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Yoga and mindfulness in the self-contained classroom

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YOGA AND MINDFULNESS IN THE SELF-CONTAINED CLASSROOM

by

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Dedications

I would like to dedicate this thesis to all of my students, past, present and future. Although you call me teacher, I too am the one learning from each of you. Thank you!

I also dedicate this work to my mom and dad, Robin and Daniel Wehner, who were the first to teach me the value in hard work.

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Abstract

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This study explores the effectiveness of the Social and Emotional Learning (SEL) intervention of yoga and mindfulness in a third through fifth grade self-contained classroom. Specifically, the study analyzed the effects of yoga and mindfulness on (a) self-efficacy and (b) self-regulation. Ten students participated in the study, five males and five females. This research used an experimental/control group design. Prior to the six-week intervention period both the control group and experimental group completed a questionnaire rating their self-efficacy in the areas of academics, social and behavior. Post intervention the students completed the self-efficacy questionnaire again. During the six-week intervention period the teacher used a self-regulation rating scale to rate the student's self-regulation during independent centers twice a week. The results from the pre and post intervention of the self-efficacy questionnaire and the average score of self-regulation for each week between the two groups were then compared. Results demonstrated that the students in the experimental group had a greater sense of self-efficacy post intervention and a higher average self-regulation score each week after week 1 of the intervention. Further research is needed to examine long-term benefits of yoga and mindfulness practices for students with disabilities.

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Chapter 1

Introduction

If you were to walk into a school building today, you will see and interact with students of diverse social and emotional backgrounds. Today's schools are not only challenged with providing a safe and positive learning environment that reaches all multicultural and multilingual needs of its students, but the social and emotional diversities of all its students as well. This is a daunting task, but one every school district must tackle to ensure that students grow into active and effective members of our ever-changing diverse society.

To meet the needs of our learners, "federal policy has begun to incorporate social, emotional, and behavioral factors into education accountability metrics (e.g., ESSA: Every Student Succeeds Act), and school climate initiatives, antibullying work, positive behavior supports (e.g., PBIS), and discipline reform are increasingly influencing the day-to-day practice of schools and communities" (Jones et al., 2017). Many districts are turning to programs that encompass social and emotional learning (SEL) because it lays out the foundation for "safe and positive learning, and enhances students' ability to succeed in school, careers, and life" (Weissberg, 2016). Research shows that SEL not only improves achievement by an average of 11 percentile points, but it also increases prosocial behaviors (such as kindness, sharing, and empathy), improves student attitudes toward school, and reduces depression and stress among students (Durlak et al., 2011).

"The field of SEL is rapidly expanding. In the past decade, SEL has emerged as an umbrella term for a number of concepts including non-cognitive development,

character education, 21st century skills, and trauma-informed learning, among others" (Jones et al., 2017). How a school teaches and/or incorporates SEL into their building varies district to district as well. Many school districts are turning to the practice of yoga as a SEL intervention within their schools. Current evidence indicates that yoga, can produce positive results related to feeling identification, emotional regulation, and coping abilities in children and adolescents (Kwasky, & Serowoky 2017). Many school districts that incorporate a yoga program into their daily routines also incorporate mindfulness within the program, which is the practice of maintaining a nonjudgmental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis. Although yoga and mindfulness are separate, they tend to be interrelated practices with the core focus of the well-being of the individual (Chimiklis et al., 2018). "Scientific evidence is accumulating that yoga and mindfulness training is an effective and cost-efficient way to promote healthy brain development and function, and to foster stress resilience" (Ebert, n.d.).

Purpose of the Study

The purpose of this study is to investigate the effectiveness yoga and mindfulness as SEL interventions have on the self-efficacy and self-regulation of students with learning disabilities in the self-contained setting.

Research Questions

1. Will the implementation of the SEL interventions of yoga and mindfulness in the classroom increase self-efficacy in students with learning disabilities?

2. Will the implementation of the SEL interventions of yoga and mindfulness in the classroom increase self-regulation in students with learning disabilities?

Significance of the Study

The significance of this study is to measure if the SEL interventions of yoga and mindfulness practices will increase self-efficacy and self-regulation in students with learning disabilities in the self-contained setting. Research has demonstrated that children with learning disabilities have lower scores in self-efficacy and achievement motivation (Seyed, Salmani, Nezhad, & Noruzi, 2017). Research has also demonstrated that practicing yoga decreases anxiety which in-return promotes a more positive outlook about oneself. Self-regulation is a major component of school readiness and there is research that demonstrates that high self-regulatory skills in a child are linked with positive developmental outcomes including positive self-esteem (Razza, Bergen-cico, & Raymond, 2015). The use of mindful yoga interventions in the classroom will teach students strategies such as; yoga-based stretches, mindful breathing activities, and other calming strategies that they can use in various situations that they may feel uneasy, stressed, overwhelmed or distracted that will help them get back on task. Building on this research, the present study will consider if students with learning disabilities self-efficacy and self-regulation will increase by incorporating yoga and mindfulness practices in the classroom.

Key Terms

For the purpose of this study, the following terms will be defined as follows:

1. **Social and Emotional Learning (SEL):** is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (CASEL, 2018).
2. **Yoga:** a holistic system comprised of several components, which include physical postures, breathing exercises, deep relaxation, as well as mindfulness-based and meditation practices (Chimiklis et al., 2018).
3. **Mindfulness:** the quality or state of being mindful
4. **Self-efficacy:** one's beliefs in one's capability to organize and execute the courses of action required to achieve given results (Bandura, 1997).
5. **Self-regulation:** a skill that has overarching effects on an individual's ability to tolerate unmet wants or needs, handle disappointments and failures, and work towards success (Bandy, & Moore, 2010).

Chapter 2

Literature Review

Ready to Learn

"We are not born knowing how to deal with stress, especially the psychological kind. Rather, this is a skill we learn, most commonly by observing others. And considering that stress-related illnesses have been America's number one health problem over the past twenty years, it's obvious that we can do better" (Gillen & Gillen, 2009). Many of today's students walk into the classroom not ready to learn due to external and internal stresses causing a large amount of anxiety. Often students do not know how to properly deal with and overcome the emotions and health issues that stress and anxiety bring with them.

Today, students face many stressors outside of the classroom such as loss of family members/friends, divorce, drug and alcohol abuse, and poverty. Each of these things can cause social and emotional turmoil in a child. When a child is struggling with coping it becomes very hard for them to learn, self-regulate their emotions and internal/external actions, and to feel good about themselves. Research demonstrates that outside stressors such as those stated above directly affect the academic achievement or lack thereof of our students. Burnett and Farkas (2009) sought to determine how the control variables of poverty and family structure each relate to the math test score trajectories among younger and older children and they found in their research that, both poverty and family structure (other than two married biological parents) have a significant negative effect on children's math score growth.

Students face stressors caused by the classroom as well, which may in return result in them not being prepared and/or ready to learn. Classrooms today are a challenging place for many if not all our students who have yet to be exposed or taught how to deal with the demands that are expected of them within its four walls (Milkie, & Warner, 2011). Milkie and Warner (2011) used a social structure and personality-stress contagion perspective, on a nationally representative sample of first graders (N = 10,700) to assess how the classroom learning environment affects children's emotional and behavior problems. Milkie and Warner (2011) found in their study that students are not only challenged by the classroom's demands and the to engage in rigorous leaning activities but to stay on task when they are surrounded by stimuli that may become distractions and, in some scenarios, expected to learn in unpleasant learning environments. Today's classrooms are filled with stressors like those stated above (distractors, rigorous work, and/or unpleasant learning environments) that can cause students to go off task and/or not feel strongly about themselves in certain areas of academics or in their overall social and emotional depiction of themselves.

Beauchemin, Hutchins and Patterson (2008) state that based on previous research, students with learning disabilities (defined by compromised academic performance) often have higher levels of anxiety, school-related stress, and less optimal social skills compared with their typically developing peers. The levels of anxiety and school-related stress combined with the challenges in the areas of learning and behavior of a student with a learning disability often results in a challenge for educational professionals to help the student be prepared and ready to learn each day. Although,

much research demonstrates that students with LD have high anxiety levels, where the anxiety stems from is still a topic of debate (Beauchemin et al., 2008).

In response to the ongoing debate of the origin of the anxiety and the nature of its relation to learning disabilities, researchers including Paulman & Kennelly (1984) have proposed a "deficit in study skills" model (Beauchemin et al., 2008). In this theory students with LD demonstrate a low academic self-efficacy because they feel that since they have a diagnosed learning disability, they are unprepared or not fully prepared to learn. Alternatively, other researchers support the "cognitive-interference model" which proposes that poor performance of students with LD is a result of problems with attentional focus, concern about competence, and a preoccupation with self-oriented and negative thoughts (Beauchemin et al., 2008). In this model students with learning disabilities demonstrate low emotional and social self-efficacy.

According to Beauchemin et al., (2008) in an effort to tackle the debate on where anxiety of students with LD originates from, Swanson and Howell (1996) conducted a study that investigated the relative influence of test anxiety on academic self-concept, cognitive interference, academic achievement, and study skills of 82 adolescents with LD and behavioral disorders in a small private special education school. The adolescents completed various measures of anxiety, academic performance, and other assessments; and correlation and stepwise multiple-regression procedures were used to analyze the data. It was concluded by Swanson and Howell (1996) that both study skills and cognitive interference are involved, with cognitive interference being the most powerful predictor of anxiety (Beauchemin et al., 2008). Although there is a debate on the origin of anxiety, it is presumed in both models that students with LD experience anxiety and

stress that diminishes their academic, social, and emotional self-efficacy which are areas in which educational professionals must gear into in order to promote academic success in their students with LD and without.

Anxiety and stress hinders self-regulation among students with LD, affecting their readiness or preparedness to learn. Russell and Topham, (2012) conducted two web-surveys in the UK in which 787 university students described their experiences of social anxiety and how it effects their learning. The students on the survey were invited to respond to the question: How does social anxiety impact your engagement in learning activities? In some cases, students stated that their anxiety about performing an academic task such as presenting in front of the class was so high that they had loss sleep over it and in some cases even caused them to exit the learning setting altogether (Russel & Topham, 2012). In order to ensure that all students including students with LD are ready to learn educational professionals face the challenge of taking time out of the academic school day to teach, model, and encourage students to develop strategies that will help them overcome and/or put aside the external and internal stresses that are eating at them in and outside of school so that they can better perform on academic tasks.

Brief Overview of Social and Emotional Learning

As indicated by the above research, some students, including those with learning disabilities may be entering into school not ready to learn due to stresses in and outside of the classroom. Many school districts are turning to social and emotional (SEL) programs to meet the social and emotional needs of all their learners. Districts are turning to SEL programs based off an intensive amount of research that supports the idea that in order

for children to succeed during elementary school, further schooling, and careers, they need to be socially, emotionally, and academically competent (Dusenbury & Weissberg, 2017). SEL intervention programs build off the idea that for students to be ready to learn they need to be socially and emotionally competent, therefore SEL involves coordinated classroom, schoolwide, family, and community practices that help students develop the following five key skills: self-awareness, self-management, social awareness, relationship skills, and responsible decision making (Weissberg, 2016).

When one examines the five key skills that SEL focuses in on they will notice that it is in areas that research has demonstrated that students with learning disabilities struggle. The five areas defined by Weissberg, (2016) are as follows:

- Self-awareness which involves students having a well-grounded sense of self-efficacy.
- Self-management which involves students being able to manage their behavior and stress to achieve personal and academic goals.
- Social awareness which revolves around the idea of empathy and social norms.
- Relationship skill learning in SEL programs involves helping students establish and maintain healthy relationships.
- Responsible decision making involves learning how to make positive choices about behavior and social interactions.

Research over the years has demonstrated the SEL interventions have the potential to increase these five skills in students.

Social-Emotional Learning Interventions

Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011) conducted a meta-analysis of 213 school-based, universal social and emotional SEL interventions involving 270,034 students in kindergarten through high school. The meta-analysis focused on SEL interventions that targeted the entire student body not interventions that were specific to certain populations such as students with LD. The meta-analysis concluded that the use of SEL interventions promoted social, emotional and academic competency in students. In comparison to the control groups, Durlak et al., (2011) reported that the students receiving the SEL interventions demonstrated a great amount of growth in social and emotional skills, academic performance, and behavior.

Similarly, a meta-analysis of 213 studies and over 270,000 students demonstrated that students who receive SEL interventions performed better than those students who did not. Students who received SEL interventions showed an 11 percentile-point gain on measures of academic achievement and similar significant improvements in conduct and discipline, prosocial behavior, and/or emotional distress (Dusenbury & Weissberg, 2017).

Research demonstrates that SEL interventions teach students strategies how to regulate their behavior so that they can be ready to learn. According to Dusenbury and Weissberg (2017) executive function skills develop rapidly during the elementary years and are critical to self-regulation and includes students' ability to focus attention, intentionally shift attention, and resist distractions. A review of evidence-based SEL programs at the elementary level found that the majority introduce practices (such as deep breathing and focus on breathing), that facilitate self-regulation (Dusenbury &

Weissberg, 2017). In a study conducted by Ye-Ha et.al. (2016) 42 women working in various positions in a hospital participated in an online mind-body training (MBT) program for approximately 8-10 minutes a day for 8 weeks. The MBT consisted of training for the both mind and body, including breathing strategies. At the end of the 8 weeks it was founded that in comparison to the 45 women in the control group whose stress level had increased significantly after 4 and 8 weeks the women participating in the MBT program demonstrated significant improvements in their psychological capabilities.

In 2013, The Collaborative for Academic, Social, and Emotional Learning (CASEL) conducted an extensive review of SEL programs designed for use during the elementary school years and identified 19 evidence-based programs. Eight of these programs have now had replications and demonstrated significant positive effects for at least two years: Caring School Community, PATHS, Positive Action, Resolving Conflicts Creatively Program, Responsive Classroom, Second Step, Social Decision Making/Problem Solving Program, and Steps to Respect (Dusenbury and Weissberg, 2017). Each of these programs teaches and creates learning environments that encourage student social, behavioral, and academic competence. Dusenbury and Weissberg (2017) state that based off of this extensive research, at least 11 states (CT, ID, IL, KS, MA, ME, OH, PA, VT, WA, and WV) have articulated explicit goals for student SEL at the elementary level in recent years and that even more states are joining in on the SEL movement to better their students over all social, emotional and academic achievement.

Self-Efficacy

One of the most important concepts in learning theories is self-efficacy. According to Tsang's view, self-efficacy refers to a person's attitude about his/her abilities to perform a task or job successfully (Seyed et al., 2017). Students come to school each day with many outside stressors which in return effects their ability to perform their job as a student and their overall learning experiences. The social cognitive theory proposed by Bandura suggests that an adolescent's academic performance is influenced by how an adolescent's beliefs are affected by his or her environment including but not limited to his/her parents, teachers, and peers (Tsang, Hui, & Law, 2012).

Studies that have examined self-efficacy beliefs, such as the mastery of academic coursework and self-regulated learning, have found that self-efficacy is a crucial factor in academic aspirations and academic achievement. Hwang, Choi, Lee, Culver, and Hutchison (2016) state that Komarraju and Nadler (2013) in their study founded that self-efficacy beliefs were positively related to academic achievement. In looking at this positive relationship, self-efficacy beliefs, effort regulation, and help-seeking accounted for approximately 18 % of the variance in academic achievement (e.g., GPA) (Hwang et al., 2016).

Hwang et al., (2016) conducted an autoregressive cross-lagged study (ARCL study) to examine the longitudinal causal relationship among Korean students' academic performance, self-efficacy beliefs, and academic achievement of 1,177 students over a five-year period from 8^{th} to 12^{th} grade. By conducting an ARCL study Hwang, Choi, Lee,

Culver, and Hutchison were investigating the self-efficacy beliefs at different points of the students' life in comparison to most studies that just look at it at one point in time, for example transitioning into high school from 8th grade and in 11th grade when student's prepare for college may cause a students' self-efficacy beliefs to fluctuate. The study found that it is imperative that educational professionals utilize interventions that target both self-efficacy and academic achievement, because the study revealed a reciprocal relationship between self-efficacy beliefs and academic achievement (Hwang et al., 2016).

Klassen and Lynch (2007) used a qualitative methodology to investigate the self-efficacy beliefs of early adolescents with LD. The study consisted of a series of focus group interviews with 28 grade 8 and 9 students with LD and individual interviews with 7 specialist LD teachers. Overall it was found that students with LD viewed themselves as low in self-efficacy. Students in all focus groups and individual interviews in the study believed that academic confidence beliefs contribute to academic achievement and that low confidence hampers performance. Some students in the study commented on the effect their LD had on their confidence. A girl in the study explained how her poor reading abilities lowers her self-confidence, because when she reads it is not clear and fluent (Klassen & Lynch, 2007). In the study it was also demonstrated that anxiety and nervousness increased low self-efficacy in students. Student G13 in the Klassen and Lynch (2007) study was quoted saying "When I'm nervous it lowers my confidence, because I tend to exaggerate-my mind will exaggerate things- and then I have no idea what's going on, it's just like, 'Oh no, I bet this is going to be really hard.'"

Research demonstrates that if students have low self-efficacy their academic achievement will most likely be low as well. On the contrary if student's have high self-efficacy and the mindset that "I can do this" their academic achievement will be higher as well. If we want our students to achieve academically how are we going to increase their academic self-efficacy so that they will perform higher? The next step that needs to be taken is examining intervention programs that will help us get our students "ready to learn" and feel that they "can do it!"

Behavioral Self-Regulation

One of the earliest demands schools place on students is self-control or self-regulation. This skill is necessary to succeed in and outside the classroom. Self-regulation is marked by delayed gratification, impulse control, use of adaptive coping mechanisms, and emotional regulation (Bergen-Cico, Razza, & Timmins, 2015). As stated earlier there is a need and/or push that is necessary so that in order for the students of today to be "ready to learn" educational professionals need to research, develop and implement school based intervention programs that will cultivate habits of mind and behavior which in return will help their students foster resilience against the everyday stresses they are up against that hinder their abilities to learn.

In the context of the classroom any activity not directed toward learning is an off-task behavior. If you were to observe a classroom today you would see teachers asking their students to get back on task. In the classroom, off-task behavior can be active or passive. Students with active off-task behavior disturb teaching and are likely to affect other students, thus disrupting the instructional process. In contrast, passive off-task

behavior means that students are cognitively disengaged without disturbing their surroundings, what some may refer to as daydreaming (Hofer, 2007). In some cases, attending to the student's off task behavior requires more than just a verbal redirection. It requires the teacher to first attended to the student's off task behavior and the teacher then walking the student through an exercise to get back on task. This often takes a lot time away from the learning experience for not only the student who is off task but the fellow classmates. Many self-management and/or self-regulating strategies have been examined in hopes to increase student on-task performance and academic competences due to the growing body of evidence that indicates that self-regulatory skills are the foundation for children's behavioral and academic competence (Bergen-Cico et al., 2015).

Many research-based strategies have been implemented into classrooms to increase behavioral self-regulation, including the teaching of self-determination skills, teaching of self-monitoring strategies, and goal-setting. According to Lichtinger and Kaplan (2015) the self-regulating strategy a student applies within the classroom varies on the specific context of the task at hand. It would be beneficial that educational professionals teach students an array of self-regulating strategies and when and how to use them.

Students with autism often have a difficult time self-regulating their behavior and at times can display disruptive behaviors that take them off the academic task at hand. Xu, Wang, Lee, and Luke (2016) conducted a study to investigate whether or not using self-monitoring with guided goal setting which was mentioned earlier as a popular self-regulating strategy was effective in increasing academic engagement in a 9-year-old male

student with autism in an inclusive language arts class. Self-monitoring involves recording one's own behavior. The student received training on self-monitoring outside of the classroom. During the intervention the student with assistance would track his behavior and the goal was gradually increased and determined by the student's best performance on the previous phase (Xu et al., 2016). Results demonstrated an increase in his engagement during academic instruction.

Overview of Yoga and Mindfulness

When yoga exactly began is unknown, but it certainly predates written history (L. Gillen, & J. Gillen, 2009). It is believed that yoga arrived in the United States in the late 1800s but didn't become popular until about the 1960's (L. Gillen, & J. Gillen, 2009). According to the 2016 *Yoga in America* study conducted by Ipsos Public Affairs, the number of American yoga practitioners has increased to over 36 million in 2016, up from 20.4 million in 2012.

The meaning of the Sanskrit word for yoga is to yoke or to unite, which is founded at the core of its tradition. Through the practice of yoga, one is desiring to be healthy and whole, by integrating the various aspects of our human nature. In order to achieve harmony of the body, mind, and spirit yoga includes five basic practices; breathing, exercise, meditation and positive thinking, lifestyle and relaxation" (L. Gillen, & J. Gillen, 2009). Breathing practices include learning healthy breathing patterns and techniques that increase energy and release tension while relaxing and rejuvenating the body. The exercise aspect of yoga will help an individual acquire many beneficial health benefits such as; strength, regulation of the nervous system, increase in flexibility and

improve circulation. Yoga also helps one create a more positive lifestyle by promoting growth in self-awareness. Lastly, the practice of yoga will encourage relaxation throughout the body from our emotions and nervous system.

In the 21st century yoga went from being practiced prominently only by adults and began to be practiced by children. Today yoga is being implemented in many school districts in the United States and worldwide. Schools today in the United States face many challenges including but not limited to; low academic achievement and motivation, anxiety, depression, obesity, and student attention challenges. It has become a major concern for many school districts on how they are going to address these challenges and reach all their students' academic, social, and behavioral needs. The above factors combined with the fact that many students with various disabilities are being mainstreamed into the classroom has increased the responsibility of teachers to provide not only academic training, but also special-needs adaptations, physical fitness training, and emotional support services (L. Gillen, & J. Gillen, 2009). In recent years research has encouraged educational professionals to turn to the practice of yoga to alleviate and/or abolish some of the above factors affecting a student's achievement in academics, social and emotional growth, and behavior management.

Benson et al., (2000) conducted a study to examine the relationship between a relaxation response curriculum that uses the yoga practice of mindfulness relaxation and academic achievement. The participants in the study were teachers and middle school students (grades 6th, 7th, and 8th) from Horace Mann Middle School in South Central Los Angeles. The relaxation response curriculum took place for three years in the school. It was rolled out in a two-step fashion, first trained professionals from the Mind/Body

Medical Institute (M/BMI) trained teachers whom volunteered on how to teach their students and use relaxation response skills to reduce stress. Then the M/BMI trained professionals went directly into classrooms to model for the teachers how to instruct students in the use of relaxation response strategies. The classroom training strategies took place once a week for 5 weeks and the teachers were encouraged to practice these strategies at other times during the week as well. The study demonstrated that students who received teachings in relaxation exercises and self-care strategies for two semesters earned higher marks in GPA, work habits and cooperation, than students who did not, and maintained this improvement for at least two years.

L. Gillen and J. Gillen (2009) state that in 2003 the Program Evaluation and Research Collaborative (PERC) at Cal State University's Charter College of Education conducted a study on a program that teaches mindfulness, movement, and social and emotional practices through yoga in schools called the Yoga Ed program. The study consisted of 405 students and 18 teachers and yoga instructors in an inner-city school. The study found that yoga participation not only helped students improver their overall attitudes towards themselves but resulted in a lower number of discipline referrals and their behavior had improved as well.

Yoga has also demonstrated success in tackling the challenges that educational professionals have in educating the students of today in a 2007 study from Purdue University. A research team of two doctors Buckenmeyer from Purdue University and Freltas from the University of Indiana (2007) looked at the K-5 outcomes on students' academic achievement, general health, personal attributes and relationships at six U.S. and Canadian schools that had incorporated the Yoga Kids Tools for Schools program.

Six surveys were used to collect responses regarding the effects the yoga program had on participating students. A pre and post survey were administered to three different groups; K-2 students, 3-5 students, and teachers/parents of students participating in the program. Each survey contained questions related to: academic achievement; general health; personal attributes; and relationships. Based on the surveys Buckenmeyer and Freltas (2007) found that yoga has significant positive effects on the children's academic achievement, personal attributions, relationships, and general health.

Yoga and Mindfulness, and Self-Efficacy

Self-efficacy is the belief someone has about their capabilities to complete a task. These beliefs have the potential to positively or negatively impact how someone may feel, think and motivate themselves. Student's self-efficacy can be broken down into three components, academic, social, and emotional self-efficacy. A student's opinion on how well they understand reading is an example of academic self-efficacy. They way in which a student feels he/she gets along with their peers is a form of social self-efficacy. The way a student judges how well they do at cheering themselves up is an example of emotional self-efficacy. A student may feel strong in one area of self-efficacy such as academics but weak in one or both of the other areas, but as research has demonstrated the emotional well-being of a student directly effects their academic outcomes, meaning if one does not feel that they are a good reader than each time before they even begin to complete a reading task they already have a negative connotation on how the reading task is going to go.

When a student perceives that academic, social, or emotional demands exceed their adaptive capacity psychological stress arises (Hewett, Pumpa, Smith, Fahey, & Cheema, 2018). Stress not only has a great potential to lead to low academic achievement in a student but an overall negative wellbeing including many health risks such as, chronic conditions like cardiovascular disease. Physical activity has been determined to be one of the more effective techniques in reducing stress (Hewett et al., 2018). Yoga requires physical activity to change from one asana (pose) to the next and often time requires a great amount of muscle engagement to hold an asana. Mindfulness is an important aspect of yoga and this is when one is fully present in the moment and aware and non-judgmental of their own thoughts. The combination of both yoga for its physical demands (changing and holding of asanas) and its practice of being mindful is believed by some researchers to have the potential to not only decrease one's stress level but to also encourage them to be more aware and accepting of one's beliefs about themselves.

Kwasky and Serowoky (2018) conducted a study examining the effects yoga had on female adolescents in an urban school-based environment. The pilot study was conducted to see if yoga could improve the self-efficacy and body core tone of the experimental group. Fifteen adolescent females ages 11-14 were recruited from an elementary/middle school in Southwest Detroit an area in which the experimental group was greatly at-risk to stress due to violence and trauma. Self-efficacy was measured using the Self-Efficacy Questionnaire for Children (SEQ-C) and was assessed prior to the yoga implementation, at the end of implementation, and 1-month post implementation. Improvements in physical strength such as; flexibility and core body tone were also examined. The experimental group received yoga from a certified yoga instructor twice

weekly for eight weeks. The results demonstrated that there was significant improvements in the social subscale of the SEQ-C.

Phang, Mukhtar, Ibrahim, Keng, and Sidik (2015) conducted a study to evaluate the effectiveness a 5-week mindfulness-based stress management (MBSM/Mindful-Gym) program had in reducing stress among students in medical school in Malaysia. Medical students in year one to three of studies in University Putra Malaysia (UPM) voluntarily entered the study as an extra-curricular activity. Participants in the study met with the mindful program trainer for 2 hours for five consecutive weeks. The exercises the participants partook in were designed to cultivate the ability to *pay attention* to the present moment, relaxing moments, and grateful moments in life (Phang et al., 2015). The following outcome variables were measured at pre- and post-intervention: mindfulness (with Mindful Awareness Attention Scale); perceived stress (with Perceived Stress Scale); mental distress (with General Health Questionnaire), and self-efficacy (with General Self-efficacy Scale). The General Self-Efficacy (GSE) scale was used to measure rates of self-efficacy among both the experimental and control group. This scale is a 10-item uni-dimensional scale for assessing a general sense of perceived self-efficacy to predict coping with daily hassles and adaptation after experiencing all kinds of stressful life events (Phang et al., 2015). A one-week post-intervention showed that there was a significant increase in all measured variables in comparison to a control group. A post intervention completed at six months there was no difference in outcome measures between the experimental and control group, except in self-efficacy were the experimental group reported higher rates of self-efficacy.

Yoga and mindfulness practices teach individuals ways to cope and/or deal with the stresses in their lives, promoting a better outlook about ones' self. In today's society for students and for adults' stresses from various contexts can make one's self-image a negative one. As demonstrated in these two diverse but similar studies yoga and mindfulness practices have the potential to increase the self-efficacy of adolescent females in the United States at-risk for stress due to their living environments and medical students in Malaysia. It is important that all students are provided with the skills they need to successfully learn including ways to manage stress from their everyday life.

Yoga and Mindfulness, and Behavioral Self-Regulation

When individuals learn to quiet their minds and bodies and educate themselves about their emotional, physical, and mental health, such as through the practice of yoga and mindfulness activities, they become more competent in many areas (Gillen, & Gillen, 2009). Self-regulation requires one to successfully implement strategies that consist of controlling your mind and body to fight off impulses in off-task, emotional, and/or physical behavior. Research demonstrates that yoga and mindfulness activities encourage individuals to increase their self-regulation through meditation practices that focus on how to listen to what the heart, mind, and body have to say, and stillness were you quite the mind and body to be in the moment or task at hand (Gillen, & Gillen, 2009).

Crescentini, Capurso, Furlan, and Fabbro (2016) studied the effects of a mindfulness-oriented meditation (MOM) program. The study consisted of an experimental group that received the MOM program and an active control group who focused on emotion awareness but without meditation. Thirty-one children from the

northeast part of Italy participated in the study. The experimental or MOM group had 16 children in it both boys and girls ranging from the ages 7-8. The control group or non-meditation group had 15 children also both boys and girls ranging from the ages 7-8. Both programs were given by the same instructor 3 times a week for 8 weeks. The teacher of the students did not participate in either trainings but completed two questionnaires (Child Behavior Check-List Teacher Report and The Conners Teachers Rating Scale) pre and post trainings assessing behavior, social, emotion, and attention regulation in both groups of children in the study. The children also completed a self-report pre and post trainings measuring mood and depressive symptoms. It was founded from the teachers report that the experimental group (MOM group) had a positive effect in reducing attention problems, such as those associated with children who have attention deficit hyperactivity disorder (ADHD).

Bergen-Cico, Razza, and Timmins (2015) conducted a study like the Crescentini et al., (2016) study where they compared the results of one experimental group to an active control group while examining the effects a curriculum infusion of yoga had on the self-regulation of young adolescents. Mindful yoga practices were integrated into a 6th grade English Language Arts (ELA) class comprised of 72 boys and girls, split into 4 classes all taught by the same teacher throughout the school day. The active control group consisted of 72 boys and girls as well in 6th grade ELA split into four classes that are taught by the same teacher, but different from the one teaching the experimental group receiving mindful yoga practices. The teacher implementing mindful yoga into her classroom completed both 30-hour training in the YogaKids program and is a registered yoga teacher via Yoga Alliance. A very brief mindful yoga activity took place at the start

of each ELA class in the experimental group three times a week for 4 minutes. The activity consisted of the students practicing certain yoga poses with different objectives such as concentration, strength, and confidence for two minutes, then the teacher led the students in a two-minute mindful meditation focusing on silencing their bodies and minds, focusing in on their breathing, and setting an intention. The students in both groups completed the *Adolescent Self-Regulatory Inventory* (ASRI) three times; in September (baseline), January (mid-year), and May at the program's end. The ASRI is a questionnaire consisting of 36 items that focus in on both short term and long-term self-regulation. As a result of the ASRI at the end of the program in comparison to the active control group the students in the experimental mindful program demonstrated a significant increase in long-term self-regulation and in contrast the control group showed significant decrease in long-term self-regulation from baseline to end of program,

Yoga and mindfulness practices based off research have the potential to increase an individual's cognitive, emotional, and social abilities (Crescentini et al., 2016). As seen in the Bergen-Cico et al., (2015) study students increased their self-regulation by practicing yoga poses and participating in a mindful activity that encouraged them and walked them through techniques such as breathing that connected them to that moment in just as little as four minutes a day. In order to succeed in the classroom self-regulation is expected of students. Therefore if self-regulation is an expectation for students than it must be taught to them in the school setting by educational professionals. Based off of the research yoga and mindfulness practices are something that districts may want to investigate and consider when looking for ways to teach students to self-regulate their behavior.

Summary

Research has shown that there is a substantial need for social and emotional learning in schools so that our students today not only achieve academically but acquire strategies that they will need in order to be successful in many aspects of life outside of the classroom. SEL programs come in many sizes, shapes, and forms and one of the interventions that a district may choose to incorporate into their SEL program is the practice of yoga and mindfulness. Research has demonstrated that in and outside of the classroom yoga and mindfulness strategies have helped individuals decrease anxieties from stress, feel better about themselves in various aspects of life, be present in the moment, and to self-regulate their behavior and emotions. Within the context of students ranging from pre-school to college medical students research demonstrates that the practice of yoga and mindfulness strategies has; decreased stress, increased self-efficacy, and increased self-regulation all resulting in preparing students to learn or students being "ready to learn" when they are in the classroom.

The practice of yoga and mindfulness as an intervention in the classroom is relatively novel and there is still much more to be learned and researched on how to best incorporate this practice into classrooms so that all students receive its benefits. The purpose of my study is to build upon and conduct research which supports the idea that yoga and mindfulness practices as SEL interventions within schools, will increase the academic, social, and emotional self-efficacy of students with learning disabilities in the self-contained classroom, as well as increase their behavioral self-regulation.

Chapter 3

Methodology

Setting

School. The study took place in a public school in a central New Jersey school district. The school is one of three elementary schools in the district. It serves students in pre-school through fifth grade. When students exit fifth grade, they enter the district's middle school (grades 6-8) and then enter the high school (grades 9-12). The district is proactive in incorporating social and emotional (SEL) practices throughout all school buildings and grade levels. The district also has a strong passion for Quad-D learning, which involves students being challenged by rigorous and relevant learning tasks across all classrooms in the district.

According to the New Jersey Performance Report (2017), the school consisted of approximately 448 students during the 2016-2017 school year. During 2016-2017, approximately 20% of the student population had an IEP and received special education services (NJ School Performance Report, 2017). Approximately 52% of the student population at the school is economically disadvantaged (NJ School Performance Report, 2017). During the 2016-2017 school year according to the NJ School Performance Report (2017) 59.4% of the students were Hispanic, 37.1% were African American, 2.5% were Caucasian, 0.9% were Asian and 0.2% were Native American or Pacific Islander. It is also important to note that 11% of the students were reported to be English learners (NJ School Performance Report, 2017).

Classrooms. One of the classrooms where the study took place is a self-contained classroom consisting of students in the third, fourth, and fifth grade. The teacher in this classroom instructs the students in all core academic content areas (English Language Arts, Mathematics, Social Studies and Science). At most times throughout the day there are 12 students in the classroom, the teacher, and paraprofessional. The number of students in the classroom may fluctuate throughout the day due to students being pulled out from the classroom to receive therapies (Speech, Occupational Therapy, and Physical Therapy) based on their IEPs. This classroom is where the teacher administered the self-efficacy questionnaire and observed the students using or not using behavioral self-regulating strategies.

The other classroom utilized in the study is the music room. This classroom is where the experimental group went to receive the yoga and mindfulness intervention by a Yoga Calm trained teacher in the building. Aside, from music materials the classroom contains yoga mats that can be comfortably laid out and used on the large floor space the classroom provides.

Participants

The study included 10 students total-5 males and 5 females. The students were randomly assigned to an experimental and control group. All participants had an IEP to meet their individual needs. See Table 1 for general participant data of the experimental group and Table 2 for general participant data of the control group.

Table 1

Experimental Group Data

Student	Age	Grade	Classification
A	9 years old	Third Grade	CI
B	8 years old	Third Grade	ASD
C	10 years old	Fifth Grade	MID
D	9 years old	Fourth Grade	SLD
E	10 years old	Fifth Grade	SLD

Participant 1. Student A is a nine-year-old African American female. The student is eligible for special education under the classification of communication impaired (CI). She receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student A is an energetic and outgoing student. Student A requires repeated directions and small group instruction.

Participant 2. Student B is an eight-year-old Caucasian male. The student is eligible for special education under the classification of autistic (ASD). He receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student B is a happy and friendly student. Student B demonstrates hyperactive tendencies due to his anxiety when instructional demands are placed.

Participant 3. Student C is a ten-year-old African American female. The student is eligible for special education under the classification of mild intellectual disability (MID). She receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student C loves to participate in school-performances that include singing and dancing. Student C requires small group instruction and a longer processing time.

Participant 4. Student D is a nine-year-old Hispanic female. The student is eligible for special education under the specific learning disability (SLD). She receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student D is a friendly and cooperative student. Student D struggles with reading and works diligently on building her reading fluency.

Participant 5. Student E is a ten-year-old Hispanic female. The student is eligible for special education under the classification of specific learning disability (SLD). She receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student E is an organized and friendly student. Student E is making great progress in her academics this school year and is needing less and less support.

Table 2

Control Group Data

Student	Age	Grade	Classification
F	9 years old	Third Grade	SLD
G	8 years old	Third Grade	MID
H	10 years old	Third Grade	MID
I	10 years old	Fourth Grade	CI
J	9 years old	Fourth Grade	ASD

Participant 6. Student F is a nine-year-old Hispanic female. The student is eligible for special education under the classification of specific learning disability (SLD). She receives all academic instruction except for specials in the 3-5 self-contained

CI classroom. Student F is an energetic and outgoing student. Student F has a difficult time staying on task when in independent learning centers and requires redirection in both teacher lead and independent centers.

Participant 7. Student G is an eight-year-old African American male. The student is eligible for special education under the classification of mild intellectual disability (MID). He receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student G is a happy and friendly student. Student H is often fixated on certain interests which makes it difficult for him to communicate.

Participant 8. Student H is a ten-year-old Hispanic male. The student is eligible for special education under the classification of mild intellectual disability (MID). He receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student H is eager to learn about new things. Student H has a slow processing rate, which makes the writing process a difficult task for him.

Participant 9. Student I is a ten-year-old Hispanic male. The student is eligible for special education under the classification of cognitively impaired (CI). He receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student I enjoys learning about math and using technology to enhance his learning. Student I demonstrates a difficult time creating and maintaining friendships on his own.

Participant 10. Student J is a nine-year-old Hispanic male. The student is eligible for special education under the classification of autistic (ASD). He receives all academic instruction except for specials in the 3-5 self-contained CI classroom. Student J is a very

creative student and enjoys art class. Student J requires redirection and repeated directions.

Research Design

This research study used an experimental/control group design. This study explored the effect of the independent variable, yoga and mindfulness, on the student self-efficacy as measured by the differences between a pre and post intervention self-efficacy questionnaire and the teacher's observation of behavioral self-regulation. Prior to the intervention each student in both the experimental and control group completed a 12 question self-efficacy questionnaire, where they were asked to rate themselves 1-4, 1 being the lowest and 4 being the highest in the areas of academic, social, and emotional self-efficacy. During the intervention phase of the study the students in the intervention group received and practiced yoga and mindfulness training at least once, a week for thirty minutes. During the intervention phase the teacher observed and rated student behavioral self-regulation in both the experimental and control group in their self-contained classroom. The teacher's behavioral self-regulation observation form rated students 1-3, a 1 meant the student was not focused and was distracted by the environment, a 2 meant the student was somewhat focused and somewhat distracted by the environment, and a 3 meant the student was focused and not distracted by the environment. After the intervention period both the experimental and control group completed the same 12 question self-efficacy questionnaire that was administered pre-intervention.

Procedures

The study took six weeks to complete. Baseline data on student self-efficacy was collected before the experimental group began to receive the yoga and mindfulness intervention. All ten students answered a questionnaire on their academic, social, and emotional self-efficacy using a 1-4 scale. If a student chose a 1 on the rating scale in response to a question, they felt that they could not perform the task well at all, a 2 if they were OK at the task, a 3 if they were good at the task and a 4 if they felt they can do the task very well. The teacher administered the questionnaire one-on-one to ensure that the students understood what the questions were asking. The teacher also attached an Emoji face to the rating on the self-efficacy scale for the students that needed the visualization as to what each number on the scale represented. Once each student completed the self-efficacy scale the students were randomly assigned to the experimental or control group.

During the six-week intervention period the experimental group received the yoga and mindfulness intervention six times (once a week) for thirty minutes each session. The students in the experimental group went to the music room and received the intervention. Weekly yoga and mindfulness sessions focused on ways to self-regulate behavior such as; yoga-based stretches, mindful breathing activities, and other calming strategies that they can use in various situations that they may feel uneasy, stressed, overwhelmed or distracted that would help them get back on task.

During the six-week intervention period the teacher in the self-contained classroom chose two times a week (12 times total) during independent English Language Arts (ELA) center time to rate each of the 12 students' (experimental and control group)

behavioral self-regulation. The teacher chose this time of day, because the students are working independently and are held accountable for regulating their own behavior at this time.

After the last yoga and mindfulness intervention in week 6 the teacher administered the same 12 question self-efficacy questionnaire to all the students. The same test administration steps were followed as when the questionnaire was administered pre-yoga and mindfulness intervention.

Materials

A 12 question self-efficacy questionnaire was used to assess student academic, social, and emotional self-efficacy pre-intervention and post-intervention (See Appendix 1 for questionnaire) (Muris, 2001). The teacher used an observational rating-scale of student behavioral self-regulation during independent English Language Arts center time twice a week throughout the intervention period (See Appendix 2 for rating-scale). Yoga mats were used in some sessions during the yoga and mindfulness intervention.

Dependent Variables

Self-efficacy. During the study, the same 12 question self-efficacy questionnaire in which students rated themselves 1-4 in the areas of academic, social and emotional self-efficacy was administered pre and post intervention. Each area of self-efficacy had 4 questions. If a student chose a 1 on the rating scale in response to a question, they felt that they could not perform the task well at all, a 2 if they were OK at the task, a 3 if they were good at the task and a 4 if they felt they can do the task very well.

Behavioral self-regulation. During the intervention period twice every week, 12 times total, the teacher in the self-contained classroom used a 1-3 rating scale to rate all the students' behavioral self-regulation during independent English Language Arts centers. The expectations of behavioral self-regulation that the teacher was rating during these observational times were; student's eyes focused on work, remains in assigned ELA center, keeping a calm body (not fidgeting or making noises), and not distracted by other students, noises and/or physical things around them. Students received a 1 if they were not focused and were distracted by the environment. Students received a 2 if they were somewhat focused and somewhat distracted by the environment. Students received a 3 if they were focused and not distracted by the environment.

Data Analysis

Results of the pre-testing for self-efficacy was recorded for both groups and compared to the results following the intervention received by both the experimental and control group. Results of the observations of self-regulation during the 6-week intervention period was recorded and will be compared at the end of the intervention period.

Chapter 4

Results

The study utilized an experimental/control group design to evaluate the effectiveness of yoga and mindfulness on the self-efficacy and self-regulation of ten students in grades third through fifth placed in a self-contained special education classroom as per their IEP (Individualized Education Plan). Prior to the intervention each student in both the experimental and control group completed a 12 question self-efficacy questionnaire, where they were asked to rate themselves using a scale 1-4. During the intervention phase of the study the students in the intervention group received and practiced yoga and mindfulness training at least once a week for six weeks. The classroom teacher observed and rated student behavioral self-regulation using a scale of 1-3 in both the experimental and control group in their self-contained classroom twice a week during the intervention period, totaling 12 observations. After the intervention period both the experimental and control group completed the same 12 question self-efficacy questionnaire that was administered pre-intervention.

Self-Efficacy

Student self-efficacy in the areas of academic, social and emotional self-efficacy was assessed using a 12 question self-efficacy questionnaire pre and post intervention. There were 4 questions per each are of self-efficacy on the questionnaire. The classroom teacher administered the questionnaire to all 10 students to both the experimental and control group. The students rated themselves 1-4, 1 being the lowest and 4 being the highest in the areas of academic, social, and emotional self-efficacy.

Figure 1 provides the mean score for both the experimental and control group on the 12 question self-efficacy questionnaire pre and post intervention period for the 4 questions on the questionnaire pertaining to academic self-efficacy. Both groups mean scores increased from pre to post questionnaire. However, the growth for the experimental group was greater in comparison to the control group. The experimental group increased by .55 and the control group increased by .30, making the difference between the two groups' growth .25. The experimental group demonstrated the most growth in the area of academic self-efficacy when comparing the mean score pre and post intervention.

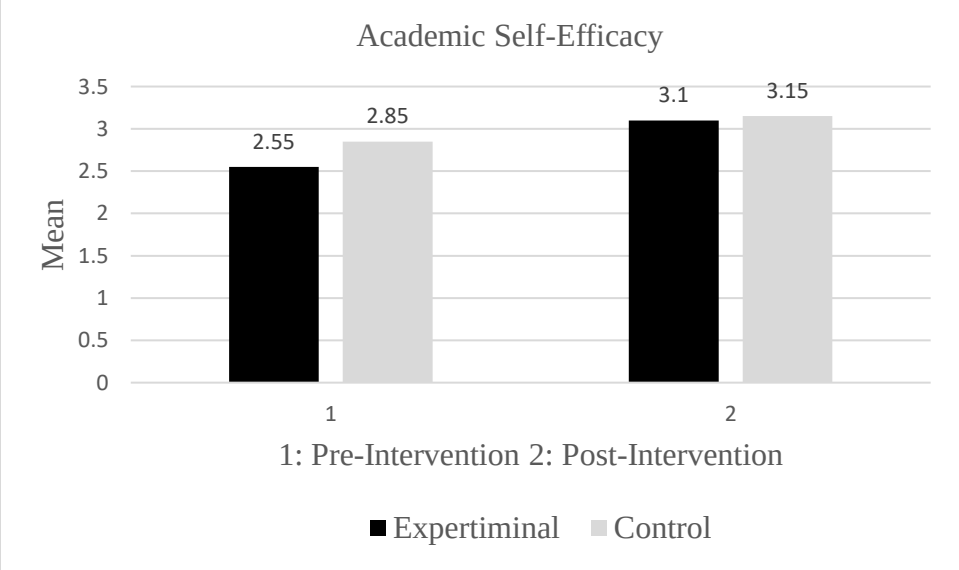

Figure 1. Pre and post mean scores of academic self-efficacy.

Figure 2 provides the mean score for both the experimental and control group on the 12 question self-efficacy questionnaire pre and post intervention period for the 4 questions on the questionnaire pertaining to social self-efficacy. Both groups' mean scores increased from pre to post questionnaire. However, the growth for the experimental group is more significant in comparison to the control group. The experimental group increased by .30 and the control group increased by .25, making the difference between the two groups' growth .05.

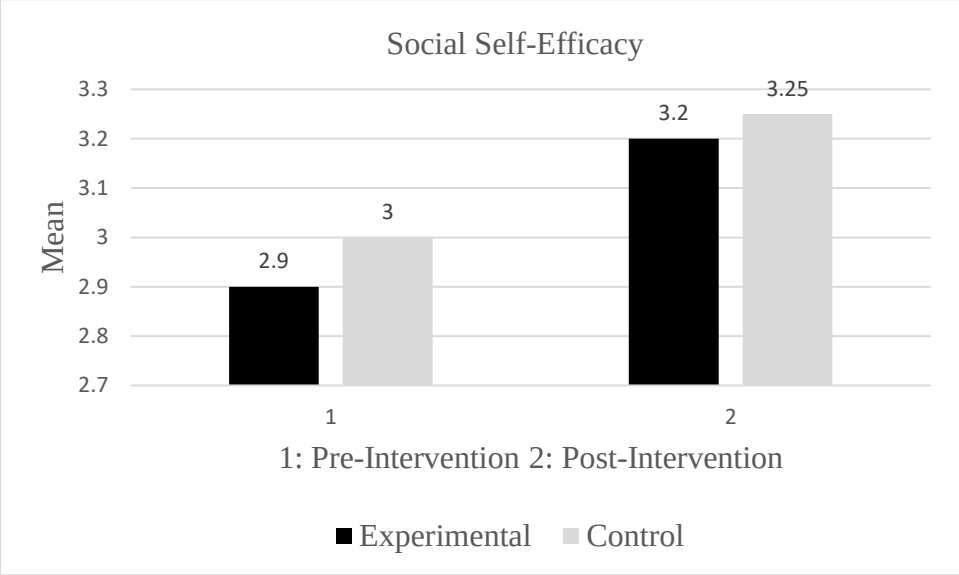

Figure 2. Pre and post mean scores of social self-efficacy.

Figure 3 provides the mean pre and post intervention score for both the experimental and control group on the 12 question self-efficacy questionnaire for the 4

questions on the questionnaire pertaining to emotional self-efficacy. The experimental group's scores increased from pre and post intervention, demonstrating a growth in emotional self-efficacy, the control groups mean score remained the same. The experimental group increased their emotional self-efficacy by .50.

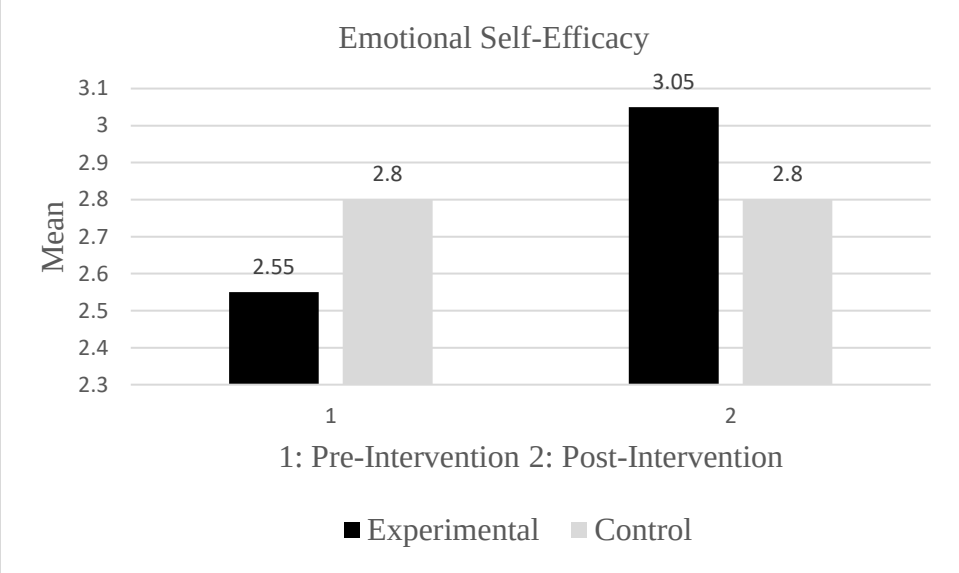

Figure 3. Pre and post mean scores of emotional self-efficacy.

Behavioral Self-Regulation

Student behavioral self-regulation for both the experimental and control group was rated using a 1-3 rating scale by the classroom teacher twice a week during the ELA (English Language Arts) center time of the day. Students received a 1 if they were not

focused and were distracted by the environment. Students received a 2 if they were somewhat focused and somewhat distracted by the environment. Students received a 3 if they were focused and not distracted by the environment.

Figure 4 provides the mean score of behavioral self-regulation for both the experimental and control group for each week during the intervention period. The mean for each student was determined by averaging the students' two scores. By the second week of the intervention period the mean score for the experimental group was higher than that of the control group and stayed that way till the end of the intervention. The mean score for the experimental group did fluctuate during weeks 2-5, but the mean score over weeks 2-6 never went below the first week's mean of 1.9. From week 1 to 6 the experimental group demonstrated an increase in mean score of .60, where the control group demonstrated a decrease in mean score of .30.

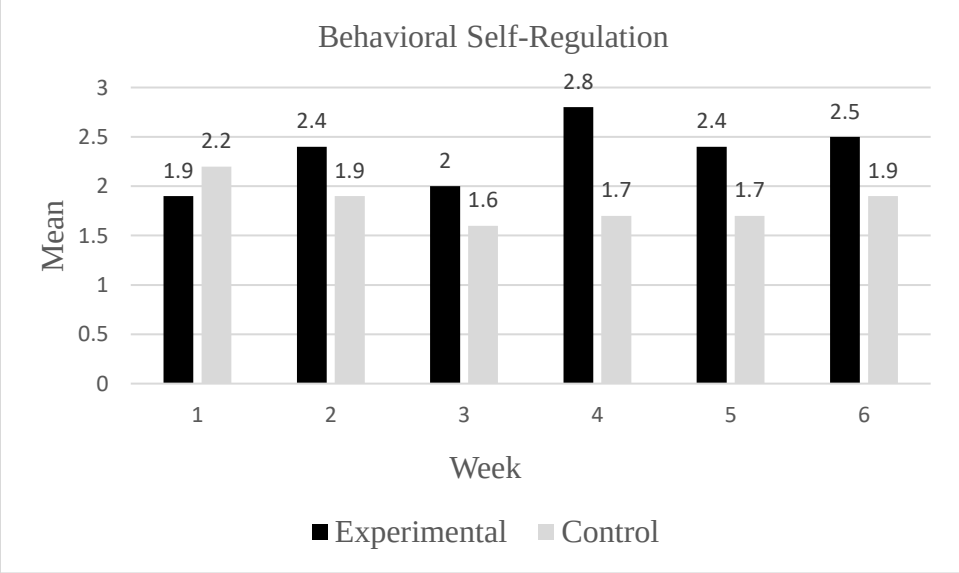

Figure 4. Pre and post mean scores of behavioral self-regulation.

Table 3 provides the mean score of each student for each week. Students A-E were in the experimental group and students F-J were in the control group. All students in the experimental group demonstrated a higher mean score when you compare week 1 of the intervention period to week 6. Student E of the experimental group is the only student to show an overall increase in behavioral self-regulation from week 1 to 6. This student's mean score started at a 2.5 in week 1, stayed the same week 2 and then in week 3 increased to a 3 were it remained the same the remainder of the intervention period. The students in the control group's mean scores when you look at week 1 in comparison to week 6 vary, 3 students decrease in score, 1 student remains the same, and 1 student increases in mean score.

Table 3

Individual Mean Scores of Self-Regulation

Student	Week 1 Mean	Week 2 Mean	Week 3 Mean	Week 4 Mean	Week 5 Mean	Week 6 Mean
A	1.5	3	2	3	2.5	2
B	1.5	1.5	1	2	2	3
C	2	2.5	2	3	2	2
D	2	2.5	2	3	2.5	2.5
E	2.5	2.5	3	3	3	3
F	2.5	1	1	2.5	2	2
G	2	1.5	1	1.5	1	1
H	1.5	2.5	2	2	1.5	1.5
I	2.5	2	1	1	1.5	2
J	2.5	2.5	3	1.5	2.5	3

Chapter 5

Discussion

The purpose of the present study was to investigate the effectiveness yoga and mindfulness as SEL interventions have on the self-efficacy and self-regulation of students with learning disabilities in the self-contained setting. The participants were third, fourth and fifth grade students with varying disabilities. The study investigated whether or not the practice of yoga and mindfulness increased the self-efficacy and self-regulation of students with learning disabilities in the self-contained setting.

Findings

An overall increase in self-efficacy was observed in each area of self-efficacy- academic, social, and emotional- when comparing the mean scores of the pre and post self-efficacy questionnaires for the experimental group to those of the control group. The control group's mean scores increased in two areas, academic and social self-efficacy but remained the same in the area of emotional self-efficacy. By the end of the 6-week yoga and mindfulness intervention period the experimental group had shown the greatest increase in the area of academic self-efficacy. The mean score went up from 2.55 to 2.85, demonstrating an increase of .55. In the area of social self-efficacy, the mean score went up from 2.9 to 3.20, demonstrating a growth of .30. In the area of emotional self-efficacy, the experimental group went from a mean score of 2.55 to 3.05, demonstrating a growth of .50.

When comparing the experimental group to the control group in each area of self-efficacy, the experimental groups' growth was always larger. When looking at academic

self-efficacy the experimental group demonstrated growth .25 larger than the control group. In looking at the area of social self-efficacy the experimental group demonstrated growth .05 larger than the control group. In the area of emotional self-efficacy, the experimental group demonstrated growth of .50 where the control group's mean score remained the same pre and post intervention in this area.

In this study an overall increase in self-regulation was observed in the data collected from the teacher rating scale from week 1 to 6 of the intervention for the experimental group. The experimental group demonstrated a .60 increase when comparing the mean score from week 1 to 6. The data collected from the teacher rating school demonstrated that the control group showed a decrease in self-regulation from week 1 to 6 of the intervention. The control group's mean score at week 1 was 2.2 and by the end of week 6 their mean score was 1.9 demonstrating a decrease in self-regulation of .30.

When looking at individual students pertaining to the self-regulation component of this study, student E, who is classified with a specific learning disability, was the only student's mean score to demonstrate an increase or remain the same week to week. This may be because this student is very organized and is reported to be making progress in her academics this school year. Every student in the experimental group demonstrated a greater mean score than their mean score at week 1 by week 4 of the intervention and they either maintained this score or increased it by week 6 of the intervention. Only one student, student J of the control group, who is classified as autistic, demonstrated a greater mean score from week 1 to week 6. Student H of the control group, who is classified with a mild intellectual disability, mean score remained the same when looking

at week 1 and week 6. The remaining students of the control group all demonstrated a decrease in mean score when looking at the mean score of weeks 1 and 6.

Previous Research

This study was designed to study the effectiveness of the SEL intervention of yoga and mindfulness trainings on the self-efficacy and self-regulation of students. Research by Durlak et al., (2011) found that the use of SEL interventions promotes social, emotional and academic competency in students. This research was designed to evaluate the effect the SEL intervention of yoga and mindfulness had on student self-efficacy and self-regulation. Research conducted by Kwasky and Serowoky (2018) reported that adolescent girls will demonstrate an increase in the social subscale of the Self-Efficacy Questionnaire for Children SEQ-C after receiving yoga training twice a week for eight weeks. In the present study the academic, social, and emotional efficacy of the experimental group all increased when comparing the mean scores on the pre and post self-efficacy questionnaire. Research conducted by Bergen-Cico et al., (2015) suggested that 6th grade boys and girls will demonstrate an increase in long-term self-regulation after participating in a mindful yoga activity for 4 minutes three times a week. The present study demonstrated that the experimental group's mean score of self-regulation increased from week 1 to week 6 after receiving yoga and mindfulness training once a week for thirty minutes for 6 weeks.

The present study found that students with disabilities increased their social self-efficacy with yoga and mindfulness trainings once a week for thirty minutes a week. These findings are similar to the findings to Kwasky and Serowoky (2018) in which

fifteen adolescent girls whom lived in an environment of great stress increased their social self-efficacy after receiving yoga training twice a week for 8 weeks. This implies that students of many backgrounds have the potential to increase their social self-efficacy from receiving yoga and mindfulness trainings. This study demonstrated that the experimental group over the course of the 6-week intervention period of yoga and mindfulness training increased their self-regulation as well as after week on demonstrated a higher average self-regulation than the control group. These finding are similar to Bergen-Cico et al., (2015) in which the experimental group of 6th grade students received a brief mindful yoga activity three times a week for 4 minutes, the control group did not receive the activity. At the end of the intervention the students in the experimental mindful program demonstrated a significant increase in long-term self-regulation and in contrast the control group showed significant decrease in long-term self-regulation.

Implications and Recommendations

The findings of previous studies as well as the current study suggest that yoga and mindfulness trainings in schools have the potential to increase student self-regulation. The results suggest that it may be beneficial for schools to implement yoga and mindfulness into their regular school day as a Social-Emotional Learning (SEL) intervention. The self-efficacy questionnaire demonstrates that yoga and mindfulness have the potential to help students feel more confident about themselves in the areas of academics, socialization and emotions. The teacher rating scale of self-regulation suggests that students will use the strategies that they have learned through the yoga and mindfulness trainings to regulate their behavior independently in the classroom.

Limitations

One limitation in this study was the amount of time the study took place. The amount of time allotted to perform the intervention effected the amount of data that was collected. Although the experimental group demonstrated an increase in both self-efficacy and self-regulation the average increase could have been greater in both areas if the intervention period was longer. Another limitation in this study that came up in the was when the teacher was collecting parental consent forms one family did not want their child to participate due to religious views, although the students were not practicing the worshiping aspects of yoga just the movements and breathing techniques the family did not feel comfortable with allowing their child to participate. The sample size of the study was relatively small as well a larger number of participants would have led to more data to have been collected and analyzed. More data points and a larger number of participants would have led to a stronger conclusion on the effectiveness the SEL interventions of yoga and mindfulness has on the self-efficacy and self-regulation of students with disabilities.

Conclusions

The present study supports the use of the SEL intervention of yoga and mindfulness to increase the self-efficacy and self-regulation of students with disabilities. After receiving yoga and mindfulness training once a week for six weeks students increased their self-efficacy and self-regulation. Yoga and mindfulness practices seems to be an effective research-based strategy that can be used in classrooms with students with disabilities.

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Appendix A

Self-Efficacy Questionnaire

Self-Efficacy Questionnaire for Children with Learning Disabilities

	 1 (Not At All)	 2	 3	 4 (Very Well)
Academic self-efficacy				
1. How well do you succeed in finishing all your homework every day?	○	○	○	○
2. How well do you do with paying attention during independent center work?	○	○	○	○
3. How well do you understand reading, writing, and math (all subjects in school)?	○	○	○	○
4. How well do you calm yourself when you are having trouble doing an assignment?	○	○	○	○
Social self-efficacy				
5. How well are you at making friends?	○	○	○	○
6. How well can you work together with your friends?	○	○	○	○
7. How well are you at telling your friends when they are upsetting you?	○	○	○	○
8. How well are you at staying friends with other children?	○	○	○	○
Emotional self-efficacy				
9. How well do you succeed in cheering yourself up when you are upset?	○	○	○	○

10. How well do you succeed in calming yourself after you are scared?	○	○	○	○
11. How well are you at letting go of unhappy thoughts?	○	○	○	○
12. How well are you at controlling your feelings (anger, sadness, anxiousness, etc.)	○	○	○	○

Appendix B

Observational Rating-Scale of Student Behavioral Self-Regulation

Observation of Behavioral Self-Regulation

Student Identifier: _____

		Rating		
Week	**Date**	**1**	**2**	**3**
1				
1				
2				
2				
3				
3				
4				
4				
5				
5				
6				
6				

Rationale of Scoring
Expectations of Behavioral Self-Regulation: eyes focused on work, remains in assigned ELA center, keeping a calm body (not fidgeting or making noises), and not distracted by other students, noises and/or physical things around them.

Score	Descriptor
1	Student is not focused and is distracted by environment. Student exhibits 0 of the behavioral self-regulation expectations stated above.
2	Student is almost focused and almost not distracted by environment. Student exhibits some but not all the behavioral self-regulation expectations stated above.
3	Student is focused and not distracted by the environment. Student exhibits all the behavioral self-regulation expectations stated above.