

A Model to Help Thai Children with ADHD by Instituting Home and School-based Interventions

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Abstract

The purpose of this research was to develop a model to help Thai children with a diagnosis of ADHD by instituting home and school-based interventions. It was thought that an effective strategy would be one that would monitor three aspects of behavior i.e. academic work achievement, self-control and social skills in an experimental and control group.

The experimental sampling group was selected using random cluster sampling techniques. The participants consisted of 16 children diagnosed with ADHD in primary grade level 4 in the Khon Kaen University Demonstration School, in 2008, 16 parents of children with ADHD and 6 teachers with students diagnosed with ADHD. The tools used to create and develop the model in this research were: (1) Design discussion groups for children with a short attention span (ADHD) (2) Develop an interview form for teachers to conduct in-depth interviews with parents (3) Develop a group counseling program for children with ADHD (4) Develop training programs with workshops for parents (5) Develop training programs with workshops for teachers (6) Develop the behavior and achievement evaluation form (7) The self-control behavior test (8) An assessment of social skills (9) The observation and behavior control form. Data analysis showing the effectiveness of the model by comparing the differences between the two groups used the Mann - Whitney U Test. Data analysis reflecting the differences within the groups used the Wilcoxon Signed Rank Test.

The results of this research were (1)The development of a model to study how to help

Thai children that suffer with ADHD by using home and school interventions via a partnership between parents and the school. Parents have a role in raising their children and the school is involved in consultation with parents and assistance to students related to their learning tasks. (2) The results of the effectiveness of the model to help Thai children with ADHD by using home and school based interventions as the central focus found that the children's behavior in the experimental group had improved more than the control group. The areas of behavior in the experimental group that were monitored and showed improvement were working achievement and self-control, at a statistically significant level of .05. Their social skills did not show any degree of improvement. In addition, a comparative result within the experimental group before and after the study had found that the behavior of children i.e. working achievement and self-control was higher at a statistically significant level of .05. Social skills remained the same.

Key words: ADHD, Intervention Model, home and the school-based

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is a condition whereby a child has difficulty in maintaining concentration and is unable to stay on task due to distractibility and hyperactivity. ADHD is a psychiatric behavioral disorder that affects children, adolescents, and adults. The incidence of ADHD in school children today is 5-10 percent. Boys are 4 – 6 times more likely to have this diagnosis than girls. The ratio of girls may be higher with the same vulnerability to be at risk for learning disabilities or social difficulties but their behavioral profile may be more subtle and not as noticeable. Boys have a greater tendency to be less inhibited in their outward behaviors and are thereby detected more readily (Spohrer, 2006). A survey of countries found that developed countries had a higher rate of people with a diagnosis of ADHD than in underdeveloped countries. The survey also noted that many countries found the incidence of ADHD had increased from 1 percent to 11 percent of the total population (Norwich et.al, 2002 cited in Spohrer, 2006). The data and statistics from the United States pointed out that more than 35 percent of children with ADHD could not finish school at the secondary education level and more than 50 percent have difficulty with peer social interaction (Barkley, 1981). In order to help children who have inattention and distractibility it is important to deal with the causative factors, develop

of plan of care, and deal with each on an individual basis as suggested by Anastopoulos and Shelton (2001). Several factors were of importance to be considered in this study to develop a multimodal intervention approach. Medical treatment was of primary importance to manage neurological pathology. The next area of focus was the implementation of classroom interventions to improve academic performance and Cognitive – Behavior Therapy to increase the child’s understanding of cause and effect behaviors and interactions with others. By identifying patterns of maladaptive thinking, the child can make modifications to this pattern which will lead to a change in affect and in behavior. The home environment was also incorporated to address concerns within the family that were directly influenced by the child’s condition and training for the parents to successfully manage their situation in a way that would lead to a positive outcome for all.

Three models were developed based on the child’s ADHD clinical presentation of Mild, Moderate and Severe.

Model 1 was developed to assist children with a Mild Clinical Presentation. Three areas of intervention were incorporated in order of priority: (1) Medical treatment (2) Classroom modification and (3) Parent training.

Model 2 was developed to assist children with a Moderate Clinical Presentation. Four areas of intervention were incorporated in order of priority: (1) Medical treatment (2) Parent training (3) Classroom modification and (4) Individual child therapy. In this model, more emphasis was placed on the medical treatment and parent training than the classroom and individual therapy.

Model 3 was developed to assist children with a Severe Clinical Presentation. Five areas of intervention were incorporated in order of priority: (1) Medical treatment (2) Classroom modification (3) Specific assistance in the remediation of identified learning disabilities (4) Parent training and (5) Individual therapy for parents. The primary emphasis was on medical treatment.

Three key behaviors typical of ADHD that were monitored for improvement were:

(1) Inattention: Lacking in the ability to attend and concentrate on a task for an extended period of time. Inability to engage in sustained attention and focus, to organize or to complete a task, losing interest and moving on to other things leaving the task unfinished. Other symptoms include boredom, becoming easily discouraged and lack of motivation to do something.

(2) Hyperactivity: Tendency to be in constant motion, wiggling in their chair or tapping on the table, touching buttons and easily distracted by sensory stimulation in the environment, excessive talking, and difficulty keeping their body still for any length of time.

(3) Impulsivity: Being impatient and having difficulty waiting for things they want or waiting their turn to play a game. Acts quickly to do something without regard for potential consequences. Not able to show restraint in expressing strong emotions. Blurting out inappropriate comments or interrupting in conversations (Nongpanga Limsuwan, 1999; Santipap Chaiwongkeard, 2007).

In summary, it appears that young school age children are the largest identified population of those with ADHD and therefore would be best served with school based intervention and home based support.

Barkley (1995) has shown that the home environment is important to help children with ADHD but it is often fraught with challenges i.e. (1) In general the social interaction between children and their families are often more negative than other families. (2) Medical evidence has shown that families of children with ADHD often have higher levels of stress compared with other families in the general population. It is the opinion of 40 percent of parents that they often see oppositional behavior in their children and parents could not adequately manage that behavior. In their distress, they respond with a negative reaction or choose to punish their child's behavior rather than work with them to gain better control of their behavior. In this scenario, due to lack of knowledge or understanding on the part of the parents, the child does not receive encouragement or support to manage their behavior. It is the premise of this study to train parents to help their children. The school is the environment where the child spends 6 to 8 hours of the day, 5 days per week. Therefore, the school is another place to cultivate the child's ability to reach their full potential. Realistically, teachers are often challenged by the behavioral problems exhibited by children with ADHD. Their lack of attention and concentration, poor organization along with missing assignments and incomplete work add to the frustration of those teachers who attempt to help. Their poor academic progress often creates problems with self-esteem as they compare themselves to their peers in the classroom. Therefore, the study has chosen to help them by developing models using both home and school based interventions for children in Thailand with a diagnosis of ADHD.

Objective

1. To develop a home and school based intervention models for children with ADHD in Thailand.
2. To assess the effectiveness of the home and school based intervention models to help children with a diagnosis of ADHD in Thailand.

Methodology

Research design

This study is a research and development design.

Population and Samples

1. Population:

1.1 A total of 25 children, 21 males and 4 females were initially included in this research. These children had a diagnosis of ADHD and were educated in the fourth grade at the Khon Kaen University Demonstration School, in 2008. The students were divided into two classrooms. Classroom #1 had a total of 12 children, 10 were male and 2 female. Classroom #2 had a total of 13 children, 11 males and 2 females. One child in classroom #2 was later excluded because of the need for treatment with medicine that was not included in the scope of this research. So, the number remaining in classroom #2 was 12 children. This change created a new total of 24 students who participated in this research.

1.2 A total of 16 parents of children with ADHD in accordance with Article 1.1

1.3 A total of 6 teachers of children with ADHD in accordance with Article 1.1

2. Samples:

2.1 A total of 16 Children with ADHD who were in the fourth grade at Khon Kaen University Demonstration School, in 2008 were selected by random cluster sampling. These students were organized by the school into each of the two classrooms. In each room they were organized to have an equal mix of learning abilities, some who were learning well and others with learning challenges. Due to their age and development the sample in the counseling group was chosen to be all male. So this made a group of 8 students per classroom for a total of 16 students. The last step was to divide into the experimental and comparison group (control) by random drawing.

2.2 A total of 16 parents of children with ADHD were accordance with Article 2.1

2.3 A total of 6 teachers of children with ADHD were accordance with Article 2.1

Study area

Data collection

The researcher and the assistants collected data as shown in Figure 1

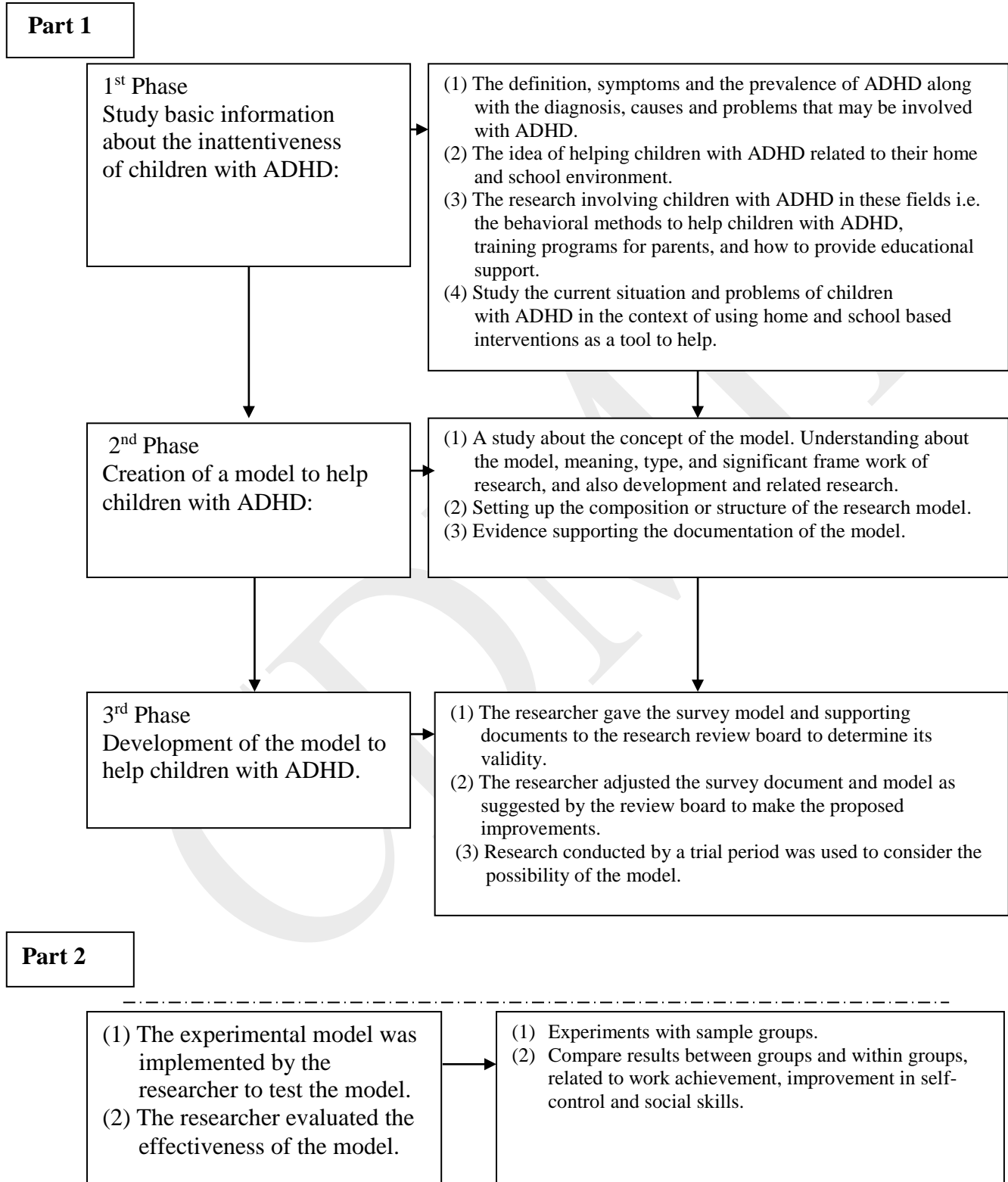


Figure I Steps involved in this research

The implementation of the experimental model was conducted as a nonequivalent group design. The researcher and research assistants collected data during the time period of June to September 2008. The 3 steps (Pre-experiment, Experiment, Post-experiment) took a period of 9 weeks to complete.

The Pre-experiment step

1. The researcher and research assistants observe and record the behavior of the control samples for 2 weeks.
2. The teachers complete evaluation forms related to the work achievement, social skills and self-control of the sample group for 2 weeks.
3. A training program of 10 one hour workshops for parents. The topics of workshops were:
 - (1) Orientation
 - (2) Typical interaction between parents and children with ADHD
 - (3) Group communication with children diagnosed with ADHD
 - (4) Increasing attention skills
 - (5) Child Discipline
 - (6) Behavior modification using the token economy method
 - (7) Losing privileges and using “time out” as a form of discipline
 - (8) How to deal with inappropriate behavior in the public
 - (9) How to deal with inappropriate behavior that will occur in the future
 - (10) Further questions, instructions and evaluation.
4. A training program of 10 one hour workshops for teachers. The topics of the workshops were:
 - (1) Orientation and strengthening the relationship between teacher and student
 - (2) Adjustments in the classroom environment
 - (3) Principles of teaching children with ADHD
 - (4) The structure of the lesson plan
 - (5) Learning strategies for teaching children with ADHD
 - (6) Providing assistance using accommodations or modifications in the classroom
 - (7) Techniques to motivate students

- (8) Principles of behavior modification for students
 - (9) Behavior modification techniques
 - (10) Further questions, instructions, and evaluation
5. Teachers and parents meet together to plan strategies to improve the behavioral problems of the child.

The Experiment step

1. The experimental group was observed 10 times for 50 minutes, two times per week, every Monday and Thursday for 5 weeks.
2. The parents were to apply the knowledge and skills gained from the 10 parent workshops with their children in the experimental group for 5 weeks.
3. Teachers were to apply the knowledge and skills gained from the 10 teacher workshops with the children in experimental group for 5 weeks.
4. Teachers and parents worked together to help the children with ADHD in the experimental group through daily telephone communication, written notes to each other and the joint meeting.

For the comparison group, the researchers conducted a counseling group and distributed handouts of the training workshops to the parents of those in the comparison group.

The Post-experiment step

1. The researcher and research assistants continued to observe and record the behavior of the control group for two weeks.
2. The teachers were asked to continue to evaluate the behavior related to work achievement, social skills and self-control for two weeks.
3. Comparison of the results between the experiment groups related to work achievements social skills and self-control.

Equipment and tools

1. Equipment used to create and develop this helping model are the structured interviews for parents, In-depth interviews with teachers, counseling programs for

children with ADHD, the training programs and workshops for parents and the training programs and workshops for teachers.

2. The Tools that were used to evaluate the effectiveness of the helping model are the evaluation form for work achievement, evaluation form of self-control, the assessment of social skills and the observation and record form of self-control.

Data analysis

To evaluate the effectiveness of the model by data analysis:

1. The control group was compared in the behavior fields of work achievement, social skills, and self-control by using the Mann-Whitney U Test.
2. The experimented group was compared in the behavior fields of work achievement, social skills, and self-control by using the Wilcoxon Signed Rank Test.

Results

The purpose of this study was to develop and to assess the effectiveness of a helping model for children in Thailand who have been diagnosed with ADHD combining a partnership of home and school based interventions. The study results are as follows:

1. The development of a model to help Thai children with ADHD. This model used both home and school as the central focus. The main element of this model was to ensure that the parent had a thorough knowledge and understanding of this condition in order to raise their child in a successful manner and have the ability to modify negative behaviors that are common with ADHD. The important role for parents was to cooperate and communicate with the school, through verbal communication, written communication and face to face meetings to resolve any problems that arose at school. With this cooperation, teachers could better understand their children with ADHD and modify the classroom environment accordingly to facilitate the learning needs of the children. The children who have ADHD were able to obtain the help they needed directly from their teacher or guidance counselor. The important role of the teacher was to conduct and arrange groups and or individual counseling to help children to realize the condition of ADHD that will affect their learning and behavior.

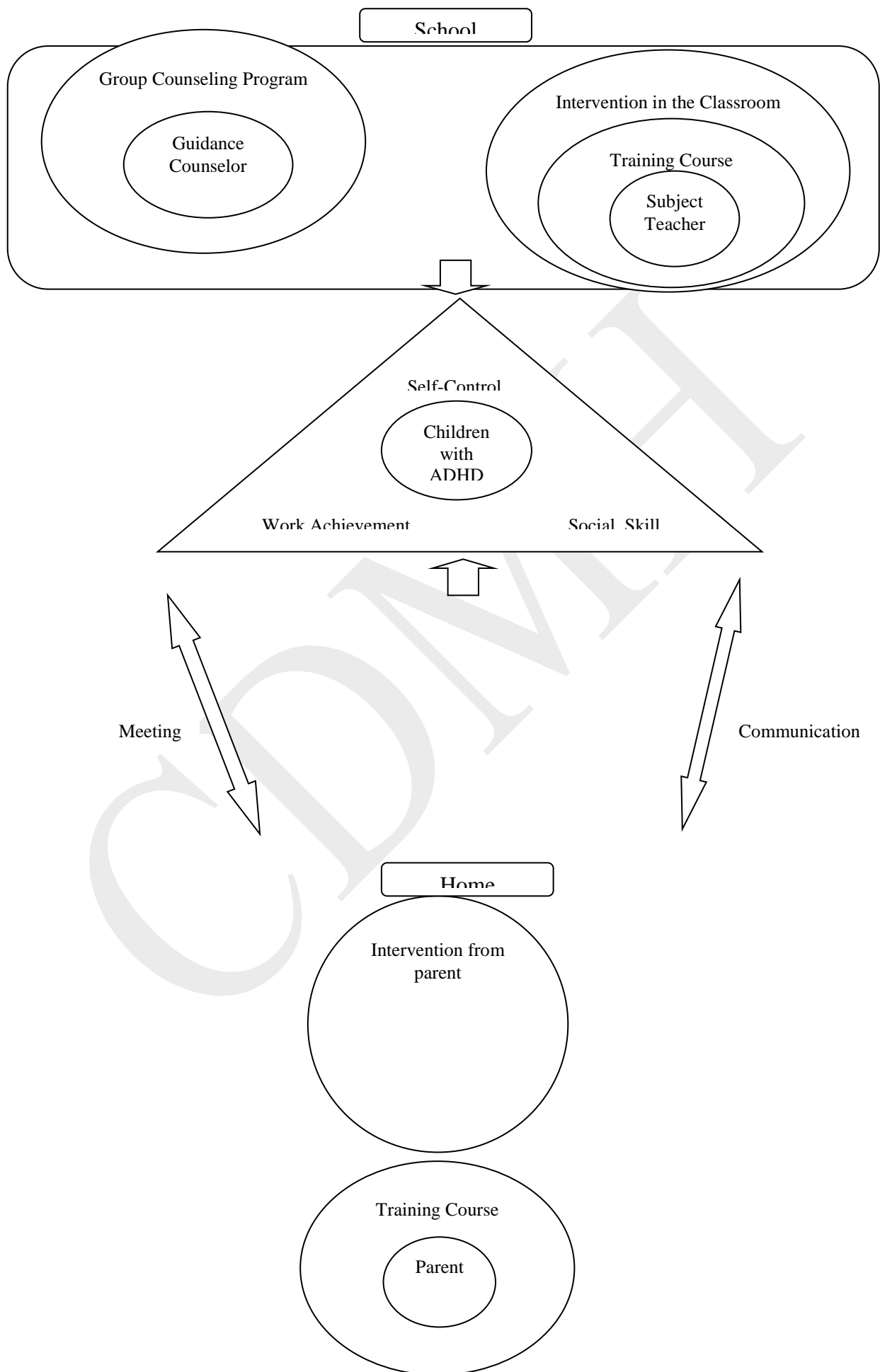


Figure II The structure of the model to help Thai children with ADHD by instituting home and school-based interventions.

Figure II is composed of two major steps: (1) Prepare and develop training programs and workshops for the parents in order for them to have the knowledge they need to understand the condition of ADHD and how to care for and raise their children effectively. (2) Prepare and develop training programs and workshops for the teachers on how to help children with ADHD, and have joint meetings with both parents and teachers to plan together appropriate strategies to help the children.

The school diagram in Figure II shows both a classroom subject teacher and a guidance counselor who does group counseling. In the absence of a guidance counselor on a particular day, the homeroom teacher served in this capacity to assist the child with whatever problem that they were facing at the time. The roles of subject teachers were to assist students in learning, establish a good working environment in the classroom as well as collaborate with parents on behavior modification. The role of the parent was to raise their child and manage their behaviors at home. Both parties collaborated together as seen in an example of data, detailed in Table 1.

Table 1: An example of data regarding collaboration between home and school to help the Thai child diagnosed with ADHD

Behaviors of children with ADHD that need improvement.	Parents		Teachers		Students	
	Role	The Behavior	Role	The Behavior	Role	The Behavior
Work achievements	To instill discipline	<ul style="list-style-type: none"> - Enforcement to complete class homework assignments. - Assigning a household job to teach them to learn responsibility such as watering plants, feeding a pet, or arranging their school bag. - Setting a routine for time to complete homework first and then play. 	<ul style="list-style-type: none"> - Know the principles of teaching children with ADHD. - Use proper techniques to teach children with ADHD. - Prepare appropriate lessons with structured activities for children with ADHD. - Use techniques to motivate students. - To Assist students as needed with their learning. 	<ul style="list-style-type: none"> - Reduce the amount of their work. - Set criteria for determining amount of time for work completion. - Use illustrations to help them with understanding. - Teach children using small steps leading them to work completed on schedule. - Select the appropriate activities with students such as simulations, debates, handicrafts etc. to encourage working in a group setting. - Assisting the children to stay on task if they become distracted. - Use short explanations with repetition for clear understanding. - Provide feedback from time to time to make improvements and build confidence with the student. 	<ul style="list-style-type: none"> - To learn and study at school. - To problem solve. 	<ul style="list-style-type: none"> - Diligently work on the assigned job that has been given to them. - Write down specific notes of importance. - Review any the diagrams which will help their understanding. -Ask the teacher for clarification if unsure of the assigned task. - Use the assignment book that lists daily study tasks to help remember to complete work on time. - When doing mathematics tries the simplest problems first. - Complete their working on the assigned job before going outdoors to play.

Behaviors of children with ADHD that need improvement.	Parents		Teachers		Students	
	Role	The Behavior	Role	The Behavior	Role	The Behavior
Self-control	Reward the children whenever they exhibit good behavior.	<ul style="list-style-type: none"> - Child must ask for permission before participating in outdoor activities - Child must return back home on time. - Child must play a game on within the time limit given. - Parent will give a toy as a reward when the child has collected the number of points on their communication card. - Recording good behavior on the communication 	<ul style="list-style-type: none"> - Create the environment in the classroom. - To assist children in the classroom. 	<ul style="list-style-type: none"> - Seating away from windows or doors. - set a student-buddy - Daily check the table every morning and before going back home. Look after the children to arrange their bag - Check equipment via the check list before back home and send back to the teacher. - using the warning signs when the student distract students or play in the classroom. - The clock signal used to tell time. - Working with parents to adjust their modified their behavior such as impolite, shouting loudly. - Take time out when they say 	<ul style="list-style-type: none"> - Develop better learning and management techniques. -Develop better self-control skills. 	<ul style="list-style-type: none"> - Determine to study well in the classroom. - Compose a sequence of storytelling events for a narrative in class. -Record daily when to change classrooms and report to teachers. - Record weekly their money expenses and report this to their parents. - Summarize each course of the day. - Complete the daily routine set task. - Set the alarm clock in the morning. -Do work as assigned. - Use techniques Stop-Think-Do before doing all activities i.e. before speaking, before proceeding with a task. - Wait to take your turn in play.Do not

Behaviors of children with ADHD that need improvement.	Parents		Teachers		Students	
	Role	The Behavior	Role	The Behavior	Role	The Behavior
		card. - The penalty for wrong doing i.e. lost items is not having the ability to purchase things with their money. - The penalty for not storing things neatly is loss of television privileges for the day.		impolite. - Keep children later stay in the class if they shouting loudly in the classroom.		create a struggle with your friends. - Raise a hand politely before answering the teacher in the classroom. -Follow the rules of the classroom i.e. do not walk around the class when asked to sit down.

Behaviors of children with ADHD that need improvement.	Parents		Teachers		Students	
	Role	The Behavior	Role	The Behavior	Role	The Behavior
Social skills	Monitor self-control behaviors	- Shout or scream outside the house. Stop to buy things they like 1 thing	-Behavior modification.	- Use the role of working in a group to solve problems	To develop better social skills and	- Learn a lesson about being a friend and having good friendship

Behaviors of children with ADHD that need improvement.	Parents		Teachers		Students	
	Role	The Behavior	Role	The Behavior	Role	The Behavior
	<p>when outside the home.</p> <ul style="list-style-type: none"> - Use the token economy system to modify behavior. 	<p>.- Collaborate with teachers to manage behavior problems such as shouting out loud ,calling someone an impolite name, being careless with assigned work.</p> <ul style="list-style-type: none"> - Help the child to control their emotion when feeling angry. - Do not allow physical force toward anyone. - Do not force the child to feel guilty. - Talk with the child in a calm tone of voice. - Spend positive time together like giving hugs while watching television together. - Do an activity on the weekend such as taking a trip to visit relatives, eat out at a restaurant. - Allow the child to select their own special reward. -Do not show anger, blame, harshly scold or complain about the child. - Be simple and direct with instructions without complaining. - Use words that indicate your feelings i.e. grandma said, “It concerns me when you prefer to play more than do your homework” 	<p>-Behavior modification techniques.</p> <ul style="list-style-type: none"> - Choose activities that fit the context of teaching children with ADHD to develop better social skills. - Provide assistance to students as needed. 	<p>related to social skills and working with others.</p> <ul style="list-style-type: none"> - Assign classroom buddies to help children learn about proper class behavior and to learn from the role model. - Collaborate with parents to modify any inappropriate behavior and social skills. 	<p>social awareness.</p>	<p>skills.</p> <ul style="list-style-type: none"> - Contribute to a group work project. - Encourage friends in your team to contribute in ways that demonstrate their talent i.e. drawing a picture of the storytelling event in the classroom. - Share with your friends. - Equally divide responsibilities in the classroom. - Organize competitive quiz teams. - Implementation of the course assignments together. - Working as a team to make decisions together. - Training in reconciliation and respect for others. - Talk with a trusted friend to express feelings to feel understood and relaxed. Have someone that you can share openly about any bad or hurtful feelings. - Have a friend to help reduce a

Behaviors of children with ADHD that need improvement.	Parents		Teachers		Students	
	Role	The Behavior	Role	The Behavior	Role	The Behavior
		- Rephrase your remarks i.e. Father said, “I keep telling you to stop playing the game “, instead say something like, “It is time to stop playing the game now and time to go and take your bath.”				sense of isolation. - Make friends with others with similar interests by engaging in a hobby.

2. Establishing an effective model of assistance for Thai children with a diagnosis of ADHD by incorporating home and school-based interventions and by comparing behavior in three areas: work achievement, the improvement in self-control and social skills. The Mann-Whitney U Test was used to compare the experimental group against the control group. The study found that the experimental group showed improvement in work achievement and the self-control which was significantly higher than the control group at the statistical level of .05. In the area of social skills, there was no significant difference between the two groups. When comparing within the experimental group of before and after the study using the Wilcoxon Sign Rank Test (used to evaluate the behavior of this group). The findings showed significant improvements in work achievement and self-control after study at the .05 level but social skills showed no difference.

Discussion

1. A model was developed to help children with ADHD by determining that the home and school environment should be the central focus with the development of a partnership between parents and the schools. The parental role involves raising the child and the school has a dual role to advise the parents and to assist the students. This is based on the principle of Anastopoulos and Shelton (2001) who discussed the importance of environmental factors, including the home and school environment, as well as the behavior. A model of assistance was incorporated based upon the severity of presenting symptoms. Assistance included a modified classroom environment, and training parents to take care of their child with instruction in behavior modification. Individual assistance to students was also included in the model. This idea corresponded to a study by Goldstein and Goldstein (1992) with classification to help children with ADHD being determined by 3 basic types; basic support, intensive support, and last to provide even more support. The training course for parents and educational assistance is the part of this research model. It had been developed and is classified as basic support aid. The training of social skills and self-control in the model is designed to give further assistance. Therefore, it can be said that this model of assistance to help children and the interventions that have been developed by this study, are closely aligned with current practice in general use. In addition, Swanson et al. (2002) has noted that it's important to consider providing assistance for children with ADHD that is the most efficient, such as the following:

1.1 Assistance should be comprehensive, multi-step, continuous and intensive. Consultants in this field should provide training workshops for parents and teachers on a variety of topics that relate to the children's needs and those supporting them. The assistance should reflect all areas of general life to help them compensate. Because children with ADHD lack self-control and self-management skills parents and teachers can cooperate together and monitor any behavioral changes and give appropriate reinforcement when the child exhibits the desired behavior.

1.2 To assist the teachers in understanding typical behaviors related to the condition of ADHD both at home and at school. This research has offered training workshops for teachers which related to the child's daily life in the home and school environment. This research has been developed to also focus on the psychosocial and the ecological approach of Brenfenbrenner (cited in Craig, 1996; Shaffer, 2002) who stated that a person is under the influence of their environment, if you desire to change behavior, then you also need to make a change in the environment. The environment for young children is primarily centered around home and school so it seems evident that both can play a vital role in collaborating together in effectively implementing support to these children. This is consistent with the study of D'Alonzo, 1996; Diane, 2003; Oord et al., 2006; Thomas, 1996, So, the model that has been developed in this research to help Thai children with ADHD is consistent with other current research in this field and demonstrates the suitability for use as a model for the development and assistance to children with ADHD.

2. Establishing an effective model of assistance for Thai children with a diagnosis of ADHD by incorporating home and school-based interventions and by comparing behavior in three areas: work achievement, the improvement in self-control and social skills.

2.1 The study found that the experimental group demonstrated significantly higher work achievement and self-control than the control group with a statistic level of .05 but their social skills were no different. This is consistent with the results of Bloomquist, August and Ostrander (1991) which found that the training of both teachers and parents were better than those who are practicing teachers or parents alone. This may be due to the experimental group getting help for learning using classroom based interventions. Examples of the improvements and adjustments of the learning environment would be to make statements on the board shorter, seating children near the teacher, assigning a study buddy companion, and setup of a time structure for learning. Changing presentation and learning methods in the curriculum is consistent with conditions of ADHD students, such as using role-plays, debates, educational games, and ways to use their imagination to invent projects.

Using teaching materials related to children who are visual learners is consistent with the child who has ADHD (Patcharewan Katekhanjan, 1998; Alban-Metearfe and Alban-Metearfe, 2001; Kewley and Latham, 2008). The goal of the student is complete assignments in a timely fashion or to finish on schedule. The parents can participate in their child's success in this area by monitoring homework and obtaining the list of classroom assignments through the school's daily communication notice. This could potentially limit turning in assignments unfinished or late. In accordance with the concept of improving the home environment, the parent receives training on how to handle their child with ADHD. The role of parents would include practicing behavior modification at home and giving particular positive attention to the desired behavior as well as for reinforcement when the child works successfully. These are the parents are committed to develop an environment of home with the simulation that will be able to help children build skills in the work has an incentive extorted rules to lead to target of work, workplace are motivated not by the rules will lead to a successful (Bender, 1997; Wodrich, 2000) Moreover, the experimental group has had the advantage of direct instruction, in terms of working successfully like learning techniques of how to study, problem solving, work related decision making and learning to prioritize. These are all important factors that were able to modify their behavior by providing support in a holistic way with a common goal (Rief, 1993; Armstrong, 1999; Hughes, and Cooper, 1988). The social skills comparison between the experimental and control groups is no different. This may be because there are social skills that depend on external factors such as relationships, and acceptance of others. These elements require time to cultivate and need skills for further development. These components are difficult for children with ADHD due to a lack of concentration. This is the first step in order to learn from the model. The children that exhibited hyperactivity and impulsivity had difficulty remembering the model, which lead to a failure to imitate and learn new social skills. It was found that children with ADHD were more likely to overestimate their social skills more than reality. Therefore, it is possible that the child does not see the need to learn new skills or to change their attitude or way of interacting with others (Hoza et.al.2002).

2.2 Comparison within the experimental group, post study showed the behavior of work achievement and self-control to be statistically significant at the .05 level but social skills did not change. According to Radathon Nillaor (2005) had found the use of a behavior modification program using visual cues can help to modify negative behavior in an attention study of children with ADHD. This method is also consistent with the study of Harris and Others, 2005; Prapawadee Sumaman, 2006. All the results of studies of persons with ADHD

show that they often have difficulty in recognizing the social cues and their social interaction is consistent with the study of Rainwater (2007). They said that the social behavior and immature ways of children with ADHD easily annoy others. It may relate to the causes of their social isolation because they are not often accepted by others, consistent with the findings of Whalen and Henker, 1980 (cited in Weiss and Hechtman, 1993); Barkley, 1995; Erhardt and Hinshaw, 1994; Hoza et al., 2005. When comparing mean scores of the social skills group before and after the experiment, it was found that the rate of their score had increased. This could explain that the social behavior in the experiment group had made some change but not enough to clearly see a difference.

It is interesting to note that perhaps social skills training should go on for a longer period of time. Un-official observations of the social skills in the experimental group comparison with the control group showed subtle changes beginning to emerge around week 9 of the study.

Recommendations

1. School level

- 1.1 Suggested guidelines for parents to realize and understand how to treat children with ADHD.
- 1.2 Development of cooperation between home and school to help children at risk with ADHD.
- 1.3 Develop further training for teachers who have children with ADHD in their classroom as well as for all teachers, so they are equipped to understand the characteristics of students with special needs and are able to easily assist them.
- 1.4 Promote knowledge management programs to meet the needs of students so they can incorporate their learning outside the context of the classroom.

2. Institutional level

- 2.1 Review and evaluate the compulsory education learning process for children with ADHD.
- 2.2 Develop regular service training for teachers, a workshop in order to apply and master new knowledge.

3. Policy level

3.1 The government should provide services and formulate a base of knowledge to educate the public on this issue regarding training parents to raise their child with ADHD in a positive way.

3.2 Establish agencies responsible for screening students who have specific special needs in the main stream schools.

Recommendations for further study

1. From this research, some parents reflected that other members in the family had different guidelines as to how to approach the child in a variety of settings. This can cause a conflict in the home when there is not unity and can make it difficult to make a consistent change in the behavior of the children. So, it is suggested that future research should incorporate additional family members or authorities in the home for the training programs to build a stronger unified home program. From this study, the research found that the help given children with ADHD by using home and school based interventions should continue in order to maintain the desired behavior. Future research should incorporate a process of evaluation and follow through with the appropriate interventions to continue with them into the next grade level. Unofficially, the results showed a positive change in the society that began to emerge at around the 9th week into the study. It is recommended that future research should lengthen the time framework. This increased time can offer the opportunity to see further development of social skills which may take more than 5 weeks.

2. From this study, the research found that social skills need more time to develop and with more purposeful training than other the behaviors. Future research should determine how much more emphasis is required to obtain a more significant change in social skills behavior.

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