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Mindfulness and an Argument for Tier 1, Whole School Support

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Abstract

This article provides an argument for implementing mindfulness supports within a school that adheres to the principles of whole schooling. First, the authors synthesize the research related to the use of mindfulness-based activities in schools. Next, they provide an argument for implementing mindfulness supports within a school that adheres to the principles of whole schooling. They also discuss the implications of supporting students at the tier 1 level. Finally, they offer directions for future research.

Introduction

Children and adolescents experience stress that may result in anger, anxiety, depression, and externalizing behaviors (e.g., conduct disorder), as well as lowered self-esteem and self-confidence (Barnes et al., 2003; Mendelson et al., 2010). Research suggests that anxiety, depression, and low self-esteem can negatively influence students' school performance by disrupting thinking, which hinders learning (Barnes et al., 2003; Fisher, 2006; Mendelson et al., 2010). Because students spend much of their time in school, educators are in positions of influencing students' social, emotional, and behavioral development. Thus, interest in the use of mindfulness-based activities with students is growing and has led to innovative strategies for educators to consider and potentially use (Roeser, Skinner, Beers, & Jennings, 2012). Mindfulness is a way of paying attention that originated in Eastern meditation practices. It has been described as "bringing one's complete attention to the present experience on a moment-to-moment basis" (Marlatt & Kristeller, 1999, p. 68) and as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p. 4). The ability to direct one's attention in this way can be developed through the practice of meditation, which is defined as the intentional self-regulation of attention from moment to moment (Kabat-Zinn, 1994).

Understanding Mindfulness

Although there is not one agreed upon definition for mindfulness, it can be defined as the practice of "paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145). In short, mindfulness involves focusing one's attention (Rempel, 2012) and is believed to have originated some two and a half thousand years ago from the religious traditions of Buddhism (Tilahun & Vezzuto, 2014). Around the late 1970's, Jon Kabat-Zinn introduced mindfulness to Western cultures as a secular health practice (Burke & Hawkins, 2012). Kabat-Zinn is Professor of Medicine Emeritus and creator of the Stress Reduction Clinic and the Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School. Kabat-Zinn was a student of Buddhist teachers Thich Nhat Hanh and Zen Master Seung Sahn and a founding member of Cambridge Zen Center (Horstman, 2010). His practice of yoga and studies with Buddhist teachers led him to integrate their teachings with scientific findings (Burke & Hawkins, 2012). He created the stress reduction program, known as mindfulness-based stress reduction (MBSR), which is offered by medical centers, hospitals, and health maintenance organizations (Creswell, 2017) across the globe.

The primary elements of mindfulness practice include (a) focus on the breath, (b) tuning into events occurring within the body and mind, and (c) being a witness to one's own personal experience (Santorelli, 2014). Research shows that rhythmic breathing improves the autonomic nervous system, focuses the mind, and increases levels of self-awareness (Davidson et al., 2003; Salmon, Santorelli, & Kabat-Zinn, 1998). Essentially, mindfulness activities can teach an individual to become aware of moment-to-moment experiences.

Much of the research on mindfulness practices focuses on adult populations (Broderick & Frank, 2014). As a result, there is extensive evidence supporting the various physical and emotional health benefits for this population within the literature (e.g., Davidson et al., 2003; Shapiro, Brown, & Biegel, 2007; Van Aalderen et al., 2012). Only more recently have researchers begun to examine whether children and adolescents also can benefit from developmentally adapted mindfulness practices implemented in the school setting (Frank, Jennings, & Greenberg, 2013). Although research on mindfulness, especially with children and adolescents, is still in relatively early stages, an increasing number of studies have shown the potential benefits of mindfulness practices for students' physical health, psychological well-being, social skills, and academic performance (Biegel, Brown, Shapiro, & Schubert, 2009; Broderick & Metz, 2009; Flook, Smalley, Kitil, Galla, Kaiser-Greenland, Locke, & Kasari, 2010; Lawlor, Schonert-Reichl, Gadermann, & Zumbo, 2012; Napoli, Krech, & Holley, 2005; Oberle, Schonert-Reichl, Lawlor, & Thomson, 2012; Schonert-Reichl & Lawlor, 2010; Semple, Lee, Rosa, & Miller 2010; Tang, Yang, Leve, & Harold, 2012; Van der Oord, Bogels, & Peijnenburg, 2012; Zelazo & Lyons, 2012; Zenner, Herrnleben-Kurz, & Walach, 2014). Such benefits may lead to long-term improvements in the lives of students and, consequently, this area of research is worthy of additional review and scrutiny.

School-Based Mindfulness Research

Mindfulness-based interventions in children and youths hold promise, particularly in relation to improving cognitive performance and resilience to stress (Zenner, Herrnleben-Kurz, & Walach, 2014). Zenner, Herrnleben-Kurz, and Walach (2014) systematically reviewed the research evidence regarding the effects of school-based mindfulness interventions on student-participants' psychological outcomes and identified 24 studies throughout grades 1-12; 13 of which were published. Studies were selected if the following criteria were met: (a) interventions were mindfulness-based, (b) implementation took place in a school, (c) participants were students from grade 1 to 12, and (d) outcomes contained quantitative data. Nineteen of the 24 studies used a control-design, and five used a pre-post design. In total, 1348 students were instructed in mindfulness, with 876 serving as controls. Their review of the research suggests that mindfulness-based interventions for students are able to increase cognitive capacity of attending and learning by nearly one standard deviation and yield an overall effect size of $g = 0.40$. Authors also found that the effect was stronger in studies where home practice was implemented along with school practice.

A core area of development that underlies most behavior from childhood onwards, is executive functioning. Executive functions encompass a host of interrelated, yet somewhat independent, processes involved in planning and carrying out regulated, goal-directed activity (Garon, Bryson, & Smith, 2008; McCloskey, Perkins, & Van Diviner, 2008). Executive functions play a role in children's emerging academic abilities, above and beyond levels of general intelligence (Blair & Razza, 2007). Limited skills in this area are associated with cognitive deficits, poor socio-emotional adjustment, and poor academic functioning (Biederman et al., 2004; Blair, 2002), which may manifest as a lack of concentration, a lack of understanding of cause and effect, an inability to understand mental states, and/or impulsivity (Riggs, Jahromi, Razza,

Dillworth-Bart, & Mueller, 2006). Flook, et.al, (2010) considered executive functioning when they evaluated a school-based program of mindfulness awareness practices (MAPs) in a randomized control study of 64 second and third-grade children aged 7–9 years. The MAPs training used was a curriculum modeled after classical mindfulness training for adults that used exercises and games to promote (a) auditory, kinesthetic, tactile, gustatory and visual awareness, attentional regulation, and awareness of thoughts and feelings; (b) awareness of others (e.g., awareness of one's own body placement in relation to other people and awareness of other people's thoughts and feelings); and (c) awareness of the environment (e.g., awareness of relationships and connections between people, places, and things). Each class lesson contained three standard sequences that involved sitting meditation for three minutes, an activity to promote the particular lesson's learning objective (e.g., sensory awareness, attentional regulation, awareness of other people, or awareness of the environment), and a modified body scan or meditation for five minutes. The program was delivered for 30 minutes, twice per week, for 8 weeks. Students in the MAPs group who were less well-regulated showed greater improvement in executive function compared with controls. Specifically, those students starting out with poor executive function who went through the MAPs training showed gains in behavioral regulation, metacognition, and overall global executive control.

The Mindful Attention Awareness Scale (MAAS) was designed to assess a core characteristic of dispositional mindfulness, namely, open or receptive awareness of and attention to what is taking place in the present. Lawlor, Schonert-Reichl, Gadermann, & Zumbo (2012) administered a version of this scale that was adapted for children, the Mindful Attention Awareness Scale—Children (MAAS-C), to 286 fourth to seventh grade students. Results indicated that mindfulness, as assessed via the MAAS-C, was related to improvements in indicators of well-being across the domains of (a) traits and attributes, (b) emotional disturbance, (c) emotional wellbeing, and (d) eudaimonic wellbeing. Eudaimonic well-being is a perspective of mindfulness, which focuses on meaning and self-realization and defines well-being in terms of the degree to which a person is fully functioning (Ryan & Deci, 2001). A second perspective of mindfulness is the Hedonic approach which focuses on happiness and defines well-being in terms of pleasure attainment and pain avoidance (Ryan & Deci, 2001). These findings were in accord with those of previous research with the MAAS in adult populations.

Oberle, Schonert-Reichl, Lawlor, and Thomson (2012) contributed to understanding the predictors of executive function skills in early adolescents' cognitive development. Specifically, they identified mindfulness as a skill that can be fostered and trained in intervention programs to promote health and well-being as significantly related to inhibitory processes in early adolescence. The authors had 99 fourth and fifth-grade students complete a measure of mindful attention awareness (i.e., self-reported dispositional mindfulness) and a computerized executive function task assessing inhibitory control. Controlling for gender, age, and cortisol levels (cortisol plays a central role in the body's response to stress), they determined that higher scores on the mindfulness attention awareness measure significantly predicted greater accuracy (as measured by % correct responses) on the inhibitory control task. Furthermore, this research identified mindfulness—a skill that can be fostered and trained in intervention programs to promote health and well-being—as significantly related to inhibitory processes in early adolescence.

Semple, Lee, Rosa, and Miller (2010) found mindfulness-based cognitive therapy to be a promising intervention for attention and behavior problems which may also reduce childhood anxiety symptoms. They implemented a program of mindfulness-based cognitive therapy for children in a randomized controlled trial that included 25 boys and girls aged 9–13, who mostly self-identified as ethnic minorities from low-income, inner-city households. Participants who completed the program showed fewer attention problems than did controls and those improvements were maintained at three months following the intervention. A strong relationship was found between attention problems and behavior problems. Moreover, significant reductions in anxiety symptoms and behavior problems were found for those students who reported clinically elevated levels of anxiety at pretest.

Implementing Mindfulness Supports in a Whole School

Mental health professionals and educators are increasingly interested in supporting the development of the whole child. Educators who value the practice of whole schooling emphasize child-centered planning and teaching. Whole schooling is an approach to developing schools that strive for equity and excellence, and is based on a set of principles (Peterson, Tamor, Feen, & Silagy, 2002) that interfaces with mindfulness strategies, that can in turn, be taught to students. More specifically, whole schooling is supported by the following eight principles: (a) create learning spaces for all, (b) empower citizens for democracy, (c) include all in learning together, (d) build a caring community, (e) support learning, (f) partner with families and the community, (g) teach all using authentic, multi-level instruction, and (h)assess students to promote learning (Peterson, 2004). Likewise, mindfulness meditation and other mindfulness-based practices traditionally value the promotion of empathy, creativity, relationships, and compassion; the development of which can help students become empowered citizens.

In order for educators to use mindfulness activities in their classrooms, they need to be supported by administrators at the school-wide level, or universal (i.e., systemic) level. A three-tiered model for instruction and intervention is based on the principle that academic and behavioral supports are first provided at a school-wide or universal level to effectively address the needs of all students in a school (referred to as tier 1). However, not all students will respond to the same curricula and teaching strategies. As a result, some students with identified needs receive supplemental or targeted instruction and intervention at tier 2. Finally, at tier 3, a few students with the most severe needs receive intensive and individualized behavioral and/or academic support.

School-wide, or tier 1 supports, and mindfulness exercises are amenable to universal prevention programs because they focus on universal vulnerabilities in students rather than specific problems (Bögels, Hoogstad, van Dun, de Schutter, & Restifo, 2008). Thus, it is a strength-based intervention rather than one focused on pathology. Because a tier 1 mindfulness program would involve the whole school, it could result in less stigmatization than pulling students out for a tier 2, or secondary, intervention program. In addition, mindfulness instruction provided to all students could be a cost-effective method to deliver preventative, rather than remedial, supports (Farrell & Barrett, 2007).

Despite the utility of tier 1 programs, considerations must be made before broadly introducing and implementing large, systemic changes. Renshaw, Bolognino, Fletcher, and Long (2015) recommend identifying three aims before attempting to implement a school-wide or class-wide mindfulness based program: Identification of (a) the desired target group, (b) the type of problem to be addressed, and (c) the desired level of intervention delivery. By selecting a program based on specific aims, educators may decide either to use a comprehensive mindfulness-based curriculum or to incorporate individual mindfulness-based activities into existing school routines and practices. Farrell and Barrett (2007) reported on the use of a universal prevention program in preventing anxiety and depression in school-age children. Authors argued that universal programs present a positive approach to social-emotional learning and focus on enhancing the strengths of all children. Napoli et al. (2005) suggested implementing mindfulness training into the physical education curriculum to teach students, from the beginning of their school career, ways to manage stress and focus attention. Because many children and parents never seek clinical interventions for emotional disorders, providing universal prevention programs in schools is a way to reach this population. Given the high prevalence rates of anxiety, depression, and other disorders, prevention offers an attractive and cost-effective alternative to intervention (Renshaw, Bolognino, Fletcher, & Long, 2015).

A further benefit of a universal prevention program is that it is perhaps less threatening than a therapy session where there may be a need to explore traumatic or painful experiences. Instead, it is presented as a group intervention that may benefit everyone by helping them learn to manage life stressors and feel better about themselves (Coholic, Lougheed, & Lebreton, 2009). Finally, Mendelson et al. (2010) spoke to the positive benefits of a program that focuses on building capacity in children and youth, rather than focusing on symptomology or disorders. Indeed, in teaching mindfulness techniques to students, it is possible to implement the mindful practice of reflection at every level of the school system (i.e., the student, the classroom, and the school), thus educators may be able to collectively and systemically address this area of need.

Creating Learning Spaces for Mindfulness

Educators often begin the school year by organizing the classroom's physical space to create learning spaces for all students; mindfulness practices can help educators create these spaces. For instance, educators might to walk through the school and observe how the environment affects their mood. Designing a room with plants, art, and soft incandescent, rather than florescent lighting, may create a mindful space for students to relax. Simply by attuning to the needs of the students' space, educators are supporting mindfulness and supporting their students' practice (Schonert-Reichl, & Roeser, 2016). Further, an educator who is aware of mindfulness practice understands that they cannot directly or forcefully control student behaviors; rather, they can create and maintain learning spaces for all students by teaching them how to mitigate those behaviors. For example, kindergarten educators might find themselves frustrated because they have difficulty stopping students from running in the classroom, even after using repeated

prompts. Using mindfulness while assessing the learning space might show that there are natural "runways" in the classroom that could be structured in a manner to allow students to run and meet other physical activity needs on-demand**.**

Empowering Students for Democracy Using Mindfulness

Mindfulness can enhance a democratic way of being, by connecting practices of awareness, reflection, dialogue, and action to democratic citizenship and social arrangements (Hyde & LaPrad, 2015). Dewey (1896) seminally laid the foundation for the relationship of awareness, reflection, and action in everyday living by theorizing that education has two sides to it, a psychological and a social side, both of which should balance. Students should feel empowered to learn in their school buildings because a sense of empowerment in the early years is critical to feeling empowered as a citizen in later years (Koshewa, 1999). Unfortunately, in many schools that serve students from low-income homes, a culture of staff anger toward both students and parents is too often pervasive and contributes to problems in learning and developing effective relationships among staff, students, and families (Koshewa, 1999). Educators concerned with teaching students how to build relationships with compassion, how to support each other, or how to cope with trauma might include a social emotional learning curriculum such as DBT-Steps A ®, a social emotional learning curriculum designed for use at the tier 1 and tier 2 levels in schools (Mazza, Dexter-Mazza, Miller, Rathus, & Murphy, 2016) which incorporates mindfulness training with training in interpersonal effectiveness, distress tolerance, and emotional regulation. The mindfulness module within DBT Steps A can enhance students' democratic interactions via modules that teach skills for increasing self-awareness, becoming less judgmental, and gaining control of one's attention.

Include Everybody in Learning Mindfulness Techniques

The sense of community and social safety promoted in inclusive classes, particularly respect for diverse abilities, provides an emotional foundation that allows brain functioning at the highest levels, which in turn may prevent the downward shifts when fear and rejection are prevalent (Chapman & West-Burnham, 2010). This is particularly noteworthy in light of new federal statistics from the United States that reveal a growing number of students with disabilities are spending most of the day in regular education classrooms alongside their typically developing peers. As of 2013, more than 6 in 10 school-age students served under the Individuals with Disabilities Education Act spent at least 80 percent of their day in regular classrooms (U.S. Department of Education, 2015). By contrast, roughly half of students with disabilities met that threshold in 2004 (U. S. Department of Education, 2015). Thus, the stage has been set for educators to expand the scope of their practices in a way that meets the social and emotional needs of all students.

One example of an activity that can be easily integrated into an inclusive classroom is the Body Scan (Tilahun & Vezzuto, 2014). To use this technique, the educator instructs students to lie on a comfortable surface and close their eyes. Next, students are instructed to squeeze every single muscle in their body as tight as they can. They are told to squish their toes and feet, squeeze their hands into fists, and make their

legs and arms as hard as stone. After a few seconds, students are encouraged to release all their muscles and relax for a few minutes. This stress-reducing process is coupled with the educator encouraging all students to think about how their bodies feel throughout the activity, which further promotes self-monitoring and development of coping skills.

For high levels of learning to occur for all students, developing inclusive classrooms is necessary, not optional. The literature is clear that for students with and without disabilities, integrated and inclusive classes are associated with higher levels of academic achievement (Carter, et al., 2015; Lawrence-Brown, 2004; Ruijs & Peetsma, 2009). As noted by Orfield and Gordon (2001), for students to become effective leaders in a multi-cultural society, schooling must provide opportunities to engage students with diverse racial, ethnic, and ability characteristics. Hence the importance of teaching students together in a common classroom to the maximum extent appropriate, to support student growth and development.

Schools that incorporate whole schooling principles provide caring supports to diverse students. When students engage in behaviors that are challenging, educators in these settings can find positive ways to meet their needs. One method of accomplishing this is via use of a technique known as "loving kindness meditation", which focuses learners on developing feelings of goodwill, kindness, and warmth toward others (Germer, Siegel, & Fulton, 2013). This form of meditation may be the most effective mindfulness-based intervention for increasing compassion among students (Boellinghaus, Jones, & Hutton, 2014). Moreover, Klimecki, Leiberg, Lamm, and Singer (2012) found that loving kindness meditation training increased participants' empathic responses to others' distress and increased positive affective experiences, even in response to witnessing others in distress.

Support Students When They Experience Difficulty Learning

Students and educators need to be supported and the concept of whole schooling emphasizes use of special education resources and supports in a collaborative model so that general and special educators can work together to provide supports to all students. For example, transitions are often difficult for students with special education needs. Recognizing this, a general education teacher could introduce an upcoming activity by sharing a personal story related to that new topic. Then she might ring a chime and ask students to notice what their minds do with the sound. Next, with eyes closed, students are directed to focus on their posture. The teacher may ask them to sit in "seated mountain pose" to add dignity and strength. She may also remind them to think about what their postures "say" to themselves, as well as what their posture says to the world. The teacher knows that attention to breath, to how different parts of their bodies feel, how their feet connect to the floor, their seats to their chairs, all connect with their abilities to develop attention control. Students who have trouble focusing may need direct supports like these to bring them into the present moment. Once students have quieted, the teacher might introduce a transitional activity and ring the chime once more to indicate the start of the transition.

Conclusion

Students should have one goal to accomplish after entering the classroom each day, and that is to learn. Unfortunately, school can be a stressful place and student thoughts may quickly become clouded with emotion, which makes learning difficult. There is evidence related to the positive use of mindfulness-based activities in schools, and mindfulness supports can naturally be provided within a school that adheres to the principles of whole schooling. Further, these supports can be provided to all students at the tier 1 level. While the research in this area continues to grow, there is a need for well designed, methodologically sound research to guide educators and administrators in integrating mindfulness-based practices into schools. Support for mindfulness training is increasing; however, larger randomized control trials are necessary to provide greater empirical support.

Future research should consider curricula that provide a meaningful set of skills for emotional management, relationship building, and decision making that students could acquire and apply to navigate the emotionally difficult situations and stressors that accompany childhood and adolescent development. An important question to explore is how the amount of time spent in mindfulness practice affects outcomes. Likewise, another question surrounds the identification of conditions that are most conducive to optimizing the effects of mindfulness training in schools. Students deserve to experience life positively, and educators should provide them with the skills to manage challenging situations. Mindfulness may be one way to provide this.

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