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THE EFFECTS OF MINDFULNESS INTERVENTIONS TO ENHANCE EDUCATIONAL EXPERIENCE AND
SENSE OF WELL-BEING

A MASTER'S THESIS
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OF BETHEL UNIVERSITY

BY
MADELINE LUOMA

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BETHEL UNIVERSITY

THE EFFECTS OF MINDFULNESS INTERVENTIONS TO ENHANCE EDUCATIONAL EXPERIENCE AND
SENSE OF WELL-BEING

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Abstract

More recently than ever, teachers are witnessing an uptick in aggressive behaviors and emotional dysregulation and decreased academic engagement within their classroom walls. This can impact the learning environments of all students and hinder academic achievement. Currently, a push for including a social-emotional curriculum in schools that encourages mindfulness, awareness, and behavior regulation has been prevalent in education to attempt to combat the increase in behaviors and disengagement in academic content. Research has shown that different types of mindfulness interventions that include meditation and movement have been suggested to yield positive outcomes in helping students overcome dysregulation, perceived stress levels, and declining academic performance. Not only can students benefit from mindfulness practices, but also educators. When mindfulness is practiced by a teacher, teacher burnout, excessive stress levels, and effective classroom management can be a result of creating learning environments that are meeting the current needs of our children.

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CHAPTER I: INTRODUCTION

What is Mindfulness?

Mindfulness has been a popular word thrown around society, especially when talking about self-care and knowing one's true self. Mindfulness is defined as, "The basic human ability to be fully present, aware of where we are and what we're doing, and not overly reactive or overwhelmed by what's going on around us." (Mindful.org, 2020, para. 3).

Traditionally, mindfulness has been practiced for hundreds of years in secular religions and is something new to Western societies. In particular, mindfulness is originally part of both Hinduism and Buddhism, and intertwined in many practices and scriptures related to both lifestyles. It was not until the 1960s when Asian emigration to the United States was on the rise, including prominent Zen and Tibetan missionaries. These missionaries attended universities that led to the development of courses that were centered around principles related to Buddhism. The creation of the Insight Meditation Center of 1976 was introduced to emulate the Eastern practices of breathing meditation in the Western culture (Nisbet, 2017, para. 8).

The most influential figure in the development of mindfulness as secular and scientific practice is Jon Kabat-Zinn, who studied at the Insight Meditation Center. He then took the practices he learned and applied them to his own approach to teaching mindfulness and an intervention practice that is highly used. He proved that mindfulness meditation can be incorporated very easily into daily practice as he, "Transformed meditation from a practice rooted in Buddhism to that of a scientifically based form of health promotion" (Nisbet, 2017, para. 16).

Mindfulness interventions are successful when people are willing to participate in mindfulness, which is much harder than it may seem. Being truly mindful means focusing on one's body, breath and creating an awareness of what is happening in the present. Ways that mindfulness can be incorporated into daily life can be practicing yoga, going on a meditation walk, practicing breath awareness, bringing mindfulness to the food that fuels one's body, and completing body scans.

Hindrances of Mindfulness

In an environment that is full of many different distractions and stressors, that can be extremely hard to do, especially in today's day and age where technology is prevalent in all aspects of life. As a teacher, students come to school each day eager to share about their lives outside of the classroom. Many of the activities that students participate in require technology such as a television, tablet, iPad, or video game console. Students come to school half asleep during the day because they are up until the wee hours of the night playing video games with their friends. Personally, I am not sure I remember the last time one of my students talked about building a fort in the woods or going on a bike ride with their friends. Not only has technology completely consumed children's extracurricular activities, but also adults. As a society, individuals are glued to their smartphones and are constantly refreshing to stay current with the news, their friends, and social media. Being fully present at the moment and experiencing in the moment sensations is a feeling that is slowly becoming forgotten. We need to teach our students about mindfulness to encourage them to savor every moment of life.

Student Expectations

There is an immense amount of pressure for students to perform well academically and meet a variety of benchmarks and academic readiness to prepare them for life after high school. It is unrealistic to expect students to meet grade level expectations when students do not have the skills to be academically successful. All children are not the same, and the United States has a diverse population of learners. According to the National Center for Educational Statistics,

In 2019–20, the number of students ages 3–21 who received special education services under the Individuals with Disabilities Education Act (IDEA) was 7.3 million, or 14 percent of all public-school students. Among students receiving special education services, the most common category of disability (33 percent) was specific learning disabilities. (2021, p. 1)

Knowing this information, it is evident that expectations need to be changed to meet the needs of students where their present levels are. If a student who has a learning disability is unable to keep up with grade-level academic rigor, this could cause negative consequences to their well-being. If a child is experiencing anxiety, depression, or other mental health illnesses, it can be very challenging for academics to be the sole focus and for students to perform at their true potential.

Current Mindfulness Interventions

As mentioned above, there are countless external factors of pressure that students face and experience inside and outside of school. The first person to help students cope with these pressures and situations are teachers. Teachers are expected to help support their students by

meeting their needs and creating a learning environment that is conducive to learning and makes everyone feel safe and loved. That can be challenging when needs are not being met on an individual level, which can result in disruption and external behaviors. Behavior is a form of communication that the current environment is not meeting present needs. When the behavior occurs in a classroom, it can be very hard for the teacher to continue to engage all students in instruction and for the classroom environment to remain predictable and calm. Research has shown that interventions within the classroom that encourage students to engage in mindfulness can have a positive impact on expected behaviors within the classroom, academic achievement, and the well-being of not only students but also educators.

Some examples of mindfulness programs that have been utilized are MindUP, Soles of Feet (SOF), Open Mind (OM), Mindfulness workbook curriculums, Drumtastic, Yoga, Mixed Martial Arts (MMA), Mindfulness Meditation (MM) and Mindfulness Stress Based Reduction (MSBR) programs. All these programs have similarities and differences but have had a positive impact on a variety of students, parents, and teachers.

Definition of Terms

Students who have a disability are a common population that is utilized in many studies mentioned within this paper. This refers to students who have either qualified for special education services in an educational setting or have a medical diagnosis of a disability. There are different labels a student can qualify for when beginning special education services. Some examples are Autism Spectrum Disorder (ASD), Emotional Behavioral Disorder (EBD) and Specific Learning Disorder (SLD). The term, *Autism Spectrum Disorder (ASD)* is a neurological and developmental disorder that affects how people interact with others, communicate, learn,

and behave. According to the CDC, in 2018, an estimated one in forty-four children are affected by Autism in the United States (2022).

Emotional Behavioral Disorder (EBD) is another disability category that children can qualify under when accessing special education. It is called an umbrella term because several distinct diagnoses (such as Anxiety Disorder, Manic-Depressive Disorder, Oppositional-Defiant Disorder, and more) fall within this category. These disorders are also termed "emotional disturbance" and "emotionally challenged. Many students in schools who qualify under EBD require behavior plans for school staff to follow because of the possibility of high behavior and trouble regulating emotions.

A *Specific Learning Disorder (SLD)* is defined as a disorder in one or more of the basic learning processes involved in understanding or in using language, spoken or written, that may manifest in significant difficulties affecting the ability to listen, speak, read, write, spell, or do mathematics. Students participate in special education services to support these possible deficits and receive instruction at their present levels versus grade level instruction and materials.

Research Question

Reviewing literature that is related to mindfulness interventions and their impact on student success academically, socially, and emotionally can provide educators like myself with guidance and strategies to implement within their classrooms to best meet the needs of students. This information can provide teachers with tools to combat teacher burnout and provide students with learning environments that set up students for success. The following questions will guide research to support answers to these questions: Does mindfulness

increase academic achievement? Does mindfulness that incorporates movement have successful outcomes? What are some simple mindfulness interventions that can support students within the school day? Does mindfulness influence teachers' attitudes towards teaching and classroom management strategies?

CHAPTER II: LITERATURE REVIEW

Literature Search Procedures

To locate the literature for this thesis, searches of Education Journals, ERIC, Academic Search Premier, Google Scholar, and EBSCO MegaFILE were conducted for publications from 2009-2021. The keywords used in searches included "mindfulness," "meditation," "mindfulness interventions in schools," "emotional regulation," "yoga," "movement and mindfulness," "education," and "teacher burnout."

Mindfulness and Meditation

More recently than ever, mindfulness and self-care strategies have been encouraged in the workplace to maintain stillness in a bustling society. Researchers have begun to discover that the same could be said for incorporating mindfulness in the classroom. In many of the following research studies, positive results have been found with implementing strategies and interventions that focus on mindfulness. Doss and Bloom (2018) conducted a study at the middle school level that incorporated a unit study of mindfulness taught in a language arts class to provide students with techniques that alleviate stress, perfectionist tendencies, and anxiety. Twenty-nine students in an eighth-grade honors language arts class in a southeastern school in the United States were participants in the study on mindfulness with a focus on daily guided meditations to improve mindfulness mind frames. Instructors provided time for guided meditation practice and discussion at the beginning of each class period for four weeks. The curriculum utilized throughout the unit of study was Mind Up. Students analyzed their progress by writing five journal entries throughout the unit of study. In addition, the instructors monitored progress through observations, whole-group discussions, and individual

conferences. After the first week, 25 of the 29 students reported that they had enjoyed the guided meditations. As students progressed through the four-week unit, they began to express appreciation for the time provided to meditate and reflect on events in their lives that may cause stress and anxiety. Students recognized the benefits of taking the time to breathe and relax in the middle of the day to reach a calm state of mind Doss and Bloom (2018).

One limitation of the study by Doss and Bloom (2018) was where it was conducted. In the region the school was located, meditation is still viewed as a religious activity. Because of this correlation, students whose parents are skeptical about guided meditation may have the potential to impact their students' potential benefits from these activities. Another limiting factor was that two students did not enjoy the process of meditation and were distracted by their peers from time to time. For meditation to be successful, it requires a quiet environment where students are engaged in their thoughts. For interventions like these, student buy-in on the value of meditation and having a quiet place is essential to be successful.

In another study conducted in Istanbul, Turkey, Ozcan and Isildar (2021) investigated if a mindfulness program had positive effects on high school students perceived stress levels, mindfulness, and self-efficacy. Albert Bandura defined self-efficacy as "The product of an individual's belief in their abilities to an extent which moderates the effects of stress" (p. 13). Stress is inevitable and can occur when individuals are overwhelmed with requirements and expectations that are beyond their control and capacity. Adolescents are a very vulnerable group to stress factors because of the many physical, cognitive, and social changes that occur at this time. The study was completed on 14 female high school students in the 12th grade at an academy in Istanbul as they were preparing to take the university exam. Three data collection

instruments were used on 135 students, where 44 students had elevated scores. These data collection instruments were the Perceived Stress Scale (PSS), the Mindfulness Attention Awareness Scale (MAAS), and the General Self Efficacy Scale (GSES). Based on the elevated score group, 14 of those students were accepted to voluntarily participate and were randomly placed in either a control or experimental group. The experimental group consisted of seven students who began a mindfulness program over six weeks with weekly 90-minute sessions with psychological activities. The control group received no mindfulness program sessions over six weeks (Ozcan & Isildar 2021).

Results from the Ozcan and Isildar (2021) study showed that mindfulness programs are very effective in reducing perceived stress and increasing mindfulness and self-efficacy. When given the PSS, MAAS, and GSES after the six weeks, significant differences were noted with the experimental group. Three important findings correlate with the effectiveness of this program. First, providing students with awareness exercises increases their ability to self-regulate and adapt to their present stressors. Next, mindfulness practices caused an uptick in the mindfulness levels of adolescents. By participating in meditation exercises, students were able to become more aware and regulate their senses and pay attention to the present. The final finding determined that providing mindfulness practices that encourage regulation increases an adolescent's self-efficacy since their stress levels are decreased.

Two limitations of this study were the population used in both control and experimental groups. This study was only conducted with 12th-grade students and female adolescents. It would be interesting to conduct these mindfulness practices on a more diverse adolescent group that included different grade levels and both male and female participants. Ozcan and

Isildar (2021) suggests that by providing adolescents with opportunities to practice mindfulness, their stress management strategies will effectively increase their self-confidence in being able to manage and complete tasks or events that may cause stress factors.

In a fifth-grade classroom in Connecticut during summer programming, a similar study by Reid and Miller (2009) was completed to determine the effectiveness of a mindfulness training workbook for younger-aged children. Participants were 24 fifth-grade students ages 9-11 that were of low socioeconomic status. Each child was administered the Perceived Learning Scale (PCS) on feelings of competence, The Curiosity and Exploration Inventory (CEI), the Rosenberg Self Esteem Scale about one's feelings of themselves, and the Mindful Attention Awareness Scale (MAAS). The Feely Faces scale was also given, where each participant placed a certain number of face stickers on how they were feeling at the moment. This was done before and after each exercise. Self-portraits were used two times throughout the six weeks. First, participants were prompted to draw themselves and then draw themselves being mindful several weeks later.

The workbook that was used during this summer programming was a detective workbook used 4-5 days per week. Reid and Miller defined the workbook as:

The mindfulness workbook is called Seymour N. B. Mack's Top Secret Detective Manual. The workbook tries to bring mindful learning to the classroom setting. It is written in a child's voice and asks each of the students to become detectives. Each week, the children are asked to explore one of their five senses in their school environment by doing explorations. (2009, p. 2776)

The results from the questionnaire data from Reid and Miller (2009) found that students filled out before and after the workbook practices suggest that 100% of the students stated their enjoyment of the program. The group increased 14% on their MAAS post-test score and a 6% increase in their CEI post-score. The PCS scores before and after had a stable 1% increase, and the Rosenberg Self-Esteem scale indicated a decrease of 4% in self-esteem. This data suggests an increase in mindfulness after completing the workbook and a correlation between mindful awareness and creativity.

Overall, more research is needed to determine if an increase in mindful awareness could lead to a decrease in self-esteem. Results from the intervention and workbook show some promising data that the children who needed the most support onset of the program showed the greatest improvement in mindfulness in the end.

The preschool environment includes a variety of opportunities to include social-emotional learning throughout their school day. Many social skills curriculums that incorporate meditation are not developmentally appropriate for ages 3-5. The OpenMind (OM) curriculum is a curriculum that is designed specifically for this age group that combines mindfulness meditation practices with social skills exercises related to cognitive and behavioral competencies. Jackman et al. (2019) explored the feasibility and outcomes of utilizing the OpenMind curriculum in Head Start programs in Missouri.

A total of 283 children, 27 teachers, and 281 parents participated in this study. There were 14 teachers, 163 children, and 147 parents assigned to the OM group and 134 parents to the comparison group. The comparison group followed their current curriculum called High Scope, which follows a 20-minute per day schedule of teacher-child bonding activities. Parents

were trained in relationship-building sessions. The OM group followed seven daily practices that included multiple meditation sessions, yoga, kindness reporting, and feelings discovery. Teachers were requested to meditate daily for 20 minutes while at school. Parents were also asked to practice and log meditation at home (Jackman et al., 2019).

There were multiple data measures utilized in this study to determine if OM was a more effective meditation practice at school. There were six different questionnaires and scales used and two tasks. The Feasibility and Acceptability questionnaires were filled out by teachers to determine if the OM curriculum was easy to implement and effective in their classrooms. The Perceived Stress Scale (PSS-10) is a ten-item questionnaire that both teachers and parents filled out to determine which life situations can be perceived as stressful. The Five Facet Mindfulness Questionnaire (FFMQ) measured mindfulness in five different facets (Observing, Describing, Acting, Nonjudging, and Nonreactivity). Both teachers and parents filled this questionnaire out as well. Parents completed a Psychological Well-Being scale that measured multiple aspects of well-being. Teachers completed a Behavior Rating Inventory of Executive Functioning (BRIEF-P), which was a preschool version for the students in their classrooms. There were two different tasks that children were asked to do during this study. In the Head Toes Knee Shoulders (HTKS) task where children were asked to do the opposite of what the examiner asked them to do. It starts with the head and toes and then continues with the knees and shoulders if the child can do this well. Finally, children were given the Go/No-Go task (GNG), where when tasked with a go trial, they should respond, and when tasked with a no go trial they should withhold a response (Jackman et al., 2019).

Results from these measurements that Jackman et al. (2019) conducted showed that the implementation of the OM meditation program in a preschool setting benefit both children and adults. Teachers reported that the OpenMind program was easy to implement and follow in the classroom. However, teachers were unable to follow the recommended 20-minute meditation per day and instead were able to do 8-10 minutes on average due to staff shortages and the preschool schedule. Regarding the HTKS task, children in the OM group performed better than the comparison group. Parent and teacher outcome questionnaires were inconclusive because of the lack of participation in both the pre- and post-questionnaires and the high rate of teacher turnover. It is suggested that more research should be completed on how to engage parents more effectively. This is the largest limitation, as the high rate of staff turnover led to a disparity in staff training for the OM curriculum. Overall, results from the OM program had strong evidence of incorporating mindfulness as an effective curriculum to encourage regulation and teach strategies to preschool children to manage stress and learn emotions. It would be interesting to investigate further to see if there is a correlation between the OM program and academic performance.

Mindfulness and Academic Achievement

When students engage in behavior that disengages with learning, it can affect not only their academic performance but also the learning environment of others. Students who receive special education services participate in their general education classrooms and may receive academic instruction that is not at their current instructional level, "Students with identified disabilities are more susceptible to academic disengagement than their peers without disabilities and would therefore particularly benefit from empirically validated interventions to

bolster academic engagement" (Felver et al., 2017). By including mindfulness practices and interventions in the general education classroom, academic performance and engagement can be increased because students have the mindset to succeed and strategies to manage stressors related to academic content.

Soles of the Feet for Students (SOF) is a successful intervention previously utilized with general education students to increase their academic engagement. SOF is an intervention that uses redirection of attention to a neutral part of the body (your feet) during intense emotional arousal that typically can result in aggressive behavior. Felver et al. (2017) decided to replicate and extend the work of previous studies by exploring SOF intervention among special education students who have high levels of disruptive behavior and low levels of academic engagement. In this study, four students in grades 4th-7th were provided instruction on the SOF intervention over five sessions that lasted 20-30 minutes each. The experimental design was broken down into three phases: baseline, intervention, and post-intervention phases. First, all students were observed at least three times to establish a baseline measurement of student behavior. During the intervention phase, students met with an assigned interventionist for a session that lasted 20-30 minutes. Students would practice using the SOF routine with a variety of different emotional states. After the five sessions, data collection of disruptive behavior was continued for the remainder of the school year.

The results of this study are consistent with previous research that Soles of The Feet is effective in increasing student engagement to encourage increased academic achievement. The present data demonstrate four different instances of increased engagement. All participants and their average percentages of academically engaged behavior increased throughout the

baseline and post-intervention phases. Both teachers and students shared that SOF was a feasible intervention that was enjoyable and effective at the moment. Limitations to this study were that three of these students had one on one support during the observation period in their general education classroom, and true observation of these students may not have been fully accurate. Data collection was also disrupted due to attendance disruptions and absences that altered the observation schedule and caused gaps of longer periods (Felver et al., 2017). Overall, this study shows promising data of providing students with simple strategies that encourage mindfulness to decrease disruptive behavior that can affect academic engagement.

Mindfulness-Based Interventions (MBIs) have been studied to be successful support to students with Intellectual Disabilities and Autism Spectrum Disorder (ASD) to manage behaviors that may interfere with academics. A study by Kim and Kwon (2018) aimed to assess the effect that an MBI has on an individual with a mild intellectual disability (ID). Math assessments were provided to participants pre- and post-intervention to determine if including time to meditate would increase assessment scores and decrease task-avoidance behavior. The study had three participants between the ages of 10-12, all with a mild ID diagnosis from a psychiatrist. Before the invention, expressive art time was provided in these participants' schedules. Art tools such as coloring supplies, play dough, and supplies to make a simple collage were provided for these participants to utilize during their mindfulness sessions, as well as calming Korean music. During the intervention phase, these same materials were provided, but instruction by a therapist in the areas of what mindfulness is and how to pay attention to one's feelings and body to begin a meditative state. Each of the three participants was involved in the intervention phase for a total of 25 sessions, with two 45-minute sessions occurring each week. Upon completion of the

intervention study, a maintenance phase was continued to determine if this intervention did, in fact, increase scores on a math assessment (Kim & Kwon, 2018).

During the intervention and maintenance phase, data shows that all three participants had a decrease in task avoidance behavior. Participants A and C averaged over 60% of task avoidance behaviors in the baseline phase and Participant B averaged 53% of task avoidance behavior. When measured during the Maintenance phase, all participants averaged below 14% of task avoidance behavior within the time provided. Accuracy percentages of the arithmetic assessment provided also increased throughout the study, with all three participants scoring at or above an average score of 86%, compared to an average of at or below 80% before the study. Not only did their accuracy in understanding academic content increase, but also the time it took to complete these assessments. When researchers asked the mothers of the three participants involved, all three shared that, in their opinion, their child's daily behaviors showed improvement while participating in this intervention. A limitation of this study was that this study did not specifically focus on different programming that children may be part of and instead focused on academic settings. Further research could be done that focuses on different settings that participants engage in, such as after-school activities, to generalize that MBIs work outside of academic environments (Kim & Kwon, 2018).

This study by researchers Kim and Kwon (2018) provides evidence that MBIs could be applied to a range of maladaptive behavior and poor academic performance in students with a learning disability in efforts to decrease task avoidance and provide strategies for students to utilize before completing academic tasks to feel capable and calm.

Nidich et al. (2011) wondered if at-risk middle school students practicing a Transcendental Meditation program would increase standardized test performance. An urban, public middle school in California had their entire 6th and 7th grades incorporate a Transcendental Meditation program as part of their beginning 12 minutes and ending 12 minutes of their school day. Transcendental Meditation or TM consists of a seven-step process where students are provided with information about TM and then coached throughout learning how to slow breathing, sit in a comfortable position and determine a mantra to repeat to themselves (Nidich et al., 2011).

Out of an experimental group of 189 students, 125 practiced TM during their school day, while 64 did not for the three months before taking the California Standards Test (CST) in reading and math. The non-meditating students were in the 8th grade and did not receive grade-wide instruction on TM. All the students involved in this study scored below the proficient level of the CSTs before completing this intervention. Results of this study indicated that significant improvement in both English and math scores was made by the students participating in TM. In math, 40.7% of students who meditated increased their score by at least one performance level, while only 25% of the non-meditating students increased their score by at least one performance level. In English, 36.8% of the students who meditated increased their score by at least one performance level, while only 17.2% of the non-meditating students increased their score by at least one performance level (Nidich et al., 2011).

A limitation of this study was the fact that the control and experimental group were students in different grade levels. Since the entire 6th and 7th grade at this middle school were provided with instruction and the opportunity to participate in TM, a control condition was not

possible with same-aged peers because of exposure. In future studies, having the control group and experimental group in the same grade levels with a randomized experimental design may produce results that could not have been potentially skewed.

Bakosh et al. (2016) completed a study like the Kim and Kwon (2018) study that questioned if the use of an MBI would increase report card grades in a variety of academic content areas. A Mindful Based Social Emotional Learning (MBSEL) program was incorporated into the daily schedule of four third grade classrooms from two different schools in a suburb of Chicago, IL. Third grade was chosen to be the age group of study because there has been previous research that has correlated third-grade reading levels with high school graduation rates. Ninety-three students were part of the experimental group, while the control group consisted of ninety-eight students. Within those groups, 19% of the experimental group students had an IEP, compared to 7% of the control group students. As mentioned previously, the MBSEL program was part of the experimental group's daily schedule, where they listened to a pre-recorded audio program that guided them through practicing awareness and meaningful movements. The Mind Based Stress Reduction (MBSR) audio was used in a previous study created by researchers from the University of Massachusetts Medical School. During each session, students in the experimental group classrooms were asked to participate, which included moving around the classroom and journaling the last two minutes of the ten-minute session. This intervention continued over eight weeks or one school semester (Bakosh et al., 2016).

Data collection occurred after the experimental period to determine if student achievement was attained based on grades in the areas of reading, writing, science, social

studies, and mathematics. Students in the intervention group that practiced daily meditation made higher academic achievement rates in all areas except mathematics. Not only did achievement rates increase, but also behaviors within the classroom decreased by over 50%. This study's data can provide educators with evidence that a simple ten-minute intervention may help improve academic achievement and classroom culture providing an opportunity to deliver effective instructional content (Bakosh et al., 2016).

Mindfulness and Social/Emotional Regulation

Behaviors related to appropriate social and emotional functioning include the ability to identify and understand one's feelings, the ability to read and comprehend others' feelings and emotional states, and the ability to establish and maintain meaningful relationships with others (U.S. Department of Education 2002, as cited in Rush et al., 2017). Many previous studies have studied if mindfulness intervention programs can benefit children with their ability to demonstrate appropriate coping skills and regulation when feeling a heightened emotion that is positive or negative. The population study has typically been general education students who have self-reported results. Rush et al. (2017) wanted to evaluate the effectiveness of a mindfulness curriculum and on-task, off-task behaviors in a special education support classroom for students who qualified under the Emotional Disturbance (ED) category. 31 Participants (4 girls and 27 boys) were from four suburban elementary and middle schools and ranged in age from 8-to 13. Within the schools chosen, three classrooms were part of the treatment group, and three classrooms were part of the control group. Both the treatment and control group would participate in a 20–30-minute social skills group with the school psychologist once a week for 12 weeks. The treatment group was introduced to a mindfulness

curriculum called HeartSmarts that teaches students about the heart-mind-body connection in emotional regulation. After a few weeks of exposure to HeartSmarts, emWave Biofeedback was introduced that provided real-time physiological feedback on heart rate and breathing rates to students using a pulse sensor attached to either their ear or finger. For the rest of the intervention time, HeartSmarts and the BioFeedback tool were utilized and practiced together to learn that emotional regulation can have a physical response. Students were then individually observed while in the classroom at the same time and during the instructional period each morning.

Results supported their hypothesis that utilizing an intervention that provided mindfulness instruction and physiological feedback can decrease off-task behavior and increase on-task behavior of students with ED. A limitation of this study is the small sample size and that only four female students participated. While these results of a decrease in off-task behavior were statistically significant, a study with a larger sample size may yield differing results that are also more representative of the Emotional Disturbance population (Rush et al., 2017).

More recently, in the summer of 2021, Sciotto et al. conducted a study that investigated the effects of an 8-week mindfulness program for young children. Eight classrooms at an elementary school in Pennsylvania with 136 students in kindergarten through second grade were used as participants for this study. The framework of this mindfulness instruction was adapted from the established MindUp and Mindful Schools curriculums. Twice a week, a certified mindfulness instructor would provide a 20-minute session in the classroom for a total of 16 sessions. Data was measured by all eight classroom teachers who filled out a Strengths and Difficulties Questionnaire (SDQ) for their students before and after the intervention was

completed. The mindfulness instructor also completed a five-point engagement scale on the classroom teacher and students at the end of each session.

Based on the results of all the SDQs afterward, ratings of students' prosocial behavior increased, and externalizing behaviors decreased. On the contrary, ratings of internalizing behavior did not have a significant change when comparing pre- and post-intervention scores. When looking at grade level specifics, there was the most positive change in a decrease of externalizing behaviors in first grade. Results also showed that classrooms that had a higher rating of student and teacher engagement could be generally associated with higher prosocial behaviors and lower externalizing behaviors. It is important to note that a limitation of this study is the fact that ratings of engagement were provided by a single source who was a mindfulness instructor, which could result in a potential rater bias (Sciutto et al., 2021).

On the other side of the world, in the Mazandaran Province of Iran, a study was completed to determine if Mindful Based Cognitive Therapy would be an effective strategy to decrease aggression and anxiety in specifically female students in the 11th grade (Keshi et al., 2019). The participants in this study were made up of 30 female 11th-grade students who scored highly on both the Beck Anxiety Inventory and Buss-Perry Aggression questionnaire. Out of these 30 females, 15 were placed through simple random sampling in a control group, while the other 15 were placed in the intervention group. Throughout the period, the intervention group completed the recommended eight sessions. Each session lasted two hours long. According to research, "Mindful Based Cognitive Therapy (MBCT) is described as Mindfulness-based Cognitive Therapy is a short-term (8) sessional and structured intervention whose purpose is not to change the content of thoughts as traditional cognitive therapy but to create

an attitude or relationship with thoughts, feelings, and emotions” (Hanasabzadeh et al., 2011, as cited in Keshi et al., 2019, p. 18).

Results from this study were similar to previous studies in that participating in MBCT had a moderate decrease in anxiety. The mean of anxiety in the pre-test was 33.47 in the experimental group, and when the post-test was given, the mean was 15.60. In regard to aggression, MBCT can significantly reduce aggressive behaviors. The mean scores of aggressions in the pre and post-tests of the experimental group were 63.47 and 25.20. By providing these women with tools through MBCT, emotions can be managed when skills are lacking in the areas of verbal communication during conflict.

Wilson and Dixon (2010) investigated if approaching classroom management from a mindfulness framework would improve whole-classroom attention to instruction. In a classroom in Southern Illinois full of eight-year-olds, twelve students in the second and third grades were the participants of this study. This classroom was picked specifically for this study because of concerns from the teacher about her students’ behavior and attentiveness. Researchers determined that paying attention meant, “The child is engaged in what was occurring at that particular moment in the classroom. This included looking at or in the direction of the teacher or student who was talking, following instructions, looking (and/or completing) a worksheet, and engaging in classroom activities” (Wilson & Dixon, 2010, p. 138). A baseline observation over two weeks was conducted on the class that consisted of five observation sessions lasting 30 minutes each. The intervention phase was five 15-minute sessions where mindfulness exercises were completed led by a researcher, followed by a 30-minute observation. Afterward, a new baseline observation period was completed with once-a-

week sessions for 30 minutes each. When discussing the mindfulness exercises, a researcher would teach the class a game that included practicing whole body listening, focusing on their breath, and mindful eating, which focused on learning how to nourish the body and savoring food.

Results from this study were promising to show that empowering mindfulness in students could increase the attentiveness of a classroom and provide whole-body listening strategies. During baseline, attending averaged about 68% across the experimental class. During the intervention phase, attending averaged 87%, with a median percentage of 86% of attentiveness across all the sessions. Findings afterward, the intervention phase found that attending decreased to an average of 73% with the removal of a 15-minute mindfulness exercise. When looking at limitations, it is important to note that this data was based on a mindfulness intervention that included a variety of exercises that focused on different aspects of mindfulness (mindful eating, breathing techniques, whole-body listening, and awareness). In the future, it would be beneficial to complete research that focuses on a single mindfulness intervention exercise to determine if the same or increased attentiveness throughout a classroom would be found (Wilson & Dixon, 2010).

Research has suggested that the disability category of Emotional Behavioral Disorders (EBD) can benefit from mindfulness practices to encourage regulation strategies and provide social skills instruction. In school, students with EBD may engage in behavior that could lead to aggression that can lead to school referrals and suspensions. This can affect their attitudes towards education and the importance of being involved in their classrooms.

Mindfulness-Based Stress Reduction (MBSR) practices can have positive effects on many different individuals who have a variety of different needs but can provide EBD students with coping mechanisms and decrease times of dysregulation (Solar, 2013). An acronym called PEACE teaches adolescent students how to appropriately deal with situations that are perceived as difficult. As the acronym suggests, there are five different steps used in PEACE. First, students need to Pause, stop what they are doing at the moment, and take a few deep breaths. Next, students should Exhale and make an audible sound when exhaling. The third step is to Acknowledge or accept the situation that is happening and any feelings that may accompany it. It is important to note that Acknowledge cannot be completed until students have mastered Exhale, where they can understand and demonstrate the importance of taking deep breaths. Fourth, students will Choose how to react to the situation itself or the emotions that happened as well. This step can take minutes, days, or weeks to complete this step. Sometimes, students will need to make a more immediate decision rather than waiting. Lastly, the individual should Engage, where students can process with a trusted person and rejoin in activities and peer interactions (Solar, 2013). By providing students with a simple acronym and modeling how to utilize this mindfulness strategy, situations can be processed and resolved faster, which could result in more engagement within the learning environment not only academically but also socially.

Ridderinkhof et al. (2018) completed a study that determined if a mindfulness program named MYMind was beneficial to family dynamics in communication and relationships between children with Autism Spectrum Disorder (ASD) and their parents. MYMind is a program that provides a curriculum to both parents and children and is conducted in separate sessions that

are parallel to each other. The child programming would teach mindfulness strategies such as breathing techniques, body scanning, yoga strategies, and journaling at home. Parents were provided with learning how to deal with parental stressors, awareness of reactions to their child's behavior, and how to understand their parenting boundaries in better efforts to understand and accept the Autism in their child. This study was completed over a nine-week period where 45 children with ASD ages 8-19 were participants. Out of these participants, 17 children took the medication as part of their daily routine.

After the nine weeks, a follow-up was completed two weeks after the intervention period of introducing MYMind, as well as one year later after the intervention was completed. Results showed that social communication problems, which can be one of the biggest challenges for children with ASD decreased across all age groups. During the one-year follow-up, this decrease in social communication challenges continued to show decreasing trends. This study also looked at the emotional and behavioral functioning in this group of children, more specifically, attentiveness, aggression, and automatic impulse control. During the two-month check-in, students mentioned that they felt a difference within themselves, feeling upset less and having more control over their emotions. The study also mentioned that participants and parents felt that communication and relationships between the parent and child were stronger. During times of behavior that resulted in a stressful situation, it was noted that a sense of calmness was felt, and both parents and children were able to cope and acknowledge big, difficult behaviors and feelings. This study continued to reveal that mindfulness training in preventative coping strategies is beneficial to not only children with Autism but also to their parental relationships (Ridderinkhof et al., 2018).

Movement and Mindfulness

More recently than ever, a push for more school-wide interventions that promote personal well-being and socio-emotional health incorporated in the school day has been discussed throughout the educational and child-development fields. Gorbett et al. (2021), completed a comparison study on twenty-nine early childhood students with Autism (ASD) at an early childhood program and if they benefit from therapeutic recreation intervention (TR) programs that encouraged movement within their school day. This study looked at two different TR programs. The first program was a yoga-based program named Kids Yoga Rocks (KYR). It focuses on teaching yoga positions and postures and inviting them to lead and join in on poses and routines. The next TR program was a drumming-based program called Drumtastic (DR). This program involved wooden drumsticks that were played on large exercise balls as music played aloud. The study sought to answer if including TR programming would improve the mood and fun experiences of these children. It also sought to answer if more changes in emotional behavior and social relationships would happen with children involved in TR programming than in typical programming (Gorbett et al., 2021).

The 29 students were split into three different groups during the five-week intervention period. The Control group for this study was the typical programming group that engaged in 30 minutes of free play recess and thirty minutes of physical education. The KYR group participated in one hour of yoga instead of typical daily programming. Throughout the intervention period, 31 poses were taught as well as breathing techniques and chants. The DR group participated in the Drumtastic curriculum that lasted one hour as well, which also

replaced typical daily programming. Each session consisted of drumming to songs, playing social games, participating in drumming choreography, and ending with a chant (Gorbett et al., 2021).

Results from this comparison study showed that the DR and KYR groups experience significantly higher levels of positive behaviors and personal relationships than the control group. When looking at the question concerning the mood and fun levels of the participants, it was found that levels were increased in both TR programs. When looking at the second question regarding social and emotional behaviors and relationships, there was no significant improvement in the control and KYR groups. When looking at the DR group, personal relationship skills such as empathy and self-regulation did show significantly higher improvement. This result was like previous studies on the effects drumming has on students with ASD. The Drumtastic curriculum promotes synchronization of actions with peers and understanding of partners' intentions and emotions.

A limitation of this comparative study is that the sample size was too small in terms of the number of participants and three different comparisons groups. If a larger population had been included in this study, a more analytical approach could have been utilized to determine statistical significance between the three different programs and determine further benefits from different therapeutic recreation programs.

In 2020, Stapp and Lambert conducted a study that sought to determine the impact that yoga interventions have on fifth-grade students and their perceived anxiety and stress levels. A school in Mississippi had 58 fifth-grade students from three different classrooms participate in this study. An anonymous pre- and post-intervention questionnaire was provided to students

that consisted of 32 questions regarding academic pressure, motivation, behaviors, and student demographics. Students were to rate themselves on a four-point scale.

During the intervention phase, a teacher conducted a five-minute mindfulness yoga-based intervention at the beginning of each class period for the three classes that participated. Students would first find a comfortable place for them to practice breathing, which would then be led into basic yoga poses. The app, Headspace was also utilized throughout the five minutes to encourage mindful meditation. At the end of the study, the researcher interviewed the classroom teacher on their perceptions of the yoga intervention and perspectives on their students' stress and anxiety levels (Stapp & Lambert, 2020).

Results from this study support previous studies that claim that mindfulness-based yoga interventions, included in classroom routines, can improve perceived stress and anxiety levels. When looking at each of the fifth-grade classes, the class that benefitted the most from practicing yoga was the remedial class, where students' performance was below grade level. Males reported the highest changes in their perceived anxiety and benefitted the most from their increased self-control levels also. Regarding teacher perceptions of the yoga intervention, it was reported that there was a definite decrease in anxiety and stress levels in their students, especially on test days during the intervention phase. A limitation of this study is that it happened within the classroom, where distractors such as unexpected schedule changes, interruptions from administration, and school-wide events such as pep rallies might have occurred. While this may be a limitation, the data from Stapp and Lambert (2020) shows that including a simple, five-minute yoga intervention in the classroom is possible and beneficial in the real world of education and the uncertainties within a school environment.

Koenig et al. (2012) conducted a case study that used the Get Ready to Learn yoga program. There were 48 participants in this study, and each participant had to meet three different criteria areas of having an Autism diagnosis, currently being in elementary school, and having no other known medical conditions. The study took place over sixteen weeks, and yoga instruction was provided daily within the classroom during their morning routine. Something interesting about this study is the fact that teachers were asked to participate in the yoga intervention or sit quietly in the back of the classroom. By seeing adults that were respected and in charge of the classroom, I would be curious to see if that had a positive effect on students' participation. Results of this study were measured using the Aberrant Behavior Checklist (ABC), which looked at off-task behavior and teacher redirection over the sixteen weeks. All classrooms had an improved classroom management environment when the intervention period was completed. Student behavior was also noted as "Less irritable behavior and changes in lethargy and social withdrawal and hyperactivity and non-compliance that approached significance" (Koenig et al., 2012, p. 543). With an environment that is calming and encourages engagement in instruction, irritable traits were decreased in these students with ASD, which can encourage emotional regulation within the classroom.

In 2011, Rosenblatt et al., completed a study in an environment outside of the classroom. It took place at a tertiary care center within a hospital, where participants would come and participate in group activities twice a week that included yoga. All participants in this study were children who ranged in severity levels of Autism Spectrum Disorder (ASD). The study started with 24 participants aged 3-16, but only ten were able to complete all eight weeks of sessions. During these sessions, children were invited to learn 18 different yoga poses. Sensory

items were also used to encourage engagement, such as pinwheels, feathers, and bubbles. The Behavioral Assessment System for Children Second Edition (BASC-2) was used to rate and assess different behaviors in children with Autism. This is a very familiar tool used by many evaluators in the special education field. Another scale used to measure results was the ABC scale which was also used in the Koenig et al. (2012) study. Behaviors that were specifically looked through the ABC scale were irritability, lethargy, inappropriate speech, and hyperactivity.

Results from this study showed that children in the latency stage or approximate ages of 5-12 benefitted most from yoga sessions. Atypicality and Depression scales within the BASC were less elevated when measured during the post-intervention phase. It is important to note that 3 of the participants did not benefit and had a change in scores from the pre- and post-intervention phase, and there was a limitation that yoga practiced outside of this setting was not measured. With that being said, a majority of the participants did have an improvement in their BASC-2 and ABC scores, suggesting similarity to other studies that incorporated yoga as a mindfulness practice.

Milligan et al. (2015) used a different type of movement of Mixed Martial Arts (MMA) to determine if students with a learning disability (LD) behavior would improve. The age range of the participant group was 29 children ages 12-17 who all had a learning disability. Milligan et al. (2015) hypothesized that mindfulness interventions of MMA would decrease anxiety and negative self-talk, in turn, increase attention and behavior regulation that would encourage working through academic frustrations. The study included 20 sessions that each lasted one and a half hours. Once a week, participants would complete an MMA session that encouraged

mindful movement and meditation. Common things observed during the sessions were sitting/walking meditations, guided breathing, and proper martial arts training. A CD was also provided to participants to listen to at home. Sessions were broken up into two different session types. One group of participants would complete basic, introductory sessions, while the other group of participants would complete a more advanced session due to previous MMA experience.

At the end of the study, parents of the participants were interviewed, and parents reported their children had improvement in peer relationships and emotional regulation. 54% of participants in the MMA intermediate group reported that they feel more equipped to handle emotional dysregulation, have confidence in their relationships, and are more present during situations. In the beginner MMA group, 92% of the participants reported increased academic achievement, improved relationships, increased emotional regulation, and improved fitness levels. A commonality between both parent and participant reports was the levels of calmness that were experienced and observed (Milligan et al., 2015).

A limitation that is important to note from this study is the fact that this MMA mindfulness program was administered outside of the school day, and participants were asked to pay for this program. That means that transportation and financial costs could have been a hindering factor for participants in this study. It would not be easy for this to be administered in the school setting merely because each session required more time than schools could provide, and a trainer in a specific skill area was required. Overall, this was a successful study to show that movement can increase not only confidence in academics but also with peers and emotional regulation (Milligan et al., 2015).

Fedewa et al. (2018) completed a study in to see if the type of moment breaks made a difference in academic achievement and physical activity levels. The two different types of movement breaks were aerobic-only breaks that did not include academic content and academic-based breaks that included movement. Four hundred and sixty participants in this study were elementary-aged and currently in grades 3-5 throughout four different elementary schools. Two elementary schools were randomly selected to utilize academic-based movement breaks that included the online platform of GoNoodle. These schools had full access to the platform and could choose to do any movement break that included academic content. The other two elementary schools implemented the aerobic-only movement breaks that also utilized GoNoodle. This group of schools did not have full access to the platform and instead had a chosen set of movement activities that were provided that had no relation to academic content. To gather pre-intervention data, Fedewa et al. (2018) used fall assessment data during standardized testing in their district in both reading and math. The same assessments were utilized as post-intervention data when students took these tests the following spring. To determine activity level changes, pedometers were given to students to determine movement time and steps.

Results from this study showed that students participating in the aerobic-only, non-academic activities made greater gains academically in the area of reading and increased physical activity levels compared to the academic-based movement break schools. It is important to note that neither of the groups made any significant differences in the academic area of math. This study suggested that the aerobic activities were more effective because students did not have to focus on any academic activities that were incorporated into the

movement breaks and could focus on moving their bodies and practicing breathing techniques (Fedewa et al., 2018).

Mindfulness for Teachers

Exploring the benefits of mindfulness in the world of education does not solely relate to just students. The profession of teaching can be very stressful with the countless demands of education, academic performance pressures, and the variety of needs of students. DiCarlo et al. (2020) states that “Elevated teacher stress not only affects the teacher’s well-being and likelihood of burnout, but also the classroom climate of young children” (p. 485). A study was conducted to assess whether mindfulness practices can increase positivity in a classroom setting and decrease the perceived stress in early childhood classroom teachers. Participants in this study were three early childhood teachers who all had over seven years of teaching experience. Each of the participants was observed in their classrooms for 10 minutes, and positive and negative behaviors were noted to create positive and negative climate scores for each teaching environment. During the intervention phase of two weeks, each participant was given protocols that included a variety of mindfulness practices such as guided meditation, three-minute breathing spaces, yoga, and mediation videos to view before school and before bedtime. Some protocols were also included within the school day, such as yoga and GoNoodle mindfulness clips with their students.

Results proved that daily mindfulness practices increased the positive climate and decreased the negative climate of all three teachers’ classrooms. When looking at perceived stress levels, two of the three teachers’ perceived stress decreased after completing the mindfulness interventions. The third teacher's perceived stress did not decrease, and it could

be because of a variety of other factors. It is noted within the study that this teacher received news that there is a possibility she would be moving classrooms and positions the following school year. That could have increased her perceived stress because of the unknown future of her teaching position. A limitation of this study was that there were only three teacher participants who worked at the same school. It would be interesting to extend research outside of this specific school and see what the results might be if this was completed district or state-wide. Also, the mindfulness intervention only lasted two weeks. Current literature suggests that a mindfulness intervention should last at least six weeks for behavior changes to truly occur. This study provides evidence that mindfulness interventions in teachers can affect classroom climate and individual perceived stress (DiCarlo et al., 2020).

Roeser et al. (2013) wondered if an eight-week Mindfulness Training (MT) program eight would reduce teacher burnout and both physiologically and psychologically stress indicators. A total of 58 teachers from Canada and 55 from the United States participated in the study and were separated into either a control or experimental group. To collect baseline data for the study, all teachers filled out surveys that assessed stress, well-being levels, and burnout. Blood pressure and heart rate were also assessed pre- and post-intervention to collect additional data. At the end of the eight-week program, an evaluation survey was administered to the experimental group, and mindfulness journals were collected from participants. When given a follow-up survey, teachers shared that they felt more in tune with their emotions and body after completing the eight-week program in its entirety. When specifically looking at the Canadian teachers, many of them felt like their attention was more focused on their job, and they felt enjoyment when teaching because their stress level decreased. The evaluation survey

results suggest that a majority of the 87% of teachers who completed the MT program would recommend it to their colleagues.

A limitation of this study was that most of the data were completed based on self-reporting. In the future, if this study was to be replicated, assessment tools such as scales that mention anxiety or other stressful behaviors could be used for more reliable, standardized scores. Overall, this program shows that the incorporation of mindfulness into professional development programs for teachers could be very beneficial to teachers' longevity of their careers.

In 2014, Bernay conducted a study with participants who were enrolled at the University of Auckland in New Zealand. The five participants who decided to participate were aspiring primary teachers in their education program. The participants practiced mindfulness in a variety of ways, such as mindful eating, body scanning, breath awareness, and both walking and sitting meditation. These exercises were incorporated into lectures and were practiced each year of college for three years. When these same participants graduated and were in their first year of teaching, the study requested each participant to write in a mindfulness journal each night after spending a day teaching. When interviews were conducted about how mindfulness might've improved their personal and professional well-being, many of the participants shared that they felt better equipped and aware of their students' needs as well as their own emotions during stressful situations. It was shared by all of the participants that learning these mindfulness strategies helped them feel more prepared for a stressful profession and remain passionate about the education field. This study suggests that mindfulness strategies should be incorporated into teacher preparation programs to better prepare aspiring teachers for

stressors that occur during the school day and year. This can help teachers learn how to be more proactive in their classroom management style versus reactive, which can lead to increased behaviors and teacher burnout (Bernay, 2014).

CHAPTER III: DISCUSSION AND SUMMARY

Summary of Literature

A variety of mindfulness interventions can positively impact student outcomes in academic performance, emotional regulation, and perceived stress levels (Bakosh et al., 2015; Felver et al., 2017; Kim & Kwon, 2018). These results should be considered by any individual working with students who are both elementary and secondary ages that have needs in the areas of learning disabilities, emotional/behavioral disorders, and additional mental health needs. An increase of time within the school day and resources of different interventions to utilize should be incorporated into the classroom to promote emotional well-being and healthy habits that encourage mindfulness (Gorbett et al., 2021; Reid & Miller, 2009; Rosenblatt et al., 2011). Several different studies on mindfulness interventions highlight the positive effects they can have on not only children but also teachers and adults.

(Bakosh et al., 2016; Doss & Bloom, 2018; Nidich et al., 2011, Stapp & Lambert, 2020) researched how mindfulness incorporated into academic courses can improve anxiety and perfectionist tendencies. Results reflected those students were able to understand the benefit of mindfulness and took time to breathe, be present, and re-frame their thinking. In other parts of the world, high school students in Turkey completed a six-week mindfulness program that increased their self-efficacy and decreased stressors, which is incredibly important since adolescents are vulnerable to high levels of stress (Ozcan & Isildar 2021).

A handful of studies collected data that sought to correlate the positive effects of mindfulness interventions and academic achievement and engagement. Felver et al. (2017), determined that students with identified disabilities are more likely to be more susceptible to

academic disengagement. By providing tools such as SOF, a simple redirection of attention to a neutral stimulus of your body such as feet, can lead to a decrease in dysregulation and aggressive behaviors. Mindfulness-Based Interventions (MBIs) can decrease task avoidance and increase test performance. A study by Kim and Kwon (2018) found that providing interventions in the classroom can lead to task avoidance behavior happening less than 14% of the time, and the accuracy of academic content increased.

Children who exhibit behaviors related to social and emotional regulation such as aggression, ability to understand others' feeling and their own feelings, and establish relationships with others can provide children with the ability to demonstrate appropriate coping skills (Rush et al., 2017; Solar, 2013). Studies found that teaching preschool students about the heart-mind-body connection can increase on-task behavior and teach students to understand when their body is beginning to feel dysregulated (Jackman et al., 2019; Rush et al., 2017; Sciotto et al., 2021). Wilson and Dixon (2010), found that approaching classroom management from a mindfulness-based approach can lead to a classroom's attentiveness to instruction happening at a percentage of 86%, compared to 68% before a mindfulness approach. Similar studies found that classrooms and teachers who explore mindfulness as it relates to senses and taking the time to learn about how one's personal body and mind reacts to their environments can decrease aggression and increase self-esteem (Keshi et al., 2019; Reid & Miller 2009).

In schools, most of the day involves sitting still and paying attention to instruction occurring at the front of the classroom. Implementing mindfulness programs that engage students through movement, martial arts, and yoga increases the moods of students, academic

engagement, and peer relationships (Fedewa et al., 2018; Koenig et al., 2012; Milligan et al., 2015; Ridderinkhof et al., 2020; Rosenblatt et al., 2011). Gorbett et al. (2021) found that implementing interventions that involved drumming and yoga can increase empathy, self-regulation, and peer cooperation in students with Autism Spectrum Disorder (ASD). A study with 48 participants with ASD conducted a 16-week intervention that included daily yoga instruction that encouraged the teacher to participate in the exercises as well. The results of that study were similar to previous studies that showed that irritable traits that could lead to aggression were decreased as well as social withdrawal from peers.

When educators are provided with opportunities to practice mindfulness, results are very similar to those that study the effects of mindfulness on children and adolescents. When teachers are taught mindfulness interventions during their teacher preparation programming and continue to practice mindfulness in their own personal lives regularly, strong classroom communities are built with students their first few years of teaching which leads to less teacher burnout (Bernay, 2014; DiCarlo et al., 2020; Roeser et al., 2013).

Limitations of the Research

This body of research did have limitations, such as the fact that many of these studies had small sample sizes. The interventions were often completed on smaller groups of participants because of criteria that needed to be met or the environment in which the study was completed. Many of the studies listed sample size as a challenge to their research and results.

A second common limitation of this research is that the data collected was based on self-reported surveys, interviews, and scales. What this means is that personal opinions and

subjectiveness to an individual could lead to discrepancies collected in the data. Also, pre- and post-intervention surveys and observations were often done by one researcher, which could also lead to bias as there was only one viewpoint of the observations occurring.

As mentioned above, learning a new habit, it can take up to 12 weeks of repeated practice. Some of the studies included in this research only had a few weeks to complete their intervention phase. Results could have varied with other studies that lasted at least a school year, if not more.

Despite these limitations, it should be noted that the need for mindfulness and social/emotional interventions in the school setting is a newer research topic. By continuing to research and understand the importance of mindfulness, further research can be conducted that addresses some of these limitations of smaller sample sizes, the longevity of intervention phases, and more standardized data collection.

Implications for Future Research

Future research should continue to investigate how mindfulness interventions can be adapted to fit within the time allotted in the school day for students aged pre-kindergarten to grade 12. There is a large pressure to utilize every minute in the classroom for academic learning and instruction. How can mindfulness interventions fit into the school day quickly and easily but also be effective? Many of these studies were completed either in general education classrooms or environments that could be center-based classrooms for students with specific disabilities. Future research should be conducted on student populations that may access resource rooms and how special education teachers can incorporate these interventions within their social skills curriculums.

Some intervention groups within the studies only had a sample size of 3-4 students, which may not have been an accurate representation of the student population and could have made the data biased towards one certain group. This could have implied that interventions were effective when in reality, they might not be with a larger population that is more diverse.

Lastly, many of these interventions led to positive outcomes for students, but there seemed to be a trend of not many follow-up data collections. Once students were done with the intervention phase, they could've lost interest in the mindfulness practice and no longer utilized it. Further research should be done after these studies are completed to determine the longevity of positive effects it can have on children and teachers.

Implications for Professional Application

The reviewed research demonstrated that interventions that included mindfulness are effective in increasing academic achievement, social relationships, and emotional regulation and decreasing teacher burnout. As a special education teacher who works with a variety of students with different disability areas, having this information can be very helpful to meet my students' needs. I am able to take this information and apply it to my teaching practices in classroom management and instruction. I can also share this information when collaborating with general education teachers to also utilize it in their classrooms to hopefully lead to a school-wide intervention that is focused on mindfulness and well-being.

When mindfulness interventions are implemented consistently and led by a positive role model such as a teacher, everybody in the classroom may benefit from its positive effects (Koenig et al., 2012). Children crave an environment where they feel loved, safe, and important, and the routine is predictable and consistent. By incorporating these interventions, the

classroom can remain calm, and strategies are provided for when students may begin to feel overwhelmed or dysregulated (Felver et al., 2017).

As a special education teacher, it is a goal of ours to provide differentiated instruction that can continue to close the achievement gap of academic and social skills when compared to their same-aged peers. By providing students with tools to feel more comfortable in the classroom, academic instruction can become a focus and goal, which can lead to an increase in academic engagement in their general education classrooms, as well as more time spent with their peers to form relationships (Bakosh et al., 2015). It is a hope that these strategies will preserve the relationships of my students with their peers and teachers when they might feel upset, which could lead to behaviors that are aggressive and unexpected. With mindfulness and self-awareness, children can be more in tune with their bodies and manage their emotions before times of strong emotions occur (Keshi et al., 2019).

Teacher dissatisfaction and leaving the classroom have increased, especially more recently (Roeser et al., 2013). Due to high demands to meet academic benchmarks and support students' high needs and behaviors, teachers are unable to continue to work in an environment that increases their stress levels to an unhealthy and unacceptable level. By providing tools for teachers to utilize and practice mindfulness in order to take care of themselves first, teachers can focus on what they love; teaching and creating meaningful relationships.

By understanding the importance of mindfulness, we as educators can become more empowered to provide our students with the best possible educational experience, led by a teacher that understands how mindfulness can have a positive impact on many different areas of life. This can also help teachers be proactive in their classroom management and empower

students to use mindfulness as a coping mechanism in hopes of helping our students be the best versions of themselves (DiCarlo et al., 2020).

Conclusion

While there is still research that can further explore the positive implications of mindfulness practices in the classroom, it is clear that mindfulness can reduce behaviors, increase attention, teach children about positive peer relationships, decrease perceived stress and increase their social awareness. In addition, mindfulness is also an effective strategy to combat teacher burnout.

More recently, school districts have started to understand the importance of supporting student and staff well-being and incorporating social skills instruction in the curriculum. Professional development sessions are beginning to focus on self-care, trauma awareness, and how we can provide life skills to children that are a variety of ages and have many different needs. If we continue to research the positive effects of mindfulness interventions and incorporate them into daily instruction, an increase in both academic and social success will become evident in classrooms of all ages.

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