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THE EFFECTS OF A MINDFULNESS CURRICULUM ON SIXTH GRADE STUDENTS IN
A TITLE I SCHOOL

by

Jason A. Tackett

A creative project submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF EDUCATION

in

Special Education

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Abstract

The Effects of a Mindfulness Curriculum on Sixth Grade Students in a Title I School

by

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Utah State University, 2022

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Mindfulness is being integrated and studied across school settings as studies continue to reveal its beneficial effects. One of the largest mindfulness-in-schools organizations is Mindful Schools, which published a revised version of The Mindful Schools Curriculum for Adolescents (MSC-A) in 2019. While the effects of previous versions of the MSC-A have been evaluated in past studies and shown to be beneficial for students, the effects of the 2019 MSC-A have not been explored. This project sought to identify the effects of a condensed schedule of select lessons from the 2019 MSC-A on student and teacher perceptions of student mindfulness as measured by pre- and post-intervention measures. Results from the student measure, the CAMM, were inconclusive, though the class average score did improve over the course of the intervention, suggesting an increase in mindfulness levels after the intervention. Results from the teacher measure, the BASC-3 FM, showed a range of results for different students, including notable improvements in the class average of externalizing behaviors, suggesting a decrease in inattentive and hyperactive externalizing behaviors after the intervention.

(63 pages)
Introduction

What is Mindfulness?

Mindfulness can be described as “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally, to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). The concept of mindfulness is nuanced with complexities and dimensions that make it challenging to define (Cullen, 2011; Williams & Kabat-Zinn, 2011). Mindfulness can be viewed and defined as a state, a trait, or a practice. As a state, mindfulness can be defined as the awareness that emerges through paying attention on purpose, in the present moment, non-judgmentally. As a trait, mindfulness can be defined as a habitual tendency to pay attention, on purpose, in the present moment, non-judgmentally. As a practice, mindfulness can be defined as “a form of training or practice of repeating the specific mental activity of redirecting attention towards present experience” (Bishop et al., 2004, p. 232) and “a form of mental training that aims to improve an individual’s core psychological capacities, such as attentional and emotional self-regulation” (Tang, p.1, 2007).

The term mindfulness is often used to describe a particular way of paying attention. It is the mental faculty of purposefully bringing awareness to one’s experience. Mindfulness can be applied to sensory experience, thoughts, and emotions by using sustained attention and noticing our experience without reacting. This mindful awareness has specific qualities that make it different from just being attentive. These characteristics are intentionality, openness, and observing. The quality of intentionality refers to setting a conscious intention to be attentive. The quality of openness refers to choosing an attitude of openness to being present and honest with what is happening in the present moment. According to the Mindful Schools Mindfulness Fundamentals curriculum, the quality of observing refers to noticing or observing what is
happening without adding judgment (Mindful Schools, personal communication, January 17, 2015).

For the purpose of this project, mindfulness was defined as “paying attention in a particular way, on purpose, in the present moment, nonjudgmentally” (Kabat-Zinn, 1994, p. 2). Mindfulness was also defined and referred to at times as “noticing what is happening right now” when delivering *The Mindful Schools Curriculum for Adolescents* (MSC-A) lessons as part of this project. *Noticing what is happening right now* is the preferred student definition provided by Mindful Schools in their Mindful Educator Essentials curriculum training (Mindful Schools, personal communication, March 13, 2014). Kabat-Zinn’s definition of mindfulness was used when introducing mindfulness to students and then sporadically throughout the curriculum. The student definition of “noticing what is happening right now,” however, was used consistently to define mindfulness throughout curriculum lessons. Related vocabulary included: presence, being, awareness, attention, balance, alertness, attentiveness, openness, and resting the mind.

**Benefits of Mindfulness**

Scientific interest in mindfulness is evident in the growing number of mindfulness-based research studies. In 2003, mindfulness-based research was the topic of 52 papers, and by 2012 it was the topic of 477 papers (Pickert, 2014). In 2014, forty studies on mindfulness were being published per month (Mindful Schools, personal communication, January 17, 2015).

Research on mindfulness and its positive impacts dates back nearly 35 years. Presently, research continues to reveal the beneficial effects of mindfulness. Mindfulness is being integrated into health care settings to improve patient well-being (Surawy et al., 2005) and a higher quality of care (Shapiro, 2005), in technology corporations to address employee burnout (Valorinta, 2009) and strong leadership (Gonzalex, 2012; Bunting, 2016), in therapeutic settings
to address anxiety (Semple & Miller, 2005) and depression (Teasdale, 2000), in higher education institutions to promote stress reduction among students (Pearson et al., 2015; Tang et al., 2007) and staff (Wells, 2013), and in nursing homes to support patients through aging (Lazar et al., 2005) and death and dying processes (Bruce & Davies, 2005).

**Mindfulness in Schools**

One major integration of mindfulness is in education settings to support students in schools and classrooms across the world. Mindfulness is being integrated and studied in pre-school through university level classrooms as studies continue to reveal its beneficial effects. Researchers in education study mindfulness and its effects on students’ focus and attention (Baijal et al., 2011; Napoli et al., 2005; Schaub, 2016: Semple et al., 2010), behavior regulation (Barnes et al., 2003; Schonert-Reichl et al., 2015; Ruhlmann, 2020; Semple et al., 2010), emotional regulation (Metz et al., 2013), social skills (Napoli et al., 2005; Schonert-Reichl et al., 2015), stress and anxiety (Barnes et al., 2004; Mendelson et al., 2010, Schonert-Reichl et al., 2015, Sibinga et al., 2016; Zenner et al., 2014), memory and test performance (Napoli et al., 2005), and attendance (Mendelson et al., 2010) and participation (Malow & Austin, 2016; Schaub, 2016). Mindfulness is also being integrated into teacher meetings and training programs to address educator stress and burnout (Cohen et al., 1983; Flook et al., 2013; Jennings et al., 2013; Kemeny et al., 2012; Roeser et al., 2013). Numerous schools have even extended their mindfulness trainings and applications beyond the classroom setting to the parents of children with developmental disabilities through mindful parenting classes due to research findings of increased parenting satisfaction, more social interactions with their children, less parenting stress (Singh et al., 2007; Singh et al., 2006), and decreases in their children’s aggressive and non-compliant behaviors (Bogels et al., 2008).
Schools and school districts are adopting mindfulness curricula and incorporating mindfulness training and practices into their regular school days. Curricula offerings are growing as the interest and research base in mindfulness in education increases. Schools may choose to simply incorporate general mindfulness practices and activities into their schedules through resources such as *Breathe, Chill: A Handy Book of Games and Techniques Introducing Breathing, Meditation and Relaxation to Kids and Teens* by Lisa Roberts (2014), *Planting Seeds: Practicing Mindfulness with Children* by Thich Nhat Hanh (2011), *Sitting Still Like a Frog: Mindfulness Exercises for Kids (and their Parents)* by Eline Snel (2013), and *Mindful Moments Cards: Contemplations to Help Kids to Remember the Important Things in Life* by Lynea Gillen (2008). They may select six- or eight-week mindfulness programs to follow to formally train students in mindfulness practices such as *A Still Quiet Place: A Mindfulness Program for Teaching Children and Adolescents to Ease Stress and Difficult Emotions* by Amy Saltzman, MD (2014), *Learning to Breathe: A Mindfulness Curriculum for Adolescents to Cultivate Emotion Regulation, Attention, and Performance* by Patricia Broderick (2013), *Quiet Time* by George Rutherford (Dierke, 2012), and curricula by Mindful Schools. Schools may also choose to explore the brain and brain chemistry in relation to mindfulness through programs such as *MindUP* by The Hawn Foundation (Scholastic, 2011) which teaches students mindfulness practices and explains the positive effect this has on their brains. There are preschool mindfulness curricula to choose from, such as *Mindful Me* by Grace Helms Kotre (Community Education & Recreation, 2016), as well as elementary, middle, and high school mindfulness curricula (see above). Schools are also incorporating mindfulness programs into their afterschool programs through organizations such as Holistic Life Foundation by Ali Smith, Atman Smith, and Andres Gonzalez (Holistic Life Foundation, 2020).
Mindful Schools’ Curriculum

One of the largest mindfulness-in-schools organizations is Mindful Schools based out of Oakland, California. Mindful Schools was founded in 2007 by a small team that assembled “…their collective experience in education, social justice, and mindfulness and founded Mindful Schools on the belief that mindfulness provides young people with a compass to navigate their lives” (Mindful Schools, 2021). The Mindful Schools team developed mindfulness curricula for elementary, middle, and high school students and chose select schools to work with in the Oakland area. In 2011, Mindful Schools partnered with the University of California, Davis, to conduct the largest randomized-controlled study on mindfulness and children in schools to date (Fernando, 2013), and they have since grown from working with select schools in Oakland, California, to working with schools worldwide. Mindful Schools offers teacher training programs in mindfulness both online and in person, and they have “…trained over 25,000 educators and mental health professionals…” (Hagerty, 2017). Mindful Schools graduates from 100+ countries across North America, South America, Asia, Africa, Europe, and Australia are now incorporating mindfulness into classrooms and schools and have “…brought mindfulness practice to over 1.5 million students worldwide” (Hagerty, 2017).

In November 2019, Mindful Schools introduced a new adolescent mindfulness curriculum (Sofer & Brensilver, 2019). Sofer and Brensilver (2019) sought to expand and build upon the 2011 adolescent mindfulness curricula. The new The Mindful Schools Curriculum for Adolescents (MSC-A) was designed for youth ages 13 to 20, and it was founded on behavioral science. Sofer and Brensilver hold that “mindfulness is about mitigating stress and promoting flourishing” (Sofer & Brensilver, 2019, p. 1), and the curriculum they designed draws both implicitly and explicitly from research in the scientific domains of behavior change,
psychotherapy, neuroscience, psychology, and emotional regulation (Sofer & Brensilver, 2019). Sofer and Brensilver enriched the previous curriculum by adding a Science Supplement to mindfulness lessons in order to highlight relevant research that support the topic and/or practice being taught. The curriculum draws on a model of the mechanisms of mindfulness by Tang, Holzer, and Posner (2015) that identifies the key beneficial impacts of mindfulness to be “enhanced emotion regulation, attention stability, and self-awareness” (Sofer & Brensilver, 2019, p. 1).

Sofer and Brensilver identify the relationship between mindfulness-based curricula and social-emotional learning (SEL) curricula, and how the boundary between the two is sometimes unclear. Mindful Schools Curriculum Module Notes: Mindfulness & Education Overview states, “The Mindful Schools curriculum starts from the assumption that the condition of the brain and nervous system should be a primary consideration in the realms of academic learning and social/relational learning” (Mindful Schools, 2017). Sofer and Brensilver (2019) expand on this, stating, “The key skills of mindfulness (emotion regulation, attention stability, and self-awareness) have substantial overlap with the key skills of SEL (self-awareness, self-management, social awareness, relationships skills and responsible decision-making)” (Sofer & Brensilver, 2019, p. 2), and as such, they integrated components of SEL into the mindfulness practices within the curriculum. These authors identify four main goals of the adolescent curriculum:

1. To articulate the relevance of mindfulness for adolescents.
2. To provide the basic instructions and support needed to develop their capacity for self-awareness and self-regulation.
3. To provide time for formal mindfulness practice.
4. To create emotional safety sufficient to share and explore their inner experience 

(Sofer & Brensilver, 2019, p. 2).

Literature Review

In the search for articles discussing the effects of mindfulness lessons on student responses/perceptions of mindful attention, stress, self-regulation, self-esteem, impulsivity, and quality of life, many sources were consulted, including EBSCOhost database (Education Full Text and ERIC, PsychINFO, Education Source, and Academic Search Ultimate), the references sited in relevant articles, as well as recommendations from both facilitators and graduates of the *Mindful Schools Certified Instructor* and *Mindful Schools Schoolwide Implementation* programs. The following search terms were included: mindfulness; mindfulness in schools; mindfulness programs for youth; benefits of mindfulness; and effects of mindfulness on adolescents. Because of the rising awareness and popularity of mindfulness education, hundreds of articles surfaced in response to these searches, but not all of them considered the implementation of mindfulness interventions within schools. This literature review focuses on four research studies involving the introduction of mindfulness experiences into a traditional academic environment: Costello and Lawler (2014), Malow and Austin (2016), Mendelson et al. (2010), and Smith, Guzman-Alvarez, Westover, Keller, and Fuller (2012). Each of these studies is described below.

A 2012 study by Smith et al. evaluated effects of the original Mindful Schools curriculum on the behavior, attention, and self-reported mindfulness of an at-risk population of elementary students in the Oakland, California area. In this study, 800 kindergarten through fifth grade students and 47 teachers in three public elementary schools were given fifteen 15 min mindfulness lessons, spread over a 6-week intervention period. Mindfulness practice included mindful breathing, listening, test-taking, and empathy amongst other topics. Support materials
included a classroom bell and workbooks for follow-up exercises. Teachers received a brief training to help them orient to the mindfulness experiences they would be leading (Fernando, 2013).

The study used the Kinder Behavioral Rubric to have teachers assess their students’ attention, self-control, self-care, and demonstration of care for others both before and after the administration of the mindfulness intervention. The researchers found that the intervention yielded “a marginally statistically significant difference” between the behavior ratings of those students who participated in the Mindful Schools intervention and those in a control group who did not (Smith et al., 2012, p.16). This improvement was more pronounced for male students, who showed greater mental and social behavior improvements overall than female students. Though a modified version of the Child and Adolescent Mindfulness Measure was given to the students for them to self-assess, the results were not meaningful, as the language of the measure proved not to be age appropriate. The study also involved the use of the Attention Network Test for Children, which showed no statistically significant short-term changes in student attention following the mindfulness intervention.

Qualitative measures included anecdotal evidence shared in teacher focus groups, such as the observation that “[mindfulness] is a routine [the students] value and enjoy. It gets them calm and ready to do their best” (Smith et al., 2012, p.43). Teachers also told stories of their students reporting to them that they had used mindfulness to help them focus when their stress increased, such as when taking a test or attempting to recite a memorized poem. One teacher even shared a video of a frustrated student acting out physically by kicking chairs, then suddenly stopping, anchoring himself and taking a few breaths, then picking up the chairs (Fernando, 2013).
This study was selected and reviewed because it evaluated an earlier version of the same intervention program as this project used and was also implemented by classroom teachers. It is also relevant because the intervention was implemented with an at-risk population with 91% free and reduced lunch, in a higher crime area (Fernando, 2013), not unlike this project population. This project included not only teacher feedback on student behavior but also focused on student self-reporting of perceived effects of the mindfulness intervention.

Similar positive results were found in the Mendelson et al. (2010) study, which aimed to evaluate the feasibility and acceptability of a mindfulness and yoga intervention in Baltimore City public elementary schools, and to assess its promise for improving key domains (i.e., social, emotional, behavioral) of youth functioning by reducing involuntary stress responses and improving mental health outcomes and social adjustment. The study partnered researchers from two universities with Baltimore-based Holistic Life Foundation (HLF) to develop and evaluate a mindfulness-based intervention for youth. Together, they developed a 12-week program pairing mindfulness and yoga for a target population of fourth- and fifth-grade students across four Baltimore City public elementary schools.

Participants in this study attended the mindfulness program four days a week for 12 weeks. Each intervention session lasted 45 min and “included yoga-based physical activity, breathing techniques, and guided mindfulness practices” (Mendelson et al., 2010, p. 989). Intervention class sizes were approximately 25 students each and took place in the schools’ gymnasiums. Intervention classes combined fourth and fifth grade students and included two HLF instructors per class. HLF instructors were male and of similar racial and ethnic background as the students (African American and Latino). Students’ classroom teachers either observed the intervention sessions or did not attend.
The measures used in this study consisted of four self-reporting questionnaires which students completed pre- and post-intervention. The Responses to Stress Questionnaire (RSQ; Connor-Smith et al., 2000) measured students’ involuntary stress responses. The Short Mood and Feelings Questionnaire—Child Version (SMFQ-C; Angold et al., 1995) measured students’ depressive symptoms experienced over the last two weeks. The Emotion Profile Inventory (EP; Benn, 2003) assessed students’ positive and negative emotions. The fourth questionnaire, People in My Life (PIML; Cook et al., 1995) evaluated students’ relations with peers and school. Trained research assistants read aloud each questionnaire to groups of participants in the school setting. An analysis of the results of the self-reporting measures suggested that the effects of the mindfulness and yoga program on urban youth “was effective in reducing problematic involuntary engagement responses to social stress among youth” (Mendelson et al., 2010, p. 991), specifically stating that the study “had a positive impact on problematic responses to stress including rumination, intrusive thoughts, and emotional arousal” (Mendelson et al., 2010, p. 985) and “supports previous research suggesting that mindfulness-based approaches may be beneficial for enhancing responses to stress among youth” (Mendelson et al., 2010, p. 992).

In addition to self-report measures, research assistants formed three focus groups at intervention schools and one teacher focus group at each intervention school. These groups consisted of consenting youth who participated in the study and with teachers whose students participated. Research assistants interviewed students and teachers about the feasibility and acceptability of the intervention program. “Responses indicated that students generally had a positive experience in the program and felt they learned skills that helped them in their day-to-day lives” (Mendelson et al., 2010, p. 989). Teachers were uniformly supportive of the intervention program, with several noting significant advantages the program offered students.
with behavioral, high activity, and attentional focus issues. In addition, teachers requested to know more about the interventions used so they could reinforce the skills the students learned.

This study was selected and reviewed because the population of students participating in the study was similar to the target population of students who participated in this evaluation project. Students in both groups attended public, Title I schools, were of similar racial and ethnic backgrounds, and were at risk for outcomes related to stress, including social-emotional difficulties, behavior problems, and poor academic performance. The MSC-A was chosen over the HLF program because its lessons focus on mindfulness and can be delivered in 20 min sessions, whereas the HLF program focuses on both mindfulness and yoga and require 45 min sessions. In addition, the MSC-A can be delivered by the classroom teacher, whereas the HLF program must be delivered by an HLF staff member.

Like Mendelson et al. (2010), Costello and Lawler (2014) implemented their mindfulness study with children from lower socioeconomic backgrounds. In this study, researchers implemented a five-week mindfulness program through four classroom teachers with 63 sixth-grade students aged 11-12 years in Dublin, Ireland. The program was based on the already-developed The Mindfulness-Based Cognitive Therapy for Children (MBCT-C) and The Mindfulness-Based Stress Reduction Course for Children (MBSR-C) and used mindful breathing as a gateway to present-moment awareness. Daily practices ranged from three to 12 min, building in duration and complexity over the course of the five weeks.

Pre- and post- self-reporting of stress using the Perceived Stress Scale (PSS-10), as well as journal entries and semi-structured interviews with students and teachers, were used to collect both quantitative and qualitative data to assess the efficacy of the mindfulness intervention. Researchers used a paired-samples t-test to evaluate quantitative data of students’ pre- and post-
PSS-10 responses. Though self-reported student stress levels remained higher than average throughout the study, the quantitative results from the PSS-10 showed a “significant decline” (Costello & Lawler, 2014, p. 27) in those stress levels following mindfulness practice. Authors concluded “…the results indicate that participants’ experience of learning mindfulness had a positive influence on perceived levels of stress” (Costello & Lawler, 2014, p. 27).

The researchers conducted qualitative analysis through semi-structured interviews on student perspectives of mindfulness and perceived stress levels in which student responses were transcribed, examined multiple times, and given per-line verbal descriptions that were coded and grouped to identify broader themes. The five major themes identified included conceptualization of stress, awareness, self-regulation, classroom relations, and addressing future stress (Costello & Lawler, 2014).

Qualitative results included many examples of student quotes that seemed to suggest they perceived mindfulness as effective at helping both them and their peers detach from stress and feel calmer. In addition to students noticing differences in themselves and their classmates, teachers also reported improvements in student stress levels and accompanying disruptive behaviors in response to the mindfulness intervention. Also, both students and teachers reported exploring the intentional use of mindfulness techniques introduced in class to handle potentially triggering learning or relational experiences differently (Costello & Lawler, 2014). The authors summarized that “the majority of participants believed that mindfulness had been beneficial to them” (Costello & Lawler, 2014, p.33), “enabling them to deal with stress more effectively” (Costello & Lawler, 2014, p.34).

This study was selected and reviewed because the population of students participating in the study was similar to the target population of students participating in this evaluation project,
specifically those facing socioeconomic challenges, which create a higher “…risk of experiencing stress and associated social-emotional difficulties and behavioral problems…” (Costello & Lawler, 2014, p. 21) that make it difficult for children to succeed in school and receive the education due them. Given the assumption of students from lower socioeconomic backgrounds experiencing elevated levels of stress, the students’ decrease in reported stress is all the more meaningful.

Like this project, Costello and Lawler (2014) also used classroom teachers as the facilitators of the mindfulness intervention, either directly or through the playing of a pre-recorded CD of the instructional content. The researchers also emphasized self-reporting, as did this project, and documented that mindfulness interventions can “demonstrate positive effects over a relatively short duration” (Costello & Lawler, 2014, p.35), which was a central component of this project’s exploration.

Corresponding results were also found in another study of mindfulness intervention in school. Malow et al. (2016) of Manhattanville College conducted a study to determine the effectiveness of mindfulness activities from *Learning to Breathe* (Broderick, 2013) in increasing students’ sense of personal mastery, decreasing students’ sense of emotional reactivity, and increasing students’ sense of relatedness (Malow & Austin, 2016). The curriculum, *Learning to Breathe: A Mindfulness Curriculum for Adolescents to Cultivate Emotion Regulation, Attention, and Performance*, is a published, publicly available, standard, manualized mindfulness curriculum aimed at “facilitating adolescents’ recognition of their own personal experience, at the moment of that experience” (Broderick, 2013, p. 3).

This study took place in a residential school in Hudson Valley, New York, during the school’s summer program. The school served adolescents, ages 15-17, who were diagnosed with
an emotional or behavioral disorder and classified as emotionally disturbed (ED) under the Individuals with Disabilities Education Act (IDEA) 2004. The most frequently diagnosed emotional disorder at the school was anxiety disorder, with approximately 60 percent of the students presenting with this as a primary or secondary diagnosis (Barowsky & Austin, 2013). Fifteen students participated in the study.

The study was conducted over a six-week period during the summer school program. The classroom teacher, a certified teacher with no formal training in mindfulness instruction, conducted mindfulness exercises following the *Six Session Program* as outlined in Broderick’s (2013) *Learning to Breathe*. Mindfulness lessons were conducted daily for 5-10 minutes, during which students were led through a centering exercise defined as “a relaxing position with eyes closed” (Malow & Austin, 2016, p. 88) and then encouraged to focus on their breathing in silence. Students were asked for feedback at the conclusion of each session in relation to their levels of attending, stress, and focus.

Students completed pre- and post-mindfulness instruction measures administered by the classroom teacher. The measure used, *The Resiliency Scale for Children and Adolescents (RSCA)* (Prince-Embry, 2007), consisted of three scales: Mastery (MAS), Relatedness (REL), and Emotional Reactivity (REA). A two-tailed t-test for paired scores was conducted to analyze the significance of mean pre- and post-test score differences for each scale. Results of this study demonstrated “a significant increase in students’ self-reported resilience, measured as optimism, self-efficacy, and adaptability, as well as a decrease in students’ vulnerability, measured as sensitivity, recovery, and impairment after only six weeks of implementation” (Malow & Austin, 2016, p. 91). In addition to the RSCA, behavioral observations by the classroom teacher and student feedback were included in this study. Malow and Austin (2016) concluded that the
measurable outcomes of the RSCA, as well as the behavioral observations and student feedback, supported that the standard mindfulness program used was beneficial in improving students’ focus and increasing their sense of resilience.

This study was selected and reviewed because it used a standard, manualized mindfulness program structured similarly to the MSC-A. The Learning to Breathe curriculum is a published mindfulness program made available to the public that was delivered by a classroom teacher with no formal mindfulness training. Similarly, the MSC-A is a published mindfulness program made available to the public that may be delivered by a classroom teacher with no formal mindfulness training. The Learning to Breathe mindfulness program yielded positive results after six weeks.

In this project, the MSC-A program was delivered over three weeks. The MSC-A was chosen over Learning to Breathe because it offers a “Science Supplement” highlighting relevant scientific findings for each lesson, whereas Learning to Breathe does not, and to evaluate the effect of the MSC-A given there are no published studies on it as there are on Learning to Breathe.

These four studies were relevant to this project because of (a) their similar student population demographics; (b) the student-centered, self-reported nature of the data gathered; (c) the strength of the positive outcomes achieved in stress-reduction and self-regulation in at-risk populations; and (d) because they assessed an earlier version of the Mindful Schools curriculum.

This project sought to evaluate changes in student mindfulness that showed improvement in the reviewed studies. The MSC-A was chosen for several reasons. First, it is a publicly available program which can be implemented by anyone with the manual; trained facilitators are not required. Second, the program enjoys worldwide participation and credibility. Third, the individual student lessons are shorter than those of some programs, making them a more feasible
fit within the academic day, and they include science supplements, which help ground students’ mindfulness experiences in a container of brain- and body-health learning. Finally, the MSC-A is familiar to the author (referred to as “the evaluator” henceforth), who is a teacher and certified Mindful Schools instructor, has trained with Mindful Schools for nearly a decade, and is implementing Mindful Schools Curricula in his role as a special education teacher.

**Purpose Statement and Evaluation Question**

Research on the benefits of mindfulness practices used in classrooms to improve student well-being are well documented (Baer, 2003; Costello & Lawler, 2014; Fernando, 2013; Grossman et al., 2004; Malow & Austin, 2016; Mendelson et al., 2010; Shapiro & Carlson, 2009; Smith et al., 2012). The purpose of this project was to identify the effects of the 2019 Mindful Schools Adolescent Curriculum on student and teacher perceptions of student mindfulness as measured by a pre- and post-intervention questionnaire.

**Method**

**Participants and Setting**

The participants of this evaluation project were 25 students in a sixth-grade general education classroom in the Intermountain West. Participants recruited for participation in this evaluation project had not received consecutive mindfulness instruction (more than two times per week) via formalized mindfulness curriculum this academic year nor the academic year prior per teacher report. Participants ranged in age from 11 to 12 years. After obtaining consent from students and parents/guardians, of the 25 students, 16 were male and nine were female. Student demographics in this classroom included 64% Hispanic, 2% Caucasian, 8% Hawaiian Native/Pacific Islander, 4% Asian or Asian/Pacific Islander, 4% African American, and 12% African. One hundred percent of students in this classroom received free/reduced lunch. 76% of
students were identified as English-language learners (ELL), 16% participated in gifted and talent ed programs, and 36% received special education resource services. Classifications of students with Individualized Education Programs (IEP) in this classroom included specific learning disability (SLD), emotional/behavioral disturbance (ED/BD), and autism (AUT). In this classroom, four students received special education services under the classification of SLD, two under ED/BD, and three under AUT.

Participants lived in an urban area in the Intermountain West. The median household income in the area was $37,500. Within the area, recent statistics indicated 21.4% of the adult population reported no high school experience, and 26.5% reported some high school experience. The total crime risk in the area was above the national average in all categories, including personal crime, murder, rape, robbery, assault, property crime, burglary, larceny, and automotive theft.

Participants attended a Title 1 elementary school with 95% of the student population receiving free/reduced lunch. Student demographics in the school were 65.2% Hispanic, 12.4% Caucasian, 9.1% Hawai‘ian Native/Pacific Islander, 4.1% Asian or Asian/Pacific Islander, 6.8% African American, 1.4% Native American Indian, and 1% two or more races. The school served students in preschool through sixth grade. There were two teachers in each of the grade levels kindergarten through sixth, one preschool teacher, and seven special education teachers. Class sizes ranged from 13 to 25 students and one teacher per classroom.

The school practiced inclusion across grade levels such that special education students participated in general education classes with their same-age peers for some portion of the school day. The student population of each class included students receiving general education services, special education services, and/or gifted and talented program services. Students in each
classroom ranged from below grade level to above grade level, and received Tier 1, 2, and 3 instruction. Tier 1 instruction is defined as instruction all students receive that is high-quality, scientifically based, and differentiated to meet their needs. Tier 2 instruction is defined as increasingly intensive instruction designed to meet the needs of those students not making adequate progress in the core curriculum. Tier 3 instruction is defined as instruction that is individualized with intensive interventions that target the students’ skill deficits for the remediation of existing problems and the prevention of more severe problems (Shapiro, 2015).

The sixth-grade classroom in this evaluation project was composed of one classroom teacher and 25 students. Students received instruction in the areas of mathematics, language arts, social studies, and science in one classroom by one teacher. Students received physical education, music, art, library, and technology instruction by multiple teachers in other locations within the school. Students received one 15 min recess followed by a 20 min lunch period with no other scheduled breaks within their school day.

The evaluator delivered lessons immediately after students’ lunch period. This time was 20-25 min in duration and was scheduled as students’ silent reading time, during which students would read from their teacher-assigned chapter book. The teacher adjusted the class schedule so that silent reading time occurred after the mindfulness lessons. The teacher created this time in the schedule by shortening “brain break” activities between content areas throughout the day. The classroom teacher defined “brain breaks” as multiple opportunities throughout the day to pause the demand placed on students to attend to instruction and/or produce written work. The teacher shortened the duration of these opportunities so that students would have the same access to silent reading even with the mindfulness lessons. The classroom teacher identified the time immediately after lunch as the most ideal due to students’ difficulty to regulate their energy after
lunch and recess. The teacher also chose this time to conduct the Mindful Schools lessons over other times because it would not take time away from academic instruction.

The physical arrangement of the classroom had students situated at six tables with three-to-five students per table. The teacher delivered the majority of instruction from the front of the room. Students engaged in individual and choral responses as directed by the classroom teacher. Students participated in discussions by raising their hands and being called upon by the teacher to answer questions. Students engaged in independent work, pair work, and group work as instructed by the teacher.

Materials

The primary instructional materials used in this project included the Mindful Schools’ Mindfulness Teacher Manual and The Mindful Schools Curriculum for Adolescents (MSC-A). Mindful Schools offers two curricula: Mindfulness Curriculum Kindergarten – 5th Grade and Mindfulness Curriculum for Adolescents. The K-5 curriculum is used in elementary schools and the adolescent curriculum in grade 6 in the current project setting. Because participants targeted for participation in this evaluation project are 6th graders, the adolescent curriculum was used in this project. The adolescent curriculum was chosen over the K-5 curriculum based on students’ grade level, the time of the school year (mid-to-end of 6th grade year), and consideration of the issues middle school age students experience and how the adolescent curriculum addresses them.

Mindfulness Teacher Manual.

The Mindfulness Teacher Manual is a 13-page manual composed of 28 teaching tips from the authors and developers of the MSC-A. These teaching tips offer best practices on how to deliver the mindfulness lessons when challenges arise in the classroom. The challenges addressed may be related to student understanding, behavior, needs, and engagement.
Suggestions for how to engage students after breaks and holidays are specifically addressed. These tips also encourage the mindfulness teacher to be reflective and aware of how much he/she is speaking versus how much the students are speaking. Tips are also given on “useful language” to use during the lessons to support student understanding.

*The Mindful Schools Curriculum for Adolescents (MSC-A).*

The MSC-A is a 228-page book composed of 18 mindfulness lessons and seven optional lessons. Fourteen lessons were planned for use in the current project. However, time permitted an additional lesson to be included for a total of 15 lessons that were delivered over three weeks, with approximately 20 min per lesson. Each mindfulness lesson provided a script for the instructor to follow. All mindfulness lessons incorporated lecture/direct instruction, student engagement in mindfulness practices (i.e., closed-eye meditation, mindful eating, mindful listening, etc.), and discussion. Each lesson contained learning objectives, discussion questions that supported the lesson’s content, journal and take-home practice suggestions to deepen students’ direct experience, and a science supplement to extend students’ understanding of the content. Discussion questions were chosen over journal suggestions in order to work within the 20 min lesson timeframe and to make participation in sharing more accessible to students who struggle with writing. Full core lessons and extra lessons can be found in the MSC-A manual (select lesson in Appendix A).

*Additional materials.*

Supplemental instructional materials as requested by the curriculum include a [Tibetan] singing bowl with a wooden mallet or a mindfulness chime with a rubber mallet and a timer with minutes and seconds visible (i.e., timer app on iPhone). The singing bowl used in this project is a
type of bell, specifically classified as a standing bell. Both the singing bowl and mindfulness chime vibrate when struck to produce a resonating sound.

Measures

Measures recommended by Mindful Schools were used in the current project, as they are measures commonly used in school contexts and are in use in the project setting.

Child and Adolescent Mindfulness Measure (CAMM).

The CAMM (Appendix B: Greco et al., 2011) is a self-report scale that measures mindfulness in children and adolescents, ages 9-17. The CAMM consists of 10 items that focus on lack of mindfulness or present-moment awareness (i.e., “It’s hard for me to pay attention to only one thing at a time.”) and the presence of judging or non-accepting responses to thoughts and feelings (i.e., “I tell myself that I shouldn’t feel the way I’m feeling.”). Items are rated on a five-point Likert scale and reverse scored (Shoemaker, 2017). Scores are summed for all 10 items to calculate the total score. Total scores can range from 0 to 40. Higher scores correspond to higher levels of mindfulness (Greco et al., 2011). Results from the Greco et al. (2011) study show the CAMM to be reliable, reporting a coefficient alpha of 0.81, stating, “the CAMM is a developmentally appropriate measure with adequate internal consistency” (p. 606) and “…appears to be a developmentally appropriate measure with adequate preliminary evidence for the reliability and validity of its scores” (p. 611). CAMM scores are positively correlated with quality of life, social skills, and academic performance, and negatively correlated with somatic complaints and internalizing and externalizing symptoms (de Bruin et al., 2011).

Behavior Assessment System for Children, 3rd Ed., Flex Monitor (BASC-3 FM).

The BASC-3 FM (Appendix C: Reynolds & Kamphaus, 2020) was developed “…to provide an efficient alternative for monitoring the status of behavioral and emotional
functioning…” and “…can be used to measure the effectiveness of intervention programs at a group or individual level” (National Center on Intensive Intervention, n.d.). It enables teachers “…to monitor and track behavior over time” (Pearson, 2016). There are four standard teacher BASC-3 FM scales to measure the following behavioral/emotional domains: Inattention/Hyperactivity; Internalizing Problems, Disruptive Behaviors; Developmental Social Disorders. The teacher scale for inattention/hyperactivity was used in the current project. This scale covers a range of behaviors that are addressed in the MSC-A mindfulness lessons. For example, there are items specific to attention (i.e., “Pays attention.”), impulsivity (i.e., “Acts without thinking.”), focus (i.e., “Is easily distracted from class work.”), and engagement (i.e., “Stays on task.”).

The selected teacher scale consists of 18 items with response options that include never (N), sometimes (S), often (O), and almost always (A). The teacher completed one measure per student, pre- and post-intervention, and the computer-based program Q-Global, Pearson’s web-based system for test administration, scoring, and reporting (Pearson, 2016) was used to calculate results. This system was already in use in the project setting. Results were computed automatically by the program: “T-score norms based on a nationally representative sample are automatically calculated and can be used to evaluate change and compare to other individuals of a similar age” (Pearson, 2016, p. 3). The selected scale has a reliability coefficient of 0.94 for adolescents, ages 12-14 (Pearson, 2016).

**Procedures**

The MSC-A lessons were delivered over 3 weeks, approximately 20 min per lesson. Students completed the CAMM before and after mindfulness instruction, and the classroom
teacher completed the BASC-3 FM before and after mindfulness instruction (Appendix C). For an approximate project schedule, see Appendix D.

**Pre-intervention**

The CAMM was completed prior to beginning mindfulness instruction. Twenty-minutes were allotted to complete the CAMM to allow time for instructions, explanations, and questions. The evaluator explained that the CAMM is a self-reporting measure and defined self-reporting measure. Self-reporting measure was defined as “reporting one’s own behaviors, thoughts, or feelings, and there is no right or wrong answer.” Students were seated such that they could not view their peers’ forms or responses. The evaluator assigned each student a number with no numbers repeating. To maintain student confidentiality, the evaluator saved record of student numbers on his Utah State University (USU) Box account, which can only be accessed by the evaluator and his USU advisor. The evaluator handed out the CAMM form and instructed students to write their assigned number on the top right side of the form. The evaluator read the directions and explained the scale. The evaluator asked for clarifying questions students had about the scale and how to self-report. The evaluator instructed students that each prompt/question would be read aloud to them twice. After the second reading, students would circle their response. Students were instructed not to move ahead. The evaluator walked throughout the room as prompts were being read and monitored that students were not moving ahead. The evaluator encouraged students to ask questions as needed and to answer as honestly as possible. The evaluator collected each student’s form upon completion. Scoring procedures may be found in the “measures” section above.

The evaluator asked the classroom teacher to complete the pre- BASC-3 FM scale (Appendix C) for each student prior to the first session. The evaluator instructed the teacher on
how to complete the BASC-3 FM using the computer-based program Q-Global by Pearson Education, Inc. The evaluator asked the teacher to read through each item and ask any clarifying questions about the items or administration procedures. The evaluator remained available for questions to be answered.

**MSC-A Lessons**

The 15 core MSC-A lessons were delivered in the order outlined in the curriculum. The evaluator tracked participants’ attendance of each lesson by marking a ‘P’ for present or an ‘A’ for absent on an attendance log (Appendix E).

The evaluator followed the script provided for each lesson. Mindful Schools encourages mindfulness instructors to personalize the curriculum, stating, “…make [the curriculum] your own. Use it as a crutch while you get familiar with it… But as you get comfortable, feel free to bring in your own style and ideas” (Cowan, 2014, p. 5). For the purpose of this evaluation project, the evaluator followed the script closely. Anecdotes and personal experiences were woven in when appropriate, but no significant modifications were made to the curriculum. The evaluator did not omit any part of the script, change the order of activities within a lesson, or engage in mindfulness practices for less time than the curriculum directs (i.e., engaging in mindful breathing for 20 s instead of the 2 min for which the curriculum calls). The evaluator gave considerations to the following factors from the Mindfulness Teacher Manual when delivering mindfulness lessons:

1. **Eyes Open or Closed.** The MSC-A lessons invite students to close their eyes at some point during the lesson. However, some students do not feel safe closing their eyes. Closing eyes is suggested, but it is not mandatory. The evaluator was sensitive to the comfort level of participants and respectful of their decision to keep their eyes open.
or closed. The evaluator demonstrated eyes-closed, but with periodically opening eyes to see how students were doing.

2. *Check In.* The evaluator checked in with students regularly (1-2 times) during lessons to ask if anyone had used mindfulness in the days prior to the lesson being taught. The evaluator also asked specifically about the most recent lesson they learned. The evaluator allowed time (2-4 min) for up to two student responses.

3. *I Noticed.* The evaluator commented on what he noticed during the lesson. For example, “I noticed some of you remained quiet even when we heard someone enter the room…” The evaluator used “I noticed…” several times (3-4) per lesson. This was a form of being mindful of and for students and modeled mindful awareness.

4. *Fidgeting.* The evaluator addressed fidgeting behaviors that create disruption (i.e., tapping pencil, bouncing leg against desk, rustling papers) by making suggestions to the whole class, such as, “Let’s allow our legs to be still in this moment. Notice how your feet and knees feel when they become still. Do you feel sensation?” The evaluator periodically emphasized (1-2 times per lesson) the importance of quiet in mindfulness practice in effort to support participants in their practice (Cowan, 2014).

**Post-intervention**

Post-intervention data collection occurred within one day after the MSC-A lessons were complete. Administration to the students of the post-intervention CAMM occurred as outlined in the pre-intervention assessment. Similarly, the evaluator asked the classroom teacher to complete the post- BASC-3 FM scale (Appendix C) for each student within one day after the MSC-A lessons were complete. Administration occurred as outlined in the pre-intervention assessment.

**Data Analysis**
The evaluator collected data from the student pre- and post-intervention measures and compared the scores to examine the differences in student perceptions of mindfulness before and after mindfulness instruction. The evaluator calculated data from the pre- and post-measure by summing the items to yield the total scores, and the total scores were graphed. The evaluator has presented student scores in a bar graph with the score on the y-axis and student aliases on the x-axis. One bar represents the pre-test and is shaded gray. The second bar represents the post-test and is shaded black (see Figure 1).

The evaluator collected data from the teacher pre- and post-intervention measure using Pearson’s (2016) web-based system, Q-Global, for test administration, scoring, and reporting. The evaluator compared the pre- and post-intervention scores for each student to examine the teacher’s perception of students’ behaviors before and after mindfulness instruction. The evaluator has presented this data in a bar graph with the score on the y-axis and student aliases on the x-axis. One bar represents the pre-intervention score and is shaded gray. The second bar represents the post-intervention score and is shaded black (see Figure 2).

Additionally, the evaluator calculated the class mean for the pre- and post-intervention student measure and teacher measure by summing the means per measure and dividing by the number of students. The evaluator has compared the pre- and post-intervention score means for the class as a whole per measure and has presented this data in a bar graph as described above (see Figure 3).

**Results**

The participants of this project included 25 sixth grade students and their classroom teacher. All 25 students completed both the pre- and post-test CAMM and the teacher completed both the pre- and post-test BASC-3 FM for each of the 25 students. With respect to intervention
attendance, 92% (23/25) of students completed at least 70% of the mindfulness sessions, with absences the result of students missing school on days within the 3-week intervention window. Four of the students who completed at least 70% of the lessons participated in only half of each 20 min session due to being pulled for services by their special education related services providers. These students participated in the direct mindfulness practice for each of the sessions they attended but did not participate in the discussions following the direct mindfulness practice.

Data for all 25 students is represented in the figures below. The two students who attended less than 70% of the mindfulness sessions (S8: 26%, S16: 53%) are marked with an asterisk (*). Although these students’ data are visually represented in the figures below, their data will be discussed separately in the written reporting of the CAMM and BASC-3 FM data due to their limited attendance and participation. The four students who attended only the direct mindfulness practice portions of the sessions, however, will be included when reporting data for both measures because of their participation in the half of each session which included the direct mindfulness practice for at least 70% of the sessions.

**Child and Adolescent Mindfulness Measure (CAMM)**

Figure 1 shows the distribution of the CAMM pre- and post-scores and the change between those scores. The y-axis represents students’ scores, and the x-axis represents individual students as indicated with an ‘S’ for student, followed by the number assigned to that student. Pre-intervention scores are represented in gray and post-intervention scores are represented in black. Change is represented by a black outline with the number values represented in table format below the graph. The CAMM scoring instructions state, “Higher scores correspond to higher levels of mindfulness” (Greco et al., 2011, p. 612).
Of the 23 participants who participated in at least 70% of the sessions, 39.1% reported a decrease in scores, suggesting a decrease in levels of mindfulness after the intervention. The values of the decreases in scores ranged from 1 to 4 points, indicating a maximum negative change of 4 and a minimum negative change of 1, as represented in the table in Figure 1. Of these same 23 participants, 60.9% reported an increase in scores, suggesting an increase in levels of mindfulness after the intervention. The values of the increases in scores ranged from 1 to 12 points, indicating a maximum positive change of 12 and a minimum positive change of 1. The number value of change reported by students S8 and S16 who attended less than 70% of the sessions fell within the same distribution of change in scores as their peers, with S8 reporting an increase of 1 point and S16 reporting a decrease of 3 points.
Behavior Assessment System for Children, 3rd Ed., Flex Monitor (BASC-3 FM)

Figure 2 shows the distribution of the BASC-3 FM pre- and post-intervention raw scores and the number change between those scores. The y-axis represents students’ scores, and the x-axis represents individual students as indicated with an ‘S’ for student, followed by the number assigned to that student. Pre-scores are represented in gray and post-scores are represented in black. Change is represented by a black outline with the number values represented in table format below the graph. The BASC-3 FM manual indicates that for the adolescent inattention/hyperactivity measure used in this project, lower scores indicate a more desirable level of functioning (Reynolds & Kamphaus, 2016).

Figure 2

Behavior Assessment System for Children, 3rd Ed., Flex Monitor (BASC-3 FM) Raw Score Data

Note. Students who attended less than 70% of the sessions are marked with an asterisk (*).
Of the 23 participants who participated in at least 70% of the sessions, the scores from the pre- and post-intervention teacher measure indicate that 8.6% had no change in scores, while the remaining 91.7% had a decrease in scores, suggesting a decrease in levels of inattentive and hyperactive externalizing behaviors after the intervention. The values of the decreases in scores ranged from 2 to 11 points, indicating a maximum decrease (positive change) of 11 and a minimum decrease (positive change) of 2, as represented in the table in Figure 2. The number value of change reported for students S8 and S16 who attended less than 70% of the sessions fell within the same distribution of change in scores as their peers, with S8 showing a decrease of 5 points and S16 showing a decrease of 9 points.

Figure 3 shows the distribution of the BASC-3 FM pre- and post-intervention $T$ scores and the number change between those scores. The y-axis represents students’ scores, and the x-axis represents individual students as indicated with an ‘S’ for student, followed by the number assigned to that student. Pre-scores are represented in gray and post-scores are represented in black. Change is represented by a black outline with the number values represented in table format below the graph. As with the raw scores, lower $T$ scores indicate a more desirable level of functioning (Reynolds & Kamphaus, 2016).

The BASC-3 FM Manual (Reynolds & Kamphaus, 2016) states, “The $T$ score is the primary score interpretation on the BASC-3 Flex Monitor reports” (p. 14). Pearson’s Q-Global program automatically computed and reported the $T$ scores based on ratings the classroom teacher reported for each student on the BASC-3 FM pre- and post- measures: “$T$-score norms based on a nationally representative sample are automatically calculated and can be used to evaluate change and compare to other individuals of a similar age” (Pearson, 2016, p. 3). “Items
are summed on each form to create a Raw Score, and the Raw Score is transformed to a \( T \) score with a mean (M) of 50 and standard deviation (SD) of 10” (Reynolds & Kamphaus, 2016, p. 11).

The BASC-3 FM manual provides classification rules for \( T \) score interpretation (see Appendix G). For the adolescent inattention/hyperactivity measure used in this project, the manual indicates that lower scores indicate a more desirable level of functioning and provide \( T \) score classification categories as the following: \( T \) scores of 70 and higher fall under “clinically significant,” 60-69 under “at-risk,” 41-59 under “average,” 31-40 under “low,” and 30 and below under “very low” with an overall “goal zone” of scores from 10-60 and an “at-risk zone” of scores from 61-100 (Reynolds & Kamphaus, 2016, p. 14; Appendix G).

**Figure 3**

*Behavior Assessment System for Children, 3rd Ed., Flex Monitor (BASC-3 FM) T Score Data*

*Note.* Students who attended less than 70% of the sessions are marked with an asterisk (*).
Of the 23 participants who participated in at least 70% of the sessions, pre-intervention data show that 34.8% of students fell under the overall at-risk zone (scores ranging 61-100) and 65.3% fell under the overall goal zone (scores ranging 10-60). Of these 23 students, 8.6% fell under the “low” classification category, 56.6% under “average,” 17.4% under “at-risk,” and 17.4% under the “clinically significant” classification category. Students S8 and S16 both fell under the “average” classification category.

Post-intervention data show that 21.7% of students fell under the overall at-risk zone (scores ranging 61-100), indicating a decrease of 13.1 percentage points in students in the undesired at-risk zone. Post-intervention data show that 78.3% of students fell under the overall goal zone (scores ranging 10-60), indicating an increase of 13 percentage points in students in the desired goal zone. Of these students, 26.1% fell under the “low” classification category for a difference of 17.5 percentage points from pre-intervention data, 52.2% under “average” for a difference of 4.4 percentage points, 8.6% under “at-risk” for a difference of 8.8 percentage points, and 13.1% under the “clinically significant” classification category for a difference of 4.3 percentage points from pre-intervention data. Scores for students S8 and S16 demonstrated a decrease in scores, with both again falling within the “average” classification category in post-intervention data.

Pre- and post-intervention T score data indicate that 3 of the 8 students in the overall at-risk zone on pre-intervention data moved into the goal zone on post-intervention data. In terms of classification categories, these students fell under the “at-risk” category on pre-intervention data and under the “average” category on post-intervention data. The remaining 5 students who scored within the overall at-risk zone on pre-intervention data all remained within the at-risk zone. However, these 5 students all had decreases in scores, moving them in the desired direction.
toward the goal zone. Of the 5, one stayed within the “at-risk” classification category between pre- and post-intervention data, one moved from “clinically significant” to “at-risk,” and 3 remained within the “clinically significant” category despite their decrease in scores.

**Class Comparison**

Figure 4 shows the difference in pre- and post-intervention data for the class as a whole on both the CAMM and BASC-3 FM. The “class as a whole” includes the 23 participants who participated in at least 70% of the sessions. The CAMM scores are presented as raw scores. Figure 4 includes both raw score and T score class averages for the BASC-3 FM. The y-axis represents class average scores, and the x-axis represents the measures used. Pre-intervention averages are represented in gray and post-intervention averages are represented in black. Change is represented by a black outline. As described above, higher scores on the CAMM are more desirable as they are associated with higher levels of mindfulness. Lower scores on the BASC-3 FM are more desirable as they are associated with less inattentive and hyperactive externalizing behaviors, indicating a more desirable level of functioning.

On the pre-intervention CAMM, the 23 participants’ scores were summed and divided by the number of participants for a class average of 18.91. On the post-intervention CAMM, the class average was 21.3, showing a 2.39-point increase, suggesting an increase in levels of mindfulness after the intervention. On the pre-intervention BASC-3 FM, the 23 participants’ scores were summed and divided by the number of participants for a raw score class average of 18.73 and a T score class average of 55.73. On the post-intervention BASC-3 FM, the raw score class average was 12.3 and the T score class average was 49.3, showing a 6.43-point decrease in both raw and T scores, suggesting a decrease in inattentive and hyperactive externalizing behaviors.
Discussion

This evaluation project was designed to identify the effects of the 2019 Mindful Schools Adolescent Curriculum on student and teacher perceptions of student mindfulness in a sixth-grade general education classroom as measured by pre- and post-intervention questionnaires. Results from both the student self-report measure (CAMM) and the teacher-report measure (BASC-3 FM) showed a range of results for different students, including notable improvement in the class average scores of self-perceived mindfulness and teacher-reported externalizing behaviors as well as in the mindfulness and behaviors of many, but not all, individual students.

Limitations
One limitation of this project was the condensed schedule within which the mindfulness intervention was implemented. The MSC-A manual is designed to offer students two mindfulness lessons per week, over the course of nine weeks, with seven additional, optional lessons that can be added anytime throughout the intervention. Due to the nature of the academic calendar, this evaluation project was implemented over only three weeks, with one lesson given each day. Results of the intervention might be different if the lessons were spaced differently.

There are also limitations inherent in the self-report process with any group of people that may lead to “results that do not accurately mirror [the respondents’] experiences” (Morey, 1991, p. 27). “Distortion can arise from an intention to deceive the recipient of the information…[or] from limited insight or self-deception” (Morey, 1991, p. 27). Some known self-report limitations might even be amplified in a sixth-grade classroom dynamic, such as “[r]espondents who answer questions randomly, with little reflection, or with a lack of understanding…” (Morey, 1991, p. 27). Self-report CAMM results might therefore be less reliable than teacher-report BASC-3 FM results, though there is also the question of whether an external person can accurately perceive what would be an internal change in another. And direct observation-reporting scales are not without known biases, including the tendency for patterned ways of perceiving to become set within the reporter, making it difficult for that person to look past their own expectations in order to accurately recognize the scope, quality, or degree of change in the externalizing behaviors of another.

Implications for Practice

Implications for practice suggested by this project include extending the timeframe over which future classroom use of mindfulness might be integrated into the classroom. For instance, the MSC-A could be implemented with two lessons per week over nine weeks, as designed by
the curriculum. The additional, optional lessons could also be included during those nine weeks or perhaps in subsequent weeks, such as one per week for seven additional weeks, to lengthen the overall time that students are revisiting the ideas, principles, and practice of mindfulness. Repeat exposure might also be valuable to help students integrate and maintain changes in their mindfulness and behaviors. Once the MSC-A lessons have all been given, a classroom teacher might continue to build the practice of mindfulness into their classroom, such as integrating mindfulness into their existing “brain break” structures throughout the day or to give students something to lean on to encourage grounded relaxation before giving a test.

The classroom teacher who participated with her students in this particular evaluation project indicated a desire to do just that. On the fifth session of the intervention, the teacher requested more information about the intervention curriculum, and on the following day, reported that she had purchased the MSC-A so that she could reinforce the skills that students were learning and use the curriculum with future classes. She noted that she could already see the benefits of training in awareness and attention and how such training could offer significant advantages for students in her class who struggled with behavior problems, impulsivity, and poor attentional focus.

Towards the second half of the intervention, the teacher began participating in the mindfulness interventions in more of a facilitative role, indicating to her students that she was supportive of the idea of mindfulness-based techniques. She expressed appreciation for the language used in the lessons and reported that she was incorporating it throughout the school day. The teacher also noted improvements even in the students who weren’t present for at least 70% of the lessons, which may be in part due to the influences of peers whose externalizing behaviors had improved. She told the evaluator that she wished the project had taken place in her
classroom earlier in the school year, when student behavior patterns with one another were not yet so ingrained and habitual. She speculated that a mindfulness intervention might produce even more observable, concrete change and improvement in student externalizing behaviors and their interactions with one another if implemented earlier in the school year, when un-mindful, so-called “bad habits” of behavior norms were not already so entrenched.

Other observations included students regularly expressing excitement when the project evaluator arrived to facilitate the day’s mindfulness intervention lesson. Students often requested additional mindful time, such as a second session with the evaluator later in the day. At the project’s end, both students and teacher expressed wishing that the evaluator could keep coming back, suggesting a real perceived value to the time spent learning about and directly experiencing mindfulness. Value was also added through the implementation of this mindfulness intervention through the effect of community building. Both participating students and their teacher began to come to the evaluator’s classroom after school to connect, share experiences they were having with mindfulness, and generally grow their social support network.

Future Evaluation and Research

As with the above implications for practice, future projects evaluating the impacts of mindfulness interventions in a classroom might involve extending the schedule of the intervention in duration or altering frequency to increase student exposure to the concepts and practices of mindfulness over time. Also, as the classroom teacher in this project suggested, implementation of the mindfulness intervention earlier in the school year might yield different measurable results, even if the schedule of the intervention remained compressed. Multiple variables could be isolated and evaluated in future projects to hone an optimal methodology for mindfulness interventions in general education classroom settings.
Another possible consideration for future projects includes the selection of a self-report measure. It has been suggested that the sensitivity of the CAMM needs further exploration, specifically in the interpretation variability of various terms by young people who have mindfulness training experience and those who do not (Greco et al., 2011, p. 612). Also, “[a] potential concern about the CAMM is that all of the items are reverse scored…[and] findings are mixed” as to whether reverse scoring is more, less, or equally “psychometrically sound” than direct-worded measures, particularly for adolescent scales attempting to measure mindfulness (Greco et al., 2011, p. 612). Perhaps a future evaluation could include the BASC-3 FM adolescent self-report measure. It would be informative to see if the Pearson-generated self-report measure that is complementary to their teacher-report measure that was used in this project would produce even more conclusive results than the CAMM offered. In particular, it might be useful to know if BASC-3 self-report results would directly mirror the BASC-3 FM teacher-report results that were obtained in this project.

Conclusion

Mindfulness is making its way into classrooms around the world, and the results of this project demonstrate again why: both students and teachers are enthusiastic about the possibilities for increased self-regulation, community and connection, and more effective learning tools for academic instruction. This project sought to identify the effects of the 2019 MSC-A on 6th grade students in a Title 1 school and found that the average scores of students’ self-report of perceived levels of mindfulness and teacher-report of students’ externalizing behaviors both improved. This project delivered a condensed version of the 2019 MSC-A by offering select lessons each day for three weeks, versus the 8-week delivery schedule of most mindfulness curricula. This
highlights the potential for teachers to adapt existing mindfulness curricula to fit the needs of their students and class in a way that may result in increased mindfulness and desired behaviors.
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LESSON 4

IMPULSES AND PATIENCE

The Basics

This lesson explores the experience of impulses, the role of mindfulness in noticing an impulse, and the value of mindful breathing to help soothe the mind and make good decisions.

LEARNING OBJECTIVES

1. To understand the difference between impulsive action and mindful action.
2. To understand the role of self-control in long-term goal achievement.
3. To learn mindful breathing practices and their relevance to soothing the mind during intense impulses.
4. To learn a mental noting technique where the use of words is paired with a specific attentional focus.

LESSON 4 IN BRIEF: A SYNOPSIS

Impulses and Patience

1. Check in & review:
   Who practiced at home? What experiences or questions came up?

2. Discuss impulses.
   Ever acted impulsively and regretted it? What's that like? To achieve our goals, we need to have patience and self-control. For that, we need to be able to recognize our impulses.

Discuss the marshmallow experiment. What would you have done at age five? If I gave you five $100 bills and agreed to give you another $500 in 6 months, if you didn't spend them, could you do it? Studies have shown that higher self-control brings better health, less addiction, and higher earnings.

3. Discuss impulse control.
   What skills do you need to resist the marshmallow? To be mindful of the impulse itself and the craving. If it could talk, what would craving say? We can learn to be aware of our impulses, so that we have more choice over which ones we follow. During this practice, anytime you notice an impulse (to open your eyes, to scratch an itch, for the bell to ring), see if you can pause, breathe, and relax.

Practice Instructions

* Sit in a posture that's comfortable yet upright, feet on the floor and hands in your lap.
Appendix A (continued)

Let your eyes close, or gaze down at the ground in front of you.
Feel gravity and the weight of your body. Notice its heaviness and where it touches the ground. If you like, say "relax, relax" silently inside.
Take a few deep breaths, noticing any ease or relaxation on the exhalation.
Become aware of your whole body sitting, then bring your attention to your breathing.
Find your anchor spot and feel the sensations of breathing in and breathing out.
You can silently label the breath with a soft mental note, “breathing in . . . breathing out . . .”
If your mind drifts off, just notice, and bring it back to your anchor.
When you feel an impulse—to move, open your eyes, and so on—first notice the impulse. Then say silently, “Pausing, pausing.” Next, feel the sensations of your breathing.
When you’re ready, let your eyes open and look around the room.

Discussion Questions

+ What impulses did you notice? What did the impulses feel like?
+ What happened when you used the breathing to soothe your mind during a strong impulse?
+ How could this be useful to you in your daily life?

Take-Home Practice

1. When you find yourself in the middle of a strong impulse, notice it and see what it’s like to do just 20 seconds of mindful breathing.
2. Start to notice how relaxation can help with making wise choices. If you regret a certain choice, look back on it and try to remember how your body and mind felt in that moment.
Lesson 4 in Detail: A Sample Script

Impulses and Patience

Lesson Outline

- Achieving our goals depends on self-control; mindfulness can help us develop self-control.
- Delayed gratification is an expression of self-control (the "marshmallow experiment").
- To resist an impulse, first, one must become aware (mindful) of that impulse.
- Mindful breathing can be a resource when an impulse threatens to overwhelm us.
- Mental noting—a technique of silently saying words in one’s mind—can be useful in focusing the attention on the breath and helping calm the mind.

Lesson

(Organize the room for mindfulness and engage the students in a transitional activity.)

Raise your hand if you remembered to use mindfulness between our last lesson and today? (Show of hands.) How did it go? What helped? Was there a time that you tried to use mindfulness but it didn’t help?

(Students answer.)

Today, I want to talk about our impulses, how to notice them, and how to pause with mindfulness so that we can get what we really want—not what our impulses tell us in the moment. To get what we really want in life, we need to have patience and self-control. And to develop self-control, we need to learn to recognize impulses.

How many people have acted on an impulse to do or say something and it’s gotten you in trouble?

Yeah, we all do that. Part of mindfulness is about developing more choice even when we’re having intense feelings. But to decide if we should act on our impulse, we have to be aware of that impulse first, right?

Let me tell you about a research study. It’s been called The Marshmallow Test. The experiment was simple. A psychologist at Stanford University would take a child age 5 to 6, put him or her into an empty room with just a table and a chair in it. He asked the child to sit in the chair and placed one marshmallow on the table. Then, he told the child he was going to leave the room and come back in 15 minutes. The child could eat the marshmallow if they wanted to. But if it was still on the table when he returned, he told the child that they would get a second marshmallow.

Imagine yourself at age five. What would you have done? (Ask rhetorically)

Now imagine for a minute another version of this test. I’m not really going to do this, but what would happen if today, right now, I gave you five marked $100 bills. The test is that if you still have these same five $100 bills in six months, I will give you $500 more. I’m not going to ask you to share your answer to either test. But just imagine what would happen for you.

The researcher at Stanford found that 2 out of 3 of the five-year-olds could resist the temptation and get the second marshmallow. Years later, the researchers looked at how the kids were doing—and the ones who were able to wait were doing much better than the ones who ate the first marshmallow immediately.

Bigger studies have found that those higher in self-control grow up to be healthier, have lower rates of
addiction, make more money, and get in less trouble with the police.

So, what skills do you need to resist the marshmallow?

(Students answer.)

Right. You need mindfulness to become aware of the impulse and the wanting. If a craving could talk, it would say something. Let’s say we want the marshmallow—sitting there, in that room alone, what is the craving saying in your mind?

(Students answer.)

Yeah, it would probably be saying eat that marshmallow, and this bad feeling of craving will go away. Does that make sense? So, sometimes we may want to obey the craving, but sometimes not. In order to choose, we need mindfulness.

When we notice an impulse, we can become aware of it and pause. We can practice breathing mindfully and relaxing. Some of our bad decisions come when we’re rushed, stressed out, and operating on automatic. Mindful breathing helps us pause, relax and make better choices.

In a minute, we’re going to do our mindfulness practice. During that time, you’ll probably have some impulses. Like, maybe you’ll want to scratch an itch, or to open your eyes and look around. Or maybe you’ll want the bell to ring early because you’re bored. Or maybe you’ll think about eating something delicious and want to go get it. When you feel these impulses, see if you can pause, breathe and relax.

Practice

So, we’ll begin as we usually begin, by establishing mindfulness of the body.

+ Let the body be comfortable and upright, feeling your spine. Feet on the ground, hands on your lap. If it feels all right to you, gently close your eyes.
+ When you hear the sound of the bell, listen with all of your attention all the way to the end.
+ Sense the relaxing effects of gravity. Feel that downward force in your body and let your body get heavy. Feel the points that are touching the ground, letting them take the weight of the body.
+ If you want, you can repeat “relax, relax” a few times silently to yourself. Let any excess tension present in your body drain down and out.
+ Take a few deep breaths, and when you exhale, see if you can feel a ripple of relaxation across the whole body.
+ As your body settles, feel the sensations of your whole body sitting.
+ Now, bring the awareness to the breathing specifically. Choose a place where you feel the breath most clearly—either the belly, chest, or nose.
+ The breath is neutral. It’s not a strong emotion, it’s not something we hate or love. It’s just there, continually, all day, every day, breathing in, breathing out. We can find it anytime we remember.
+ Bring your attention to the spot where you feel your breath easiest—your anchor in your belly, chest, or nose. Just like an anchor keeps a boat from drifting off, we use our breath to anchor our mind.
+ When your mind drifts away from the anchor and into planning, worrying or remembering, direct your mind back to the anchor of the sensations of breathing. Don’t worry if you have to do that again and again. You’re not doing it wrong.
+ When you notice a strong impulse—maybe you want to move your body—this is an opportunity to practice. First, just notice that this is an impulse. Then, silently, calmly make a note to yourself in your own mind. Silently say, “pausing, pausing.” Then feel your breath and silently say, “breathing” with each breath.
+ Turn to your breath to soothe your mind when
you find yourself caught in an impulse. Really feel the breath. You can silently say "breathing in" as you inhale, "breathing out" as you exhale.

* We’ll do this for a couple of minutes.

(Ring bell.)

* When you’re ready, you can let your eyes open slowly. Notice how you feel.

**Discussion Questions**

- How did that go for you?
- What impulses did you notice? What did the impulses feel like?
- What happened when you used the breathing to soothe your mind during a strong impulse?
- How could this be useful to you in your daily life?

**Take-Home Practice**

1. When you find yourself in the middle of a strong impulse, notice it and see what it’s like to do just 20 seconds of mindful breathing.
2. Start to notice how relaxation can help with making wise choices. If you regret a certain choice, look back on it and try to remember how your body and mind felt in that moment.

**Journal Suggestions**

1. What surprised you about this lesson?
2. What role do impulses play in your life?
3. In what area(s) of your life do you want more control of impulses?

**Teacher Notes**

It can be helpful to go over how to use the labeling technique with your students. Be sure it’s clear that the intention is to keep most of their attention focused on the sensations of breathing rather than the words “in” and “out.” You can use the example of pointing at the clock. Everyone seeing your fingers understands its meaning and looks at the clock. A mental label functions in the same way. It is meant to point our attention to the object, in this case the feeling of an inhalation or exhalation.

**Science Supplement**

One of the leading researchers on self-control, Roy Baumeister (Baumeister, Vohs, & Tice, 2007), writes:

"Every day, people resist impulses to go back to sleep, to eat fattening or forbidden foods, to say or do hurtful things to their relationship partners, to play instead of work, to engage in inappropriate sexual or violent acts, and to do countless other sorts of problematic behaviors—that is, ones that might feel good immediately or be easy but that carry long-term costs or violate the rules and guidelines of proper behavior. What enables the human animal to follow rules and norms prescribed by society and to resist doing what it selfishly wants? Self-control refers to the capacity for altering one’s own responses, especially to bring them into line with standards such as ideals, values, morals, and social expectations, and to support the pursuit of long-term goals... Self-control has attracted increasing attention from psychologists for two main reasons. At the theoretical level, self-control holds important keys to understanding the nature and functions of the self. Meanwhile, the practical applications of self-control have attracted study in many contexts. Inadequate self-control has been linked to behavioral and impulse-control problems, including overeating, alcohol and drug abuse, crime and violence, overspending, sexu-
ally impulsive behavior, unwanted pregnancy, and smoking. It may also be linked to emotional problems, school underachievement, lack of persistence, various failures at task performance, relationship problems and dissolution, and more.” (p. 351)

Baumeister (2007) highlights the centrality of self-control in a successful human life. Terrie Moffitt (Moffitt, et al., 2011)—an influential researcher at Duke University, published a groundbreaking study on self-control that concluded this way: “Differences between individuals in self-control are present in early childhood and can predict multiple indicators of health, wealth, and crime across three decades of life in both genders… Our findings imply that innovative policies that put self-control center stage might reduce a panoply of costs that now heavily burden citizens and governments.” (p. 2697)

Regulating oneself is thus a critical capacity for human beings. We can first examine how self-regulation functions in our life and how it fails. There are certain conditions under which self-regulation is most likely to fail. In these circumstances, we need to take extra care to be mindful and support healthy choices.

Neuroscientist Todd Heatherton (Heatherton & Wagner, 2011), writes that the most common conditions under which self-regulation fails are: (1) when we’re in a bad mood, (2) when minor indulgences snowball into full-blown binges, (3) when we’re overwhelmed by immediate temptations or impulses, (4) when control itself is impaired—such as self-regulatory depletion. We want to highlight the fourth point on that list—self-regulatory depletion. Baumeister has formulated the strength model of self-regulation. He suggests that self-regulatory capacity is akin to a muscle. Muscles fatigue. Self-regulation strength can be depleted too: There is finite pool of self-regulatory energy. Repeated exertions of self-regulation draw down that pool of energy—and make it more difficult to subsequently regulate oneself. If you give a person a task that requires a lot of self-control and then afterwards test them by asking if they want a candy bar, they’re more likely to say “yes” to the candy, even if they want to say “no.”

Perhaps you might have noticed that after emotionally intense episodes, it’s more difficult to make wise choices. Again, here is Gailliot and Baumeister (2007):

“…Recent evidence has indicated that some brain and cognitive processes likewise consume substantial amounts of energy—indeed, some far more than others. The “last-in, first-out rule” states that cognitive abilities that developed last [in our evolutionary development] are the first to become impaired when cognitive and physiological resources are compromised. Self-control, as a relatively advanced human capacity, was probably one of the last to develop and hence may be one of the first to suffer impairments when resources are inadequate.” (p. 334–335)

So, what do we do? Fortunately, just as we can exercise muscles to get stronger, we can exercise self-regulatory capacities too—we can expand our pool of self-regulatory energy. Research suggests that acts of self-regulation strengthen our long-term capacity to regulate ourselves in the future. Mindfulness meditation is one way we can practice this.

This framework highlights why it’s harder to regulate urges at certain moments, and to cultivate compassion for ourselves when the strength of the impulse overrides our pool of self-regulation energy.

**WANTING, LIKING, AND COMPULSIVITY**

Self-regulation requires energy because the mechanisms of “wanting” have a prominent place in our brain. Resisting our “wants” requires strength. Kent Berridge (Berridge & Robinson, 2016), a leading neu-
Appendix A (continued)

Rosciestment, describes the difference between “wanting” and “liking.”

“Rewards are both ‘liked’ and ‘wanted,’ and those two words seem almost interchangeable. However, the brain circuitry that mediates the psychological process of ‘wanting’ a particular reward is dissociable from circuitry that mediates the degree to which it is ‘liked.’ Incentive salience or ‘wanting,’ a form of motivation, is generated by large and robust neural systems that include mesolimbic dopamine. By comparison, ‘liking,’ or the actual pleasurable impact of reward consumption, is mediated by smaller and fragile neural systems, and is not dependent on dopamine.” (p. 670)

This highlights the way in which equanimity can sometimes require us to move against evolutionary pressures—the mechanisms for wanting are robust and they keep us feeling like something is missing. Part of mindfulness practice is developing equanimity with wanting. This allows us to come home to the present moment in such a way that nothing feels like it’s missing.

REFERENCES & FURTHER READING


Appendix A (continued)

### Impulses and Patience

**Key Points**
- Achieving our goals depends on self-control; mindfulness helps us develop self-control.
- Delayed gratification is an expression of self-control (the “marshmallow experiment”).
- To resist an impulse, one first must become aware (mindful) of that impulse.
- Mindful breathing can be a resource when an impulse threatens to overwhelm us.
- Mental noting—a technique of silently saying words in one’s mind—can be useful in focusing the attention on the breath and helping calm the mind.

**Practice Instructions**
- Sit in a posture that’s comfortable yet upright, feet on the floor and hands in your lap.
- Let your eyes close, or gaze down at the ground in front of you.
- Feel gravity and the weight of your body. Notice its heaviness and where it touches the ground. If you like, say “relax, relax” silently inside.
- Take a few deep breaths, noticing any ease or relaxation on the exhalation.
- Become aware of your whole body sitting, then bring your attention to your breathing.
- Find your anchor spot and feel the sensations of breathing in and breathing out.
- You can silently label the breath with a soft mental note, “breathing in . . . breathing out . . .”
- If your mind drifts off, just notice, and bring it back to your anchor.
- When you feel an impulse—to move, open your eyes, and so on—first notice the impulse. Then say silently, “Pausing, pausing.” Next, feel the sensations of your breathing.
- When you’re ready, let your eyes open and look around the room.

**Take-Home Practice**
1. When you find yourself in the middle of a strong impulse, notice it and see what it’s like to do just 20 seconds of mindful breathing.
2. Start to notice how relaxation can help with making wise choices. If you regret a certain choice, look back on it, and try to remember how your body and mind felt in that moment.

**Journal Suggestions**
1. What surprised you about this lesson?
2. What role do impulses play in your life?
3. In what area(s) of your life do you want more control of impulses?

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**Definition:** An impulse is the urge to act, to do or say something.
Appendix B
Child and Adolescent Mindfulness Measure (CAMM)

Child and Adolescent Mindfulness Measure (CAMM)

We want to know more about what you think, how you feel, and what you do. Read each sentence. Then, circle the number that tells how often each sentence is true for you.

<table>
<thead>
<tr>
<th></th>
<th>Never True</th>
<th>Rarely True</th>
<th>Sometimes True</th>
<th>Often True</th>
<th>Always True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I get upset with myself for having feelings that don’t make sense.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>2. At school, I walk from class to class without noticing what I’m doing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>3. I keep myself busy so I don’t notice my thoughts or feelings.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>4. I tell myself that I shouldn’t feel the way I’m feeling.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>5. I push away thoughts that I don’t like.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>6. It’s hard for me to pay attention to only one thing at a time.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>7. I get upset with myself for having certain thoughts.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>8. I think about things that have happened in the past instead of thinking about things that are happening right now.</td>
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<tr>
<td>9. I think that some of my feelings are bad and that I shouldn’t have them.</td>
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<td>10. I stop myself from having feelings that I don’t like.</td>
<td>0</td>
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Appendix C
BASC-3 FM, Inattention/Hyperactivity

Remember: N = Never  S = Sometimes  O = Often  A = Almost Always

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<tr>
<th></th>
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<tbody>
<tr>
<td>1. Pays attention.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
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<tr>
<td>2. Has trouble staying seated.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
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<tr>
<td>3. Acts without thinking.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
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<tr>
<td>4. Listens to directions.</td>
<td>N</td>
<td>S</td>
<td>O</td>
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<tr>
<td>5. Is well organized.</td>
<td>N</td>
<td>S</td>
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<tr>
<td>6. Interrupts others when they are speaking.</td>
<td>N</td>
<td>S</td>
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<tr>
<td>7. Cannot wait to take turn.</td>
<td>N</td>
<td>S</td>
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<td>8. Is easily distracted from class work.</td>
<td>N</td>
<td>S</td>
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<td>9. Has trouble following directions.</td>
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<td>10. Disrupts other adolescents' activities.</td>
<td>N</td>
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<td>11. Stays on task.</td>
<td>N</td>
<td>S</td>
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<td>12. Speaks out of turn during class.</td>
<td>N</td>
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<td>13. Is in constant motion.</td>
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<td>14. Turns in work on time.</td>
<td>N</td>
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<td>15. Has poor self-control.</td>
<td>N</td>
<td>S</td>
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<td>16. Listens carefully.</td>
<td>N</td>
<td>S</td>
<td>O</td>
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<td>17. Talks over others.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
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<tr>
<td>18. Plans ahead.</td>
<td>N</td>
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BASC-3 Standard Flex Teacher, Adolescent, Inatt/Hyp: This form was created using the BASC-3 Flex Monitor software. Copyright © 2016 NCS Pearson, Inc. All rights reserved.

Appendix C. BASC-3 Flex Monitor, Teacher (Reynolds & Kamphaus, 2020)
### Appendix D

**MSC-A Project Schedule**

**MSC-A Project Schedule** (W=Week; C=Class; S=Session)

<table>
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<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td>W1</td>
<td>Pre-Measure: BASC-3 FM&lt;br&gt;Pre-Measure: CAMM&lt;br&gt;C1: Intro to Mindfulness: Stress &amp; Well-Being (pp. 28-34)</td>
<td>C2: Our Bendable Brains: Mindfulness of Sound (pp. 35-42)</td>
<td>C3: Getting (back) Online: Mindfulness of Breathing (pp. 43-50)</td>
<td>C5: Soaking in the Good: A Heartfulness Lesson (pp. 59-67)</td>
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<tr>
<td>S1</td>
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<tr>
<td>W2</td>
<td>C6: Mindfulness of Emotions (pp. 68-76)</td>
<td>C7: Changing the Channel: Heartfulness Practice (pp. 77-85)</td>
<td>C8: Being at Home in Our Bodies: Body Scan (pp. 86-92)</td>
<td>C11: Ending the War Within: Equanimity (pp. 112-120)</td>
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<td>S11</td>
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<td>Post-Measure: CAMM&lt;br&gt;Post-Measure: BASC-3 FM</td>
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## Attendance Log

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Write each student's number under “Student #.” When the student completes the pre-intervention measure, mark a check in the box. If the student does not complete it, mark an “X.” Follow the same when marking the “post-” box. For sessions 1-14, mark a “P” for present and an “A” for absent. Sum the Ps and divide by 14. Write attendance percentage in the % box.
**Completed Attendance Log**

**Note:** Present is represented as ‘P’ and absent is represented as ‘A.’ A checkmark means “completed.” A green shaded ‘P’ indicates the participant was present for the full session. A yellow shaded ‘P’ indicates the participant was present for half of the session. The red shaded ‘A’ means the participant was absent from school that day.

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Write each student’s number under “Student #.” When the student completes the pre-intervention measure, mark a check in the box. If the student does not complete it, mark an “x.” Follow the same when marking the “post-” box. For sessions 1-14, mark a “P” for present and an “A” for absent. Sum the Ps and divide by 14. Write attendance percentage in the % box.
Appendix G
T-Score Interpretation & Classification Categories

T-Score Interpretation
The T score is the primary score for interpretation on the BASC-3 Flex Monitor reports. T scores can be interpreted using the classification rules presented in Table 2.2. The interpretation labels are based on the selection made when creating the form that indicates the scoring direction. The ranges are based on the distance of the T-score range from the mean; scores within 1 SD are considered average, while scores 1 to 2 SDs away are considered at-risk, and scores 2 or more SDs away are considered clinically significant.

Table 2.2. T-Score Classification Categories

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<td>Clinically Significant</td>
<td>Very Low</td>
<td>30 and below</td>
</tr>
</tbody>
</table>

Appendix G. BASC-3 Flex Monitor: Manual (Reynolds & Kamphaus, 2016, p.14)