic and behaviorally-based strategies to reduce ADHD symptoms, and to promote positive behaviors, and self-control in ADHD children. The program successfully modified behavior problems for children with ADHD, helped them to create desirable behaviors, and reduce undesirable behaviors. The PICBM also encourages parental skills and knowledge to assist them to take care of their child. The procedures of this program can be flexibly integrated into routine nursing care.

Limitations

This study has some limitations. Firstly, it was conducted in only one child and adolescent psychiatric clinic. To develop the best interventions, a more rigorous randomized controlled trial in many settings may be required to compare effectiveness of outcomes. Lastly, the symptoms score was assessed by the parents, which takes only one viewpoint into account. Additional evaluation from the teacher may be more effective so the researcher can compare both viewpoints in the symptom reports.

Implications for nursing

1. The psychiatric nurse can use this program as a guideline to apply behavior management in the clinic. The result of the focus group suggested the need to provide this program on an ongoing basis in the clinic.

2. With respect to certain limitations for actual practice, this program can be adapted to be flexible for application in the clinic, at home, or school setting.

3. To reach the best practice, the nurse can use this program as a trial and develop it as a development circle. Nurses can thus provide useful therapies for their patients and can develop their profession.

Implications for nursing education

At present, a trend in the curriculum in nursing education should focus on developing training for advanced nurse practitioners. Therefore, the knowledge of behavior management with parental involvement for ADHD children should be a part of this curriculum. Behavior management for children with ADHD using parent

involvement can be used as a simulation and as a guideline to promote early intervention for children with ADHD.

Recommendations for future research

1. This program can be studied in many settings to compare the results and confirm the rigorous procedures of the program.

2. This program should be replicated extending the long-term evaluation to 4-6 months. The long-term outcome should be evaluated with respect to concerns about the costs of intervention compared with the program's long-term effectiveness.

3. The effects of behavioral management should be studied by evaluating many outcomes rather than ADHD symptoms, such as social skills, or academic performance.

4. This program should evaluate outcomes from many viewpoints, such as using the teacher to rate the SNAP-IV compared to the parent.

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APPENDIX

APPENDIX A

THE EXPERTS AND VALIDATORS

The Name of Experts and Validators

1. **Professor Dr. Winutda Piyasil**

   Child and adolescent Psychiatrist

   Child and adolescent Psychiatric clinic

   Queen Sirikit National Institutes of Children Health

2. **Mr. Chukeirt Yongpittakom**

   Child and adolescent Psychiatrist

   Child and adolescent Psychiatric clinic

   Songkhla Rajanagarindra Psychiatric Hospital

3. **Associate Professor Dr. Wondee Sutharungsri**

   Department of Mental Health and Psychiatric Nursing,

   Faculty of Nursing, Prince of Songkla University

4. **Assistant Professor Dr. Walailuck Pumpuang**

   Department of Mental Health and Psychiatric Nursing,

   Faculty of Nursing, Mahidol University

5. **Mrs. Supawadee chumjit**

   Advance Psychiatric Practice Nurse, Department of Nursing,

   Yuwaprasat Waithayopathum Child Psychiatric Hospital

APPENDIX B

HUMAN SUBJECTS APPROVAL DOCUMENT

เอกสารเลขที่....๑๐..../๒๕๖๒

คณะกรรมการพิจารณาการศึกษาวิจัยในมนุษย์
โรงพยาบาลจิตเวชสงขลาราชนครินทร์

โครงการวิจัย: ผลของโปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น
The effect of parent involvement-child behavioral management program among children with ADHD

รหัสโครงการ: -

ผู้ดำเนินการวิจัย: นางอุบล วรรณกิจ

สถานที่ดำเนินการวิจัย: โรงพยาบาลจิตเวชสงขลาราชนครินทร์

ระยะเวลาดำเนินการวิจัย: ๑๒ เดือน

เอกสารที่อนุมัติ:

๑. โครงการวิจัย ลงวันที่ ๓๐ เดือน สิงหาคม พ.ศ. ๒๕๖๒
๒. ข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย ลงวันที่ ๓๐ เดือน สิงหาคม พ.ศ. ๒๕๖๒
๓. ใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย ลงวันที่ ๓๐ เดือน สิงหาคม พ.ศ. ๒๕๖๒
๔. แผนงานการดำเนินงานตลอดโครงการวิจัย ลงวันที่ ๓๐ เดือน สิงหาคม พ.ศ. ๒๕๖๒
๕. ประวัติผู้วิจัย

คณะกรรมการพิจารณาการศึกษาวิจัยในมนุษย์ โรงพยาบาลจิตเวชสงขลาราชนครินทร์ ได้พิจารณาโครงการแล้ว คณะกรรมการฯพิจารณาอนุมัติในแง่จริยธรรมให้ดำเนินการศึกษาวิจัยเรื่องข้างต้นได้ ทั้งนี้โดยยึดตามเอกสารฉบับภาษาไทยเป็นหลัก อนึ่ง ท่านต้องรายงานสถานะของโครงการให้คณะกรรมการฯทราบทุกปี เพื่อขออนุมัติดำเนินโครงการต่อจนกว่าจะหมดอายุโครงการ

รับรองตั้งแต่วันที่ ๓๐ เดือน สิงหาคม พ.ศ. ๒๕๖๒ ถึงวันที่ ๓๐ เดือน สิงหาคม พ.ศ. ๒๕๖๓

MRNHSP-2018 No 516

Certificate of Attendance

Ubon Wannakit

has successfully completed

Ethical principles for research involving humans
(Human subject protection)

The course included the following topics:

Module 1	History, principles, laws & regulations & international guidelines
Module 2	Informed consent process
Module 3	Privacy & confidentiality
Module 4	Risk& benefit assessment and risk minimization
Module 5	The ethics of research participant recruitment
Module 6	Research in vulnerable subjects/populations
Module 7	Institutional review board/ Ethics committee
Module 8	Responsible conduct for research and research misconduct

During 26 - 27 February 2018 At Bamrasnaradura Infectious Diseases Institute

Prof.Sirirurg Songsivilai, M.D., Ph.D.
Secretary-General
National Research Council of Thailand

Pravich Tanyasittisuntorn, M.D.
Director, Medical Research Network,
Medical Research Foundation

Prof.Tada Sueblinvong, M.D.
Chairperson
Forum for Ethical Review Committees in Thailand

APPENDIX C

CONSENT FORM and ASSENT FORM

เอกสารชี้แจงข้อมูล/คำแนะนำแก่ผู้เข้าร่วมการวิจัย(สำหรับกลุ่มทดลอง)

(Patient/Participant Information Sheet)

ชื่อโครงการ ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น

ชื่อผู้วิจัย นางอุบล วรรณกิจ

บุคคลและวิธีการติดต่อเมื่อมีเหตุฉุกเฉินหรือความผิดปกติที่เกี่ยวข้องกับการวิจัย

นางอุบล วรรณกิจ
คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11 ถนนพระราม1แขวงวังใหม่ เขตปทุมวัน กรุงเทพฯ 10330
โทรศัพท์ 089-4471548

ข้าพเจ้า นางอุบล วรรณกิจ นิสิตปริญญาเอก คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย มีความประสงค์ที่จะขอความร่วมมือจากท่านเพื่อให้เป็นผู้มีส่วนร่วมในการวิจัยเรื่อง “ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น” โดยรายละเอียดเกี่ยวกับการวิจัยมีดังนี้

1. การศึกษาวิจัยนี้เพื่อศึกษาผลของโปรแกรมการจัดการพฤติกรรรมสำหรับผู้ปกครองและเด็กต่ออาการสมาธิสั้นของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น

2. ประโยชน์ที่ได้จากงานวิจัยในครั้งนี้ จะช่วยให้เด็กสมาธิสั้นและผู้ปกครองได้รับการพยาบาลเพื่อจัดการพฤติกรรมที่ครอบคลุมมากยิ่งขึ้น พยาบาลจิตเวชเด็กและวัยรุ่นสามารถนำรูปแบบการจัดการพฤติกรรมนี้เป็นแนวทางในการจัดการพฤติกรรมสำหรับเด็กสมาธิสั้นและครอบครัวที่มารับการรักษาที่คลินิกจิตเวชเด็กและวัยรุ่นต่อไปในอนาคตได้ ซึ่งผลการศึกษาจะสามารถนำไปพัฒนาต่อยอดเพื่อการส่งเสริมพฤติกรรมของเด็กและผู้ปกครอง ให้ผู้ปกครองมีความรู้และพฤติกรรมการดูแลที่เหมาะสม เด็กกลุ่มนี้สามารถควบคุมพฤติกรรมของตนเองได้ ซึ่งจะส่งผลให้อาการของสมาธิสั้นของเด็กลดลง

3. ผู้เข้าร่วมโครงการวิจัยในครั้งนี้ คือ เด็กสมาธิสั้น (อายุ 6-12 ปี) และผู้ปกครองของเด็ก ที่รับการรักษาแบบผู้ป่วยนอก ในคลินิกจิตเวชเด็กและวัยรุ่น โรงพยาบาลจิตเวชสงขลาราชนครินทร์ ในเขตจังหวัดสงขลา

4. ผู้เข้าร่วมวิจัยจะได้รับการชี้แจงจากผู้วิจัยถึงวัตถุประสงค์ ขั้นตอนการเก็บข้อมูล โดยผู้วิจัยจะเข้าพบและจัดกิจกรรมการพยาบาลประกอบไปด้วย

- การสัมภาษณ์ข้อมูลส่วนบุคคล
- การจัดกิจกรรมการพยาบาลตามโปรแกรมการจัดการพฤติกรรม โดยผู้เข้าร่วมวิจัยมาร่วมกิจกรรมกลุ่ม 8 สัปดาห์ สัปดาห์ละครั้ง เวลา 2 ชั่วโมงต่อครั้ง
- การติดตามการทำกิจกรรมต่อเนื่องที่บ้านทางโทรศัพท์
- ประเมินการจัดกิจกรรมการพยาบาล
- การตอบแบบสอบถาม

โดยผู้วิจัยจะเข้าพบเด็กและผู้ปกครองที่คลินิกจิตเวชเด็กและวัยรุ่น โรงพยาบาลจิตเวชสงขลา จำนวน 8 สัปดาห์ สัปดาห์ละครั้ง ครั้งละ 2 ชั่วโมง และติดตามการทำกิจกรรมที่บ้านโดยการโทรศัพท์

5. การศึกษาครั้งนี้เป็นการจัดกิจกรรมการพยาบาลสำหรับเด็กและผู้ปกครองเป็นรายบุคคลและรายกลุ่ม โดยผู้ปกครองจะได้รับความรู้ในการดูแลเด็ก เช่น ความรู้เกี่ยวกับโรคสมาธิสั้น การจัดการกับพฤติกรรมที่ไม่พึงประสงค์ของเด็ก รวมถึงการวางแผนจัดการปัญหาในการดูแลอื่นๆ ส่วนเด็กจะได้รับการประเมินอาการและปัญหา จัดกิจกรรมเพื่อส่งเสริมพฤติกรรมที่ดีและปรับพฤติกรรมที่เป็นปัญหา ให้การพยาบาลเพื่อส่งเสริมทักษะทางสังคม ทักษะการควบคุมตนเอง และการจัดการกับงานที่ได้รับมอบหมาย ตลอดจนกิจกรรมทางกาย มอบหมายให้ทั้งผู้ปกครองและเด็กทำการบ้าน และติดตามผลทางโทรศัพท์และในสัปดาห์ถัดมา กิจกรรมเหล่านี้ ไม่มีผลข้างเคียงที่กระทบต่อด้านร่างกายและจิตใจทั้งต่อเด็กและ ผู้ปกครอง ผู้เข้าร่วมวิจัยมีสิทธิที่จะปฏิเสธการตอบแบบสอบถามหรือถอนตัวออกจากการศึกษาครั้งนี้ได้ทุกเวลาที่ต้องการ ทั้งนี้ การปฏิเสธจะไม่ก่อให้เกิดอันตรายหรือผลกระทบใดๆ ต่อการรักษาของเด็กในคลินิกจิตเวชเด็กและวัยรุ่น

6. หากผู้เข้าร่วมวิจัยมีข้อสงสัย สามารถสอบถามเพิ่มเติมจากผู้วิจัยได้โดยตรง หรือติดต่อผู้วิจัยได้ตลอดเวลาที่ นางอุบล วรรณกิจ โทร 089-4471548 หรือติดต่อตามที่อยู่ด้านบน และหากผู้วิจัยมีข้อมูลเพิ่มเติมที่เป็นประโยชน์หรือโทษเกี่ยวกับการวิจัย ผู้วิจัยจะแจ้งให้ผู้เข้าร่วมวิจัยทราบในทันทีเพื่อให้ผู้เข้าร่วมวิจัยทบทวนว่ายังสมัครใจจะอยู่ในโครงการวิจัยต่อไปหรือไม่

7. ข้อมูลที่ได้จากการตอบแบบสอบถามของผู้เข้าร่วมวิจัยจะถูกนำไปรวมกับข้อมูลของผู้เข้าร่วมวิจัยคนอื่นๆ ที่เข้าร่วมในการศึกษาครั้งนี้ โดยข้อมูลจะถูกเก็บเป็นความลับและผู้วิจัยจะใช้รหัสแทนที่ชื่อและนามสกุลของผู้เข้าร่วมวิจัยในแบบบันทึกข้อมูล หากผู้วิจัยตีพิมพ์ผลการศึกษา การรายงานผลการวิจัยจะเป็นการนำเสนอข้อมูลในภาพรวม การเปิดเผยข้อมูลเกี่ยวกับผู้เข้าร่วมวิจัยต่อหน่วยงานต่างๆ ที่เกี่ยวข้อง จะกระทำได้เฉพาะในกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น และผู้วิจัยจะทำการทำลายแบบสอบถามเหล่านั้นด้วยตนเองภายหลังเสร็จสิ้นการวิจัย

หนังสือยินยอมโดยได้รับการบอกกล่าวและเต็มใจ

(Informed Consent Form)

ชื่อโครงการ ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น

ชื่อผู้วิจัย นางอุบล วรรณกิจ

เลขที่ ของผู้เข้าร่วมการวิจัย .....

ข้าพเจ้าได้ลงนามด้านล่างของหนังสือเล่มนี้ และได้รับคำอธิบายอย่างชัดเจนจนเป็นที่พอใจจากผู้วิจัยชื่อ นางอุบล วรรณกิจ นิสิตปริญญาเอก คณะพยาบาลศาสตร์ จุฬาลงกรณ์ สถานที่ติดต่อ คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย โทรศัพท์ 089-4471548 ถึงวัตถุประสงค์และขั้นตอนการวิจัย ความเสี่ยงและประโยชน์ซึ่งจะเกิดขึ้นจากการวิจัยเรื่อง “ผลของโปรแกรมการจัดการพฤติกรรรมสำหรับผู้ปกครองและเด็กต่ออาการสมาธิสั้นของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น” ดังนี้

ข้าพเจ้าได้รับทราบว่า การศึกษานี้มีวัตถุประสงค์เพื่อ จะช่วยให้เด็กสมาธิสั้นและผู้ปกครองได้รับการพยาบาลเพื่อจัดการพฤติกรรมที่ครอบคลุมมากยิ่งขึ้น พยาบาลจิตเวชเด็กและวัยรุ่นสามารถนำรูปแบบการจัดการพฤติกรรมนี้เป็นแนวทางในการจัดการพฤติกรรมสำหรับเด็กสมาธิสั้นและครอบครัวที่มารับการรักษาที่คลินิกจิตเวชเด็กและวัยรุ่นต่อไปในอนาคตได้ ซึ่งผลการศึกษาจะสามารถนำไปพัฒนาต่อยอดเพื่อการส่งเสริมพฤติกรรมของเด็กและผู้ปกครอง ให้ผู้ปกครองมีความรู้และพฤติกรรมการดูแลที่เหมาะสม เด็กกลุ่มนี้สามารถควบคุมพฤติกรรมของตนเองได้ ซึ่งจะส่งผลให้อาการของสมาธิสั้นของเด็กลดลง ข้าพเจ้ารับทราบว่า ข้าพเจ้าเป็นผู้มีส่วนร่วมในการวิจัยที่มีจำนวนผู้เข้าร่วมวิจัย 60 คน โดยผู้วิจัยจะเข้าพบและจัดกิจกรรมการพยาบาลประกอบไปด้วย

- การสัมภาษณ์ข้อมูลส่วนบุคคล
- การจัดกิจกรรมการพยาบาลตามโปรแกรมการจัดการพฤติกรรม โดยผู้เข้าร่วมวิจัยมาร่วมกิจกรรมกลุ่ม 8 สัปดาห์ สัปดาห์ละครั้ง เวลา 2 ชั่วโมงต่อครั้ง
- การติดตามการทำกิจกรรมต่อเนื่องที่บ้านทางโทรศัพท์
- ประเมินการจัดกิจกรรมการพยาบาล
- การตอบแบบสอบถาม

โดยผู้วิจัยจะเข้าพบผู้เข้าร่วมวิจัย ที่คลินิกจิตเวชเด็กและวัยรุ่น โรงพยาบาลจิตเวชสงขลาราชนครินทร์ จำนวน 8 สัปดาห์ สัปดาห์ละครั้ง ครั้งละ 2 ชั่วโมง และติดตามการทำกิจกรรมต่อเนื่องที่บ้านทางโทรศัพท์

ข้าพเจ้า เข้าร่วมวิจัยในครั้งนี้ด้วยความสมัครใจ และมีสิทธิ์ที่จะถอนตัวออกจากการวิจัยนี้เมื่อใดก็ได้ตามความต้องการโดยไม่ต้องแจ้งเหตุผล ซึ่งการถอนตัวออกจากการวิจัยในครั้งนี้จะไม่มีผลกระทบใดๆ ต่อข้าพเจ้าและบุตรทั้งสิ้น ข้อมูลที่ได้จากการตอบแบบสอบถามของข้าพเจ้าจะใช้รหัสแทนที่ชื่อ และนามสกุลของผู้เข้าร่วมวิจัยในแบบบันทึกข้อมูล ผู้วิจัยจะรายงานผลการวิจัยเป็นข้อมูลแบบภาพรวม และรักษาข้อมูลที่แสดงว่าเป็นตัวข้าพเจ้าอย่างเป็นความลับ การเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆ ที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

หากข้าพเจ้ามีข้อสงสัยสามารถสอบถามเพิ่มเติมจากผู้วิจัยได้ตลอดเวลา

ข้าพเจ้าได้รับสำเนาเอกสารข้อมูลสำหรับกลุ่มประชากร หรือผู้มีส่วนร่วมในการวิจัย และใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัยแล้ว

ข้าพเจ้ายินดีเข้าร่วมการวิจัยครั้งนี้ ภายใต้เงื่อนไขที่ระบุไว้ในเอกสารข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย และลงนามในท้ายเอกสารเกิดขึ้น

ลงชื่อ.....(ผู้เข้าร่วมวิจัย)
ลงชื่อ.....(พยาน)
ลงชื่อ.....(พยาน)
วันที่.....

เอกสารชี้แจงข้อมูล/คำแนะนำแก่ผู้เข้าร่วมการวิจัย (สำหรับกลุ่มควบคุม)
(Patient/Participant Information Sheet)

ชื่อโครงการ ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น

ชื่อผู้วิจัย นางอุบล วรรณกิจ

บุคคลและวิธีการติดต่อเมื่อมีเหตุฉุกเฉินหรือความผิดปกติที่เกี่ยวข้องกับการวิจัย

นางอุบล วรรณกิจ
คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11 ถนนพระราม1แขวงวังใหม่ เขตปทุมวัน กรุงเทพฯ 10330
โทรศัพท์ 089-4471548

ข้าพเจ้า นางอุบล วรรณกิจ นิสิตปริญญาเอก คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย มีความประสงค์ที่จะขอความร่วมมือจากท่านเพื่อให้เป็นผู้มีส่วนร่วมในการวิจัยเรื่อง “ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น โดยรายละเอียดเกี่ยวกับการวิจัยมีดังนี้

1. การศึกษาวิจัยนี้เพื่อศึกษาผลของโปรแกรมส่งเสริมพฤติกรรมการป้องกันการติดเชื้อ ต่อพฤติกรรมการป้องกันการติดเชื้อ สำหรับผู้ดูแลผู้ป่วยเด็กวัยก่อนเรียนโรคมะเร็งเม็ดเลือดขาวชนิดเฉียบพลัน

2. ประโยชน์ที่ได้จากงานวิจัยในครั้งนี้ จะช่วยให้เด็กสมาธิสั้นและผู้ปกครองได้รับการพยาบาลเพื่อจัดการพฤติกรรมที่ครอบคลุมมากยิ่งขึ้น พยาบาลจิตเวชเด็กและวัยรุ่นสามารถนำรูปแบบการจัดการพฤติกรรมนี้เป็นแนวทางในการจัดการพฤติกรรมสำหรับเด็กสมาธิสั้นและครอบครัวที่มารับการรักษาที่คลินิกจิตเวชเด็กและวัยรุ่นต่อไปในอนาคตได้ ซึ่งผลการศึกษาจะสามารถนำไปพัฒนาต่อยอดเพื่อการส่งเสริมพฤติกรรมของเด็กและผู้ปกครอง ให้ผู้ปกครองมีความรู้และพฤติกรรมการดูแลที่เหมาะสม เด็กกลุ่มนี้สามารถควบคุมพฤติกรรมของตนเองได้ ซึ่งจะส่งผลให้อาการของสมาธิสั้นของเด็กลดลง

3. ผู้เข้าร่วมโครงการวิจัยในครั้งนี้ คือ เด็กสมาธิสั้น (อายุ 6-12 ปี) และผู้ปกครองของเด็ก ที่รับการรักษาแบบผู้ป่วยนอก ในคลินิกจิตเวชเด็กและวัยรุ่น โรงพยาบาลจิตเวชสงขลาราชนครินทร์ ในเขตจังหวัดสงขลา

4. ผู้เข้าร่วมวิจัยจะได้รับการชี้แจงจากผู้วิจัยถึงวัตถุประสงค์ ขั้นตอนการเก็บข้อมูล โดยผู้วิจัยจะเข้าพบและจัดกิจกรรมการพยาบาลประกอบไปด้วย

- การสัมภาษณ์ข้อมูลส่วนบุคคล
- การตอบแบบสอบถาม

โดยผู้วิจัยจะเข้าพบเด็กและผู้ปกครองที่คลินิกจิตเวชเด็กและวัยรุ่น โรงพยาบาลจิตเวชสงขลาราชนครินทร์ จำนวน 2 ครั้ง ครั้งละ 30-45 นาที

5. การศึกษาครั้งนี้เป็นการจัดกิจกรรมการพยาบาลตามปกติของทางโรงพยาบาล และเป็นการตอบแบบสอบถาม จึงไม่มีผลข้างเคียงที่กระทบต่อด้านร่างกาย และไม่มีผลกระทบต่อเด็กและผู้ปกครอง ผู้เข้าร่วมวิจัยมีสิทธิที่จะปฏิเสธการตอบแบบสอบถาม หรือถอนตัวออกจากการศึกษาครั้งนี้

ได้ทุกเวลาที่ต้องการ ทั้งนี้ การปฏิเสธจะไม่ก่อให้เกิดอันตราย หรือผลกระทบใดๆ ต่อการรักษาที่คลินิกจิตเวชเด็กและวัยรุ่น ของผู้เข้าร่วมวิจัย

6. หากผู้เข้าร่วมวิจัยมีข้อสงสัย สามารถสอบถามเพิ่มเติมจากผู้วิจัยได้โดยตรง หรือติดต่อผู้วิจัยได้ตลอดเวลาที่ นางอุบล วรรณกิจ โทร 089 4471548 หรือติดต่อตามที่อยู่ด้านบน และหากผู้วิจัยมีข้อมูลเพิ่มเติมที่เป็นประโยชน์หรือโทษเกี่ยวกับการวิจัย ผู้วิจัยจะแจ้งให้ผู้เข้าร่วมวิจัยทราบอย่างรวดเร็ว เพื่อให้ผู้เข้าร่วมวิจัยทบทวนว่ายังสมัครใจจะอยู่ในโครงงานวิจัยต่อไปหรือไม่

7. ข้อมูลที่ได้จากการตอบแบบสอบถามของผู้เข้าร่วมวิจัยจะถูกนำไปรวมกับข้อมูลของผู้เข้าร่วมวิจัยคนอื่นๆ ที่เข้าร่วมในการศึกษาครั้งนี้ โดยข้อมูลจะถูกเก็บเป็นความลับและผู้วิจัยจะใช้รหัสแทนที่ชื่อและนามสกุลของผู้เข้าร่วมวิจัยในแบบบันทึกข้อมูล หากผู้วิจัยตีพิมพ์ผลการศึกษา การรายงานผลการวิจัยจะเป็นการนำเสนอข้อมูลในภาพรวม การเปิดเผยข้อมูลเกี่ยวกับผู้เข้าร่วมวิจัยต่อหน่วยงานต่างๆ ที่เกี่ยวข้อง จะกระทำได้เฉพาะในกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น และผู้วิจัยจะทำการทำลายแบบสอบถามเหล่านั้นด้วยตนเองภายหลังเสร็จสิ้นการวิจัย

หนังสือยินยอมโดยได้รับการบอกกล่าวและเต็มใจ

(Informed Consent Form)

ชื่อโครงการ ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น

ชื่อผู้วิจัย นางอุบล วรรณกิจ

เลขที่ ของผู้เข้าร่วมการวิจัย .....

ข้าพเจ้าได้ลงนามด้านล่างของหนังสือเล่มนี้ และได้รับคำอธิบายอย่างชัดเจนจนเป็นที่พอใจจากผู้วิจัยชื่อ นางอุบล วรรณกิจ นิสิตปริญญาเอก คณะพยาบาลศาสตร์ จุฬาลงกรณ์ สถานที่ติดต่อ คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย โทรศัพท์ 089-4471548 ถึงวัตถุประสงค์และขั้นตอนการวิจัย ความเสี่ยงและประโยชน์ซึ่งจะเกิดขึ้นจากการวิจัยเรื่อง “ผลของโปรแกรมการจัดการพฤติกรรรมโดยผู้ปกครองมีส่วนร่วมต่ออาการของเด็กสมาธิสั้น คลินิกจิตเวชเด็กและวัยรุ่น”ดังนี้

ข้าพเจ้าได้รับทราบว่า การศึกษานี้มีวัตถุประสงค์เพื่อ จะช่วยให้เด็กสมาธิสั้นและผู้ปกครองได้รับการพยาบาลเพื่อจัดการพฤติกรรรมที่ครอบคลุมมากยิ่งขึ้น พยาบาลจิตเวชเด็กและวัยรุ่นสามารถนำรูปแบบการจัดการพฤติกรรรมนี้เป็นแนวทางในการจัดการพฤติกรรรมสำหรับเด็กสมาธิสั้นและครอบครัวที่มารับการรักษาที่คลินิกจิตเวชเด็กและวัยรุ่นต่อไปในอนาคตได้ ซึ่งผลการศึกษาจะสามารถนำไปพัฒนาต่อยอดเพื่อการส่งเสริมพฤติกรรมของเด็กและผู้ปกครอง ให้ผู้ปกครองมีความรู้และพฤติกรรมการดูแลที่เหมาะสม เด็กกลุ่มนี้สามารถควบคุมพฤติกรรมของตนเองได้ ซึ่งจะส่งผลให้อาการของสมาธิสั้นของเด็กลดลง ข้าพเจ้ารับทราบว่า ข้าพเจ้าเป็นผู้มีส่วนร่วมในการวิจัยที่มีจำนวนผู้เข้าร่วมวิจัย 60 คน โดยผู้วิจัยจะเข้าพบและจัดกิจกรรมการพยาบาลประกอบไปด้วย

- การสัมภาษณ์ข้อมูลส่วนบุคคล
- การตอบแบบสอบถาม

โดยผู้วิจัยจะเข้าพบผู้เข้าร่วมวิจัย ที่คลินิกจิตเวชเด็กและวัยรุ่น โรงพยาบาลจิตเวชสงขลาราชนครินทร์ จำนวน 2 ครั้ง ครั้งละ 30 – 45 นาที

ข้าพเจ้า เข้าร่วมวิจัยในครั้งนี้ด้วยความสมัครใจ และมีสิทธิ์ที่จะถอนตัวออกจากการวิจัยนี้

เมื่อใดก็ได้ตามความต้องการโดยไม่ต้องแจ้งเหตุผล ซึ่งการถอนตัวออกจากการวิจัยในครั้งนี้จะไม่มีผลกระทบใดๆ ต่อข้าพเจ้าและบุตรทั้งสิ้น ข้อมูลที่ได้จากการตอบแบบสอบถามของข้าพเจ้าจะใช้รหัสแทนที่ชื่อ และนามสกุลของผู้เข้าร่วมวิจัยในแบบบันทึกข้อมูล ผู้วิจัยจะรายงานผลการวิจัยเป็นข้อมูลแบบภาพรวม และรักษาข้อมูลที่แสดงว่าเป็นตัวข้าพเจ้าอย่างเป็นความลับ การเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆ ที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น หากข้าพเจ้ามีข้อสงสัยสามารถสอบถามเพิ่มเติมจากผู้วิจัยได้ตลอดเวลา

ข้าพเจ้าได้รับสำเนาเอกสารข้อมูลสำหรับกลุ่มประชากร หรือผู้มีส่วนร่วมในการวิจัย และใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัยแล้ว

ข้าพเจ้ายินดีเข้าร่วมการวิจัยครั้งนี้ ภายใต้เงื่อนไขที่ระบุไว้ในเอกสารข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย และลงนามในท้ายเอกสารเกิดขึ้น

ลงชื่อ.....(ผู้เข้าร่วมวิจัย)
ลงชื่อ.....(พยาน)
ลงชื่อ.....(พยาน)
วันที่.....

คำอธิบายโครงการวิจัยและการขอความยินยอมสำหรับเด็กอายุ 6-12 ปี

โครงการวิจัยนี้ทำขึ้นเพื่อจะศึกษาว่าน้องๆที่มารักษาในคลินิกสุขภาพจิตและจิตเวชเด็กและวัยรุ่นนี้มีอาการสมาธิสั้นเป็นอย่างไรเมื่อได้รับการดูแลโดยใช้โปรแกรมการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วม

พี่ชวนน้องเข้าร่วมโครงการนี้เพราะว่าน้องมีอายุระหว่าง 6-12 ปี มีสุขภาพแข็งแรงและมีอาการสมาธิสั้น ซึ่งพี่อยากจะศึกษาว่าน้องจะมีอาการสมาธิสั้นเป็นอย่างไรหลังจากได้รับการดูแลตามกิจกรรมโครงการนี้

ถ้าน้องยินดีร่วมโครงการนี้ น้องจะได้รับการปฏิบัติดังนี้

1. ตอบแบบสอบถาม เกี่ยวกับพฤติกรรมต่างๆของน้อง แล้วกำหนดพฤติกรรมเป้าหมายร่วมกับผู้ปกครอง
2. มาเข้าร่วมกิจกรรมกลุ่ม โดยมีเพื่อนๆรุ่นเดียวกับน้องประมาณ 10-12 คน โดยร่วมกิจกรรมกลุ่ม สัปดาห์ละ 1 ครั้ง ครั้งละ 2 ชั่วโมง จำนวน 8 ครั้ง
3. ขณะร่วมกิจกรรมกลุ่ม น้องมีอิสระที่จะแสดงออก แสดงความคิดเห็นและเล่นกับเพื่อนๆได้ตามกติกาของกลุ่ม โดยกลุ่มแต่ละครั้งจะแตกต่างกันออกไป เช่น กลุ่มสัมพันธุ์ น้องจะได้ทำความรู้จักกับเพื่อนในกลุ่มทุกคน กลุ่มบวกเลขหรรษา น้องจะได้รูปการ์ตูนที่มีค่าเป็นตัวเลข แล้วให้บวกเลข กลุ่มกายบริหาร น้องจะได้ออกกำลังกายร่วมกับเพื่อน เป็นต้น
4. มีการบ้านเล็กๆน้อยๆให้น้องเพื่อติดตามความก้าวหน้าของพฤติกรรม โดยพี่จะมีรางวัลเล็กๆน้อยๆสำหรับน้องที่ตั้งใจร่วมกิจกรรมตามกติกา
5. ผู้ปกครองหรือคุณพ่อหรือคุณแม่จะพาน้องมาร่วมกิจกรรม โดยผู้ปกครองจะอยู่รอจนน้องเสร็จกิจกรรม

งานวิจัยนี้มีความเสี่ยงน้อย พี่จะคอยดูแลน้องอย่างดี ไม่ให้น้องเหนื่อยเกินไป แต่ถ้าน้องรู้สึกไม่สบายใจ อึดอัด ไม่อยากเข้าร่วมในการวิจัยนี้ น้องสามารถบอกพี่ได้ตลอดเวลา และถ้าน้องหรือผู้ปกครองมีเรื่องสงสัยประการใดสามารถถามได้ พี่ชื่อ อุบล วรรณกิจ โทรศัพท์มือถือ 0894471548

พี่จะเก็บเรื่องส่วนตัวน้องเป็นความลับ ไม่เปิดเผยให้ใครทราบ

น้องได้อ่านและเข้าใจรายละเอียดของโครงการแล้ว

☺ **ถ้าน้องเต็มใจ เข้าร่วมในโครงการนี้**

ลงชื่อ .....

☹ **ถ้าน้องไม่เต็มใจเข้าร่วมโครงการนี้**

ลงชื่อ .....

APPENDIX D

INSTRUMNETS FOR DATA COLLECTION

แบบสอบถามความคาดหวังของผู้ปกครองในการเข้าร่วมโครงการ

โปรดกรอกข้อมูลในช่องว่าง และใส่เครื่องหมาย ✓ ในช่อง ❑ ที่ตรงตามความเป็นจริงของท่าน

ข้อมูลทั่วไปของเด็ก

1. เพศ ❑ ชาย ❑ หญิง
2. อายุ.....ปี
3. การศึกษา ❑ ไม่ได้เรียน
   ❑ กำลังเรียนชั้นประถมศึกษาปีที่.....
   ❑ กำลังเรียนชั้นมัธยมศึกษาปีที่.....
4. ลักษณะครอบครัว ❑ อาศัยอยู่กับทั้งพ่อและแม่ ❑ อาศัยอยู่กับแม่
   ❑ อาศัยอยู่กับพ่อ ❑ อาศัยอยู่กับผู้ดูแลที่เป็นญาติ
   ❑ อาศัยอยู่กับคนอื่นๆ.....(ระบุ)
5. เริ่มเข้ารับการรักษาที่คลินิกจิตเวชเด็กฯเมื่อ.....
6. เคยรับการรักษาจากที่ใดบ้าง.....
7. ยาที่ได้รับในปัจจุบัน.....
8. โปรแกรม/กิจกรรม/โครงการที่เคยเข้าร่วม.....
   .....

ข้อมูลผู้ปกครอง/ผู้ดูแล

1. เพศ ❑ ชาย ❑ หญิง
2. อายุ.....ปี
3. สถานภาพสมรส ❑ โสด ❑ คู ❑ หม้าย ❑ หย่า
   ❑ แยกกันอยู่ ❑ อื่นๆ ระบุ.....
4. ระดับการศึกษา ❑ ไม่ไดเรียน ❑ มัธยมศึกษาปลาย/ปวช.
   ❑ ประถมศึกษา ❑ อนุปริญญา/ปวส. ปริญญาตรี
   ❑ มัธยมศึกษาตอนต้น ❑ สูงกว่าปริญญาตรี
5. อาชีพ ❑ รับราชการ ❑ รัฐวิสาหกิจ ❑ พนักงานบริษัท ❑ เกษตรกรรม
   ❑ ค้าขาย ❑ รับจ้าง ❑ ว่างงาน ❑ อื่นๆ ระบุ.....
6. รายได้ ❑ ไม่เพียงพอกับค่าใช้จ่าย ❑เพียงพอกับค่าใช้จ่ายแต่ไม่เหลือเก็บ
   ❑ เพียงพอกับค่าใช้จ่ายและเหลือเก็บ
7. ความสัมพันธ์กับเด็ก ❑ พ่อ ❑แม่ ❑ ญาติสายตรง เช่น พี่ ป้า น้า อา ฯลฯ
   ❑ ผู้ดูแลที่ไม่ใช่ญาติสายตรง โดยไม่ได้รับค่าตอบแทน
   ❑ ผู้ดูแลที่ไม่ใช่ญาติ และรับค่าตอบแทน ❑ อื่นๆ .....(ระบุ)
8. ระยะเวลาที่ดูแลเด็ก.....ปี.....เดือน
9. ความช่วยเหลือ/สิ่งสนับสนุนในการดูแลเด็ก
   ❑ มีผู้ให้ความช่วยเหลือในการดูแล ❑ ไม่มีผู้ให้ความช่วยเหลือในการดูแล

ข้อมูลปัญหา/ ความต้องการ

1. ปัญหาในการดูแลที่ท่านหนักใจมากที่สุดในตอนนี้คืออะไร

.....

.....

2. ท่านคิดว่าเด็กมีปัญหาพฤติกรรมอะไรบ้าง

.....

.....

3. ปัญหาพฤติกรรมใดของเด็กที่ท่านต้องการแก้ไขมากที่สุด

.....

.....

4. พฤติกรรมที่ดีของเด็ก/ศักยภาพของเด็กที่ท่านเห็นคืออะไรบ้าง.....

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5. ท่านต้องการให้บุคลากรทางการแพทย์ช่วยเหลือในการดูแลเด็กอย่างไรบ้าง.....

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6. ท่านมีความคาดหวังอย่างไรในการเข้าร่วมโครงการวิจัยนี้.....

.....

แบบประเมินพฤติกรรม SNAP-IV

ชื่อเด็ก .....เพศ ..... อายุ .....ปี ชั้นเรียน.....

ผู้ตอบแบบสอบถามมีความสัมพันธ์กับเด็กเป็น .....วันที่ประเมิน .....

กรุณาทำเครื่องหมาย ✓ว่าอาการในแต่ละข้อนั้นตรงกับลักษณะของเด็กที่ท่านประเมินเพียงใด

	ไม่เลย	เล็กน้อย	ค่อนข้างมาก	มาก
1. มักไม่ละเอียดรอบคอบหรือสะเพร่าในการท างานต่าง ๆ เช่น การบ้าน				
2. ทำอะไรนานๆ ไม่ได้				
3. ดูเหมือนไม่ค่อยฟังเวลามีคนพูดด้วย				
4. มักทำการบ้านไม่เสร็จหรือทำงานที่ได้รับมอบหมายไม่สำเร็จ				
5. จัดระเบียบงานและกิจกรรมต่าง ๆ ไม่เป็น				
6. มักหลีกเลี่ยงกิจกรรรมที่ต้องใช้ความอดทนในการทำให้สำเร็จ				
7. ท าของหายบ่อยๆ (เช่นของเล่น, สมุดจดงาน, เครื่องเขียน ฯลฯ)				
8. วอกแวกง่าย				
9. ขี้ลืม				
10. มือเท้ายุกยิก นั่งบิดไปบิดมา				
11. นั่งไม่ติดที่ ชอบลุกจากที่นั่งในชั้นเรียนหรือจากที่ที่ควรจะนั่งเรียบร้อย				
12. วิ่งหรือปีนป่ายมากเกินควรอย่างไม่รู้กาลเทศะ				
13. เล่นหรือทำกิจกรรมเงียบๆ ไม่เป็น				
14. พร้อมจะเคลื่อนไหวอยู่เสมอ เหมือน “ติดเครื่อง” อยู่ตลอดเวลา				
15. พูดมาก				
16. มักโพล่งคำตอบออกมาก่อนจะฟังคำถามจบ				
17. ไม่ชอบรอคิว				
18. ชอบสอดแทรกผู้อื่น (เช่นพูดแทรกขณะผู้ใหญ่กำลังสนทนากัน)				
19. อารมณ์เสียง่าย				
20. ชอบโต้เถียงกับผู้ใหญ่				
21. ไม่ยอมท าตามสิ่งที่ผู้ใหญ่สั่งหรือวางกฎเกณฑ์ไว้				
22. จงใจก่อกวนผู้อื่น				
23. มักตำหนิผู้อื่นในสิ่งที่ตนเองทำผิด				
24. ขี้รำคาญ				
25. โกรธขึ้งบึ้งตึงเป็นประจำ				
26. เจ้าคิดเจ้าแค้น				

Cut off: Parent 16--13-15; Teacher 18-11-8

<u>การให้คะแนน</u> ไม่เลย = 0 เล็กน้อย = 1 ค่อนข้างมาก =2 มาก = 3

คิดคะแนนรวมในแต่ละ subset หากต้องการคิดคะแนนเฉลี่ยก็นำจำนวนข้อหารด้วยคะแนนรวม

การแปลผลคะแนน

เมื่อให้คะแนนแต่ละช่องแล้ว รวมคะแนนเป็น subset (รายด้าน) โดยแปลผลคะแนนดังนี้

ช่วงคะแนน / การแปลผล	ด้าน / จำนวนข้อ		
	ขาดสมาธิ ข้อ 1 – 9	**ซนอยู่ไม่นิ่ง/หุนหันพลันแล่น ข้อ 10 – 18**	**ดื้อต่อต้าน ข้อ 19 – 26**
อาการไม่ถึงระดับในการเป็นโรค	<13	<13	< 8
อาการเล็กน้อย	13 – 17	13 – 17	8 – 13
อาการปานกลาง	18 – 22	18 – 22	14 – 18
อาการรุนแรง	23 – 27	23 – 27	19 – 24

APPENDIX E
INSTRUMENTS FOR INTERVENTION
AND INSTRMENTS FOR MONITORING EXPERIMENTATION

INSTRNMENTS FOR INTERVENTION

คู่มือการจัดการพฤติกรรมเด็กสมาธิสั้นโดยผู้ปกครองมีส่วนร่วม สำหรับพยาบาลจิตเวช

โดย

อุบล วรรณกิจ

รศ.ดร.จินตนา ยูนิพันธุ์ อาจารย์ที่ปรึกษา

ผศ.ดร. ชนกพร จิตปัญญา อาจารย์ที่ปรึกษาร่วม

พ.ศ. 2562

คำนำ

โรคสมาธิสั้น (Attention Deficit Hyperactivity Disorder - ADHD) เป็นโรคที่ก่อให้เกิดปัญหาทางพฤติกรรมและการเรียนของเด็กวัยเรียนที่พบบ่อยที่สุด โดยมีความชุกเท่ากับร้อยละ 7 ในเด็กวัยเรียน ประมาณร้อยละ 50 ของเด็กสมาธิสั้นจะมีอาการต่อเนื่องจนถึงวัยผู้ใหญ่ โรคสมาธิสั้นมักจะมีภาวะแทรกซ้อนหลายด้าน ทั้งด้านสุขภาพทางกาย พฤติกรรม อารมณ์ และสังคม นอกจากนี้ยังส่งผลกระทบด้านลบ ได้แก่ เด็กสูญเสียโอกาสด้านการเรียน มีปัญหาสัมพันธภาพในครอบครัว รู้สึกด้อยคุณค่าในตนเอง มีพฤติกรรมเสี่ยงต่างๆ อีกทั้งมีความเสี่ยงต่อการใช้สารเสพติด และการก่ออาชญากรรม ส่งผลให้ครอบครัวเกิดความเครียดในการดูแล

การให้การดูแลรักษาที่มีประสิทธิภาพตั้งแต่เริ่มแรกในช่วงวัยเรียนจะช่วยป้องกันภาวะแทรกซ้อน, ผลกระทบ และช่วยลดปัญหาที่จะนำไปสู่ความสูญเสียทางการศึกษาและเศรษฐกิจเหล่านี้ได้ ซึ่งการดูแลรักษาที่มีประสิทธิภาพนั้น นอกจากบุคลากรพยาบาลซึ่งเป็นผู้ให้การดูแลที่ใกล้ชิดกับเด็กมากที่สุดแล้ว ครอบครัวหรือผู้ปกครองมีความสำคัญอย่างยิ่งเนื่องจากเป็นบุคคลสำคัญที่มีอิทธิพลต่อเด็ก การดูแลรักษาที่ผู้ปกครองมีส่วนร่วมด้วยอย่างเต็มที่และต่อเนื่องจึงเป็นสิ่งสำคัญต่ออาการที่ดีของเด็กสมาธิสั้น

โปรแกรมการจัดการพฤติกรรมเด็กสมาธิสั้นโดยผู้ปกครองมีส่วนร่วมนี้ มีวัตถุประสงค์เพื่อลดอาการสมาธิสั้นในเด็กวัยเรียนอายุ 6-12 ปี, ส่งเสริมการเรียนรู้ทางสังคมและการควบคุมตนเองของเด็ก ส่งเสริมและพัฒนาทักษะให้ผู้ปกครองมีความรู้ความสามารถในการดูแลและปรับพฤติกรรมเด็กสมาธิสั้นได้อย่างถูกต้อง โดยโปรแกรมนี้เป็นการจัดการกับปัจจัยที่มีผลต่ออาการสมาธิสั้น ซึ่งประกอบด้วย 1) ปัจจัยด้านพฤติกรรมเด็ก ใช้การปรับพฤติกรรม เพื่อให้เด็กได้เรียนรู้และแสดงออกผ่านกิจกรรม แล้วปรับพฤติกรรมโดยให้ผู้ปกครองมีส่วนร่วม 2) ปัจจัยด้านทักษะการดูแลของผู้ปกครองโดยโปรแกรมการจัดการพฤติกรรมนี้ ประกอบด้วย 4 ระยะ คือ ระยะประเมินความต้องการและเตรียมความพร้อมสำหรับผู้ปกครอง, ระยะประเมินและวิเคราะห์พฤติกรรมเด็ก, ระยะปรับพฤติกรรม, และระยะประเมินผลการจัดการพฤติกรรม ซึ่งประกอบด้วยคู่มือ 2 ฉบับ ได้แก่ ได้แก่ คู่มือการจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วมสำหรับพยาบาลจิตเวช และคู่มือการดูแลเด็กสมาธิสั้นสำหรับผู้ปกครอง

คณะผู้จัดทำหวังเป็นอย่างยิ่งว่า โปรแกรมการจัดการพฤติกรรมเด็กสมาธิสั้นโดยผู้ปกครองมีส่วนร่วมนี้ จะสามารถช่วยลดพฤติกรรมก้าวร้าว วอกแวก และพฤติกรรมทางสังคมไม่เหมาะสม และช่วยเพิ่มทักษะในการจัดการพฤติกรรมและการดูแลเด็กสมาธิสั้นในผู้ปกครองได้ ซึ่งทำให้อาการสมาธิสั้นลดลงได้ ตลอดจนสามารถนำไปใช้ในคลินิกได้อย่างต่อเนื่อง

อุบล วรรณกิจ
รศ.ดร.จินตนา ยูนิพันธุ์
ผศ.ดร.ชนกพร จิตปัญญา

การจัดการพฤติกรรมเด็กสมาธิสั้นโดยผู้ปกครองมีส่วนร่วม

หลักการและเหตุผล

โรคสมาธิสั้น (Attention Deficit Hyperactivity Disorder: ADHD) คือ กลุ่มอาการที่เกิดจากความผิดปกติของสมอง พบความชุกมากที่สุดในเด็กวัยเรียน ถึงร้อยละ 8-11 อาการสมาธิสั้นประกอบด้วย 3 อาการหลักคือ Inattention, Hyperactivity และ Impulsivity ทำให้เด็กมีความบกพร่องในการควบคุมตนเอง ซึ่งมีผลกระทบต่อพฤติกรรม อารมณ์ การเรียน การทำงาน การเข้าสังคมกับผู้อื่นอย่างชัดเจน และส่งผลกระทบที่รุนแรงต่อเด็กและครอบครัว เช่น ปัญหาการเรียนที่ทำให้เสียโอกาสด้านการศึกษา ปัญหาพฤติกรรมและอารมณ์ที่ทำให้สัมพันธภาพกับเพื่อนและครอบครัวไม่ดี มีความเสี่ยงต่อการใช้สารเสพติด และก่ออาชญากรรมในอนาคต หากไม่ได้รับการช่วยเหลือที่ถูกต้อง (Visanuyothin & P., 2013)

จากการศึกษาพบว่าปัจจัยที่ส่งผลต่ออาการสมาธิสั้น ได้แก่ ปัจจัยด้านตัวเด็กและปัจจัยด้านผู้ปกครอง โดยปัจจัยด้านตัวเด็ก ประกอบด้วย การมีโรคร่วม และปัญหาพฤติกรรมซึ่งเกิดจากความบกพร่องในการควบคุมตนเองจึงทำให้เด็กแสดงพฤติกรรมที่ไม่เหมาะสมทางสังคม และพฤติกรรมที่เป็นปัญหา ส่วนปัจจัยด้านผู้ปกครอง ได้แก่ ทักษะในการดูแลเด็กสมาธิสั้นของผู้ปกครอง และความเครียดของผู้ปกครอง ในด้านปัญหาพฤติกรรมของเด็กนั้น พบว่าพฤติกรรมที่มีความสัมพันธ์กับอาการสมาธิสั้น ได้แก่ พฤติกรรมก้าวร้าว โดยพบว่าเด็กสมาธิสั้นที่มีพฤติกรรมก้าวร้าวมักมีอาการของโรคสมาธิสั้นมากกว่า (Bezdjian et al., 2011; Brown, 2009; Sanguenkulchai, 2013) และยังพบว่าปัญหาพฤติกรรมที่พบบ่อยในเด็กสมาธิสั้นวัยเรียนคือ วอกแวก ทำงานไม่เสร็จ และพฤติกรรมทางสังคมไม่เหมาะสมซึ่งสัมพันธ์กับอาการสมาธิสั้นที่มากขึ้นด้วย

เนื่องจากอาการของโรคสมาธิสั้นส่งผลกระทบที่รุนแรง ดังนั้นการลดอาการสมาธิสั้นจึงเป็นเป้าหมายสำคัญในการให้การพยาบาลเด็กสมาธิสั้น จากการศึกษาพบว่าการดูแลรักษาที่ได้ผลดีในการลดอาการของเด็กสมาธิสั้น คือ การให้ยาร่วมกับการรักษาทางจิตสังคม(psychosocial intervention) หรือการจัดการพฤติกรรม (behavioral management) (Ryan & McDougall, 2009; Vierhile et al., 2009) ดังนั้นผู้วิจัยจึงสนใจลดอาการสมาธิสั้นโดยใช้การจัดการพฤติกรรมโดยผู้ปกครองมีส่วนร่วม โปรแกรมการจัดการพฤติกรรมนี้เป็นการจัดการดูแลแก่เด็กสมาธิสั้นที่มารับการรักษาที่คลินิคจิตเวชเด็กซึ่งประกอบด้วย1) การจัดการพฤติกรรมเด็กโดยพยาบาลผู้บำบัด 2) การพัฒนาทักษะการดูแลเด็กสมาธิสั้นแก่ผู้ปกครอง แล้วนำผู้ปกครองเข้ามามีส่วนร่วมในการดูแลและจัดการพฤติกรรมเด็กอย่างต่อเนื่องที่บ้าน

โปรแกรมการจัดการพฤติกรรมเด็กสมาธิสั้นโดยผู้ปกครองมีส่วนร่วมนี้ เป็นการจัดการกับปัจจัยที่ส่งผลต่ออาการสมาธิสั้นทั้ง 2 ประการดังกล่าว คือ 1) ปัจจัยด้านเด็ก คือ ปัญหาพฤติกรรม ประกอบด้วย 1.1) แสดงพฤติกรรมทางสังคมที่ไม่เหมาะสม ซึ่งเกิดจากความบกพร่องในการควบคุม

ตนเอง จัดการด้วยการส่งเสริมให้เด็กเรียนรู้การควบคุมตนเองผ่านกิจกรรมกลุ่ม การให้ความร่วมมือในกิจกรรม รู้จักการรอคอย จัดตารางกิจกรรมประจำวันร่วมกับผู้ปกครอง และผู้ปกครองคอยดูแลและกำกับให้เด็กสามารถควบคุมตนเองให้ทำตามตารางกิจกรรมได้ ซึ่งจะช่วยให้เด็กเรียนรู้การควบคุมตนเอง มีพฤติกรรมทางสังคมที่เหมาะสม 1.2) การแสดงพฤติกรรมที่เป็นปัญหา (ซึ่งได้แก่ พฤติกรรมก้าวร้าว วอกแวก ทำงานไม่เสร็จ) จัดการโดยการปรับพฤติกรรม และให้ผู้ปกครองมีส่วนร่วมในการปรับพฤติกรมเด็กที่บ้าน การใช้เทคนิคในการปรับพฤติกรรมจะช่วยลดพฤติกรรมที่ไม่พึงประสงค์และเพิ่มพฤติกรรมที่พึงประสงค์ ส่วนการมีโรคร่วมนั้น โปรแกรมนี้ไม่ได้จัดกระทำกับปัจจัยนี้ แต่ใช้วิธีการทางสถิติเพื่อลดปัจจัยแทรกซ้อนจากการมีโรคร่วมโดยจับคู่ผู้เข้าร่วมโครงการเป็นเด็กสมาธิสั้นที่ไม่มีโรคร่วม 2) ปัจจัยด้านผู้ปกครอง ได้แก่ ทักษะการดูแลเด็กสมาธิสั้นของผู้ปกครองและการจัดการความเครียด โปรแกรมนี้จัดการให้ผู้ปกครองมีทักษะในการดูแลเด็กสมาธิสั้น ซึ่งทักษะการดูแลเด็กสมาธิสั้นของผู้ปกครอง ประกอบด้วย 2.1) ความสามารถในการดูแลและช่วยให้เด็กควบคุมตนเองได้ (ความรู้เรื่องโรคและวิธีการดูแลเด็กสมาธิสั้น ส่งเสริมการจัดตารางกิจกรรม ความรับผิดชอบ ระเบียบวินัยแก่เด็ก และการสื่อสารเชิงบวก) 2.2) ความสามารถในการปรับพฤติกรรม 2.3) การช่วยเหลือด้านการเรียนของเด็ก 2.4) ทักษะในการจัดการความเครียดของผู้ปกครอง โดยจัดกลุ่มพัฒนาความรู้ ทักษะการดูแลและการปรับพฤติกรรมแก่ผู้ปกครอง และติดตามส่งเสริมการดูแลต่อเนื่องผ่านกลุ่มแชทออนไลน์และโทรศัพท์ติดตามเพื่อให้คำปรึกษาและช่วยเหลือในการดูแล เพื่อให้ผู้ปกครองสามารถจัดการพฤติกรรมของเด็กได้อย่างต่อเนื่อง

เมื่อเด็กได้รับการดูแลจัดการพฤติกรรมทั้งจากพยาบาลผู้บำบัดและจากผู้ปกครอง เด็กจะเกิดการเรียนรู้ในการควบคุมตนเอง ปรับเปลี่ยนพฤติกรรมได้ดีขึ้น ส่วนผู้ปกครองเมื่อได้เรียนรู้จากทั้งพยาบาลผู้บำบัดและแลกเปลี่ยนประสบการณ์กับกลุ่มผู้ปกครองด้วยกัน จะเกิดการพัฒนาวิธีการดูแล จนสามารถให้การดูแลและปรับพฤติกรรมเด็กได้อย่างต่อเนื่อง อีกทั้งผู้ปกครองเรียนรู้การจัดการความเครียดของตนเองผ่านการให้คำปรึกษาจากพยาบาลผู้บำบัดและกลุ่มเพื่อน ซึ่งสามารถปรึกษาทั้งส่วนตัวและผ่านกลุ่มแลกเปลี่ยนเรียนรู้ รวมถึงกลุ่มแชทออนไลน์ ซึ่งกระบวนการเหล่านี้จะช่วยลดอาการสมาธิสั้นของเด็กลงได้ในที่สุด ซึ่งในโปรแกรมนี้ให้คำจำกัดความปัญหาพฤติกรรมของเด็กสมาธิสั้นและทักษะการดูแลของผู้ปกครอง ดังนี้

พฤติกรรมก้าวร้าวของเด็กสมาธิสั้น หมายถึง การแสดงออกด้านการกระทำหรือวาจาที่คุกคามหรือละเมิดต่อบุคคลอื่นทั้งด้านร่างกาย จิตใจ ได้แก่ ตี ชก ต่อย กัด ผลัก และหรือการใช้วาจาคุกคาม ด่าทอด้วยคำหยาบคาย ในการศึกษานี้ให้ความหมายรวมการกระทำที่เด็กกระทำต่อบุคคลอื่นทั้งด้านร่างกายและจิตใจ ดังนั้น โปรแกรมจัดการพฤติกรรมสำหรับพฤติกรรมก้าวร้าวนี้ จึงมุ่งเน้นให้ เด็กมีพฤติกรรมด้านบวกคือ มีการแสดงออกทั้งทางกาย วาจาหรือการเล่นกับคนอื่นอย่างสุภาพ ไม่คุกคาม/ละเมิดคนอื่น

คู่มือการดูแลเด็กสมาธิสั้นสำหรับผู้ปกครอง

โดย

อุบล วรรณกิจ

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พ.ศ. 2562

คำนำ

โรคสมาธิสั้น (ADHD: เอดีเอชดี) คือ กลุ่มอาการที่เกิดจากความผิดปกติของสมอง พบความชุกในเด็ก วัยเรียนมากที่สุดถึงร้อยละ 7 กลุ่มอาการนี้ ประกอบด้วย อาการขาดสมาธิ, ซน อยู่ไม่นิ่ง, และอาการหุนหัน พลันแล่น ทำให้ส่งผลกระทบต่อพฤติกรรม อารมณ์ การเรียน การทำงาน หรือการเข้าสังคมกับผู้อื่นอย่างชัดเจน ซึ่งต้องการการช่วยเหลือดูแลอย่างถูกต้องจากผู้มีส่วนเกี่ยวข้อง ทั้งพ่อแม่หรือผู้ปกครอง ครู พยาบาลแพทย์ที่ให้การรักษาอย่างเหมาะสม โดยเฉพาะอย่างยิ่งพ่อแม่หรือผู้ปกครองเป็นบุคคลที่มีบทบาทมากที่สุดในการดูแลช่วยเหลือเด็ก

เด็กสมาธิสั้นมักมีความบกพร่องในการควบคุมพฤติกรรมของตนเอง และมีปัญหาในการดำเนินชีวิตประจำวันในหลาย ๆ ด้าน ทำให้ผู้ปกครองมีความยากลำบากในการดูแล และอาจจัดการด้วยวิธีการที่ไม่เหมาะสม เช่น ลงโทษด้วยการดุว่า ตี เป็นต้น ซึ่งอาจทำให้เด็กปรับตัวได้ลำบากและมีปัญหาพฤติกรรม อารมณ์อื่นๆตามมาได้ หากผู้ปกครองมีความรู้ความเข้าใจเรื่องโรคและการดูแลที่ถูกต้อง แล้วนำไปปฏิบัติในการดูแลเด็กอย่างต่อเนื่อง จะช่วยให้บัญหาต่างๆของเด็กบรรเทาเบาบางลงได้

คู่มือการดูแลเด็กสมาธิสั้นสำหรับผู้ปกครองฉบับนี้เป็นส่วนหนึ่งของโครงการวิจัยเพื่อจัดการพฤติกรรมเด็กสมาธิสั้นโดยผู้ปกครองมีส่วนร่วม โดยใช้เป็นแนวสำหรับผู้ปกครองในการดูแลและปรับพฤติกรรมเด็กอย่างถูกต้อง เนื้อหาประกอบด้วย 4 ส่วนคือ ส่วนที่ 1 โครงการจัดการพฤติกรรมโดยสรุป ส่วนที่ 2 ความรู้เกี่ยวกับโรคสมาธิสั้น ส่วนที่ 3 เคล็ดลับต่างๆในการดูแลเด็กสมาธิสั้น และส่วนที่ 4 การปรับพฤติกรรม อันจะช่วยให้ผู้ปกครองได้รับความรู้ วิธีการดูแลและเทคนิคการปรับพฤติกรรมเด็กสมาธิสั้น และได้รับประโยชน์จากการนำไปใช้ในการจัดการพฤติกรรมบุตรหลานของตนเองจนสามารถให้การดูแลและปรับพฤติกรรมเด็กสมาธิสั้นมากขึ้นและนำไปใช้ได้อย่างถูกต้องมีประสิทธิภาพ ซึ่งจะส่งผลให้เด็กสามารถพัฒนาและปรับปรุงพฤติกรรมตนเอง และลดอาการสมาธิสั้นได้

อุบล วรรณกิจ
รศ.ดร.จินตนา ยูนิพันธุ์
ผศ.ดร.ชนกพร จิตปัญญา

สารบัญ

INSTRMENTS USED IN THE INTERVENTION

แบบวัดความรู้ในการดูแลเด็กสมาธิสั้นของผู้ปกครอง

คำชี้แจง: คำถามต่อไปนี้เป็นการสอบถามเกี่ยวกับความรู้ในการดูแลและปรับพฤติกรรมเด็กสมาธิสั้น โปรดทำเครื่องหมาย ✓ หน้าข้อความที่ท่านคิดว่าถูกต้อง และใส่เครื่องหมาย ✗ หน้าข้อความที่ท่านคิดว่าไม่ถูกต้องเกี่ยวกับการดูแลและปรับพฤติกรรมเด็กสมาธิสั้น

.....1. โรคสมาธิสั้นมีอาการเด่น 3 อาการคือ ก้าวร้าว ซน อยู่ไม่นิ่ง และ หุนหันพลันแล่น

.....2. โรคสมาธิสั้นจะส่งผลเสียทั้งด้านพฤติกรรม อารมณ์ การเรียน และการปฏิสัมพันธ์กับคนอื่น

..... 3. เมื่อเด็กสมาธิสั้นแสดงพฤติกรรมที่ไม่ดี ผู้ปกครองควรบอกเด็กให้ชัดเจนว่าพฤติกรรมนั้นทำไม่ได้ และไม่ตำหนิเด็ก

.....4. ยาที่ใช้รักษาจะออกฤทธิ์ทำให้สมองส่วนที่ทำหน้าที่ต่าง ๆ กลับมาทำหน้าที่ได้ ทำให้มีอาการดีขึ้น ควบคุมสมาธิได้ดีขึ้น ตั้งใจทำงาน เรียนรู้เรื่อง

.....5. หากเด็กมีพฤติกรรมดื้อ ไม่เชื่อฟัง ควรมีการบังคับหรือออกคำสั่งตรงๆกับเด็ก เพื่อให้เด็กเชื่อฟังมากขึ้น

.....6. ไม่จำเป็นต้องจัดทำตารางเวลาที่ชัดเจนว่า กิจกรรมในแต่ละวันที่เด็กต้องทำมีอะไรบ้าง ตั้งแต่ตื่นนอน จนกระทั่งเข้านอน เพราะจะทำให้เด็กเครียดและกดดัน

.....7. การให้แรงเสริมทางบวก ควรปรับเปลี่ยนแรงเสริมให้สอดคล้องกับความต้องการของเด็ก

.....8. การตีหรือการลงโทษทางร่างกาย เป็นวิธีปรับพฤติกรรมที่ดีเพราะทำให้เด็กควบคุมตนเองได้มากขึ้น

.....9. การอธิบายให้เด็กเข้าใจเรื่องการกินยาโดยบอกว่าเขาเป็นโรคสมาธิสั้นซึ่งยาช่วยให้เขาควบคุมสมาธิและตั้งใจเรียนได้ดีขึ้น จะเป็นการตอกย้ำให้เด็กรู้สึกไม่ดี ดังนั้นควรให้เด็กกินยาโดยไม่ต้องอธิบายมาก

.....10. การออกคำสั่งเตือนให้หยุด ควรเรียกชื่อเด็ก มองไปที่เด็กแม้ว่าเด็กจะไม่มองคุณ ใช้คำง่ายๆ สั้นๆ กระชับ และน้ำเสียงปกติ

.....11. การออกคำสั่ง สามารถชี้นิ้ว กอดอก และใช้อารมณ์ได้ เพื่อให้เด็กรู้ว่าหากโดนใช้อารมณ์บ้างจะรู้สึกอย่างไร

.....12. หากเด็กทำผิด อาจไม่จำเป็นต้องลงโทษตามที่ตกลงกันไว้ ควรมีการอลุ้มอล่วยได้บ้าง เพราะหากทำ ตามข้อตกลงตลอด อาจทำให้เด็กเครียด

.....13. ควรจัดสถานที่เงียบๆ ให้เด็กทำงาน อ่านหนังสือ โดยไม่มีใครรบกวน และไม่มีสิ่งที่ทำให้เด็กเสียสมาธิ

.....14. ควรตั้งกฎกติกากับเด็กให้ชัดเจน และแบ่งงานออกเป็นขั้นย่อย ๆ แล้วให้ค่อยๆ ทำไป

.....15. ควรขอความร่วมมือคุณครู ช่วยตรวจการจดการบ้านเด็กทุกวัน และผู้ปกครองก็ต้องตรวจสมุดจดการบ้านทุกวันและกำกับให้ให้เด็กทำด้วย

แบบสังเกตพฤติกรรมก้าวร้าวของเด็กสมาธิสั้น

ชื่อ -สกุล ดช. /ดญ..... อายุ .....ปี ผู้สังเกต (ความสัมพันธ์).....

โปรดใส่เครื่องหมาย / ในช่องที่พบพฤติกรรมนั้นๆครั้งละ 1 ทุกครั้งที่พบพฤติกรรม

พฤติกรรม / ความถี่	สัปดาห์ที่ .....วันที่.....เวลา.....		
	กิจกรรมที่ 1	กิจกรรมที่ 2	รวมคะแนน
1. ตะโกนเสียงดังด้วยความโกรธ			
2. พูดต่อว่าไม่รุนแรง			
3. ปิดประตูดังหรือทุบโต๊ะ			
กระทืบเท้า			
4. แช่งด่า ใช้คำหยาบคาย ต่อคนอื่นหรือตนเอง			
5. ขว้างของลงพื้น			
ผลัก เตะโต๊ะ เก้าอี้ โดยไม่แตกหัก			
6. แกว่งเท้าใส่ผู้อื่น			
ดึง/กระชากเสื้อผ้าผู้อื่น			
7. ขว้างปาสิ่งของรุนแรงจนของแตก			
เตะประตู ต่อยหน้าต่างจนแตก/พัง			
8. คุกคามผู้อื่นด้วยความรุนแรง เช่น ตะโกนเสียงดังใส่หน้าหรือทำเสียงขู่			
9. ทำร้ายตนเอง/ผู้อื่นจนบาดเจ็บเล็กน้อย เช่น เป็นแผล ช้ำ ถลอก ตีผู้อื่น			
กำหมัดต่อยสิ่งของ			
กำหมัดต่อยต่อยผู้อื่น			
10 พฤติกรรมอื่นๆระบุ.....			
รวมคะแนน			

หมายเหตุ เกณฑ์การให้คะแนนตามระดับความรุนแรงของพฤติกรรม

พฤติกรรมในข้อ 1,2,3 ให้ข้อละ 2 คะแนน

พฤติกรรมในข้อ 4,5,6 ให้ข้อละ 3 คะแนน

พฤติกรรมในข้อ 7,8 ให้ข้อละ 4 คะแนน

พฤติกรรมในข้อ 9 ให้ข้อละ 5 คะแนน

แบบประเมินพฤติกรรมเด็กสมาธิสั้น

ชื่อ -สกุล ดช. /ดญ..... อายุ .....ปี ผู้สังเกต (ความสัมพันธ์).....

<u>คำชี้แจง</u> โปรดใส่เครื่องหมาย / ในช่องที่พบพฤติกรรมนั้นๆครั้งละ 1 ทุกครั้งที่พบพฤติกรรม

พฤติกรรม / ความถี่	สัปดาห์ที่ .....วันที่.....เวลา.....		
	กิจกรรมที่ 1	กิจกรรมที่ 2	รวมคะแนน
1. อยู่ไม่นิ่ง วุ่นวาย			
2. เหม่อลอย ไม่สนใจกิจกรรม			
3. ไม่จดจ่อกับชิ้นงานที่มอบหมาย			
4. ทำงานที่มอบหมายไม่เสร็จ			
5. ชวนเพื่อนคุย/ซุบซิบกับเพื่อนขณะร่วมกิจกรรม			
6. พูดแทรกแซงขณะที่คนอื่นพูดไม่จบหรือโพล่งตอบคำถาม			
7. ไม่ปฏิบัติตามคำสั่ง			
8. แย่งของจากเพื่อน			
9. แซงคิว รอคอยไม่ได้			
10. ไม่เก็บของๆตนเองเข้าที่ /ไม่เป็นระเบียบ			
11. พฤติกรรมไม่เหมาะสมอื่นๆ (ระบุ)			
รวมคะแนน			

INSTRMENTS FOR MONITORING EXPERIMENTATION

แบบประเมินการปฏิบัติของผู้ปกครองในการดูแลเด็กสมาธิสั้น

คำชี้แจง คำถามต่อไปนี้ เป็นการสอบถามสิ่งที่ผู้ปกครองปฏิบัติในการดูแลเด็กสมาธิสั้น โปรดพิจารณาข้อความในแต่ละข้อว่าท่านได้ปฏิบัติในระดับใด แล้วทำเครื่องหมาย ✓ในช่องที่ตรงกับการปฏิบัติของท่าน โดยมีเกณฑ์ดังนี้

ทุกครั้ง หมายถึง ท่านได้ปฏิบัติตามข้อความดังกล่าวทุกครั้ง (ปฏิบัติ 5-7วัน ใน 1 สัปดาห์)

บางครั้ง หมายถึง ท่านได้ปฏิบัติตามข้อความดังกล่าวเป็นบางครั้ง (ปฏิบัติ 1-4วัน ใน 1 สัปดาห์)

ไม่ปฏิบัติเลย หมายถึง ท่านไม่ได้ปฏิบัติตามข้อความดังกล่าวเลย (ไม่ปฏิบัติเลยสักวัน)

พฤติกรรม	การปฏิบัติ		
	ทุกครั้ง	บางครั้ง	ไม่ปฏิบัติเลย
1. ท่านสนใจหาความรู้เพิ่มเติมเกี่ยวกับวิธีการดูแลและปรับพฤติกรรมเด็กสมาธิสั้น เพื่อพัฒนาทักษะในการดูแลเด็ก			
2. ท่านสังเกตอาการข้างเคียงของยาที่เด็กรับประทานได้ถูกต้อง			
3. ท่านสร้างความสัมพันธ์ที่ดีกับเด็กอย่างสม่ำเสมอ เช่น แสดงการยอมรับสื่อสารเชิงบวกแสดงความห่วงใย			
4. ท่านสร้างบรรยากาศในครอบครัวให้อบอุ่น เอื้อเฟื้อ และช่วยเหลือซึ่งกันและกัน			
5. ท่านปฏิบัติตามที่พยาบาลแนะนำ และทำการบ้านตามโปรแกรม			
6. ท่านให้เด็กมีส่วนร่วมทำข้อตกลงในตารางกิจวัตรประจำวัน เพื่อฝึกความรับผิดชอบและการควบคุมตนเองแก่เด็ก			
7. ท่านดูแล หรือติดตามให้เด็กรับประทานยาตามที่แพทย์สั่งอย่างสม่ำเสมอ			
8. ท่านจัดสิ่งแวดล้อมในบ้านให้เป็นระเบียบ และสอนเรื่องระเบียบวินัยให้เด็กได้เรียนรู้ เช่น ให้เก็บรองเท้าเข้าที่			
9. ท่านเป็นแบบอย่างที่ดีในการควบคุมอารมณ์และการวางตัวแก่เด็ก			
10. ท่านกระตุ้นให้เด็กใช้พลังงานให้เป็นประโยชน์ เช่น ให้ช่วยทำงานบ้าน และเล่นกีฬาที่เด็กชอบ			
11. ท่านพูดคุย/ สื่อสารทางบวกกับเด็ก และให้กำลังใจเด็ก เช่น บอกสิ่งที่ท่านต้องการให้เด็กทำโดยไม่ตำหนิเด็ก ชื่นชมในสิ่งเล็กๆน้อยที่เด็กทำ			
12. ท่านไม่ใช้อารมณ์หรือลงโทษรุนแรงกับเด็กเมื่อเด็กแสดงพฤติกรรมไม่เหมาะสม เช่น ไม่ทำการบ้าน ตีน้อง หรือมีปัญหาที่โรงเรียน			
13. ท่านประเมินและวิเคราะห์พฤติกรรมเด็ก ตามที่ได้เรียนรู้มา			
14. ท่านได้นำเทคนิคการปรับพฤติกรรมที่เรียนรู้มาใช้อย่างต่อเนื่อง			
15. ท่านให้แรงเสริมทางบวกแก่เด็กทันทีเมื่อเด็กแสดงพฤติกรรมที่			

พฤติกรรม	การปฏิบัติ		
	ทุกครั้ง	บางครั้ง	ไม่ปฏิบัติเลย
ต้องการ เช่น ชื่นชมทันที			
16. ท่านได้สื่อสารเรื่องวิธีการปรับพฤติกรรมกับคนอื่นในครอบครัว เพื่อให้ปฏิบัติต่อเด็กในแนวทางเดียวกัน			
17. ท่านเอาใจใส่ ช่วยเหลือเรื่องการเรียนของเด็ก เช่น สอนการบ้าน จัดสถานที่สงบ ไม่มีสิ่งรบกวน ให้นั่งทำการบ้านด้วยกันจนเสร็จ			
18. ท่านติดต่อพูดคุยกับครูอย่างสม่ำเสมอในการช่วยเหลือเด็กด้านการเรียน หรือการปรับตัวที่โรงเรียน			
19. เมื่อท่านรู้สึกเครียด ท่านหาวิธีผ่อนคลายที่เหมาะสมกับท่าน เช่น ปรึกษา/พูดคุยระบายกับคนที่ไว้ใจ ดูหนัง ออกกำลังกาย เป็นต้น			
20. ท่านพยายามจัดการแก้ไขปัญหาต่างๆในการดูแลเด็กได้ แต่หากเกินกำลัง ท่านแสวงหาบุคคลที่สามารถให้ความช่วยเหลือหรือสนับสนุนท่านได้			

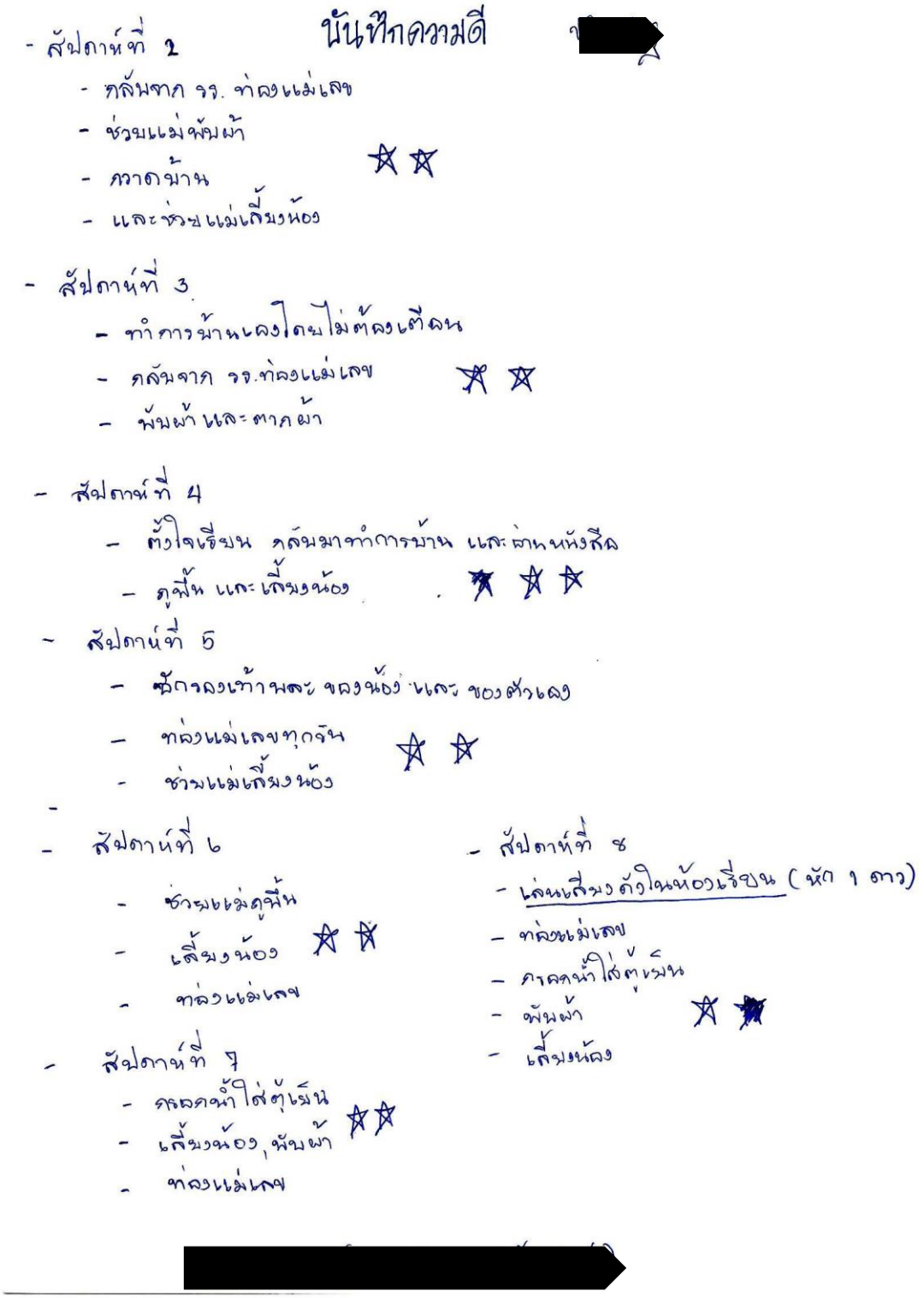
การให้คะแนน

ไม่ปฏิบัติเลย = 0
บางครั้ง = 1
ทุกครั้ง = 2

คะแนนเต็ม 40 คะนน
ผ่านเกณฑ์การปฏิบัติ = 20 คะแนน

APPENDIX F

CHILDREN WORK SHEET



บันทึกความดี พี่ [redacted]

สัปดาห์ที่ 2
- กลับจากโรงเรียน
- เทถังขยะในบ้าน ☆☆
- เอาน้ำใส่ขอดใส่ตู้เย็น
- ซักผ้าของตัวเอง
- รีดผ้าของตัวเองบางครั้งของน้องด้วย

สัปดาห์ที่ 3
- กลับจากโรงเรียน
- ทำการบ้าน ☆☆
- เอาน้ำใส่ขอด
- เทถังขยะในบ้าน
- ซักผ้าและรีดผ้าของตัวเอง

สัปดาห์ที่ 4
- กลับจากโรงเรียน
- กวาดขยะช่วยยายทำกับข้าวหุงข้าว ☆☆
- ซักผ้ารีดผ้าของตัวเอง
- เอาน้ำใส่ตู้เย็น

สัปดาห์ที่ 5
- ช่วยตาล้างรถยนต์
- ช่วยยายหุงข้าว ☆☆
- ซักผ้ารีดผ้าของตัวเอง
- อ่านหนังสือ

สัปดาห์ที่ 6
- กลับจากโรงเรียน
- เอาน้ำใส่ตู้เย็น ☆☆
- ช่วยยายหุงข้าวทำกับข้าว
- ซักผ้ารีดผ้าของตัวเอง

สัปดาห์ที่ 7
- ช่วยตาล้างรถยนต์
- ซักผ้ารีดผ้าของตัวเอง ☆☆
- เทขยะในบ้าน
- ช่วยยายหุงข้าว

บันทึกความดี

๒ ช่วยงานบ้าน 2 ดาว

- ล้างจาน
- พับผ้า
- ตั้งใจในการทำการบ้าน

๓ - ช่วยล้างจาน 2 ดาว

- กรอกน้ำใส่ขวดใส่ตู้เย็น
- พับผ้า
- ตั้งใจทำการบ้าน

๔ - ช่วยล้างจาน 1 ดาว

- จัดถุงเท้า
- ตั้งใจทำการบ้าน / งานที่ครูสั่ง ที่เป็นชิ้นงาน

๕. - ล้างจาน 2 ดาว

- พับผ้า
- ทำการบ้าน

๖. ล้างจาน 1 ดาว

- พับผ้า
- ทำการบ้าน

[redacted] ([redacted])

บันทึกทำความดี

สัปดาห์ที่ 1 3 กิจกรรม

1. รดน้ำต้นไม้
2. ล้างจาน
3. ทำการบ้าน 1
4. ช่วยแม่ทิ้งขยะ 2

สัปดาห์ที่ 3 3 กิจกรรม

1. ทำการบ้าน 1
2. เช็ดโต๊ะ, ทานข้าว
3. ช่วยแม่ถือของ
4. ช่วยแม่ทำกับข้าว (ล้างผัก) } 2

สัปดาห์ที่ 4 3 กิจกรรม

1 ทำการบ้าน 1
2. ช่วยแม่กวาดบ้านและถูบ้าน
3 ช่วยแม่เก็บผ้าและพับผ้า } 2
4. ช่วยแม่ล้างจาน

สัปดาห์ที่ 5 3 กิจกรรม

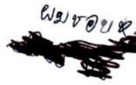
1. ทำการบ้าน 1
2. ช่วยแม่ล้างจาน
3. ช่วยพ่อตากผ้า } 2
4. ช่วยรดน้ำต้นไม้

[redacted]

ผมชอบกินลูกอม

ผมคื่โมโห

ผมชอบหมาป่า



ผมชอบสีดำ

ผมชอบกินไก่

ผมชอบเล่นไฟ

ผมชื่อ [redacted] ชั้น ป.6

ข้อดีของการ

1 ผมได้ทำกิจกรรม
2 ได้พบเพื่อนใหม่ๆ
3 ได้ศึกษากับเพื่อนๆ
4 ผมได้ออกพื้นที่ร่วมกัน
5 ผมได้ปรับพฤติกรรมได้

ข้อดีของฉัน

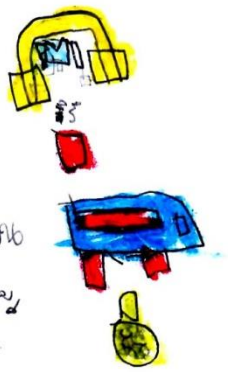
1 ช่วยแม่ตากผ้า

2 ช่วยแม่ทำกับข้าว

3 ช่วยแม่เก็บที่นอน

4 ช่วยแม่ทิ้งขยะ

5



ข้อดีของผม [redacted]

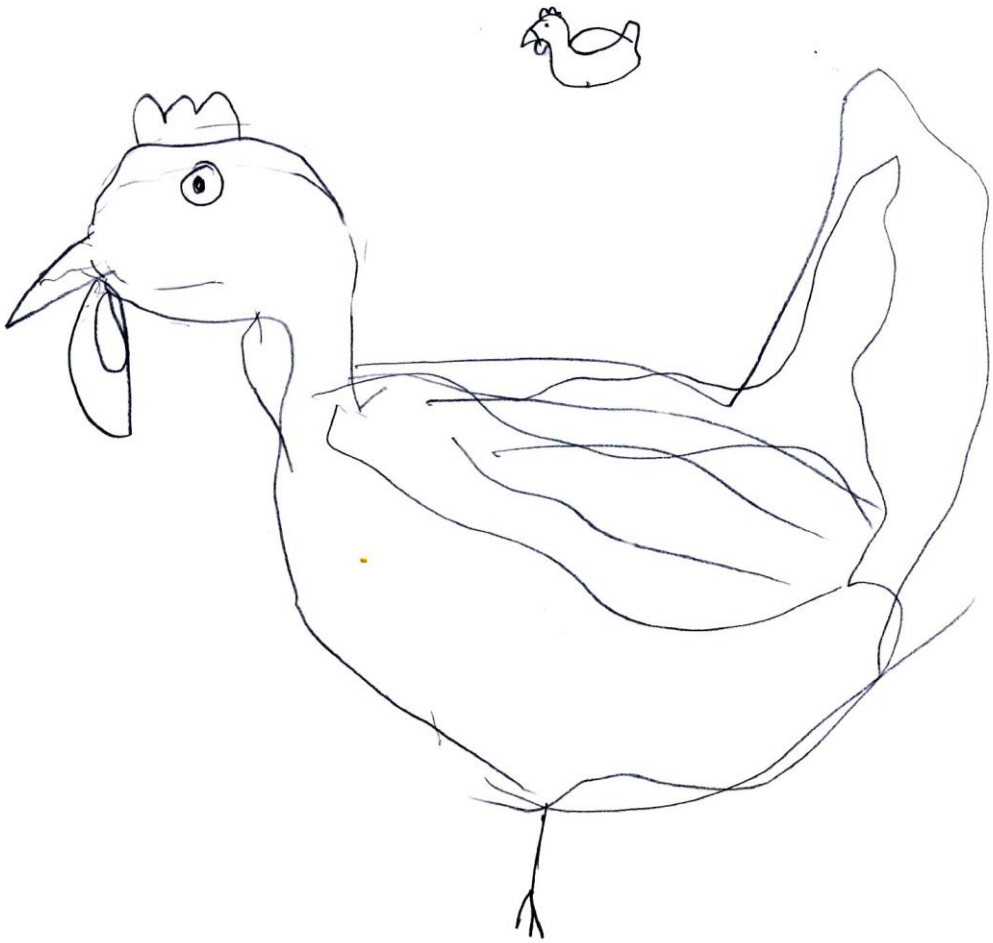
1. ทำอาหารเป็น
2. เป็นผู้ฟังมากกว่าผู้พูด
3. ทำความสะอาดบ้าน
4. ให้อาหารสัตว์ (ไก่)
5. ไม่ยุ่งเกี่ยวกับยาเสพติด

[redacted] [redacted] 4/1

ข้อดี = ชอบช่วยเหลือ - ใจดี - ชอบไก่ [illegible] - ชอบทำอาหาร - ชอบทำสวน

- ชอบ เล่นเกม - ชอบผจญภัย - รักการอ่านการ์ตูน - [redacted] วิทยาศาสตร์

ข้อเสีย = ห่วงแม่มีคนเมียว่า - กินมาก - ใจร้อน - ทำอะไรได้ดีต้องห้ามทวน



[redacted]

เกมชวนคิด 2 (ตัวตนของหนู)

ให้น้องๆเล่าเรื่อง หรือแสดงความคิดเห็นตามข้อต่อไปนี้ (เลือก 1 ข้อ)

1. **ถ้าหนูทำให้เพื่อนหรือคนใกล้ชิด เช่น ครู พ่อแม่ พี่ น้อง ยาย เสียใจ หนูจะบอกความรู้สึกของหนูอย่างไร**
2. **ถ้าเพื่อนหรือพ่อแม่ทำให้หนูโกรธ หนูจะพูดอย่างไรกับเพื่อนหรือพ่อแม่**
3. **ถ้าเพื่อนหรือพ่อแม่ทำสิ่งดีๆให้หนู หนูจะแสดงความขอบคุณเพื่อนหรือพ่อแม่อย่างไร**
4. **หนูอยากทำสิ่งดีๆอะไรให้คนอื่น เช่น เพื่อน พ่อแม่ ครู**

1 ตอบ หนูขอโทษให้โอกาสหนูนะคะ

2 ตอบ ไม่เป็นไร หนูให้อภัย

3 ตอบ หนูขอบคุณค่ะ

4 ตอบ ตั้งใจเรียนทำให้เพื่อนภูมิใจ

ภาควภูมิใจ

เกมชวนคิด 2 (ตัวตนของหนู)

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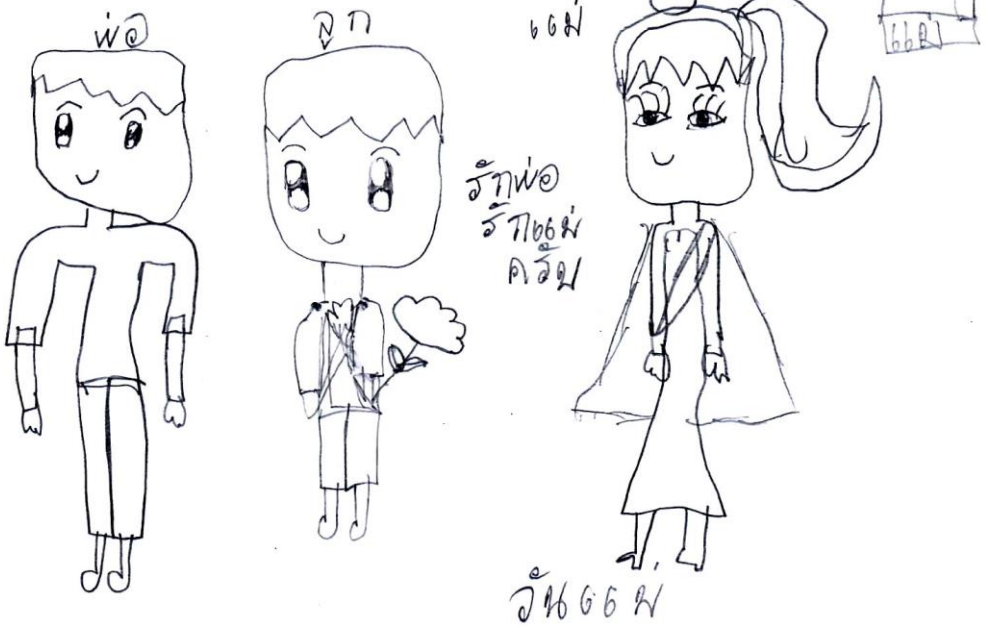
2. **ถ้าเพื่อนหรือพ่อแม่ทำให้หนูโกรธ หนูจะพูดอย่างไรกับเพื่อนหรือพ่อแม่** ทำดีกัน
3. **ถ้าเพื่อนหรือพ่อแม่ทำสิ่งดีๆให้หนู หนูจะแสดงความขอบคุณเพื่อนหรือพ่อแม่อย่างไร**
4. **หนูอยากทำสิ่งดีๆอะไรให้คนอื่น เช่น เพื่อน พ่อแม่ ครู** ให้พ่อแม่กอดพ่อ



[redacted]

VITA

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