The Perceptions of Children Following Participation in a Yoga and Mindfulness Program: A Qualitative Study

A Thesis

Presented in Partial Fulfillment of the Requirements for the degree Master of Science in the Graduate School of The Ohio State University

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Abstract

Children are experiencing increasing levels of stress both in the school environment and at home. Yoga and mindfulness training are examples of less traditional methods being explored to help children manage this stress. The positive effects of these methods can include improved balance, strength and flexibility, as well as improved emotional health and behavior. Children who have participated in mindfulness programs have shown an increase in attention, relaxation, as well as decreased conduct and anger management problems. Following participation in a yoga and mindfulness program, the twenty-one second grade children were participants in focus groups designed to explore their experiences and perceptions of the program. Using a qualitative approach, the children were asked predetermined open-ended question probes following an art-based activity used as an introduction. An iterative process was used to identify and confirm themes from transcripts of the focus groups. The children interviewed during the focus groups perceived that following their participation they had increased strength, attention and on-task behavior, and social emotional abilities. Equally, they were able to express ways that they were able to transfer those techniques to situations in and outside of the school environment. The outcome of this study seems to indicate that techniques such as these could be an integral part of improving a child’s success in school and in developing better social relationships.
Dedication

Dedicated to my mother
Acknowledgments

First and foremost I wish to thank my advisor, Jane Case-Smith, who has provided unlimited support during this process. Many times I have showed up on her doorstep with questions or concerns, and she has always been willing to help in any way possible. I am deeply grateful. I also wish to thank the other members of my committee, Maryanna Klatt and Jill Clutter, who have provided their vast knowledge and guidance to this project.

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I especially wish to thank all the women in my life that surround me and have inspired me. I was taught early on that your life is measured in how you lift others up. My mother worked as a nurse and was truly an inspiration to every one around her. My sister, in her work with people with disabilities, has shown me what it is to truly care. I work everyday with women that are amazing and through small gestures, give so much to the children and adults that they touch. I want to take this opportunity to say thank you for inspiring me, and for lifting me up as well.
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Chapter 1: Introduction

Background of the Problem

Children struggle with greater amounts of stress than would have been typical years ago. The No Child Left Behind Act of 2001 (NCLB) was signed into law on January 8, 2001. This requires states to test students stringently in reading and math every year from third through eighth grade, and once in high school. The results must achieve a certain level or those schools face loss of federal funds. Equally, the schools are responsible for closing gaps between the majority of students and minority students and/or children with disabilities. That means that all students should be at grade level in math and reading by 2014. Nelms (1999) reported even prior to the enactment of NCLB that when children were asked to identify the biggest stressors “school was identified as the major concern” (p. 209). Equally children may experience stress in their home and family situations. This could include financial or domestic issues, divorce, and/or social issues related to loss of a parent. Often grandparents or aunts step in when their biological parents are unable to care for them. Children in low socioeconomic areas may also have poor nutritional intake, lack of regular exercise or restful sleep. All of these factors would affect their abilities in the classroom, possibly leading to difficulties concentrating or attending in the classroom.
Children also have fewer opportunities for physical activity during day. Recess and physical education classes have been reduced, and sometimes eliminated, at schools to allow more time for academics. Children often receive less than the recommended 60 minutes per day of physical activity, with minority children more likely than non-Hispanic white children to spend time watching television or playing video games (Burton & VanHeest, 2007). However, the amount of physical activity in children has been shown to have a positive association with their cognitive functioning. Sibley and Etnier (2003) found that the benefits were greatest for children in elementary and middle school. Equally, it is important to note that the type of physical activity was found to be unimportant, with any physical activity beneficial to cognitive performance.

The Individuals with Disabilities Education Act (IDEA, Public Law 102-119) provides for specialized services, including occupational therapy, in schools for children with disabilities. Under IDEA, occupational therapy services as a related service are part of a specially designed education program for school-age children. These special programs are unique to each child’s individual needs in his or her “least restrictive environment to support the child’s ability to access and participate in the general curriculum. Equally, an occupational therapist’s role should be to promote wellness and health within the school environment as ‘the cornerstone of all therapeutic intervention’” (Rider, 1989, p.806).

**Significance of the Problem**

Occupational therapy has a unique role in the school environment. Occupational therapists provide evaluation and intervention for the foundational skills that allow a
child to participate in school. The foundational skills can be motor or perceptual skills or their social-emotional skills. They also include the child’s physiologic and emotional ability to respond appropriately to the sensory stimuli or self regulate. Self-regulation in the school environment refers to the balance of appropriate alertness and arousal that provides the optimum environment for learning. Roberts, King-Thomas, and Boccia (2007) report that when self-regulation is impaired, children may demonstrate “disruptive and aggressive behaviors, poor attention, and lower scores on cognitive measures” (p.555). The occupational therapist may use a sensory integration approach to decrease these behaviors and facilitate the student’s ability to participate in the classroom.

Another preventative treatment technique to improve children’s arousal and attention is yoga and mindfulness training with children. Yoga, developed thousands of years ago, uses breathing techniques, postures, and relaxation with mediation to change the physiology of the body (Jensen & Kenny, 2004). Galantino, Galbavy, and Quinn (2008) reviewed the literature to describe the wide range of studies and outcomes on yoga with children. Outcomes included improved muscle strength, flexibility, and some areas of motor performance. Other research has shown that experiencing enhanced sensory input through yoga and sensory integration activities has beneficial effects on children’s ability to focus, concentrate, and attend (Jensen & Kenny, 2004; Manjunath, 2004). Stueck and Gloeckner (2005) reported that when yoga was combined with relaxation techniques it reduced feelings of helplessness and fear, decreased aggression and negativity, and improved overall feelings of well-being. Meditations and mindfulness training are also effective ways to help children reduce their anxiety, develop positive affect, and learn from their environment (Semple, Lee, & Miller, 2006.)
Although the practice of yoga is not always traditionally used by occupational therapists, it is consistent with the changing focus in the community to health promotion and wellness. Providing preventative practices in the classroom through consultation with teachers establishes positive outcomes for children and teachers alike. Research has also demonstrated that proactive measures are the most effective in managing problem behavior (Horner, Carr, Strain, Todd, & Reed, 2002). Yoga has been used as a complementary intervention with children with attention-deficit/hyperactivity disorders (Peck, Kehle, Bray, & Theodore, 2005; Jensen & Kenny, 2004). As attention-deficit hyperactivity disorder (ADHD) is sometimes accompanied by other emotional disorders, yoga can help with feelings of emotional well being and/or feelings of calmness. These studies involving children with ADHD demonstrated improvements in time on task behavior (Peck et al., 2005) and improvements in the five subscales of the Parents Rating Scales (CPRS) (Jensen & Kenny, 2004). Both studies reported that yoga might complement a combination of other behavioral or medical interventions.

**Objectives**

Move Into Learning was a yoga and mindfulness program developed at the Ohio State University for second grade children at Weinland Park. The purpose of the program was to give the children tools that could enhance their attention, focus, and on task behavior in the classroom. The children participated in a one-hour per week yoga and mindfulness training and also performed yoga for 15 minutes four days a week in the classroom. A larger study is examining the effect of the program on students’ on task
behaviors, activity levels, and breathing. My study will identify the participants’ perceptions of the program and what they learned from their participation in the program.

**Research questions**

In a sample of typical and at risk children 8 to 9 years old who have completed participation in a six-week program of yoga and mindfulness activities:

1. How did the children describe their experience in the program?

2. Did the children perceive any effect in their ability to maintain attention in the classroom after the program’s completion?

3. How did the children use the techniques learned during this program outside of the program?

**Research Approach**

Following participation in a yoga and mindfulness program, the children were participants in focus groups designed to explore their experiences and perceptions of the program. The children were first asked to draw pictures that would represent Move Into Learning. This art-based approach was used to encourage open discussion with this researcher. Using a qualitative approach, the children were then asked predetermined open-ended question probes. An iterative process was used to identify and confirm themes from transcripts of the focus groups.
Chapter 2: Literature Review

Introduction

Some amount of stress can allow children to stretch beyond their current abilities and develop new skills, while acute and sustained stress can have a negative impact. Often children in lower socioeconomic areas and in minority groups struggle academically, experiencing more stress than their white, suburban counterparts. Mistry, Biesanz, Chien, Howes and Benner (2008) characterized socioeconomic status (SES) by three indicators: income, welfare receipt, and maternal education level. It has been suggested that the earlier in age that children experience poverty, the longer lasting are the negative effects on cognitive and social-emotional development. Equally, children of mothers who have increased education have more positive relationships (Mistry et al., 2008). Burton and VanHeest (2007) stated that when children of African American and Hispanic descent are compared to White students, “the most significant concern within the US educational community is the academic achievement gap” (p. 212). Children of African American and Hispanic descent are not able to perform academically to the level of White and Asian American students. A more recent concern in the United States is an increasing number of children born of lower income non-English speaking immigrants, who suffer from similar disadvantages as African American and Hispanic children. As a result, federally mandated legislation was enacted, called “No Child Left Behind”, to counteract these discrepancies in academic performance.
Although there are many reasons why children can experience stress, pressures related to school have been determined to be significant. This stress can increase children’s struggle with maintaining attention in the classroom. While this is true, children can learn ways of coping and adapting to stressful events in their lives, improving their performance.

**Children and Stress**

Children have identified school as a major stressor in their lives. Nelms (1999) reported when children were asked, they were most concerned about grades, disappointing their parents with their grades, and not completing assignments. Along with this, the children reported they experienced physical symptoms as a result of stress, including insomnia and stomachaches. Elementary age children have even been characterized as anxious and angry regarding the current demands of extensive testing (Smyth, 2008). This in return can cause children to have difficulty maintaining attention to their school assignments, thus causing more stress.

Children who live in inner city or urban settings often experience the most stress. Jewett and Peterson (2002) report external stressors are greatest in children who live in poverty or violent communities, or are victims of bullying in school. These children often attend schools that lack the resources of the suburbs; teacher to student ratios are higher, equipment is limited, and sometimes even adequate physical environments may be lacking. Outside of school, children are more likely to come from single parent homes that struggle with financial issues. As such, children may be undernourished and sleep deprived. The younger the child however, the more of an impact negative stressors can
have on their lives. Excessive stress can affect their ability to adapt to new situations, even if they are unrelated to the original event. In discussing how children respond to stress, Band and Weisz (1988) reported that children as young as six years of age try to directly influence the event rather than adapt to it internally. They speculate that developing secondary coping skills, which are more cognitively based, would be a harder skill for young children to learn.

Adults can have a positive influence on children by teaching them how to manage stress. While supporting children by giving them information can help them understand and anticipate events, other less traditional options are to teach children relaxation techniques and practice positive self-talk (Band & Weisz, 1988). Teaching children yoga and mindfulness techniques is an example of this practice.

**Children and Yoga**

Yoga is described as a “systematic body of knowledge concerned with the physiological and mental processes that change the physiology of the body through respiratory manipulation (breathing techniques), postures, and cognitive control (relaxation and meditation)” (Jensen & Kenny, 2004, p. 205). Using self-control techniques, participants in yoga work to develop insight into how their mind and body’s processes are interrelated. Techniques are used to recognize and concentrate on breathing, as well as focus attention on joint and muscle tension and relaxation. This is done by moving through a set of organized postures, while incorporating various visualizations designed to calm and control the mind.
With children, yoga can help increase physical activity while giving input to the various joints of the body (deep pressure) producing feelings of calmness and focus. Equally it can serve to stimulate those who are lethargic and tired, allowing improved focus and attention. By learning these techniques, participants can experience improved self-control, attention and concentration, improved body awareness and reduced stress (Zipkin, 1985).

The practice of yoga is reported to have a positive effect on the physiological components of the body. These can include balance, strength, flexibility, and overall circulation. While important in a child’s development, these skills have increased emphasis in an environment where children are required to sit for longer and longer periods of time in the classroom. Children with decreased strength may be unable to concentrate on lessons if they are using increased effort to maintain an upright posture at their desks. Galantino et al. (2008), in a review of the literature, found that yoga also has a positive effect on muscular performance. They reported that there were four studies that demonstrated the positive effects of yoga on reaction time, planning, execution time and motor speed. Stueck and Glockner (2005) also found increases in static balance ability and less physical complaints as an outcome of children who participated in relaxation and yoga.

There are also benefits to the emotional health and behavior of children related to yoga. Reductions in anxiety, oppositional behaviors, and emotional lability have all been noted after the practice of yoga. Jensen and Kenny (2004) studied the practice of yoga on boys diagnosed with ADHD using the Connors’ Parent and Teacher Rating Scales. The changes in the Connors’ Global Emotional Lability Index and the Global Restless
Impulsive Index subscale indicated decreased mood swings, outbursts, restlessness, impulsivity, and inattentiveness. Reductions in oppositional behaviors were also noted. These attributes contribute to a child’s ability to participate more fully in the classroom environment.

Stueck and Gardner (2005) report similar results with their study using yoga in combination with relaxation training with children who had examination anxiety. As the learning progressed, the children were encouraged to use the breathing exercises and yoga to relax after school. Following participation in the study, the children demonstrated significant decreases in aggression, feelings of helplessness at school, and fears. More importantly, the children were able to transfer the breathing techniques and self-instruction to situations outside the school environment with teachers and parents indicating an improved overall well being of the students. They were able to cope with daily demands more efficiently and were less stressed.

**Children and Mindfulness Training**

Yoga is often used in combination with meditation. Fisher (2006) defines meditation as a “range of mental states relating to attention, including states of consciousness, concentration and contemplation” (p. 147). As such, mindfulness is a component of meditative practice. Mindfulness involves focusing on the physical sensations or perceptions. One example of being “mindful” is to concentrate on the sensations associated with the act of breathing. Mindfulness can allow one to examine other internal experiences and thought processes through concentration. Kabat-Zinn et al. (1992) describes this as the act of identifying thoughts as “just” thoughts, thus not
attaching judgment or an emotional response. “Mindfulness practices emphasize the observation of internal experiences without distortion from affective, cognitive, or physiological reactivity influencing those experiences” (Semple et al, 2005, p.380).

Mindfulness-based stress reduction (MBSR) is a group program that was developed by Jon Kabat-Zinn in 1979. The purpose is to teach the mindfulness practice in such a way as to promote sustained attention to mental content without an evaluative component. The program is used clinically in a variety of settings with participants affected by stress, pain and/or illness. Widely accepted in use with adults, Kabat-Zinn et al. (1992) found that when patients with anxiety disorders participated in group sessions of MBSR, they exhibited decreases in anxiety, depression and reduced panic attacks. Also important, these results were maintained three months later. In other studies, it has been reported to increase quality of life, coping styles and improved physical well being (Chang et. al, 2004; Grossman, Niemann, Schmidt, & Walach, 2004). Chang et al. (2004) also reported an increase in self-efficacy scores with college students. Meditation overall has been shown to help develop skills of concentration and self-control, while improving feelings of self-worth (Fisher, 2006).

Studies involving mindfulness with children are much more limited. Although similar results can be obtained, techniques for teaching mindfulness need to be different. A child’s memory is less developed, as is their capacity for sustained attention. Semple et al. (2006) suggest that sessions need to be shorter and more repetitive. Techniques should include activities that are appropriate for the age of the child, including games and stories. This helps children understand the concepts because of their limited verbal fluency and decreased understanding of abstract thought. Children need to experience
mindfulness as a multisensory experience, including breathing, gustatory, visual, auditory, olfactory, and tactile exercises. Fisher (2006) recommended that the meditation techniques focus on posture, breathing, attention and visualization in order to help the child develop control and awareness of the body and mind.

Mindfulness training with children has been shown to have implications both in overall health and abilities important for school performance. As Semple et al. (2006) suggested, “self-management of attention is a necessary prerequisite for learning” (p. 148). Thus mindfulness training has far-reaching implications for its practice in school achievement. Overall, meditation techniques with children have been shown to increase attention and relaxation, as well as decrease test anxiety and non-attending behaviors (Semple et al., 2006). It can improve mental abilities and social behaviors, with fewer symptoms of anxiety and conduct/anger management problems. Fisher (2006) suggests that mindfulness can even help to treat and/or prevent the emotional problems that can block learning in the classroom.

**Children and Attention**

Attention is “the process of consciously focusing on relevant stimuli while blocking out irrelevant stimuli” (Pfeiffer, Henry, Miller, & Witherell, 2008, p. 274). Sustained attention is also an important component for children to be able to participate in the school environment. This is described by Betts, Mckay, Maruff, and Anderson, (2006) as “the ability to maintain attention over an extended period of time” (p. 205). Both aspects of attention are important in a child’s ability to learn. Children develop their ability to sustain attention throughout their childhood, with rapid growth occurring
from 5-6 to 8-9 years (Betts et al., 2006). Each child’s ability to self-manage his or her attention is a significant factor in school performance and contributes to his or her ability to concentrate over long periods of time in order to understand large amounts of information. Peck et al. (2005) report “80% of children with attention problems also display academic performance problems” (p. 416). Other factors associated with attention problems are poor study habits, difficulties with organization, impulsivity, and hyperactivity. Pfeiffer et al. (2008) also report that poor attention to task is associated with struggles with learning in the elementary school setting.

Attention span also has a relationship to a child’s ability to perform motor tasks. Children who struggle with attention may also struggle with motor planning, sequencing and timing. Shaffer et al. (2000) suggests that there are “important relationships between attention and aspects of motor regulation, including inhibition” (p. 155). They further describe that children who struggle with attention are often clumsy as well. That the ability of children to maintain attention is related to their ability to appropriately adapt and interact with their environment, e.g., performing complex sequential multiple step directions or developing an efficient and organized motor plan. These skills are necessary for learning and for academic performance, as well as overall quality of their interactions with others at school and home.

Children who exhibit extreme difficulties maintaining attention may be diagnosed with attention deficit hyperactivity disorder (ADHD). ADHD is described as “a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development” (VandenBerg, 2001, p.621). In children with ADHD, sensory processing disorders are
also frequent observed. Examples of sensory processing disorders include difficulties filtering out sensory stimuli, maintaining a seated posture, talking or making noises, frequently changing activities, and touching objects excessively. Written work is often messy and unorganized. Medicinal treatment for ADHD can be frustrating, due to inconsistencies in benefit and side effects.

Such struggles to treat these children would indicate the need to try alternative and complementary techniques to increase attention. As such, several studies have examined environmental supports that can influence a child’s ability to maintain attention in the classroom. Pfeiffer et al. (2008) used dynamic seating cushions (“Disc “O” Sit) to increase attention to task in the classroom with children who had attentional difficulties. The cushions allowed the children movement without leaving their seated postures. VandenBerg (2001) also had success using weighted vests with children with ADHD. She was able to demonstrate an increase in on-task behavior with these children. Jensen and Kenny (2004) were able to demonstrate improvement in boys diagnosed with ADHD who received yoga as a complement to medication. The children who received weekly yoga sessions demonstrated an improvement in the subscales of the Conners’ Parent Rating Scale. Parents reported decreased emotional lability as well as decreased restlessness, impulsiveness, and inattentiveness.

Physical activity has also been shown to increase attention and academic performance in children. In a study completed by Mahar et al. (2006), children were given physical activities, called “Energizers”, to be done in the classroom for 10 minutes daily for 12 weeks. Following the physical activity, the children were found to demonstrate an increase in on-task behavior, with the least on-task students improving by
20%. The teachers also reported an increase in overall classroom behavior. Burton and VanHeest (2007) also suggest that physical activity correlates with cognitive functioning, with a positive association between aerobic fitness and attention and working memory.

**Occupational Therapy and Children**

Occupational therapy in the school setting is a collaborative process with other professionals to determine what factors specific to that child or their environment are contributing or inhibiting a child’s performance in the classroom. Working in conjunction with the teacher and other team members, the goal is to improve students’ academic performance and achievement in the classroom. Children with attention problems are frequently referred for OT. An area of concern is often fine motor skills, however other concerns may include maintaining concentration, inability to stay seated, constant fidgeting or movement, and problems interacting appropriately in the classroom environment. When children with attention deficits exhibit concurrent sensory processing problems; occupational therapists evaluate a child’s ability to process and integrate sensory input in the classroom.

Sensory integration is “the organization of sensory input for use” (Ayres, 1972). It is the nervous system’s ability to organize sensory information in such a way that the person can interpret sensory information and successfully interact in their environment utilizing appropriate motor and behavioral responses. Pfeiffer et al. (2008) describes this as the brain’s ability to react to or ignore sensory information, called “sensory modulation”. This has a direct effect on both the child’s attention and ability to learn. There are various types of sensory input, including tactile (touch), proprioception (deep
pressure) and vestibular (movement). The occupational therapist analyzes how the child is able to process these types of sensory input and the relationship of his or her sensory preferences to ability to learn. Children who struggle with their ability to integrate proprioceptive and vestibular input have difficulties with maintaining their posture and are constantly moving or fidgeting (Pfeiffer et al. 2008). Children may also have difficulties integrating both sides of the body, as well as difficulties with sequencing (Bundy, Lane, & Murray, 2002). All of these factors contribute to their poor attention in the classroom.

Intervention includes exposing the child to sensory experiences within meaningful activity for production of appropriate adaptive behaviors and integration of the sensory input (Bundy et al., 2002). In the classroom a “sensory diet” is often used as a component of the intervention. A “sensory diet” is a schedule of activities designed to provide the sensory input the child needs throughout the day, promoting appropriate adaptive responses, attention, and learning. Also “movement breaks” can be utilized. Pfeiffer et al. (2008) report that teachers found movement breaks to be one of the more effective strategies in the classroom.

The use of yoga in the classroom provides a unique experience that can provide exposure to the similar input of a “sensory diet” or “movement break”, while allowing the meditative components of these experiences. Yoga uses self-initiated proprioceptive input to the body by assuming postures that give deep pressure input to the joints and muscles of the body. Deep pressure is a type of sensory information that is calming. Mollo, Schaaf, and Benevides (2008) found that when kripalu yoga was used with adults with sensory defensiveness, the adults experienced lower sensory over responsiveness
and had a lower perceived anxiety level than prior to the sessions. Yoga also provides self-directed vestibular input when moving through the dynamic postures. It also can increase body awareness and improve motor coordination. Through meditative focus, yoga provides experiences to focus on sensory input in a measured way, whether through breathing or touch.

**Summary**

Children are experiencing increasing levels of stress both in the school environment and at home. Yoga and mindfulness training are examples of less traditional methods being explored to help children manage this stress. The positive effects of yoga can include improved balance, strength and flexibility, as well as improved emotional health and behavior. Mindfulness is often used in conjunction with yoga. Mindfulness or mediation promotes focusing on physical sensations and perceptions, as well as focusing on internal experiences and thought processes. While research with children is limited, studies have shown an increase in attention, relaxation, as well as decreased conduct and anger management problems.

Children with attention problems are frequently referred for occupational therapy in the school setting. Poor attention to task is often associated with struggles with learning in the elementary school setting. When children with attention deficits exhibit concurrent sensory processing problems; occupational therapists evaluate a child’s ability to process and integrate sensory input in the classroom. The use of yoga in the classroom provides a unique experience that can provide exposure to the similar input of a “sensory
diet” or “movement break”, while allowing the meditative components of these experiences.
Chapter 3: Research Methods

Introduction

This chapter discusses the research methods utilized for this qualitative design study. The methodology will be identified and the procedure for choosing participants will be discussed. A discussion of the procedures for the treatment phase is included. The data collection methods and data analysis methods are discussed.

Research Design

Qualitative data about the experience will be collected from the children. The study focuses on the qualitative component in which the participants are interviewed about the yoga program.

Research Questions/Hypotheses

In a sample of typical and at risk children 8 to 9 years old who have completed participation in a six-week program of yoga and mindfulness activities:

1. How did the children describe their experience in the program?

2. Did the children perceive an effect in their ability to maintain attention in the classroom after the program’s completion?

3. How did the children use the techniques learned during this program outside of the program?
Sample

A class of 24 second grade students from a large urban school district was selected by the school’s principal for participation in Move into Learning, a yoga and mindfulness program. Permission to participate in the program and follow-up interviews was received from the students’ parents or legal guardians.

Instruments/Measures

Focus groups were held to explore the children’s experiences and perceptions of the program. Question probes were peer reviewed to decrease researcher bias. The dialogue was audio and videotaped for analysis. The teacher was also interviewed to determine if the emerging themes were consistent with her own experiences and observations in the classroom. A copy of the interview form for the focus groups and the teacher can be found in Appendix A and B.

Procedures

To answer the research questions, focus groups were conducted. From the initial sample of 24 second grade students, the teacher divided the children into groups of 4-5 students randomly, with both boys and girls in each group. Focus groups with children ages 7-8 are best with 4-5 students (Peek & Fothergill, 2009). Five focus group sessions were formed. The focus groups were held in an adjacent room to the classroom and were completed on the same day within a three-hour period of time. Each focus group was completed within a fifteen to twenty minute period. The focus groups were video and audio taped for analysis.

Using an art-based technique as a basis for the discussion, the children were asked about their experiences in the program. Art and activity based techniques with children
are regarded as a more meaningful way to receive information from children while allowing insight from adults (Coad, 2007; Colucci 2007). The children were first given paper and crayons and were asked to draw a picture that represented Move Into Learning. The children were told they could draw whatever that meant to them. Some children requested to write words. If the children struggled, they were just reminded to draw or write whatever they thought other children would need to know about the program. The children were then asked predetermined question probes (See Appendix A) to provoke answers regarding their perceptions and experiences during the program. These questions consisted of question probes such as the following:

“Tell me about your picture”
“What does Move Into Learning or yoga mean to you?
“How did Move Into Learning or yoga make you feel?”
“How does Move Into Learning or yoga make your body feel?”
“What does it mean to have a healthy/strong body?
“In what ways did doing the program change you?
“In what ways have you used the program in or outside of school?”
“Do you think you will use Move Into Learning or yoga in the future?”

The children were also asked whether they have used yoga outside of the program and if they plan to use it in the future. A peer reviewed the question probes to decrease bias in question design. The teacher was also interviewed (Appendix B) to determine if the children’s discussion was consistent with her observations and perceptions.

**Intervention**

The second grade classroom, consisting of the ten children specifically chosen with difficulties with attention, received once weekly 45 minutes of yoga and mindfulness activities for six weeks. Led by specially trained instructors, each session
started with movements to energize the students. These activities emphasized integration of both sides of the body and encouraged movement and vestibular input. This incorporated sensory integrative techniques. Music was also used to enhance the experience and help achieve the desired outcome, initially energizing the children and helping them calm toward the end of the session. The second group of activities incorporated balance and proprioceptive input. While more traditionally yoga techniques, these activities also act to strengthen postural stability. The third group of activities focus was calming. While incorporating stretching, these activities sought to help the child relax, organize and focus their attention in relation to the body. Lastly, the session concluded with mediation. This allowed the student to calm his or her mind and to build attentional capacities.

The teacher was provided with a CD which was used daily in the classroom the other four days of the week. This CD incorporates music and instruction on yoga movements that allowed the teacher to implement the techniques into her classroom once a day at least four days a week for fifteen minutes.

**Data Analysis**

To answer the research questions, focus groups were conducted. The transcripts of the children’s answers were condensed into overall topics based upon the descriptive conceptual labels of their answers. Kielhofner (2006) describes conceptual labels as “words or short phrases that serve as a kind of tag for segments of text, categorically describing information the segments contained” (p. 360). Operational definitions were then determined for the inclusion and exclusion criteria for each topic. An iterative
process was used to fit the data from the transcripts first into topics and then into emerging themes of discussion. To establish the trustworthiness of the data, the topics were reviewed by two additional reviewers. These results were examined quantitatively to establish the level of agreement. The teacher was also interviewed to determine if the emerging themes are consistent with her own experiences and observations in the classroom.
Chapter 4: Findings

The Participants

Twenty-one children participated in the focus groups. All participants had completed the Move Into Learning program and had signed permission from their parent to participate in the study. Each focus group consisted of the interviewer and four children, except for the last group in which there were five children.

Findings

Each child drew a picture or wrote words describing Move Into Learning. While each child’s answers were different, the following ideas were consistently discussed across all of the groups.

Health and Strength:

The children often talked about being healthy or strong. They often referred to healthy behaviors as eating vegetables or fruits. Strength was often discussed as being able to lift or push things. This was categorized by the interviewer as when the children used the words healthy or strong, or descriptive behaviors that involve nutrition.
Researcher: So how did yoga or Move Into Learning make you feel?
Group 1: “It makes me feel happy and healthy” What does it mean to be healthy? “It means you eat fruits, vegetables and kind of meat, like that.”

Group 2: “Yea, that’s what we be doing in class and I was going to say that it makes you healthy”
“The vegetables that you eat, it makes you healthy”

Group 4: “Move Into Learning is keeping your body healthy.” What does it mean to keep your body healthy? “Eat good foods.”

Group 4: “My picture is about healthy things and keeping your body healthy and drinking lots of water.”

Researcher: Probe: What would happen if you went to yoga every day?
Group 4: “It’d be fun and real healthy. We might eat fruits like we got one time that were good.”

Group 5: “It makes my body feel good when we ate the healthy food, we should eat the healthy food.”

**Deep Breathing**

The children talked about breathing and taking deep breaths, as well as their perceptions of how it made them feel. This interviewer categorized this as when the children discussed the actual process of breathing or when they or an observer were feeling for breaths.

Researcher: “What does Move Into Learning or yoga mean to you?
Group 1: “How to breathe easy…like how they can concentrate and be quiet by breathing.”

Researcher: When you did the breathing what did that do?
Group 2: “It made me feel good.”

Group 5: “They be telling us about like the breaths and like people that help us breathe so we can breath right” “And we can breathe differently”
Researcher: You can breathe in different ways?
“They want us to breathe calm and real slow and stuff.”
Group 5: “You put your hand on your chest and breath in.”
Researcher: How did that make you feel?
“It made me feel more better.”
Group 5: “I like when we did the breathe in and breathe out.”

**Calm and Focus**

The children also discussed ways that Move Into Learning or yoga made them feel more calm or relaxed, sometimes by using the actual words or describing behaviors that demonstrated it. They also discussed its ability along with practices that were taught (tracing a figure eight in the air) that can be used to increase their ability to concentrate and focus. The interviewer categorized these answers by the child’s use of the words or variations of “concentration”, “focus”, “relax”, or “calm” (or use of descriptive techniques used that encourage those behaviors).

Researcher: Tell me about the picture is that you’re drawing?
Group 2: “It’s the yoga class”
Researcher: Probe: What’s happening in the picture?
“It’s relaxing”
Researcher: It’s relaxing? What does it mean to relax?
“It means…calm down means you need to be easy on your body, by don’t go hopping or hyper.”

Group 3: “Inside your body, it feels like it’s calmed down and stuff, it’s smooth”

Group 4: “It made me feel good cause I could relax and lie on my side.”
Researcher: Probe: What does it mean to relax?
“Like when you lay down and you get all comfy and then you keep your eyes open though and you just relax like put your hands on your head or something and relax”

Group 5: “Because when it helps us focus, we first don’t know what to do and [be] confused, and then when we finally go to yoga we be ready, and it helps us and we won’t just be confused.”
Group 5: “I draw the (figure) eight on its side, we have to follow our finger, we have to make an eight on its side”
Researcher: Does it help you do anything?
“Yes, it helps me focus because if I follow my eyes it helps me focus”
Group 1: “It’s a lazy eight” What is it about? “You do this <making lazy eight in air> follow your thumb” And what does that do? “Help you concentrate” “Help you like focus on the things you’re looking at.”

**Social-emotional/Interpersonal**

The children described situations in which they used the techniques they learned during Move Into Learning to help them control their feelings. This included feelings of happiness and anger, and their behaviors associated with those feelings. The children also talked about interpersonal relationships with others and how yoga affected those relationships. This interviewer categorized these answers by the child’s use of feeling words (I feel…), self affirming, or directly affecting social relationships with others.

Researcher: How did Move Into Learning make you feel?
Group 1: “Feel like I’m in a good place”

Group 1: “I do it at home. It makes me feel free.”

Group 1: “I just feel like I’m in my own world.”

Group 2: “It means it gives you power, and you can be strong…and you can be strong in the whole wide world by using your power.”

Researcher: So tell me what Move Into Learning or yoga means to you?
Group 3: “Like when you’re mad”. “Like when your brother or sister mess with you” “You can just listen to them, but you don’t have to tell them to go somewhere or stuff like that. You can take deep breaths before you tell them to move.”

Researcher: Does it help you do anything?
Group 3: “Yes, it helps me, like when I get mad it helps me calm down.”
Group 3: “If you get mad, you can take a deep breath”. When do you use that? “I use it all the time.”

Group 3: “I do yoga at home cause every time my brother get mad, cause he’s always trying to hit me, I take a deep breath. It helps me think about what he’s going to do, then I tell him what he’s going to do to me, and he’s going to leave me alone.”

Group 3: “When I do yoga it made me happy.”

Group 4: “I felt happy, it made me feel happy.”

Group 5: “It makes me feel kind of nice and not fight in school” “It will tell you how not to be mean or anything.”

Group 5: “I’ve got anger management problems and when people make me mad on the bus I’ll just put my head on the seat or just scream, because I don’t want to get in no trouble or get expelled or get suspended, or when I get off I will tell a teacher.”

Group 5: “Move Into Learning, it helped me stop my anger problems and my calming down and I feel really good and calm down.”

Group 5: “When I did Move Into Learning, it helped me with my anger problem because when people was rolling their eyes and stuff at me, I just fight, but now I tell the teacher.”

Move into Learning Related to School Work

The children also talked about how Move Into Learning had helped their ability to participate in classroom activities and academics. This was defined as mentioning “school” specifically or a subject completed at school (reading), or measures used to judge one’s abilities at school, such as grades or tests.

Group 4: “It makes you concentrate in school and concentrate on reading and concentrate on sitting that you never got right before.”

Researcher: Okay, so how does it help you concentrate?

“It helps me concentrate and something I never got right in school, like my spelling tests and stuff. I never got one of those right.”

Researcher: Now how does it do that?
“Because it when I concentrate on like the lying down part, it helps my brain and stuff and it helps me relax so I can get all the hyperness out of me all right, so I can be good on studying and stuff and I can fix my classes.”

Group 5: “Move Into Learning is yoga and it helps us with…I mean, umm help us like when we’re doing a project or something, it helps us, and it make us focus about what we’re about to do, and it helps us.”
Researcher: Probe: So when you mean it helps you focus, how does it help you focus?
“Because when we’re focused, we like umm when we’re focused on our work, we get a better grade.”

Group 5: “Yoga helps me by…it helps me be ready to do my test and stuff.”

Group 1: “[She means] as you learn, you like concentrate…when you do Move Into Learning.”

Group 1: “Yes, it changed me from bad to good” Tell me when you said bad to good what does that mean? “ It means that I started from bad and went all the way up to good from yoga” When you mean good from yoga, what does that mean? “That means that it helps you learn from bad to good, like we can get straight A’s on your report card.”

Group 5: “So you can focus and …. “Get an education” “So you can get into college”
Researcher: So how does it help you get into college?
“So you can work good and get good grades.”

**Using Techniques Outside of School**

When asked about how they currently use techniques from Move Into Learning, the children were able to identify situations that they did aspects of the program outside of school. They were also asked in they thought they would use Move Into Learning in the future.
Researcher: Do you think you’ll use [yoga]?
Group 1: “I think so, cause you sure don’t have that much, so I would have been bored there, so I’ll want to do some yoga.”

Researcher: Has anyone used yoga when it’s not the entire group?
Group 1: “I do it at home, I just put some relaxing music on and then I do yoga stuff and then the figure eight and then all the other stuff…”

Group 2: “I like to get wii fit, because you can do yoga there”

Researcher: Is there times that you do [yoga] by yourself?
Group 3: “I do, I do it with my cousin”
Researcher: Where do you do it with your cousin?
“At home…we close the door so we can concentrate.”

Group 4: “One time my sister she thought she was going to fall down the stairs and I caught her and she was crying and I took her to my mom and my mom said what happened and I told her what happened and we did yoga together and she calmed it down and that’s all it changed me and my sister.”

Group 4: “One time me and my cousin came over…and my mom said you all want to do yoga? So my mom gave us a CD and we started doing the yoga.”

Group 4: “When I do yoga, I just pick up yoga stuff and I lay down on my bed and pretend my bed is a mat, a big mat, and I just lay down and relax.”

Group 5: “We were at my cousin’s house and she turned on kid’s yoga…and we were doing what the kids were doing.” “I do yoga at my dad’s. We got a yoga DVD and we watch it cause they give you directions.”

**Teacher Interview**

Following the completion and categorization of the focus groups into topics, the teacher was interviewed. She felt that each topic identified had also been discussed during class time. The children often spoke about their experiences in Move Into
Learning, and she was able to reference those experiences as a technique during class time.

“I had wanted the children in my classroom to become a team and for this to be a safe haven for the children.” “These children express themselves through music and body movements. Yoga really was consistent with that and allowed the children to express themselves more openly.”

She felt that the insights given by the children on how they were less likely to react to a difficult situation was demonstrated in the behaviors of the children in her classroom. She described a situation specifically where one child in her class is in an accelerated reading program for gifted students, but is in a home situation where his father is a gang member. She discussed how the student has expressed to her how stressful it is that he has difficulty meeting both the expectations at school and in his home environment because they are so different. While not an answer, she felt the techniques the children learned would be helpful.

“The children had a strategy through Move Into Learning to examine their thinking and relax. They developed strategies through yoga. They would close their eyes and take a deep breath. This allowed them to come back down and it worked. I feel like these abilities became a part of them, and I think it will aid them in their homes and on the street.”

She also felt like it helped the children’s abilities to concentrate and focus in the classroom. The children in her class were able to use Move Into Learning techniques to calm them, as well as increase their attention.

“The children had become more and more focused during the school year and yoga was a part of that. The children were also aware of how to calm their bodies on their own or with a small reminder”.

“All I would have to say is “breathe” and the children would stop and take breaths in the classroom to calm down.”
She felt the children also became leaders to other members of their class. They felt like they were knowledgeable enough that they could teach other children the techniques.
Chapter 5: Discussion

Introduction

The following section discusses the relevancy between the themes that were generated and the available literature. The literature regarding the use of yoga and mindfulness with children is limited. This section includes implications for further study as a result of the children’s responses. This information is organized into themes using the topics that were presented in the preceding chapter.

Themes

**It Made My Body Feel Good**

The children interviewed for this study talked about their perception of developing physical strength as a component of the program. When one group of children was asked if Move Into Learning had changed them, a child responded, “Yes, I’m strong. I can lift up things. I can put a couple of books on my back and lift it up.” The overall duration of this program may have limited the amount of change in the children’s actual strength. However in a review of effects of yoga in other studies with children, Galantino et al. (2008) found that yoga often did improve muscle strength, endurance, and flexibility. Grip strength was also found to improve in two separate studies of children who participated in yoga. Their review also suggested that these
improvements would have implications for overall body strength and the musculoskeletal system. While the children did not identify other physiological components, such as flexibility or endurance, it would be atypical for children this age to be able to understand these conceptual terms. The children were able to describe activities used during the program that would exhibit those behaviors, such as static postures and movements.

**We Should Eat the Healthy Food**

Many of the children discussed “health” and being “healthy” as a component of the Move Into Learning program with an association with fruits and vegetables. One session incorporated the children experiencing different types of fresh fruits and vegetables. The children were encouraged to be mindful and use many of their senses to experience these items. The children perceived this as an important aspect of the program, which was unexpected. The children often spoke of the program making you “healthy”. One child stated, “it make my body feel good when we ate the healthy food, we should eat the healthy food.” Children in lower socioeconomic status often have less exposure to fresh fruits and vegetables. Even school lunches often come from cans. The children discussed this as an important component of being healthy and even drew pictures of items they had eaten. They identified Move Into Learning as keeping their body healthy, and with that recognized that eating good foods was one of the behaviors necessary to achieve that goal.

The children did not discuss other aspects related to health from the program, such as exercise. This suggests that the children didn’t recognize the yoga as exercise. The use of games, songs and playful interactions were non-threatening and simply “fun”.  

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It Helps You Wake Up Your Body

Zipkin (2001) suggested that yoga is beneficial to children because it promotes body awareness, specifically “they become more aware of their bodies and of bodily tensions which yoga exercises help to release” (p. 286). During the focus groups the children were able to describe physiological processes typically taken for granted indicating they had increased their overall body awareness. This included describing the act of breathing and feelings of muscle tension. The ability of the children to describe body sensations, as well as cognitive and affective states separate from judgment is often a goal when practicing mindfulness. Semple et al. (2006) describe it as “thoughts, emotions, and sensations are interpreted as interesting phenomena to observe rather than to judge and as events to be noted rather than changed” (p. 149).

When asked what Move Into Learning was about, one child responded that it was “how to breathe easy”. Mindfulness/mediation is the focused attention on somatic experiences. The act of breathing is seldom an area of focus for most adults, and would be rare for a child. However, the children spoke of the aspects of breathing as well as the rate of their breaths. “[You] can breathe differently, they want us to breathe calm and real slow and stuff”. This would indicate the children had become aware of the physiological act of taking breath in and out of the body, as well as the rate and intensity.

The children were also able to verbalize sensations involving body tension and overall levels of energy. Mindfulness and yoga techniques often incorporate muscle relaxation exercises. The exercises are designed to increase awareness of the contractions and then release of the muscles throughout the body, causing deep relaxation (Zipkin, 2001). This same muscle tension can also be produced by stress. In using a
series of postural movements, yoga also provides sensory input that can have a calming effect. The children had developed the language to describe the sensations experienced during periods of relaxation as well as being able to interpret the perception as “calm” and “relaxed”. One child described it as “inside your body, it feels like it’s calmed down and stuff, it’s smooth”. This may be helpful in situations where the children experience stress and could use this experience to reduce muscle tension in a way that is constructive and positive.

They described yoga as helping them to become more alert, as well as calm. As another child described it, “it helps you wake up your body, it means to get your energy and wake up your skin”. An experience that may be calming to one child may be alerting to another, bringing both children to an equal state of being “quiet and alert”. These perceptions would suggest that the children had recognized what the sensations were that exhibited outward energy levels. Children often struggle in the classroom with demonstrating an appropriate level of arousal. Children may be “hyper” or even lethargic during different periods of the day. The perception of feeling “smooth inside” or to “wake up your skin” allows that child to utilize those techniques as a “sensory diet” to regulate their own energy levels. If utilized appropriately this would enhance their participation in the classroom to either decrease or increase their energy level in response to the demands of environment.

**It Helps Me Learn**

The children in the focus groups were able to identify the yoga and mindfulness program as helping their concentration and learning. The children could describe the
relationship between the experiences during yoga and its effect on their focus with classroom work. “It helps us like when we’re doing a project or something…it makes us focus about what we’re about to do, and it helps us”.

There were many examples of yoga’s benefit to children’s attention and concentration in the literature. Peck et al. (2005) used yoga as an intervention for children with attention problems and noted positive effects recommending it as an alternative or complement to more traditional practices. Semple et al. (2006) found that with mindfulness techniques children displayed significantly reduced attention problems. Stueck and Gloeckner (2005) reported that children improved in concentration tests following relaxation and yoga training. Mahar et al. (2006) even found improvements in on-task behavior when students participated in physical activity not specific to yoga, suggesting that any component of movement would be helpful. Zipkin (2001) suggests that mediation shows an immediate effect on children’s concentration on tasks, “students in a more relaxed state are able to concentrate more easily” (p.287).

The students were able to recognize a connection between techniques learned during Move Into Learning and the perception that it had improved their ability to do academic work. They reported improvements in their overall concentration in the classroom, but also improvements in their reading, writing and with test taking. “It helps you learn from bad to good, like we can get straight A’s on your report card”. “So you can work good and get good grades”.

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I Feel Like I’m in a Good Place

All of the groups described positive feelings of well-being and enjoyment of Move Into Learning. “When we do Move Into Learning it’s fun because we jump around, it’s funny, it makes everyone happy”. “I feel like I’m in a good place”. “It makes me feel good”. Stueck and Gloeckner (2005) described that children who participated in yoga and relaxation had an overall increase in emotional balance both short-term and long-term. Using questionnaires, they were able to determine significant decreases in feelings of helplessness in school and overall anxiety. Jensen and Kenny (2004) also reported that with boys with ADHD who participated in yoga there were decreases in the Connors’ Global Emotional Lability Index subscale, indicating a reduction in mood swings, temper outbursts, and crying fits.

Often when children experience the inevitable challenges associated with school and home, they will develop fears and worries. These may even develop into associated physiological responses. The use of mindfulness techniques allows the participant to “observe” the characteristics of the experience, rather than “judge” it. This can allow the child to perceive the event differently forming more adaptive responses and thoughts (Semple et al., 2006).

In one focus group a child described improved feelings of self-worth, “it means it gives you power, and you can be strong…you can be strong in the whole wide world by using your power”. While the children’s perceptions of self-efficacy were difficult to determine, some of the children were noted by the teacher to have demonstrated more of a leadership role with their peers. Several children described situations where they had
taught the techniques to another classmate or family member indicating that they felt knowledgeable enough to act as the teacher.

They were able to describe activities and their feelings related to them, including movement and music used during the program, as well as their attachment to the program leaders. Activities designed to help with closure and carryover of the program they expressed as meaningful, even sad. “I kinda felt sad cause we had to leave them and we wasn’t going to yoga anymore and so we took pictures and gave everybody a hug and then they gave us a little box”. “Them persons were good for us to learn about”. The children also expressed that they wished they could continue the program or go everyday.

Several children described situations where they have used the Move Into Learning in their home both alone and with others. The children described ways that they used it in at home, one used her bed as a yoga mat, others alone in their rooms. “I just feel like I’m in my own world…by myself”. “It just makes me feel free”. This allows the children to use these strategies as an escape to what may be an otherwise stressful environment. Others asked parents or other family members to participate, indicating they enjoyed doing yoga with other people at their home.

**If You Get Mad You Can Take a Deep Breath**

The most surprising outcome was the discussion of how yoga had changed their behaviors toward other classmates or family members. Many of the children discussed situations when they could use Move Into Learning techniques, especially taking breaths, as an alternative to a more aggressive behavior when angry. “If you get mad, you can take a deep breath”. Several children were able to describe situations where this could be
used both in school and at home. “When I did Move Into Learning, it helped me with my anger problem because when people was rolling their eyes and stuff at me, I just fight, but now I tell the teacher”. “Like when your brother or sister mess with you…you can take deep breaths before you tell them to move and stuff like that”. “I do yoga at home cause every time my brother get mad, cause he’s always trying to hit me, I take a deep breath…it helps me think about what he’s going to do and then I tell him and he’s going to leave me alone”. One child described using Move Into Learning techniques as a strategy to help her calm her sister when she was upset, acting as a mentor teaching her the techniques.

In their study, Stueck and Gloeckner (2005) reported that their subjects also were able to apply the learned poses to control anger outside of their relaxation training, as a strategy to improve physical emotional reactions when stressed indicating a transfer effect. Semple et al. (2006) described similar results, finding that parents reported fewer conduct or anger management problems following their children’s participation in mindfulness cognitive-based techniques. Mahar et al. (2006) reported that when students are given more physical activity, teachers indicated an improvement in classroom behaviors. This program incorporated both components of physical activity and mindfulness.

I Like It When We Do the Volcano

During the focus groups the children often described activities of the program that were meaningful to them. These descriptions often incorporated imagery or a story that was incorporated into the movement. “I liked the part where we got to do the volcano.”
“Next we did the stew one…stir the stew.” “And then we jumped and did this [bow and] arrow thing.” The children had gotten meaning and had learned the techniques through the use of the imagery incorporated into the movements or mediation. Semple et al. (2006) suggest that when doing mindfulness with children it may be more effective when games, activities, and stories are integrated into the program. The use of imagery had helped the children to incorporate these ideas into techniques that they could describe and use outside of the program. This included doing yoga postures, activities learned to encourage concentration and focus, or the breathing as a strategy to help with social and emotional situations. “I draw the eight on its side [in the air] because if I follow my eyes it helps me focus.” Stueck and Gloeckner (2005) suggest that by using imagery it provides a transition from simply a motor action to an “imaginative self-regulation process” (p. 373).

**Limitations with the Study**

The children were interviewed in a focus group format, which may have influenced their answers. Often children want to be like their peers and so their answers may have a similarity that might not have been present had they been interviewed individually. Also, there were some children who did not wish to speak in front of their peers. This would have negatively affected the study, as their experiences and perceptions are not reflected in the analysis. The study may have also been influenced by the children’s wish to please the interviewer and not given answers that were negative or reflected badly on the program.
**Recommendations for Further Research**

The study of the use of yoga and mindfulness techniques with children remains very limited. Researchers may anticipate that children don’t have the control or cognitive abilities to maintain postures or focus during mediation activities. This may be true; however, the benefits of these techniques in an adapted form may outweigh the risks. After examining the reflections and perceptions of the children in this program, it can be assumed that children are more than willing participants. The children were also able to reflect on their increased ability to attend and concentrate in the classroom, their increases in overall mood, and on their improved social interactions both in and outside of the classroom.

Further research into the use of yoga and mindfulness techniques with children would be helpful to determine their effect. A larger randomized sample from schools that represented different ethnic and economic groups would allow the outcomes to be generalized to a larger population. Equally, it would be important to learn what components of the yoga and mindfulness techniques are the most helpful? Do the children exhibit calmer behaviors if they participate in yoga exclusively or does the mindfulness contribute to their abilities? Important for the classroom, are these skills transferable into other settings? It would also be helpful to know if the children who participate in yoga and mindfulness continue to use those strategies after the program is completed and for how long? Lastly, it would be beneficial to interview more teachers to determine if they are receptive to these strategies being used in the school settings.
Summary

The objective of this study was to determine the experiences and perceptions of children who had participated in a yoga and mindfulness program. Twenty-one children were interviewed in a focus group format to obtain information regarding what techniques they had learned, what experiences were significant to them, and what of those techniques had they used outside of the program. The children of this study spoke openly and quite intuitively about what they had experienced. While it was surprising that children of this age were able to express this verbally, it emphasizes the significance of their perceptions.

While limited, previous literature has discussed the effects of yoga and mindfulness with children. These include increases in physical attributes, such as motor performance and strength, attention and on-task behavior, and social emotional abilities. The children were themselves able to identify ways that the program had helped them to exhibit those behaviors. Equally, they were able to express ways that they were able to transfer those techniques to situations in and outside of the school environment. The outcome of this study seems to indicate that techniques such as these could be an integral part of improving a child’s success in school and in developing better social relationships.
References


Appendix A: Focus Group Interview Form

Researcher: So tell me about your picture.
   Probe: So what are you doing in the picture? Tell me about that
   Probe: Tell me more about yoga.

Researcher: Tell me about the picture is that you’re drawing?
   Probe: What does that mean?
   Probe: Did the yoga help you to do that?

Researcher: What is MIL (Move Into Learning) or yoga and what do other kids need to know about it?

Researcher: Does anyone else want to tell what MIL and yoga meant to them?
   Probe: What does healthy mean to you?

Researcher: What is MIL or yoga and what do other kids need to know about it?
   Probe: So how did it help you concentrate?

Researcher: How did MIL make you feel?
   Probe: What does that mean to you?

Researcher: How did the yoga make your body feel?
   Probe: What do you mean by healthy? So what does it mean to be healthy or strong?

Researcher: How did MIL make you feel?
   Probe: When you say you’re in a good place, what does that mean to you?

Researcher: How did the yoga make your body feel?
   Probe: How did it make it feel good?
Researcher: So did MIL or yoga change you at all?

Researcher: So when you talk about the things that yoga did, what are there other things that yoga did? Did yoga change anything?
   Probe: What else did it change?
   Probe: What does that mean to you?

Researcher: Can anyone tell me about how they’ve used yoga or MIL inside their classroom or outside their classroom or at home?
   Probe: How have you used it in the classroom?
   Probe: How have you used in at home?

Researcher: Has anyone used the things that they learned in MIL in their classroom?
   Probe: Has it changed anything in your classroom?

Researcher: Is there anytime that you used yoga or MIL when it’s you’re just by yourself?
   Probe: How? How do you do it at home?
   Probe: How does it make you feel when you do it at home?

Researcher: Does anyone think they’ll use it in the future?
   Probe: How do you think you’ll use it?
Appendix B: Teacher Interview Probes

Researcher: I had identified topics of what the children talked about during the focus groups. They were: how the yoga related to school work, their use of breath, concentration and focus, health and strength, interpersonal relationships, and how they use what they learned outside of school. Were these topics also discussed during class time?

Probe: Are they any additional topics or ideas that should be included?

Probe: What experiences did the children discuss that fit into some of these categories?

Researcher: How do you feel the program has affected your classroom?

Probe: Did you observe specific instances where the children used aspects of the program?

Researcher: Some of the children discussed how they used yoga or mindfulness techniques to help them when they were mad or needed to concentrate? Did you observe this in class?

Researcher: Is there any additional information about how the children reacted to the program that would be helpful for me to know?