

The Impact of a Positive Living Skills Training Program on Children with Attention-Deficit Hyperactivity Disorder

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Abstract

Medication and psychotherapy have been used traditionally to treat the symptoms of Attention-Deficit Hyperactivity Disorder (ADHD). The purpose of this research was to evaluate the use of a mental skills training program, Orlick's (1998) *Positive-Living Skills (PLS)* program, on three male children ages 8 to 9-years-old with ADHD. The *PLS* program teaches children mental skills including relaxation, focus and distraction control. A multiple case study method was administered to determine (a) whether the participants enjoyed the *PLS* programs; (b) the extent to which the skills were implemented by the children on a daily basis; and (c) the effectiveness of the skills in facilitating self-control and focus management by the participants. The results of this study were extremely positive. The participants learned to relax, focus and control distractions. The *PLS* program empowered these three children to assume responsibility for their actions, to manage ADHD behaviors, and provided positive alternatives to negative behavior.

Introduction

Extensive research has been compiled surrounding the use of stimulant medications in managing the behaviors of children diagnosed with Attention-Deficit Hyperactivity Disorder (ADHD), however only a small number of have endeavoured to examine the use of self-modulated programs in managing this disorder. Initially recognized in the Diagnostic and Statistical Manual for Mental

Disorders in 1980 (American Psychiatric Association, DSM-III, 1980) ADHD is a behavioral disorder recognized by two core characteristics, inattention and impulsivity/hyperactivity. The symptoms of ADHD can manifest at varying degrees and are identified by behaviours that impede academic performance, social interactions, and the completion of developmental tasks (Krueger & Kendall, 2001). Children diagnosed with ADHD often exhibit aggression,

frustration, lack of internal control, diminished intrinsic motivation, and limited reaction to external motivators. Subsequently, depression and low self-esteem become secondary symptoms (Leipold & Bundy, 2000). Children diagnosed with ADHD are also subject to poor peer relations due to aggressive conduct, and are often rejected due to their overzealous and insensitive behaviours (Blachman & Hinshaw, 2002). The inability to maintain attention and the exhibition of impulsive behaviours also limit the learning abilities of the child, which become increasingly detrimental to academic achievement and results in lower I.Q. scores (Kerns, McInerney & Wilde, 2001; Kruger & Kendall, 2001). An ADHD diagnosis also impacts on the family situation, sometimes causing disruption and hostility in parent and sibling relationships with the diagnosed child (Lobar & Phillips, 1995). Discipline concerns and low family cohesiveness contribute to an increased potential for a conflict-ridden situation, often resulting in increased frequency of maternal depression, marital conflict, and elevated intensity of maternal discipline (Bor, Sanders, & Markie-Dadds, 2002; Lavigne, Arend, Rosenbaum, Binns, Christoffel, & Gibbons, 1998; [NIH], 2000). ADHD often persists into adulthood, with most children experiencing a decrease in symptoms during mid-to late adolescence (Hupp & Reitman, 1999; Wood, 1999). The effects of an ADHD-diagnosis that persist into adolescence and adulthood are likely to result in low employment and socio-economic status, antisocial behaviours and mood problems (Waschbusch, Pelham, Jennings, Greiner, Tarter, & Moss, 2002; Wood, 1999).

ADHD is diagnosed by assessing a series of pre-established characterizing factors administered by a physician and/or child psychiatrist (Pillow, Pelham, Hoza, Molina and Stulz, 1998). The diagnostic criteria requires

that the child experience six or more specified symptoms of inattention and/or hyperactivity-impulsivity for at least six months to an extent that is maladaptive and inconsistent with the characteristic developmental level (American Psychiatric Association, 1994).

Traditional treatment methods targeted the medical community and medical practitioners as the most appropriate to manage ADHD. Few attempts have been made to teach children mental skills that may help them manage their own ADHD behaviors, perhaps because they are considered too young to be able to administer any form of treatment. Despite the controversial diagnosis and treatment protocols, ADHD remains the most commonly diagnosed behavioral disorder in children (National Institute of Health [NIH], 2000), with a boy-to-girl proportion of 3:1 (Wood, 1999). Currently, between 5 and 10% of school-aged children in North America have been diagnosed with ADHD (Hoagwood, Kelleher, Feil, & Comer, 2000; Johnston, 1996; Waschbusch, et al., 2002) stimulating research to effectively manage the behaviors. These numbers alone provide support for the need to conduct research on appropriately designed programs to teach children skills to effectively manage their own behaviors.

While research on relevant self-control programs for children with ADHD is clearly warranted, no reports have utilized a mental skills program in an attempt to teach children with ADHD important skills like relaxation, focusing and distraction control. The purpose of this study was to introduce and evaluate the effectiveness of select skills from Orlick's *Positive-Living Skills (PLS)* program (1998), a mental skills program for children, to determine; (a) whether the participants with ADHD enjoyed the *PLS* programs; (b) the extent to which the skills

were implemented by children diagnosed with ADHD on a daily basis; and (c) the effectiveness of the skills in facilitating self-control behavior management by the participants with ADHD.

Review of Literature

Medication Therapy

Research estimates that 3 to 5% of school-aged children are currently undergoing psycho-stimulant medication therapy to control and manage behaviour symptoms associated with ADHD (Blachman & Hinshaw, 2002; Hoagwood et al., 2000; Janetti, 2000; Johnston & Leung, 2001). Methylphenidate, also recognized as Ritalin®, Concerta®, and Metadate®, is the most commonly prescribed psycho-stimulant medication for ADHD. Over seventy percent of ADHD-diagnosed children are using this medication, with a significant increase over the last two decades (Klein-Schwartz, 2002). Less commonly used psycho-stimulant treatments for ADHD include dextroamphetamine and pemoline (NIH, 2000). Race, sex, age, socio-economic status and family relations do not appear to impact the effectiveness of methylphenidate, although low intelligence may be associated with an inferior response to treatment (Wood, 1999). Methylphenidate serves the child by blocking dopamine transporters and increasing attention signaling, resulting in a decrease in activity while increasing concentration (Vastag, 2001). Use of the medication has been reported to result in dramatic improvements in attentiveness, reduced aggressive behaviours and more self-control of emotional reactions, measured by teacher and parent observation. Psycho-stimulants also reportedly improve cognitive abilities and emotional maturity, seemingly “normalizing” the ADHD behaviours of diagnosed children (Hoagwood & al., 2000; Spencer, Biederman, & Wilens, 2000). The medication has varying results in improving academic achievement, with the

most recent studies concluding that increased academic achievement is due to improved attentiveness and is not a direct result of the psycho-stimulant (Moline & Frankenberger, 2001). While methylphenidate is effective in the management of ADHD symptoms in a large number of cases, it is not without negative side effects. Side effects of this medication, with children, include nervousness, headaches, insomnia, anorexia, dizziness, dry mouth, irritability, and weight loss (Wood, 1999). The medical community has also expressed concern regarding the potential for overdose with children who are prescribed methylphenidate, as the tablets may be abused when used orally, injected, or snorted (Klein-Schwartz, 2002). Moline and Frankenberger (2001) confirmed that 34% of children who are prescribed methylphenidate to control ADHD symptoms have been approached by other students to either sell or trade the medication.

The immediate effects of methylphenidate use have been well documented, however the long-term effects are less well known. Vastag (2001) reported that only two large studies attempted to determine the long-term effects of methylphenidate use. One study stated that drug addiction was more prevalent while the other study demonstrated an opposing conclusion. The Canadian Pharmacists Association (2001) indicated that, not unlike other psycho-stimulant medications, methylphenidate should be administered cautiously to patients with emotional instability, as the patient may develop dependency. Vigilant individual supervision during drug withdrawal is imperative, as depression and chronic over-activity may occur.

Recent evidence suggests that medication to treat ADHD is more effective when paired with alternative treatment strategies, such as

cognitive behavior therapy, psychotherapy, stress management training and emotional counseling (Klein-Schwartz, 2002; Pelham, Vodde-Hamilton, Murphy, Greenstein & Vallano, 1991; Stubbe, 2000). Methylphenidate is used to decrease the occurrence of inappropriate behaviors, but does not serve to increase positive social behaviors in children diagnosed with ADHD (Hupp et al., 2002).

Positive-Living Skills Program

Positive-Living Skills (PLS) outlined in the book *Feeling Great, Teaching children to excel at living* (Orlick, 1998) provides a basic mental skills program designed for children, through a cognitively based approach that may be self-administered following the initial teaching. The *PLS* program provides adults, living or working with children, with activities to help children learn positive-living skills. Created by Dr. Terry Orlick, the *PLS* program was refined using feedback from children and professionals in the area of child development. *PLS* is targeted at children ages 4 to 12-years-old. The program teaches positive-living skills including; relaxation, stress control, highlights, positive thinking, focusing, and positive imagery. A separate manual provides step-by-step instructions to introduce the skills to children, activities for practicing the skills, an audio compact discs (CD) of all the program skills, and homework suggestions.

Gilbert and Orlick (2002) introduced Orlick's *PLS* program to three classrooms children: grade one, a combined grade one and two class, and a combined grade five and six class. An experimental group in each classroom received four or five, 15-20 minute *PLS* intervention sessions a week, taught by their teacher, for a period of nine weeks. Control groups in the same school at the same grade level maintained their habitual classroom schedule during the intervention

sessions. Using pre- and post-tests, the researchers were able to determine that by using the *PLS* program, the teachers were successful in teaching their students to relax themselves, to apply stress control strategies to their lives, and to identify and increase the positive, or meaningful events and occurrences in their day. A comparable study in an alternative school, which incorporated many ages of children, found similar results. Administered by the teachers to grade one through grade students, relaxation and stress control skills were successfully integrated into real world situations by the students. Both teachers and students reported having enjoyed the program and felt they had been positively affected by the experience (Taylor & Orlick, 2004). Cox and Orlick (1996) found, using heart-rate monitors, that children from Kindergarten through grade six could lower their heart-rates following a 10-week intervention using the *PLS* skills, while the control displayed no improvements. They also reported that 96% of the children gave specific examples of successfully applying the relaxation and stress control skills they learned in class to their daily life.

The benefits of *PLS* skills training were also demonstrated in select or special populations, including children with chronic illness (Koudys & Orlick, 2002). A four-month intervention was used to teach the *PLS* skills to a child with cancer and their primary caregiver with field notes and interviews used to assess the program. The child learned a variety of positive living skills and was able to use them both inside the hospital environment, and in other situations. The researchers also reported a decrease in crying and an increase in proactive responses to pain when the child was undergoing treatment for cancer. Learning the *PLS* skills, including muscle relaxation, diaphragm breathing and positive imagery, enhanced

the child's ability to cope with treatment and improved his overall quality of life. The caregiver also found the skills helped her to manage her fear and stress better, thereby being better able to provide more effective assistance to her child (Koudys & Orlick, 2002). Klingenberg and Orlick (2002) introduced skills from the *PLS* to a family with a child with a physical disability and a cognitive delay. Ten weekly interventions were conducted to teach the skills adapted from the *PLS* program. Interviews were conducted during week 5 and week 10 of the intervention program. The results indicated that the family perceived better overall family functioning and reported improved coping skills. The family also reported that regardless of the demands of each family member, the interventions served as an opportunity for the family to re-energize and spend enjoyable time together.

Teaching children mental skills related to positive personal development, at school or at home, leads to overall growth of children, particularly when someone who cares is guiding the learning process (Orlick, 2002). Based on a series of studies done on the *PLS* program, and extensive applied work using the *PLS* activities with children, Orlick concluded that teaching children positive-living skills (mental skills related to personal development) is extremely effective (Orlick, 2002). This study assessed the extent to which this proposition held true for children diagnosed with ADHD.

Methodology

The purpose of the study was to assess the enjoyment, application, and effectiveness of Orlick's *Positive Living Skills* program (Orlick, 1998) for children with ADHD. A qualitative, multiple case study, was carried out with 3 male children diagnosed with ADHD. Two participants were 8-years-old and one was 9-years-old. The participant

selection was completed by posting information in a facility frequented by families of children with ADHD.

The participants had been previously diagnosed as having ADHD by their family physician or child psychologist, as per the criteria established in the Diagnostic and Statistical Manual for Mental Disorders, 4th edition (DSM-IV, 1994). The participants were undergoing physician-supervised treatment for the symptoms of ADHD using medication, and had maintained their prescription for a minimum of 4 months, thereby providing for a bodily adjustment to the medication (Canadian Pharmacists Association, 2001). None of the children were under medical care for other medical conditions and none had previously participated in research related to the topic. The consent of each participant and their parent(s) or was obtained prior to the research commencement.

Program

The *PLS* program was administered to each of the participants individually by the first author of this article. At that time she had ten years of experience working with children in recreational and academic settings, and had training in behavioral and cognitive disorders, and interventions. The researcher, in conjunction with her supervisor (second author), selected the skills to be taught and was very familiar with their teaching and implementation. The skills selected were those designed to teach relaxation, focus and distraction control. The eleven intervention exercises used in this intervention all focused, either in part or in full, on skills to increase relaxation, strengthen focus or limit distraction. The relaxation component of the program taught children how to relax and calm down. The focusing component taught children to concentrate and direct their focus. The distraction-control component taught the children skills to maintain focus

during distractions. Some intervention exercises incorporated more than one of these skills. A brief overview of the intervention activities can be found in Table 1.

Table 1. Activities Used from the PLS Intervention activities (Orlick, 1998)

Activity - Length (mins.)-Description

Basic Spaghetti Toes - (6:07)-Tense and relax their muscles

Treasure Hunting for Highlights - (6:16) - Focus on finding happy things everyday

Umbalakiki- (5:51) - Learn to shift focus

Changing Channels - (5:10) Switching from negative to positive thoughts by using an internal remote

The Great Little Listener - (4:43) - Listen to a story and learn to focus

One-Breath Relaxation - (5:35) - A slow breath, exhaling stress and tension

Tree It and Changing Channels - (4:14) - Focus on one of two stories being told

Focusing Through Distraction - (5:43) - Perform a math task, with distractions

Special Place Relaxation - (4:11) - Image calm and beautiful places

Jelly Belly – (6:39) - Relax by controlling abdominal breathing

Quiet Lake – (3:54) - Use imagery to relax the mind and body

The intervention consisted of ten 35 to 45-minute sessions, with two sessions each week for a 5 week period. The one-on-one intervention sessions were conducted in ei-

ther the ADHD parent resource centre or in the participant's home, with parent's present in the room or in a nearby room. The scheduling of the sessions was planned with each individual family, and was organized not to interfere with either academic or extracurricular commitments. Sessions occurred on weeknights, mostly in the two hours directly following the child's return from school.

The initial four sessions introduced the participants to the intervention activities, and provided an opportunity for the children to practice the skills. Each participant and the researcher listened to the selected audio CD exercises. The researcher then asked the child to identify what they thought was the purpose of the exercise, for example, the purpose might have been to relax, to focus, or to stop distractions. The participant then practiced the skill without the use of the CD.

Approximately three audio CD exercises were presented in each session for the initial four sessions. The children also used their log books to identify their level of relaxation and focus prior to, and following each CD exercise. For the next six sessions the child and the researcher repeated specific CD exercises and together identified, and discussed specific situations where the program skills might be used in daily life. The participant and the researcher listened to the exercises on CD and then practiced the exercise without the CD. An outline of CD activities used for each session is shown in Table 2

Table 2. Session Schedule for Intervention Method - Introduction and Teaching Session - Intervention Activities

Session 1
Basic Spaghetti Toes
Treasure Hunting for Highlights
Umbalakiki

Session 2
 Changing Channels
 The Great Little Listener
 One-Breath Relaxation

Session 3
 Tree-It and Changing Channels
 Focusing Through Distraction
 Special Place Relaxation

Session 4
 Jelly Belly
 Quiet Lake

Method - Practice and Discussion
Session - Intervention Activities

Session 5
 Basic Spaghetti Toes
 Practice and Discussion
 Treasure Hunting for Highlights

Session 6
 Umbalakiki
 Changing Channels

Session 7
 The Great Little Listener
 One-Breath Relaxation

Session 8
 Tree-It and Changing Channels
 Focusing Through Distraction

Session 9
 Special Place Relaxation
 Jelly Belly
 Quiet Lake

Session 10
 Reviewed all exercises with CD
 Discussed activities

Sometimes distractions were introduced, such as an open window, the TV on, or the researcher fidgeting with paper to further simulate and practice the use of the exercises in daily situations. The researcher used

a log book in the last six sessions to allow the children to identify their level of relaxation and focus before and following the use of the skills, both with and without the audio CD. The log book was also used to illustrate situations where they had used or may use the skills in daily situations.

During sessions, reinforcement for on-task behaviours, such as listening and sitting appropriately, was provided in the form of verbal praise, such as “good listening, I like your sitting, great paying attention”. Verbal prompts, such as “listen carefully, time to pay attention”, were used to regain the attention of children if they appeared to be distracted.

The researcher was aware of the importance of the researcher-participant relationship when introducing an intervention and conducting qualitative research. This relationship allows for meaningful communication and open and honest interview results. The importance of listening and really hearing the participant, as presented by Rubin and Rubin (1995), assist in constructing this relationship throughout the research experience. The researcher provided a comfortable and safe environment by interacting in a calm, caring and professional manner at all times. The parents were informed of the researchers’ graduate experience in qualitative research, through both class work and previous interview experience. The researcher shared her background in behavior analysis and her experience working with children in recreational and academic settings. The parent and participant interviews also began with general questions to begin from an unobtrusive vantage point and to gain a basic knowledge of each participant’s interests.

Role of Parents

Each participant and parent received an outline of the selected intervention activities

(Appendix D) from *PLS* (Orlick, 1999) and the audio CD to use at home and share with their family. Parents were encouraged to remind their child to use the skills in daily life. The researcher briefed the parents at the end of each session about the skills discussed during that session, and some of the situations the child had identified as areas where they may be implemented. The researcher then informed the parents that they could practice the skills with their child and encouraged the parents to provide verbal prompts to their child for using the skills, if they identified an opportunity.

During intervention sessions, parents were encouraged to join in and listen to the CD, but were discouraged from participating in the researcher-child discussions. They were provided with a note pad and pen where they could make notes of ideas or suggestions relating to the log book activities or the intervention activities completed. At the end of the session parents could then share their ideas with the researcher and their child. This was done to limit disruption during the sessions.

Pre-intervention Interview

The purpose of the pre-intervention interview was to gain a general understanding of the participant's treatment history, their particular behaviors associated with ADHD, their ability to remain focused and their general ability to control distractions.

The researcher conducted the pre-intervention interview the week prior to the start of the intervention. The participant interview had parent(s) present while the child responded to open-ended questions. The participant was also asked questions about their ability to focus in different situations, times when they were distracted and their own description of not being able to focus.

The child participant then left the room and the parents were interviewed regarding situations when their child was able to concentrate, strategies used by the family to manage the behaviors, and their description of the ADHD behaviors they observed in their child.

Post-intervention Interview

Following the completion of the ten session, five week intervention, the participants and their parent(s) engaged in a post-intervention interview. The post-interview was scheduled 2 to 3 weeks after the completion of the five-week intervention. The participants were asked to respond to questions that related to whether or not the participants enjoyed the *PLS* program, whether or not the participants used the skills, and the participant's perspective on the effectiveness of the skills that they did use.

The parents were also interviewed, again with the without the child participant being present. They were asked questions about their perception of their child's enjoyment of the program, their opinion of whether the program skills had been effective for their child, and their views on their child's application of the skills to daily life.

The researcher audio taped the pre-intervention and the post-intervention interviews and transcribed the interviews verbatim. The participants and parents were provided with a written copy of the transcripts to read and review together, and all confirmed the accuracy of the content.

Log book

A log book was introduced as part of the intervention. Each participant decorated their own log books with pictures and coloring. One or two log book pages were completed by the participants per session to target the specific mental skills being

learned or practiced that session. The pages completed during that sessions were either paired with listening to the intervention exercise on CD or after practicing the skill without the CD. The researcher collected the log books at the end of each session and kept them until the following session. During the log book exercises, participants often requested that the researcher write out longer responses for them due to their inability to spell correctly. In these cases, the researcher transcribed the participants' responses verbatim, and then read them to the participants again to verify accuracy. In these cases the researcher indicated on the log book page that the responses had been transcribed by the researcher.

The log book provided the children with an opportunity to further explore and evaluate intervention activities. The contents provided questions to initiate reflection, evaluation and discussion. The primary purpose of the log book was to facilitate better mastery of the mental skills through use of illustrations and written comments by the children.

The log book provided participants with evaluation scales where they could rate the effectiveness of using the skills. They could also comment on additional areas explored, including possible situations for applying the skills, and a list to catalogue which exercises had been learned. The log book served to generate opportunities for the researcher and the participants to discuss the intervention exercises and skills following listening to the intervention activities on CD. The participants colored the pages assigned for each activity and were encouraged to make notes of ideas or thoughts they had on the intervention activities they were doing. The researcher facilitated the process by reading the directions and encouraging the partici-

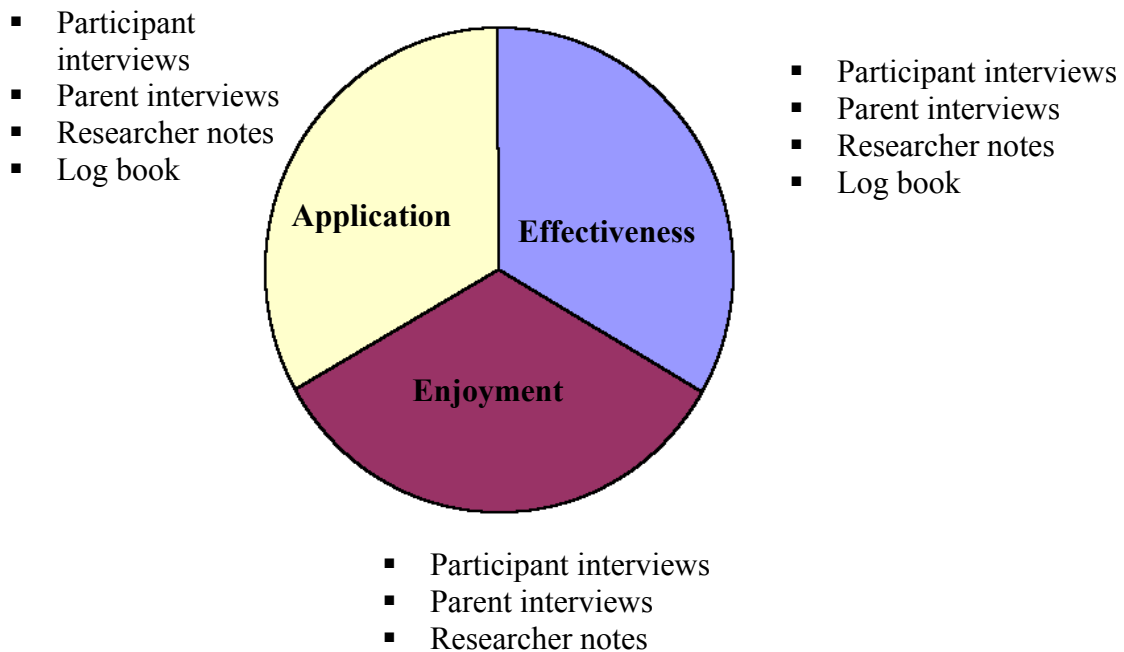
pant to discuss their picture or ideas. The log book also provided an opportunity for the children to recall specific situations where they had used the program skills, or situations where they could have, but did not use the skills.

Researcher Notes

The researcher kept brief notes on each session with each participant. Following each session, the researcher recorded information relating to what was done in that session, what went well, any problems or concerns expressed by the parents or the participant, the participant's reactions to the intervention activities presented and any relevant or unique session details. Notes were used to allow the researcher to recall details about what transpired with each particular participant while running sessions with three different children over the course of the intervention period.

Results

The post-intervention interviews, log books and researcher notes were analyzed to assess the overall effectiveness of the program (see Figure 1). Prior to the study, the researcher identified 3 primary categories of information that would be assessed, including enjoyment of intervention activities, application of skills learned, and effectiveness of the application. These three primary areas of assessment were based on previous research on the *PLS* program, the needs of children with ADHD and discussions between the researcher and her supervisor. The following Figure indicates which data sources were used to evaluate each of the research categories.

Figure 1. The data sources that contribute to each of the three research categories.**Case 1**

Cal was an 8-year-old boy who was diagnosed with ADHD when he was 6-years-old. At the time of the research he was taking methylphenidate to treat the behaviours of ADHD and had been part of an ADHD group therapy session with children his age for eight months. During the pre-intervention interview Cal's mother explained that he had many typical symptoms of ADHD.

He is excited all the time, even when I know he is tired, he cannot stop himself. He gets frustrated because I want him to sit for a meal or to do his homework. He yells a lot, sometimes to be heard, other times just to yell...I often have to repeat instructions, like making his bed, six or seven times. I know it is not his fault, he cannot focus, he gets lost in other things, but not like a typical child.

He really seems to want to pay attention, but he just can't sometimes.

Cal's mother explained that since he began the medication a year ago, he is more able to maintain a level of focus when talking to another person or completing a task, but far less than his 6-year-old, non-ADHD brother.

When asked about favorite activities, Cal explained that he used to play hockey and he loved it, but the coach said he had to leave. Cal's mother explained, "He was just too anxious, he didn't know how to calm down. If they were winning, he was up the walls, if they were losing, he yelled, screamed, and got penalties for being unsportsmanlike". Cal also explained that he was unable to stay focused at school, and was often sent to the principal for recess. "She [teacher] sends me there all the time. I say one little thing and I hafta spend recess with the secretary, inside. Nobody listens when I say I didn't do it".

Cal's mother later said that Cal is quick to complete his work and has a high academic standing, but once he is finished, he doesn't sit and read like other children, or talk quietly.

When asked what it felt like to be focused, Cal responded "Like water, I mean like being there. Then I know what to do, and everybody likes me. My friends like me more, and mom too". When he tried to explain how he felt when he couldn't focus, Cal said, "Like, like nobody cares. I try, I do. I try to pay attention. But it is like nobody can make me, even me... I feel like I am shaky, like I can't do anything right". Cal responded quickly when asked about situations where he can stay focused. "I can play PS2 (videogame) forever. And I pay attention to TV really good. Sometimes when I play with my brother, but sometimes not". Cal's mother explained that he can watch TV or play video games for an intense amount of hours.

He has this amazing ability to pay attention to those things. And he is good, he knows what to do to go to the next level. Even TV is easy for him to watch, he knows all of the Simpsons® episodes by heart, I think. I sometimes want to video myself asking him to do stuff, like clean his room, and see if it works. But it probably wouldn't, I don't think.

Enjoyment

When Cal was asked about the intervention activities, he was quick to announce his approval of the PLS program. He mentioned enjoying all the parts of the program, but had particularly enjoyed One-Breath Relaxation, a relaxation skill.

I do it all the time, like at school, or when I play soccer. And in the car

mom tells me to do it when I get loud. And my teacher says I did it and she taught the class. Now we get to do it after recess and stuff when we are hyper.

Cal's mother reinforced his dedication to using the One-Breath relaxation, saying that she had immediately noticed him using it after the second session, when it was introduced. She had also heard him using Special Place Relaxation before bed, quietly talking to himself.

He would frequently ask me to put the CD in when we were driving to school or somewhere. He likes listening to the Focusing through Distraction one. He is always asking me to make sure he did it right. And I even heard him teaching his little brother to do Jelly Belly once.

She also mentioned that Umbalakiki had been a favorite of his, and that she had many times told him to use Changing Channels when he was in a difficult mood or easily frustrated.

Cal was asked about when he used the skills and he said,

I use them all the time. I do them at school, and in the basement when we are playing, or with my friends. And when I have to be quiet, like when we visit Nana. Some I do with the CD, but I can do a lot on my own too.

Application

Cal brought his PLS CD to school and soccer practice. He introduced his teacher and coach to the program so that they could facilitate its use outside the home. The parents encouraged the teacher and coach to prompt him to use the program skills if they ob-

served situations where he might need to relax, shift focus or manage his behaviors.

Cal was asked to provide more detail on how he uses the program skills in soccer or at school. He stated that he used One-Breath Relaxation when he got excited or could not focus. “I take a slow breath when I get crazy like that. Some days I take lots of breaths. But mom says I am good at it”.

In the log book, participants had the opportunity to complete two pages for each new program skill introduced. The first page completed provided the participants an opportunity to brainstorm situations where they might use the new skill they had just finished listening to on the CD. Cal had a multitude of situations to suggest for implementation, and most of these situations were repeated for each new program skill introduced. A sample log book page that Cal completed for the Focusing Through Distraction CD exercise is shown in Figure 2. The following list includes the situations suggested by Cal where he might use one or more of the program skills in daily life, including at school, at hockey, during soccer, at the doctor, at church, while doing homework, and while playing outside. Participants were encouraged to update the list of possible situations for application and their actual situations of application in their log book pages as they used their skills or had new ideas for situations to apply them. The researcher suggested adding to the lists during each session.

Cal, and the other participants, also completed a separate page for each program skill that illustrated where the children had actually used the skills. Cal repeatedly reported specific areas where he actually applied the program skills. For example at school, doing homework, at the hospital and playing soccer.

Cal’s mother said she would often encourage him to use Basic Spaghetti Toes while she was making dinner, and he would just relax and become calm enough to sit through dinner. The family also listened to the CD on the way to church, and Cal was able to sit through two 45-minute church services without being disruptive. Once he was calm after listening to the CD, he would colour or read during the service to keep from running and yelling. Cal did require the occasional reminder to use the skills during church and when visiting people, but he was quick to identify which program skills to use, and his mother said he was almost always successful in choosing one that was effective.

Effectiveness

When asked if the program had helped him, Cal responded with an enthusiastic yes

Cause I can do stuff now. Like sit and listen to the teacher. Not always, but sometimes. And I can play soccer. Mom said if I learned to calm down, I could. And I scored two goals last week. I only got two warnings from the coach to calm down, and the other kids did too.

The researcher notes cited a specific incident in session 7. Cal, a child who had previously been removed from hockey, due to his inappropriate behaviours, literally ran to share the news of his permission to join the soccer team with me. At the end of that session, his mother became emotional as she shared that she had feared her son would never be able to participate in recreational activities without direct parental supervision prior to the PLS program.

Cal and his parents had previously been informed that he could no longer play on the hockey team because he was unable to con-

trol himself and his outbursts during the games. Therefore he and his parents considered his ability to appropriately participate in soccer and control his inappropriate behaviours as a milestone accomplishment and attributed it primarily to the PLS program. They clearly stated this in their post-intervention interview.

Figure 2. Cal's list of locations where he could use the skills learned from the Focusing Through Distractions activity.



Cal's mother pointed out that his teacher and coach had been aware of his use of the PLS program and would sometimes remind him to use his skills if they thought he might lose control or blow up. She reported that the instances of going to the principal's office had also decreased drastically since starting the PLS program.

He still goes, but when he does, he tells the principal what he should have done before she even asks. He

tells her he should have used this program skill or that program skill. The school is very impressed with this change.

In his log book scales on self-evaluation of relaxation prior to and following the use of One-Breath Relaxation, Cal frequently evaluated himself as stressed prior to doing it, and calm after doing it. Cal completed six relaxation evaluation scales during the course of the PLS program. He rated himself as having gone from a little stressed to very relaxed five out of six times, and going from very stressed to a little relaxed the one remaining time.

Cal was also a frequent user of the focusing skill called Changing Channels. In his log book, he rated his independent use of the Changing Channels on four separate occasions. On each assessment responded that yes, using Changing Channels to refocus had been effective for him. Cal's third self-assessment of Changing Channels, taken in session 6 of the intervention, is presented in Figure 3.

Cal's mother noted that when he was tired or sick, it became more difficult to engage him in using the program skills, but that he still tried.

Cal emphasized that he will continue to use the program skills. As he phrased it, "Well they work, why would I stop?" His mother echoed this remark, commenting that they had been so effective, she wished this had been available sooner to her. While Cal still had behaviours that he could not completely control, he was more frequently able to use his program skills to help himself maintain or regain control. His mother commented on how his behaviours had improved.

Figure 3. Cal's logbook entry on using Changing Channels at school and its effectiveness.

CAL.

Changing Channels

Date: January 28/04

Did you try to change channel or refocus today?

Yes No

What happened?

Cal: Transcribed Verbatim by researcher: I was trying to focus but I was looking outside of school. So I changed channels.

What did you do to refocus?

Channels

Did it work?

Yes A little No

Since the second week, (of the PLS program) I could see a change. He would really try to control himself. Even asking what a program was called so he could use it. He is less antagonistic of his brother and is able to listen better.

He can follow instructions now to do something without three repeats. He still needs to be overseen, and sometimes he will say, 'Mom, let me breathe first, then tell me what to do.'

The family now uses the programs actively with both children. Each parent has a copy of the CD in their car and they often play it going to school, church, and work, or even to the grocery store

Before, when he was bouncing off the walls, we couldn't stop him, besides sending him to his room. Now, we have a tool, and a tool that he enjoys, It isn't a punishment. It's like we say, 'here, you need this now, it will help' and he accepts that.

Case 2

Tom is an 8-year-old boy diagnosed with ADHD 18 months ago. He is currently taking medication to manage his ADHD behaviours and also participates in regular psychotherapy. He used many short, non-descript answers in both interviews and used his log book primarily to express his opinions about the program skills.

When asked to discuss the particulars of Tom's behaviours, his mother explained that, He likes to be the centre of attention. But there has to be consequences, he will sit out, because he will act out. I have to repeat myself 55 times... And hyperactivity, acting hyper. The struggle to get him to do his homework.

When Tom was asked about situations where he found it hard to maintain attention, Tom explained that he found it hard to focus at school, or at his desk. And at home, he found doing his homework to be terribly hard because he simply could not focus to get it finished. He explained that he had no techniques to allow him to focus in necessary situations. "I just fail because I can't focus".

Tom's mother pointed out that he can focus during desirable activities, such as video games, building with Lego, and playing with cars. "He can do it if he wants to. It's gotta be what he wants though". Tom also plays hockey, skis and mountain bikes.

Some of the strategies Tom's family had used in the past to manage his behaviours included taking away items and removing preferred activities.

Enjoyment

In the post-interview Tom was quick to comment on his enjoyment of the program. "I liked it, I still do". He listened to the intervention activities frequently in the car or before bed, to both relax and focus. He explained that he enjoyed using it at these times, and he would often borrow his mother's CD player to listen to the tapes alone. Tom clarified that he enjoyed the intervention activities most when he could practice them a couple of times in a row. His mother discussed his use of the program as follows. "It's different from therapy...and he actually pulled out the CD without me pushing him". His mother was pleased with this observation, as she had had difficulty in the past motivating Tom to engage in some activities.

Application

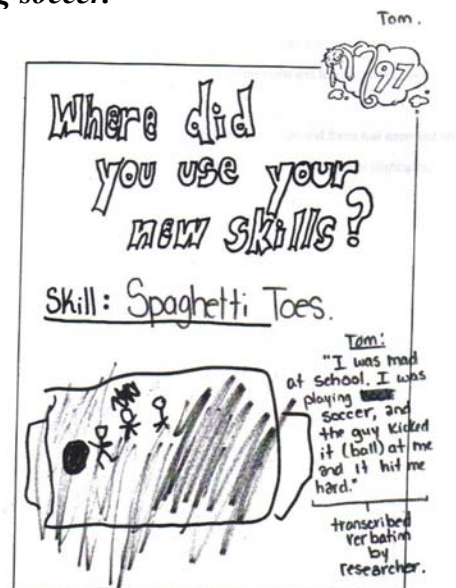
The use of the program was integrated as a routine into Tom's life, which his mother believes contributed to its overall success. Tom said, "I listened to it before bed, or sometimes in the car. It is just kinda part of the day". His ability to integrate it as a part of his schedule allowed him to readily accept it. In his log book, Tom identified school as a primary location to utilize the program skills. He also indicated that during intense hockey games, when the fans were particularly loud, the relaxation skills were useful. Finally, he discussed that when he was angry, upset, or frustrated were ideal times to apply the program skills.

In his log book, Tom indicated that he would use the program skills in many situations, including during tests, at home, before bed, during meals, and when he was angry

or upset. In his log book, he listed a variety of situations where he successfully implemented the program skills, including hockey, school, homework, when people were yelling, when doing work in class, and on tests.

The following example from Tom's log book (see Figure 4) presents a situation when he had actually applied the Spaghetti Toes activity, the one he determined worked best for him.

Figure 4. Tom's logbook entry on using Spaghetti Toes at school when playing soccer.



Effectiveness

Tom recognized that his ability to relax and focus improved after engaging in certain intervention activities, such as Highlights, The Great Little Listener, and Umbalakiki. Tom's self-assessment of his level of stress prior to, and following their use, consistently showed favorable results. He experienced a reduction in stress and a transformation into a more relaxed and focused state. Through his log book, Tom illustrated various ways in which he effectively used the PLS pro-

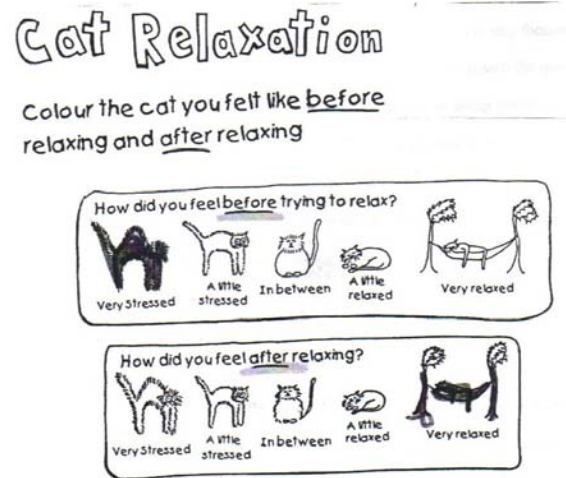
gram skills. Tom had already started to experience more academic successes, and gain a better grasp of his own ability to relax and focus early on in the *PLS* program. At the beginning of the fifth session, as recorded in the researcher notes, Tom was sitting at the table with a book when the researcher arrived. He shared that he had received his highest grade ever in math that day, and had already begun studying for next week's test. The first program skill for that session was Basic Spaghetti Toes. When he was told the session would start with Spaghetti Toes, Tom announced that he had in fact used Spaghetti Toes that very day, to relax and focus before his math test.

Tom completed six self-assessments using the cat relaxation scales throughout the intervention. He assessed himself on this scale as having gone from a little stressed to a little relaxed 3 out of 6 times, from very stressed to a little relaxed 1 time, and from very stressed to very relaxed on the final two occasions. Tom's final cat scale, completed after practicing the Spaghetti Toes activity, is shown in Figure 5.

Tom and his mother both commented in the post-intervention interview that learning to relax had contributed significantly to his overall ability to focus. His mother felt that simply learning the skills to relax allowed him to focus and gain an overall confidence in himself.

Tom also completed the Changing Channels assessment page in his log book on three occasions. In two instances he reported that "yes" Changing Channels had worked to refocus, and in the other instance he reported it had worked "a little".

Figure 5. Tom's logbook entry on the effectiveness of his relaxation strategy on the Cat Relaxation Scale.



Tom's mother said she witnessed a significant improvement in his behaviours after using the *PLS* program.

I've seen a big change in his school work...I'd say the one area I've noticed the most is where he would lose it and throw tantrums. They're becoming more of a minimum. And the outbursts, he'll catch himself...he is starting to think a bit more before he does things. It's a work in progress.

Both Tom and his mother agreed that it was the entire *PLS* program that contributed to Tom's improved behaviour management, and that no specific program skill could be identified as contributing more than others. He had used many of the skills and felt that each helped him to control himself.

It was clear from Tom's log book, that his ability to relax and focus had improved after completing certain intervention exercises and working on certain skills, such as High-lights,

Spaghetti Toes, The Great Little Listener, and Umbalakiki. His self-assessment of his own level of stress prior to and following the use of these skills consistently indicated positive results, including reduction of stress and shifting to a more relaxed and focused state.

Case 3

Bobby, a 9-year-old male, was diagnosed with ADHD 18 months ago, and is currently undergoing physician-supervised acupuncture and has been using methylphenidate for six months to treat his behaviours. When asked if it was sometimes hard for him to stay focused, the question was repeated twice before he could pay attention long enough to absorb the question, and answer. Bobby found it hardest to focus when he was in school or doing homework. His father mentioned that Bobby is an artist. “It’s the only time I can get him to sit still. Give him some paint and paper and you could leave him for hours. But anything else and you can’t keep him down”. Bobby echoed his father’s comments when asked to describe situations when he is able to focus. “When I am painting, or drawing, or using clay stuff, then I can focus. I know what I am doing. And I am good at that”.

Bobby described his inability to focus as, everything being more interesting than what he is supposed to be doing at that time. “I can find a hundred million stuffs to look at and talk about when I hafta do something. My teacher is always saying, ‘find one thought’. But I can’t do that. I have a lot to think about”. Bobby’s father explained that many “issues” exist around daily routine. Because Bobby is in constant need of direction, when left to his own devices, he will rarely complete tasks such as brushing teeth before school, eating lunch or dressing adequately to go outside.

Strategies the family had adopted for dealing with the ADHD behaviours included having Bobby repeat back instructions given to him, and being sure that clear expectations are being set and maintained for him daily.

We have a picture schedule that tells [Bobby] what is expected of him before school, after school and after dinner. If he forgets, or if he becomes distracted, we simply point him to the schedule. It has stopped the constant yelling between us and him, or at least we yell less.

Bobby referred to the picture schedule when asked what he does to stay focused in situations where it is necessary, “I go to the schedule and figure out what’s next. Then I go do that. It helps me...I also try really hard when mom and dad are talking, to pay attention. I don’t always listen, neither does my friends”.

Bobby’s father explained in the pre-intervention interview that meal times, church, or even going to a movie are very stressful for the family.

He just can’t sit there and listen; he needs to be up, doing something. We have stopped taking him to church because he was so disruptive. And movies, well we rent them now, and that way he can run around when the mood strikes him. I am actually surprised he sat for the whole interview.

Bobby did in fact sit for the entire interview with the researcher, but it is important to note he was constantly moving, needed the questions to be repeated multiple times, and was unable to maintain eye contact.

Enjoyment

In the post-interview, when Bobby was asked how he felt about the program, he responded by saying “I really liked the CD stuff, and I loved the art, but the programs were hard

to do on my own. I learned how to do Highlights really well.” His father supported this statement by saying that Bobby enjoyed listening to the CD, and did so almost daily.

Of all of the participants, Bobby’s reaction to the program was the most enthusiastic, which is clear from the researcher notes. On all occasions, except the very first session, Bobby ran to meet the researcher in the driveway to his house, already had the CD ready to go in the stereo and had a pencil case ready to work in his log book. At the end of sessions, he often shrugged his shoulders in a pleading way, and asked for five more minutes. This indicated that Bobby had a positive experience with the *PLS* program.

Application

Bobby and his parents were encouraged to use the *PLS* programs everyday. His parents said that his ability to illustrate his highlights appeared to relax him and allowed him to better focus on the rest of the day.

Bobby discussed his use of the program skills outside session.

One-Breath Relaxation was good if I was calm, but if I was bouncing off the walls, I couldn't do it. Mom would put the CD in and then I could calm down. I would relax and kinda pay attention to just the guy's voice.

His father agreed that it was easiest for Bobby to use the skills if the CD was present; however the family had been practicing

with him to help him learn to relax on his own.

He definitely concentrates on the CD. It is amazing to see him focus on anything other than art, or maybe TV. But he would listen to the CD over and over. It has become part of his routine, built in, that he listens to one program after school, one before homework and one before bed.

In his log book, Bobby had many suggestions where he might use the program skills. His suggestions included at school, with friends, doing homework, in the car, in gym class, during piano lessons, and when his parents were talking to him. When he completed his list of situations where he actually applied the *PLS* skills, his list included while doing homework, when reading, at dinner, before bed, and while watching television. Bobby’s uses were focused primarily on his home environment, most frequently with his parents, before bed or when he was trying to relax before a meal. He did occasionally use the skills during homework, but they were limited to Changing Channels and One-Breath Relaxation.

When asked to discuss the program skills best suited to Bobby, his father said that for after school, Special Place Relaxation was best, and Bobby’s favorite. Before homework, Bobby generally listened to Muscle Relaxation or Focusing Through Distractions. And before bed, Bobby always chose Basic Spaghetti Toes. The other intervention activities were used interchangeably through the day, including Highlights and the Great Little Listener. Changing Channels was favored by the parents, and became a commonly heard phrase for Bobby. He said that “Mom and dad are always saying ‘change your channel’ if I am being negative or having a bad day... I guess it reminds me.”

Effectiveness

Bobby found that the program skills worked for him, however, he and his parents agreed he sometimes had a difficult time applying the skills on his own.

In times when he needed to use them, he often had a hard time thinking to use them. If his mother or I even said the name of program, he would really try to use that skill. Highlights were good for him. He would get really frustrated or upset, and just by saying 'highlights' he would rush to get paper and draw some good things about the day.

When asked if the program had helped him, Bobby said that he was able to relax better now and was starting to be able to focus better, particularly when being given directions or instructions. He acknowledged that he had difficulty using the skills on his own, without the CD, but said he would certainly continue working on them.

Bobby completed the Changing Channels self-assessment log book page four times. Bobby indicated that he was able to refocus all four times when using this program skill, although he specified he had used the CD on each occasion. This was supported by the researcher notes. Bobby's third self-assessment for Changing Channels, taken from his log book, indicated that he enthusiastically felt this intervention activity had worked.

Bobby also used the cat relaxation scale to evaluate his own ability to relax following the use of a PLS program skills. Of the 6 scales he completed, he indicated having gone from a little stressed to very relaxed three out of six times, and having gone from very stressed to a little relaxed the other three times. Bobby's final cat scale, completed after using the Quiet Lake activity

showed that he clearly felt relaxed after using this intervention activity.

Bobby's parents said that they had begun to see improvements in his behaviors after completing the first half of intervention sessions. According to the researcher notes from session nine, Bobby and his father were excited to share the news that Bobby had used his new-found skills to telephone his Grandmother and engage in a lengthy discussion. His parents were quick to point out his previous inability to maintain a thirty-second conversation on the phone, and the great milestone they felt this phone call was for both Bobby and his parents.

Bobby's parents said that they were impressed with the success Bobby had experienced with the program. They commented that his ability to even have a simple conversation on the phone was improved. When he started to become distracted, he would take a deep breath and then pretend he was doing the Great Little Listener program. His parents also emphasized that they felt it was very important to continue to use and refine these skills.

As a final note, Bobby sat through his entire post-intervention interview, approximately 11-minutes, without needing a single question to be repeated or asking to leave. He wiggled in his chair, but made eye contact and provided well thought out answers. In his pre-intervention interview (7 weeks earlier), Bobby was very inattentive and distracted. He struggled to remain seated and required many questions be repeated due to his inattention. A review of the researcher notes indicated that Bobby's ability to remain engaged in the interventions had increased dramatically over the 10 sessions, with less verbal prompts required to remain on-task as the sessions progressed, and none required in the final 2 sessions. The dramatic

difference between the pre and post-intervention interviews was very evident to Bobby's father. He commented that he had observed Bobby using One-Breath Relaxation during the post-intervention interview to relax and remain focused. Bobby's father's final comment was, "He is a different kid. He tries harder and can really be a part of things now. He is much easier to be around, not just for me, but the whole family".

Challenges to the research

This research presented three main challenges. The first challenge was the overall behavior management required to facilitate the intervention process. All three participants demonstrated issues in focusing and were all easily distracted. The researcher managed these behaviors by showing respect for each child and by using positive verbal praise for on-task behaviors throughout the session. This positive verbal praise occurred at a variable-interval of approximately three minutes. This time-based reinforcement allows for verbal praise for on-task behaviors that varies around a predetermined time. In this case, approximately every three minutes worked well during the session.

The second challenge faced by the researcher was the off-task behavior exhibited by all of the participants at some point during the intervention sessions. This was managed by using verbal prompts to pay attention or return to the task. This was effective in most situations. When a participant was not easily returned to task using a verbal prompt, a two minute break would be encouraged. The child could get a drink, go for a quick walk, or talk about their distraction. The researcher would then quickly return to the task with the child, often increasing the variable-interval of praise for on-task behaviors to 30 seconds intervals for the initial

few minutes in order to further reinforce the on-task behaviours. The variable-interval would then return to about 3 minutes once the child was on-task for 2 minutes.

The final significant challenge facing the researcher in this study was the interference of parents and siblings during the intervention sessions. During the initial interview, the researcher had clarified the necessity to exclude the direct participation of the siblings from the intervention sessions. However, parents were encouraged to involve siblings in the practice and listening to the CD activities when they did them on their own at home. Parents were requested to redirect their other children from the intervention session areas, and it was suggested that they provide highly enjoyable alternative activities to dissuade siblings from attempting to participate. Verbal reminders at the start of sessions were provided for the parents who had previously failed to keep their other children away from the sessions.

Parents, who themselves, attended the sessions, were provided with a pad and pencil to note any comments or suggestions relating to the activities and intervention activities the researcher introduced to the child. This gave the parents a task to focus on and helped them refrain from suggesting situations or events, or answering questions for their child during the session. At the end of the session, parents were encouraged to share their notes with the researcher, who would then sometimes introduce some of their ideas at the next session. These three ongoing challenges directly faced by the researcher through the process of delivering the intervention activities, were sufficiently managed through the aforementioned means and did not disrupt the sessions to any significant degree.

Discussion

The findings of this study clearly indicated that these three children, diagnosed with ADHD, who participated in the PLS program (Orlick, 1998) benefited from learning the relaxation, focus and distraction control skills. These encouraging results support the findings of previous studies (Cox & Orlick, 1996; Gilbert & Orlick, 2002; Klingenberg and Orlick, 2002; Koudys and Orlick, 2002; Taylor & Orlick, 2004) all of which found the PLS programs to be effective in improving the relaxation and focusing skills of children from select population, including those with special needs and chronic illnesses. The outcome of the current research ADHD children is perhaps best served by discussing the enjoyment, application, and effectiveness of the program for these children.

The participants enjoyed the PLS program activities and found them to be engaging and fun experiences. The enjoyment of the intervention activities was due to two factors; the design of the activities, and the fact that they worked. The participants enjoyed the child-specific design of the program. Doing activities and applying the skills was fun. This supports the findings of Cox and Orlick (1996), and Taylor and Orlick (2004) that children really enjoy the PLS program activities. The PLS program activities were also identified by all of the parents as positive and relevant, and easy to use.

The participants enjoyed discovering that they have the ability and the skills to contribute to their own treatment and well being. The ability to actively participate in the treatment of one's own diagnosis is empowering and can contribute to an overall improved prognosis (Tyson, 2000; Miranda & Presentacion, 2000). By providing the participants with relevant skills to self-administer strategies or "therapy" to treat their be-

haviors of ADHD, it appears to have provided better focus and more self control, which in turn, has the potential to enhance their quality of life.

The application of the PLS skills to daily life, was essential in ensuring an effective use of these program skills. The participants were able to integrate the relaxation, focus and distraction control skills into many aspects of their daily lives. In their log books, the children identified many situations where these skills were used effectively, including when doing school work, in peer relations, for family cohesiveness, during recreational participation and preparing for sleep. These findings support the findings of previous studies (Cox & Orlick, 1996; Gilbert & Orlick, 2002; Koudys & Orlick, 2002; Klingenberg & Orlick, 2002; Taylor & Orlick, 2004) that found children effectively use the PLS program skills outside the teaching environment to relax, focus and see things in a more positive light.

Two of the participants (8-year-old Cal and 8-year-old Tom) and their parents found that their children easily generalized the PLS skills to all of their environments, and were capable of identifying appropriate situations and self-administering the skills. This supports earlier research by Cox and Orlick (1996), and Taylor and Orlick (2004) that elementary school children implemented the skills into many real world situations. Gilbert and Orlick (2002) also found that children who were taught the PLS skills used them both inside the classroom setting, as well as outside the teaching environment.

The other participant with ADHD in this study (9-year-old Bobby) also gained significantly from the intervention activities and applied them in multiple contexts. However, when compared to the previous two participants in this study, Bobby appeared to

rely more on the CD, verbal prompts or reminders to use the skills in different situations where they may be beneficial. This family identified the generalization of the skills to different domains as important and challenging, and were therefore committed to persist in encouraging their child to integrate the skills into his daily life. Given that this was a 5 week intervention program, and the previous school-based interventions were 10 and 12 weeks, it is likely that with continued use and encouragement, generalization of application and less reliance on the CD or verbal prompts will improve with time.

On a daily basis, the diagnosis of a child with ADHD impacts the entire family, sometimes causing discipline concerns and low family cohesiveness, with the potential to lead to greater distress, including maternal depression and marital conflict (Bor, Sanders, & Markie-Dadds, 2002; Lavigne & al., 1998; [NIH], 2000). All of the families in the current study integrated the PLS skills into their daily lives, with frequent use at home, at school and in recreational settings. The participants and their parents all indicated that they will persist with the PLS program as an integral part of their family cohesiveness and positive behavior management. The overall findings of the current study supports findings of previous studies by Klingenberg and Orlick (2002) and Koudys and Orlick (2002) both of which were conducted on families with special needs. In each case, better family functioning and improved coping skills resulted from using the PLS program.

All three families in the current research study reported experiencing improved family dynamics following the implementation of the PLS program into their lives. These families all found that using the PLS programs resulted in less anxiety and less stress

related to their child's behaviors and in their own lives. More specifically they reported that there was less stress for them and their child, particularly in social settings. Families reported experiencing greater ability for family outings, increased participation in community events, and better cohesiveness between parents, siblings and their children diagnosed with ADHD.

The enjoyment and application of the PLS skills are the first steps to successful implementation. The final and perhaps most important step is the effectiveness component of the PLS program skills in promoting positive behaviors while diminishing inappropriate behaviors. The participants, from this select ADHD population, found that the skills they learned were useful in managing their behaviors, particularly when they had previously identified, during the sessions, possible situations where they could use the skills. These findings support similar findings in studies using the PLS programs with select populations (Koudys & Orlick, 2002; Klingenberg & Orlick, 2002).

The participants confirmed that they were able to learn the relaxation, focusing and distraction control skills, and use them either independently or with the use of the CD program to relax, to focus and to improve their ability to control distractions. The findings of this study demonstrate that the parents reported an improvement in how their children handled their ADHD behaviors by replacing disruptive behaviors with positive alternatives. They identified improved behaviors, including less tantrums, improved listening skills, greater attention span, less frustration and more self-control as results associated with the use of PLS program skills.

The findings of this research are remarkable, considering the limited time of the interven-

tion (5 weeks, 10 sessions). The success can be attributed to the use of a program that is exceptionally well-designed for children that can be self-directed, and self-controlled. It is effective in its simplicity, by being easy, enjoyable, and relevant for these children.

ADHD children are best served using a holistic approach to incorporate different approaches in order to decrease inappropriate behaviors, while increasing the use of appropriate behaviors. The Positive Living Skills Program (Orlick,1998), paired with other appropriate treatment, provide potentially valuable tools for both children with ADHD and their parents. It is important to include children in the treatment process and empower them to deal with their own ADHD behaviors in constructive ways. The major stakeholders, the children and their parents, all expressed their pleasure in being able to learn and use these skills themselves to enhance their own lives – in addition to, or apart from their medication treatment.

Future studies with the PLS Program would gain from longer interventions, small group interventions (where children are taught the skills in a group or team setting), larger sample sizes and follow-up studies with children and parents who have been participants in the program. The more control that children gain over their own behaviors, the better the chances of medication being minimized or eliminated.

Personal Reflections

The following personal reflections represent the feelings of the researcher who delivered

this program to the children. Having extensive experience and training with select populations, and particularly children with behavioral challenges, I was hopeful, but cautious that the use of self-implemented skills could help children with ADHD manage their own behaviors. As this program unfolded, I was astonished that any program could have such a powerful impact in such a limited time-frame. My experience with this study has served to broaden my mind to all the possibilities for treatment of ADHD.

Children, who often feel powerless, can be provided with skills to help them create better lives for themselves. The *PLS* program empowered these three children to assume responsibility for their actions, and provided positive alternatives to negative behavior. Tom started doing better at school, Cal got to play soccer with a team, and Bobby had many successful phone conversations, due to the skills they learned. They were taught to manage their behaviors by learning to relax, focus and control distractions. While all children can benefit from learning these skills, it is, perhaps, the children with behavioral challenges that can benefit the most, as they have the most to gain. The children and the families in this study earnestly integrated the *PLS* program into their lives. Their willingness to attempt something new and to persist with it provided them with a valued tool to facilitate managing ADHD behaviors. Given the positive results that were incurred in this study in such a short time frame, it is stimulating to anticipate the results that could be incurred from a longer-term intervention.

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