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The Effects of a Mindfulness Intervention with Students in Special Day Class

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The Effects of a Mindfulness Intervention with Students in Special Day Class

Amber Julien

Thesis Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Arts in Education

California State University, Monterey Bay
May 2017

The Effects of a Mindfulness Intervention with Students in Special Day Class

Amber Julien

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Abstract

Negative behaviors impede the learning of one's self as well as others. They also decrease positive social interactions with peers and adults. Students who are in SDC often have higher occurrences of problematic internalizing and externalizing behaviors. Recent research regarding mindfulness and general education yields limited yet promising results in the enhancement of attending and self-regulating. The purpose of this study was to examine if direct mindfulness lessons with fifth-grade special day class (SDC) students decreases negative behaviors. Two fifth-grade students in a SDC participated in a six-week single subject A-B-C-B/C study to determine the effects of a mindfulness intervention to decrease negative behaviors. The hypothesis was rejected due to a lack of stable data and non-overlapping data above 50%. Therefore there was not a functional relationship between the mindfulness intervention and decreasing negative behaviors. Further research involving a longer study, more frequent lessons in mindfulness, and a larger population of students in SDC would need to take place to provide substantial support for the positive impacts of mindfulness for students in SDC.

Keywords: Mindfulness, Special Day Class, Internalizing and Externalizing behaviors, Negative behaviors, executive functioning

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The Effects of a Mindfulness Intervention with Students in Special Day Class

Literature Review

A continuing rise in mental health issues among children in America has encouraged

policy makers in education to begin including social and emotional learning constructs in

classroom curriculum (Biegel, Brown, Shapiro, & Schubert, 2009; Durlak, Weissberg,

Dymnicki, Taylor, & Schellinger, 2011; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor,

2010). As referenced in the Centers for Disease Control and Prevention, one in five children in

the U.S. have mental health issues severe enough to cause negative impacts in daily living (Perou

et al., 2013). The increased stressors of an ever-changing society and high academic

expectations in schools are causing more and more students to experience anxiety, depression,

and aggression (Biegel et al., 2009; Broderick & Metz, 2009; Schonert-Reichl & Lawlor, 2010).

Left untreated these behavioral and emotional issues may lead to dropout, addiction, and lower

adult economic stability (Robst & Weinberg, 2010). This is a problem because students who

face these issues often deal with increased stress levels and are more reactive. Mindfulness can

help individuals to deal with these issues by allowing them to change their relationship with their

thoughts and reactions by developing more self-awareness.

Mindfulness is a rapidly growing area of social, emotional, and behavior intervention that

is being piloted in primary and secondary schools to alleviate the increasing amount of

behavioral and emotional issues seen across schools nationwide. Several studies have been done

to examine the effectiveness of mindfulness in the classroom (Beauchemin, Hutchins, &

Patterson 2008; Biegel et al., 2009; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor,

2010). Although still in its infancy, emerging research provides encouraging evidence

demonstrating mindfulness in school environments can decrease inappropriate behaviors and increase students' ability to attend and self-regulate (Fernando, 2013).

The Importance of Appropriate Behavior

Students with learning disabilities (LD), defined as low academic functioning, are even more susceptible to behavioral and social emotional issues (Beauchemin et al., 2008). For example, a student who struggles in school often loses self-confidence which can increase defensiveness and reactivity. Based on the research of Robst and Weinberg (2010), students ages five to six who struggle with the ability to attend (i.e., sustained focus on a task) will have lower math and reading scores in the future. Also, students who habitually have emotional internalizing behavioral problems are less likely to graduate from high school and attend college (Robst & Weinberg, 2010). In other words, students who exhibit negative behaviors are less successful in school. Students who continually exhibit externalizing behaviors associated with impulsivity and over activity by third grade are at a greater risk for mental health issues, incarceration, and substance abuse as young adults (Robst & Weinberg, 2010). This means that if schools focus on early intervention for younger students, these students may be more successful adults. The research behind these statistics shows an urgent need for interventions to help school-age students deal with stress, impulse control, and emotional issues.

These inappropriate student behaviors (e.g., impulsivity and inattention) have negative effects on teachers as well. Teachers report that behavior management is the most challenging aspect of their job, and an area in which there is often little training (Reinke, Herman, & Stormont, 2013). Further, research shows that a lack of behavior management in a classroom setting leads to lower academic outcomes (Reinke et al., 2013). Inappropriate behaviors associated with low academic success include inattention, impulsivity, and defiance (Cappella,

Jackson, Bilal, Hamre, & Soulé, 2011). This can look like an excessively noisy classroom in which students are not on-task, and are often challenging the teacher. Behaviors that inhibit positive social outcomes are depression, anxiety, and aggression (Biegel et al., 2009; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010). Students who exhibited these behaviors may be withdrawn, angry, and have a lack of friends. Therefore, effective behavior interventions should be accessible and explicitly taught to educators. Students, educators, and parents can all benefit from implementing quality behavior interventions involving social and emotional learning on a school wide level.

Interventions in Social Emotional Learning

Theoretical and empirical literature shows that early intervention in social and emotional competence promotes optimism, reduces stress, increases resiliency, and decreases externalizing behaviors (Durlak et al., 2011; Schonert-Reichl & Lawlor, 2010). This means that social emotional learning (SEL) can increase students' happiness and decrease negative behaviors. In addition, these interventions or behaviors lead to greater academic success for students. Two major components of a SEL intervention are to give students tools for conflict resolution and to decrease problematic behaviors (Reinke et al., 2013). Pre-adolescents in the age range of nine to twelve years old are an optimal target for SEL interventions because of their growing abilities in self-awareness and empathy (Schonert-Reichl & Lawlor, 2010). Thus, SEL interventions should focus on students in grades 3-6.

Historically, schools have addressed mental health issues through special education services (Broderick & Metz, 2009). For students to have access to these services, they must first meet specific criteria. Most school districts in the U.S. use a three-tier response to intervention (RTI). Students must be in the third tier before assessments take place to see if the student

qualifies for services (IDEA, 2004). For a student to get to tier three RTI, there must be

observations, data collection, and modifications made in the student's general education

classroom for both tier one and two interventions (IDEA, 2004). This process typically takes

months before a student reaches tier three. Once the criteria are met, the student can then be

assessed and given an intervention plan. Issues of concern with this method in treating mental

health issues include students not meeting the criteria, and therefore not receiving services;

reaction versus prevention (Broderick & Metz, 2009; Schonert-Reichl & Lawlor, 2010). Also,

fragmented services may not extend to all aspects of the school environment (Broderick & Metz,

2009; Schonert-Reichl & Lawlor, 2010). This can lead to services that are only applied to

specific settings and circumstances. This is not a good idea because a student needs to be able to

generalize behaviors and social strategies across multiple settings in multiple environments.

School wide SEL intervention programs are a new promising way to help students be successful

with social and behavioral modifications.

In a meta-analysis study involving 213 studies by Durlak and colleagues (2011) evidence

of SEL programs that are implemented school-wide with the use of: step-by-step instruction,

active forms of learning, focus time on skill development, and explicit learning goals have

produced positive effects for students in the areas of: social-emotional competencies, positive

attitudes, prosocial behavior, and increases in academic performance. This study also notes that

when current staff implement the SEL program during regular school hours, there are higher

rates of positive behavior outcomes (Durlak et al., 2001). These types of school-wide SEL

interventions include students in special and general education settings. This meta-analysis

shows that SEL instruction on a school-wide level can increase academic and positive behavior

outcomes.

One current method being used in schools to address behavior intervention is the implementation of a school-wide discipline system. School-wide Positive Behavior Interventions and Supports (SW-PBIS) are currently being used in over 14,000 schools in the United States (Reinke et al., 2013). The school in which this study was conducted is currently using SW-PBIS as an SEL program. The use of SW-PBIS creates consistency for students in all aspects of their school environment. Specifically, this system allows teachers, yard staff, aides, and administrators to maintain the same rules, expectations, and consequences during any school activity.

One of the fundamental interventions used in SW-PBIS is clear and positively stated rules that are systematically taught and reinforced throughout the school (Reinke et al., 2013). A second aspect of SW-PBIS involves teacher training in the use of positive praise. Research has shown that a teacher who engages with students in a ratio of four positive interactions to one negative interaction is more likely to experience positive, compliant behavior (Reinke et al., 2013). An example of this is a teacher acknowledging a student's on-task or good behavior, such as getting a writing utensil to begin work. Finally, teacher redirection for negative student behaviors needs to give the student access to what they should be doing instead of what not to do (Reinke et al., 2013). Though SW-PBIS is a commonly used SEL intervention, there is still not a lot of peer reviewed research that supports its positive effects on academics and behavior.

Although many advances have been made in implementing SEL programs into schools there is still a lack of scientific theory and research in the content and structure of these programs (Schonert-Reichl & Lawlor, 2010). Further, many of these SEL programs primarily focus on conflict resolution and reduction of problematic behaviors, yet do not give students access to managing their fight-flight reaction to conflicts and stressors (Schonert-Reichl & Lawlor, 2010).

This means that students are gaining valuable tools to manage social and emotional issues, but when intense situations arise they may lose access to these tools.

Recent discoveries at the intersection of mindfulness and neuroscience have shown that mindfulness allows individuals to have greater control over executive functioning (Schonert-Reichl et al., 2015). This means that when an individual is faced with an intense situation, the use of mindfulness allows them to better choose how to react. Executive functioning allows a person to organize, sequence, self-monitor, and regulate behaviors (Schonert-Reichl et al., 2015). The use of mindfulness as a SEL intervention, in conjunction with other SEL programs, like SW-PBIS may provide students access to better executive functioning.

Mindfulness. Mindfulness is a secular practice dedicated to becoming present and aware of internal and external experiences (Baer, 2003; Brown & Ryan, 2003; Langer & Moldoveanu, 2000). Mindfulness is learned through consistent practice and guided lessons focused on observing what is around us, as well as what occupies our mind, without judgment of being good or bad (Baer, 2003; Brown & Ryan, 2003). The first step in a guided mindful lesson is to become present by focusing on the motion of breath moving in and out of one's body, and when the mind begins to wonder, to regain focus on breath. Any thoughts or sensations that occur are observed or acknowledged but not judged or acted upon (Beauchemin et al., 2008). Mindfulness training allows a person to exist in a present state in which anxiety does not exist because anxiety is a product of anticipating future events (Borkovec, 2002). Being present also helps to eliminate depression because depression stems from past events (Borkovec, 2002). The overall effects of mindfulness help one to decrease stressors and manage one's thoughts and reactions.

The origins of mindfulness in western medicine started in the late 1970s and were introduced by researcher Kabat-Zinn (2003) as a mindfulness-based stress reduction (MBSR)

therapy for outpatients with chronic pain and stress related disorders (Baer, 2003). For example, if a person with chronic pain learned to observe their pain through mindfulness instead of react to it, their relationship to the pain may seem less severe. Several other therapies involving mindfulness with addiction, borderline personality disorder, self-management, anxiety, and acceptance have been widely introduced as a cognitive-behavioral treatment in the United States and abroad (Baer, 2003; Kabat-Zinn, 2003). This means, that physicians, psychiatrics, and therapists have used mindfulness to treat mental health issues in patients. Despite some methodological weaknesses, significant peer reviewed empirical research over the last thirty years in adult populations involving mindfulness interventions suggest reductions in pain, stress, anxiety, depression, and eating disorders (Baer, 2003; Biegel et al., 2009; Broderick & Metz, 2009; Brown & Ryan, 2003; Mindful Schools, 2015; Schonert-Reichl et al., 2015). It also has shown an increase in an individual's ability to attend and self-regulate when practiced consistently over time (Broderick & Metz, 2009; Schonert-Reichl et al., 2015; Tang et al., 2007). These significant and diverse findings show that mindfulness has positive effects on an array of mental health issues as well as executive functioning.

    Mindfulness in education. Based on the promising evidence of mindfulness in adult populations and the increasing rise in mental health issues with adolescents, policy makers and educators have begun to introduce mindfulness into school settings as a SEL intervention. There are currently multiple curricula available for educators to use for instruction (Broderick & Metz, 2009; Mindful Schools, 2015; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010). The lessons are typically designed to be short and frequent. Themes of the lessons pertain to mindful breathing, sensory experiences (e.g., smelling, sounds, body sensations, tastes), and cognitive experiences (e.g., kind thoughts, gratitude, empathy), which involve independent

practice and observation of these traits in others (Broderick & Metz, 2009; Mindful Schools, 2015; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010).

Most studies with mindfulness curricula have been done with general education preadolescent and adolescent students (Broderick & Metz, 2009; Mindful Schools, 2015; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010). The effects of mindfulness as a SEL intervention in a school setting show significant improvements in executive functioning, social and emotional competence, optimism, and attention (Broderick & Metz, 2009; Mindful Schools, 2015; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010). This means, that typical developing students in grades six through twelve have experienced improved mental health and focus due to the use of mindfulness as a SEL intervention in schools. Broderick and Metz (2009) also report a decrease in fatigue, distressing thoughts, and stress for participants.

Mindfulness interventions in a school setting have become so prevalent that Mindful Schools was established in 2007 to provide a simple to use, time efficient curriculum for educators. Mindful Schools provides on-line and in-person courses in relation to mindfulness and teaching mindfulness in education (Mindful Schools, 2015). These courses give educators the practice and tools they will need to teach the curriculum provided by Mindful Schools. In 2012, Mindful Schools conducted a twelve-week study involving the effects of mindfulness lessons on 937 elementary students in high risk schools (Mindful Schools, 2015). To determine the effects of the study, Mindful Schools (2015) used the Mindful Schools Curriculum (MSC), data collection. Participants in this study showed increases in attention, self-control, participation, and caring for others. Because of the limited yet promising results to date of this mindfulness curriculum in general education, it is hoped that students in special education will

also show positive effects as well as decreases in problematic behaviors due to mindfulness intervention.

      Mindfulness in Special Education. Students in special education who struggle with mental health disorders and/or learning disabilities often suffer from increased anxiety levels, stress, and reduced social skills (Beauchemin et al., 2008; Biegel et al., 2009). For example, a study by Beauchemin and colleagues (2008) showed that students who are eligible for special education services under the category of LD often have heightened levels of anxiety due to cognitive interference (e.g., reduced study skills, attention, competence, self-esteem). Mindfulness as a SEL program for this population could have significant benefits. In a pilot study using mindful meditation training with a pre-post no-control design involving thirty-four LD students ages thirteen to eighteen, data showed significant decreases in the areas of trait anxiety, internalizing behaviors, externalizing behaviors, and hyperactivity (Beauchemin et al., 2008).

      Research using MBSR treatment involving psychiatric outpatients ages fourteen to eighteen by Biegel and colleagues (2009) show significant reductions in depression, borderline personality disorder symptoms, stress, obsessive symptoms, interpersonal issues, and self-reported anxiety. Participants also reported improved self-esteem and sleep quality. Because of the limited size of the study and lack of significant gender diversity, more research is needed to generalize these findings (Biegel et al., 2009).

Gaps in the Literature

      The research involved in mindfulness as a SEL intervention in schools is limited and does not yet have statistical significance. To add to the growing empirical evidence, studies from multiple disciplines such as neuroscience, contemplative science, and sociology would greatly

strengthen the evidence of benefits of mindfulness as a SEL intervention for schools (Schonert-Reichl et al., 2015). In addition, further peer reviewed research indicating reductions of negative behaviors needs to take place. This is especially true for the research involving special education and mindfulness as a SEL intervention. Negative behaviors are a prevalent occurrence in special education classrooms and because of this, studies indicating a decrease in negative behaviors from mindfulness as an SEL intervention would be beneficial. As such, this study seeks to determine if participation in a mindfulness intervention decreases negative behaviors in a class of fifth-grade mild/ moderate students in a special day class (SDC).

Method

Research Question

Does direct instruction in mindfulness decrease negative behaviors in fifth-grade mild/ moderate Students in SDC?

Hypothesis

Based on research, students who receive training in and practice mindfulness will show an increase in positive behaviors which will in turn cause a decrease in negative behaviors (Beauchemin et al., 2008; Biegel et al., 2009; Fernando, 2013; Mindful Schools, 2015; Schonert-Reichl et al., 2010).

Research Design

This study was a multiple baseline A-B-C-B/C single case design. This design was chosen to fill a gap in the literature, which primarily uses a treatment control comparison (Biegel et al., 2009; Broderick & Metz, 2009; Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010). All participants entered instruction at the same time, as in prior research (Beauchemin et

al., 2008; Biegel et al., 2009; Fernando, 2013; Mindful Schools, 2015; Schonert-Reichl et al., 2010).

Independent variable. The independent variable in this study is the MSC. The MSC was used as an intervention method to promote a decrease in negative behaviors (Beauchemin et al., 2008; Biegel et al., 2009; Fernando, 2013; Mindful Schools, 2015; Schonert-Reichl et al., 2010).

Dependent variable. In this study, the dependent variable was frequency of negative behaviors. Negative behaviors include: inappropriate language, calling out, put downs, and off-task behaviors. *Inappropriate language-* is the use of language not appropriate for school such as swearing. *Calling out-* is defined as a student commenting or answering a question without raising their hand during classroom instruction when a teacher or peer is talking. *Put downs-* refer to the student making rude or offending comments toward peers or teachers. *Off-task-* is when a student is not attending to the task given by teacher (Brown & Ryan, 2003).

Setting & Participants

The experiment took place in a suburban, central California public kindergarten through fifth-grade elementary school. There are 551 students, 50% female and 50% male. Of the 551 students, 69% were White, 16% were Hispanic, 11% were two or more races, 4% were Asian, and 1% were American Indian. Approximately 13% of students in the school's population received a reduced lunch. The researcher used a purposeful convenience sample as participants were students in the researcher's class and consistently displayed two or more of the following behaviors: inappropriate language, calling out, use of put downs, and/ or off task.

Participants are students in a SDC class. Of the nine students in the class there are seven boys and two girls. Participants in the study consist of two fifth-grade boys. All participants

were observed and received intervention in the SDC environment. Pseudonyms were used to ensure confidentiality and anonymity.

Mark. Mark is a ten year, five-month old boy who qualifies for special education services under the category of speech and language impairment. This student also has memory and retention issues. Mark's most frequent behaviors observed are calling out and off task.

Jack. Jack is a ten year, two-month old boy and qualifies for special education services under the categories of other health impairment and speech and language impairment. This student also has behavior issues, attention deficient hyperactive disorder (ADHD). Jack's most frequent behaviors are the use of put downs, inappropriate language, and calling out.

Measures

Time sampling, frequency data using event recording sheets were used to track the occurrences of the four outlined negative behaviors (see Appendix A). All mindfulness lessons and data were obtained in the SDC setting.

Validity. To ensure internal validity both observers were trained to take frequency data on event recording sheets using the defined four behaviors above. All observers were trained by the researcher. A fidelity checklist (see Appendix B) signed by a second observer was used to confirm the fidelity of the MSC which directed and paced the lessons (Fernando, 2013; Mindful Schools, 2015).

Reliability. The researcher used an inter-observer agreement (IOA) to ensure reliability. Two observers both collected data for 20% of the time and achieved 97% interrater agreement. Therefore, data were collected consistently throughout the study and reliability was established (see Appendix C).

Intervention

The intervention consisted of sixteen guided fifteen to twenty minute lessons from Mindful Schools (Mindful Schools, 2015). Because of limited time to conduct this research only the first eight lessons from MSC were used (Fernando, 2013; Mindful Schools, 2015). All lessons were taught to the entire class at the same time (Mindful Schools, 2015). Lessons were given on Mondays, Thursdays, and Fridays.

Lesson one introduced mindfulness and how to be a mindful listener. Mindfulness is being aware of the present and observing our thoughts and emotions with openness (Kabat-Zinn, 2003; Mindful Schools, 2015). Lesson two taught students to focus on their breath going in and out. This involved the students focusing on their breath by placing their hand on their chest or belly (Mindful Schools, 2015). Lesson three was about heartfulness and sending kind thoughts to others. Heartfulness is about having kindness, gratitude and empathy (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008; Mindful Schools, 2015). Lesson four helped students to gain awareness of their bodies through a guided body scan. Students were directed to scan their body for sensations like their chair under them or the feel of their shirt on their shoulders. It can also include tightness or pain in the body, coolness, heat, and relaxed sensations (Mindful Schools, 2015). Lesson five increased awareness by learning to observe one's own thoughts, and counting breaths to come back to present thinking when one's mind wanders to thoughts, memories, planning, or images (Mindful Schools, 2015). Lesson six helped students to learn about generosity and paying attention to what we do that is generous, as well as what others do (Mindful Schools, 2015). Lesson seven helped students to become even more aware of their thoughts and helped them to be mindful of what effects their thoughts have on them (Mindful Schools, 2015). Lesson eight was about mindful seeing, which involved becoming more aware

of what is around us by paying attention to our environment (Mindful Schools, 2015). Each of these eight interventions was aimed at decreasing inappropriate language, calling out, use of put downs, and/or off task behaviors in each of the three participants.

Procedures

All observation data was collected from on Monday's 9:30-9:50, Wednesday's 9:00-10:00, Thursday's 2:00-2:20 and Friday's 8:30-8:50 for each stage of the A-B-C-B/C design. Data was collected at these times because that is when participants were in the SDC room. To obtain a baseline for instruction, both the researcher and a second observer gathered frequency data for each of the three participants based on the four outlined behaviors on event recording data sheets. Once five consecutive stable data points of baseline were established for each participant, the researcher began full group instruction.

During intervention phase A involving lessons one through four, data was collected on Monday, Wednesday, Thursday, and Friday due to participant availability. Each lesson began with the chime of a bell, and had the students take a seated mindful posture. Students were then guided through a 15 to 20-minute mindfulness lesson, a teacher lead discussion about what each lesson looks and feels like was discussed. Students were asked to keep a journal and answer questions each week about the lessons taught (Fernando, 2013; Mindful Schools, 2015). Withdrawal from instruction took place after the fourth lesson. Data were collected for five data points while using mindfulness reminders. After this occurred, the B/C phase of intervention began with lessons five through eight and included the use of mindfulness reminders daily.

Data collection. Time sampling, frequency data were collected from two observers using event recording data sheets with target behaviors outlined at the top of each sheet. Data were collected for Mark and Jack on Mondays, Wednesdays, Thursdays, Fridays for 20-minutes when

participants were in their SDC room. Data were collected during these times in each phase of the

A-B-C-B/C design.

        Fidelity. To ensure fidelity, the researcher was trained through www.mindfulschools.org

to deliver the guided and paced curriculum from their mindful educators course to participants

(Mindful Schools, 2015). The researcher was the only person delivering instruction. An aide

was the second observer and collected data 20% of the time to ensure fidelity to intervention was

100%. A treatment fidelity checklist is included in Appendix B.

Ethical Considerations

        The art of mindfulness is a secular practice. However, religious ties to mediation can be

found in the origins of mindfulness. It was important not to teach mindfulness as a religion

based practice, as this goes against the separation of church and state as defined in public

schools. The curriculum from www.mindfulschools.org has guided lessons to ensure a secular

approach to the instruction (Mindful Schools, 2015). Confidentiality of the students was

maintained by not naming any participant other than the use of a pseudonym at any time

throughout the research. Possible harmful effects were limited, but could include symptoms that

present similarly to what may occur in exposure therapy. Exposure therapy is a process which

exposes a patient to a feared object in a controlled setting, and often provokes anxiety and

avoidance in a patient. While this is an uncomfortable state of being, it can also help an

individual to overcome fears and create an opportunity for personal growth (Brensilver, 2016).

If at any time a student felt anxious they could open their eyes and transition into the next part of

the lesson.

        Validity threats. Biased data collection from the observers was a potential threat to

validity. Both the researcher and a classroom aide were collecting data, and both had a prior

emotional investment in the students, which could have led to a bias skew of observations. To

eliminate this bias, both observers reached 97% agreement on data collected. To establish

validity of observations, both observers were trained on how to properly collect data. This

means that both observers collected data based on recording the occurrences of behaviors

defined on the data collection sheet only.

Social Validity

At the completion of the study, the classroom teacher and aide completed a four-point

Likert scale (i.e., 1 = strongly disagree to 4 = strongly agree) social validity questionnaire (see

Appendix D). The questionnaire, adapted from Berger, Manston and Ingersoll (2016), consists

of nine questions designed to understand the perceived usefulness, significance, and satisfaction

with the implemented intervention (Kennedy, 2005). Due to the relevance of the questions for

the research only seven of the questions were used. Participant responses were kept confidential

and descriptive statistics were conducted to gain insights regarding the intervention. Based on the

social validity questionnaire in Appendix D filled out by the classroom teacher and aide, the

overall impact of direct instruction of mindfulness in a SDC setting had positive impacts on the

class.

Data Analyses

Data were collected across all four phases of the multiple subject A-B-C-B/C research

design, and analyzed with individual plot graphs for each of the three participants. The data

collected in each stage of the A-B-C-B/C design were compared using traditional visual analysis

techniques to determine effects of the MSC (Mindful Schools, 2015; Sarabia, 2015).

Results

Figures 1 and 2 below depict the results for both Jack and Mark. The y-axis measured

the frequency of the combination of the four inappropriate behaviors. The x-axis represented the

number of sessions. A dotted line was used to divide each phase of the ABCB/C design.

Jack

Jack had a baseline mean of 5 negative behaviors ranging between 3-7 occurrences. Jack

then entered phase B and had a mean of 3.8 negative behaviors ranging between 1-7 occurrences.

In phase C Jack had a mean of 3.75 negative behaviors with a range of 1-5 occurrences. Data

was missing on 3/10/17 due to an absence. Jack's mean for phase B/C was 4.4 negative

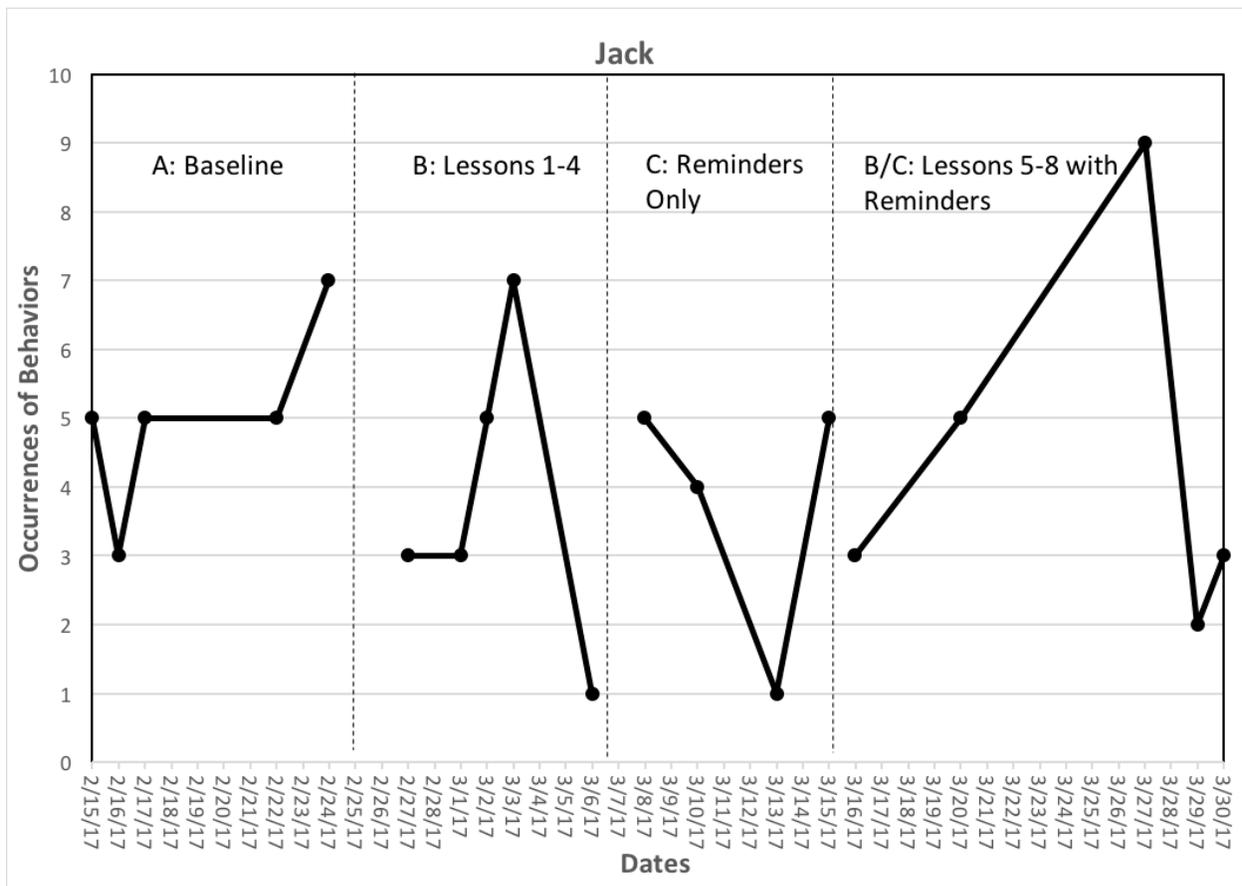behaviors with a range of 2-9 occurrences (see Figure 1).

Figure 1. Jack's occurrences of negative behaviors in each phase of the A-B-C-B/C design

during 19 sessions of observations.

Mark

In phase A Mark had a baseline mean of 3 negative behaviors ranging between 2-5 occurrences. Mark then entered phase B and had a mean of 1.6 negative behaviors ranging between 0-5 occurrences. In phase C, Mark's mean was 1.6 negative behaviors with a range of 0-3 occurrences. In phase B/C Mark had a mean of 3.6 negative behaviors with a range of 2-5 occurrences (see Figure 2).
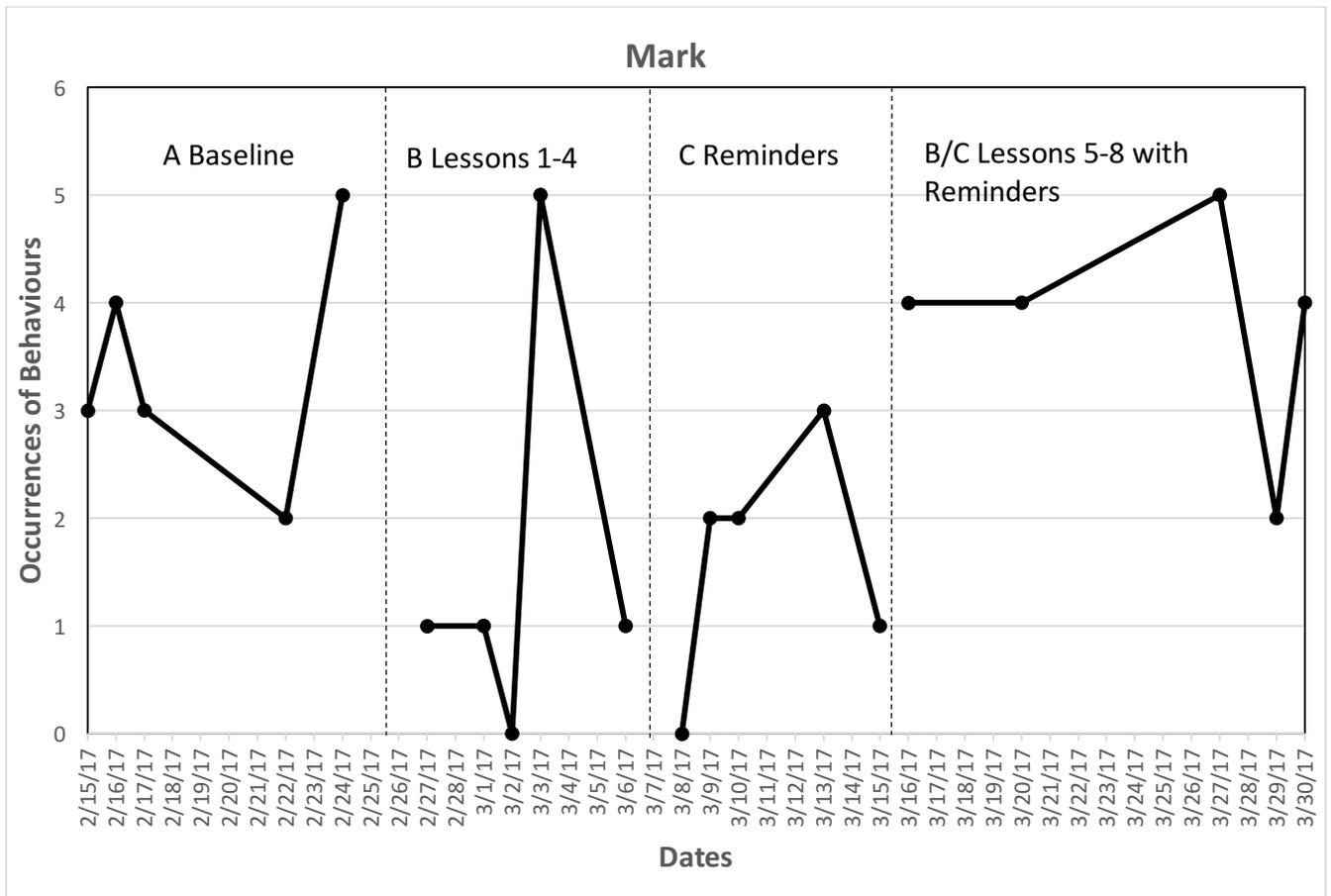

Figure 2. Mark's Occurrences of negative behaviors in each phase of the A-B-C-B/C design during 20 sessions of observations.

Discussion

The purpose of this study was to discover if direct lessons in mindfulness would improve fifth-grade mild to moderate SDC student's negative behaviors by showing decreases of the

following behaviors: inappropriate language, off task, put downs, and calling out. The hypothesis was rejected due to unstable data points and high rates of overlapping data. Therefore, there was not a functional relationship between the mindfulness intervention and decreasing negative behaviors. These findings are inconsistent with findings from Mindful Schools (2015), which indicates that sufficient weekly practice in mindfulness increases its effectiveness in regulating behaviors. The results also differ from that of the literature in a study done by Beauchemin and colleagues (2008) which showed significant positive changes in participant's behaviors.

One reason this study may not have demonstrated a decrease in negative behaviors, and a limitation of this study, is that there were gaps in the mindfulness lessons due to numerous activities and vacations during the time this intervention was implemented. Specifically, there were two three-day weekends, a teacher professional development day, and a four-day science camp. Over the course of the 27 days that this intervention took place, seven of those days were impacted by the events mentioned.

In addition, two major disruptions occurred during this study which caused a significant increase in the participants' negative behaviors. The first disruption was because a classroom aide was reassigned to a different school. In the morning, just before the mindfulness lesson, the classroom aide informed the class that she was going to be moving to a new school the next week. Both participants were impacted by this announcement. Figures 1 and 2 show a spike in the data on this day during phase B. The second disruption happened in phase B/C when a first-grade student with highly disruptive behaviors had returned to the class after a suspension. The first-grade student began to have a tantrum (e.g., screaming, insulting other students, and

throwing things), and Jack was one of the students receiving the aggression. This caused a spike in both Mark's and Jack's behavior.

Although Jack showed an overall decrease in his mean of negative behaviors from baseline, the instability of the data does not show that Jack's negative behaviors decreased with consistency. Further, his percentage of non-overlapping data comparing baseline with phases B, C, and B/C is only 21% which indicates that this intervention was ineffective for him. This is particularly true on the days in which Jack encountered stressful situations as his occurrences of negative behaviors increased. Mindfulness' aim is to help students stay calm and have a greater ability to regulate during stressful situations; however, this was not observed.

Mark's data showed some initial decreases in negative behaviors; however, the negative behaviors rose in phase C and were above that of baseline in phase B/C. The percentage of non-overlapping data comparing baseline with phases B, C, and B/C is only 40% which signifies that this intervention was ineffective. Anecdotally, Mark appeared to be excited to learn about and practice mindfulness in phases B and C. However, in phase B/C there were many disruptions in the lessons and Mark's initial motivation to engage in mindfulness seemed to fade.

Limitations and Future Research

Although the results of this study are contradict previous literature, past research indicates that mindfulness is something that should be practiced consistently over time to generate significant positive outcomes (Broderick & Metz, 2009; Schonert-Reichl et al., 2015; Tang et al., 2007). This study was conducted over six weeks with inconsistencies in the delivery of the mindfulness lessons and may not have allowed the students the necessary time to practice and refine the skills learned. Further, due to heightened levels of anxiety in a SDC setting, routine and consistency are important factors in maintaining consistent behaviors (Beauchemin

et al., 2008; Biegel et al., 2009). During this study, some major classroom environment changes occurred that caused behavior spikes in the data.

Additionally, only eight of the nineteen lessons from the MSC were used due to the limited amount of time the researcher had to conduct this study. The sample selection process was convenient and purposeful and a more diverse sample should be used. Further, the lessons and observations were not able to be conducted at the same time daily due to student availability. Finally, in all phases of the research design, Wednesdays were observation days only due the participants not being in the classroom at the same time.

The possibility of students in SDC gaining valuable skills to manage emotions and behaviors through mindfulness are still unknown. Additional research involving a larger number of students in SDC with a control group and direct instruction in mindfulness as an SEL intervention would greatly increase the very limited research done thus far with students in SDC.

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Appendix A

Data Collection Sheet

Student:

Inappropriate language- swearing.

Calling out- during classroom instruction when a teacher or peer is talking, student comments or

answers the question without raising hand.

Put downs- rude or offending comments toward peers or teachers.

Off task- student is not attending to the task given by teacher.

Date: _____ **Observer:** _____ **Time:** _____

Inap. Lang.	Calling Out	Put Downs	Off Task

Appendix B
Fidelity Checklist

Fidelity Checklist

○ Curriculum Use: Mindful Schools Engaging Children. Supporting Educators. Transforming Schools. Mindfulness Curriculum Kindergarten - 5th grade (MSC). (Mindful Schools, 2015, Mindfulness Curriculum for Grades K-5. Emeryville, CA: Mindful Schools).

○ Lesson's 1-8 delivered in their entirety including workbook pages for each lesson.

○ All Monday observations and lesson were done from 9:30-9:50.

○ All Wednesday observations were done from 9:00-10:00.

○ All Thursday observations and lessons were done from 2:00-2:20.

○ All Friday observations and lesson were done from 8:30-8:50.

○ No other interventions or behavior modifications were used during observations or lessons for mindfulness research.

○ Data collection was done with at least two observers 20% of the time.

○ The only person delivering the lessons was the researcher.

○ Reminders were done by the regular teacher and the researcher.

○ All observers were trained in data collection and used data collection sheets provided by the researcher with behaviors outlined on the top of the sheet.

○ Reward incentives for participation in mindfulness lessons consisted of classroom procedures that were put in place prior to researches observations or mindfulness lessons. (tickets, marbles in a jar, and group table points)

○ All observations and lessons were conducted in the SDC setting.

Observer Signature: _____

　　　　　　Date: _3 - 3 ι - 17_____

Appendix C
Inter-observer Agreement

Inappropriate Behaviors
IOA

Baseline A

2/15/17	Observer 1	Observer 2	% of agreement
Brian	10	11	91%
Jack	5	5	100%
Mark	3	3	100%

2/16/17
Brian		6
Jack		3
Mark		4

2/17/17
Brian	7
Jack	5
Mark	3

2/22/17
Brian	Absent
Jack	5
Mark	2

2/23/17 Assembly no data

2/24/17
Brian	Absent
Jack	7
Mark	5

IOA accuracy
97%

% of observations with 2 observers
20%

Observer 1 signature: _____

Observer 2 Signature: _____

Appendix D

Social Validity Questionnaire

		1 Strongly disagree	2 Disagree	3 Agree	4 Strongly Agree
1	This treatment was effective			Teacher- 3	Aide- 4
2.	I found this treatment acceptable for increasing the student's skills				Aide- 4 Teacher- 4
3.	Using the treatment improved skills across multiple contexts (home, classroom, community)			Aide- 3 Teacher- 3	
4.	I think the student's skills would remain at an improved level even after the treatment ends			Aide- 3 Teacher- 3	
5.	This treatment quickly improved the student's skills			Aide- 3 Teacher- 3	
6.	I would be willing to carry out this treatment myself if I wanted to increase the student's skills			Teacher- 3	Aide- 4
7.	I would suggest the use of this treatment to other individuals				Aide- 4 Teacher- 4