

SCHOOL-BASED MINDFULNESS INTERVENTIONS

WHAT IS MINDFULNESS?

Although there is no one agreed upon definition for mindfulness, it is often 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, it involves focusing one’s attention (Rempel, 2012). Mindfulness is said 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). Since then, mindfulness has become a very popular practice due to its various mental and physical health benefits (Meiklejohn et al., 2012).

Mindfulness is considered one of many contemplative practices. Youth-focused contemplative practices that have been shown to be effective include yoga, meditation, Tai Chi, breathing exercises, and body scan (Rempel, 2012). Two of the more commonly recognized interventions include mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) (Rempel, 2012). MBSR focuses on “mindful eating, body scan, sitting meditation, Hatha Yoga, walking meditation, and mindfulness in everyday living” (Baer & Krietemeyer, 2006 as cited in Rempel, 2012, p. 205). MBCT, on the other hand, focuses on handling negative or depressing thoughts by teaching participants to notice their thoughts and feelings in a non-judgmental way (Rempel, 2012). However, Renshaw, Bolognino, Fletcher, and Long (2015) argue that mindfulness is only truly practiced when its three components—mindful awareness, mindful responsivity, and mindful effort—are integrated and used together so that the full spectrum of positive effects can be experienced.

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MINDFULNESS IN THE SCHOOLS

Originally, much of the research on mindfulness practices focused on adult populations (Broderick & Frank, 2014). As a result, there is extensive evidence supporting the various 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).

THE PROMISE OF SCHOOL-BASED MINDFULNESS INTERVENTIONS

Mindfulness programs in schools have taken varied forms, but have generally provided promising results (See Table 1 below).

Mental Health

In terms of mental health outcomes, mindfulness programs often have been associated with decreases in stress levels (Bluth et al., 2015; Costello & Lawler, 2014; Edwards, Adams, Waldo, Hadfield, & Biegel, 2014; Kuyken et al., 2013; Sibinga et al., 2013), rumination, intrusive thoughts, emotional arousal (Mendelson et al., 2010; Sibinga et al., 2013), and depression symptoms (Bluth et al., 2015; Edwards et al., 2014; Kuyken et al., 2013; Lau & Hue, 2011), along with increases in emotional well-being (Viafora, Mathiesen, & Unsworth, 2014) and self-compassion (Edwards et al., 2014) among participants.

Behavior & Physical Health

Benefits also have been shown to extend to behavior and physical health. Some commonly reported outcomes include: increased on-task behavior, (Carboni, Roach & Fredrick, 2013; Felver, Frank, & McEachern, 2014), healthy responses to stress (Mendelson et al., 2010) and prosocial behavior (Schonert-Reichl et al., 2015), as well as less negative coping, lower cortisol levels (Sibinga et al., 2013) and lower self-harm (Britton et al., 2014).

Academic

Finally, research on practicing mindfulness in schools also has suggested improvements in cognitive performance (Zenner, Herrnleben-Kurz, & Walach, 2014), school self-concept (Schonert-Reichel et al., 2015), and engagement (Felver et al., 2014).

PRACTICAL SUGGESTIONS FOR SCHOOLS

PLANNING

Renshaw et al. (2015) recommend identifying three aims before attempting to implement a school-wide or class-wide mindfulness-based program: (1) the desired target group, (2) the type of problem to be addressed, and (3) the desired level of intervention delivery.

Selecting a Program

Based on one's specific aims, teachers and administrators may decide either to use a comprehensive mindfulness-based curriculum or to incorporate individual mindfulness-based activities into existing school routines and practices.

Examples of Mindfulness-Based Curricula:

- *A Still Quiet Place* curriculum (Saltzman, 2014): www.mindfuleducation.org
- *.b [dot-be]* and *Paws b* curricula (Mindfulness in Schools Project, 2015): <http://mindfulnessinschools.org/>
- *Learning to Breathe* curriculum (Broderick, 2013): <http://learning2breathe.org>
- *Mindful Schools* curriculum (Mindful Schools, 2010): <http://www.mindfulschools.org/>
- *MindUP* curriculum (Hawn Foundation, 2011): www.thehawnfoundation.org

For a table of mindfulness-based programs and their corresponding research findings, see Table 1 in Meiklejohn et al. (2012), available at: http://www.mindfulnessinstitute.ca/Portals/15/pdf/Integrating_Mindfulness_Training_Into_K-12_Education.pdf

Examples of Other Activities:

- *Building Everyday Resilience: A Practical Handbook on Mindfulness Adapted for Primary School Teachers* (Peacock, 2015): starts on page 69; includes 30 activities - http://dr.library.brocku.ca/bitstream/handle/10464/5862/Brock_Peacock_Jennifer_2014.pdf?sequence=1
- *Classroom Yoga Activities for Elementary and Middle School Children* (Radiant Child Yoga, 2015): <http://childrensyoga.com/wp-content/uploads/2012/04/Classroom-yoga.pdf>
- *The Stress Reduction Workbook for Teens* (Biegel, 2009)

IMPLEMENTATION

Lawlor (2014) recommends the following considerations for implementing mindfulness programs in schools: (a) start from the roots up (i.e., teach mindfulness to teachers), (b) ensure high fidelity in implementation, and (c) continuously monitor the effectiveness of the implemented program(s). Schools considering implementing mindfulness programming should consider how it can be aligned with a multi-tiered system of behavioral support. For example, at Tier 1, could mindfulness strategies or curricula be incorporated into universal supports at the school and classroom levels? At Tier 2, could small groups of students experiencing similar mental health issues benefit from more targeted mindfulness approaches? At Tier 3, could MBSR or other individualized approaches be used for students experiencing significant mental health issues not response to other tiers? These types of questions may be helpful for school-based teams to consider.

TABLE 1: SAMPLE EMPIRICAL STUDIES

Author (Year)	Sample	Intervention	Results	Conclusions
Black & Fernando (2014)	409 children in kindergarten through sixth grade from Richmond, CA public elementary school	5-week mindfulness-based curriculum	They found improvements in student behavior (as reported by 17 teachers) that lasted up to 7 weeks after intervention.	They suggest that such programs may be useful in altering teacher perceptions of student behavior.
Bluth et al. (2015)	27 ethnically diverse at-risk adolescents	Weekly 50-minute semester-long 'Learning to BREATHE,' (intervention) program and substance abuse class (control)	They found that those in the mindfulness group reported decreases in depression and stress, increases in perceived credibility of the program, and a desire to continue the program.	They concluded flexibility and responsiveness are essential for implementing these programs in such populations successfully.

TABLE 1 CONTINUED

Britton et al. (2014)	10 sixth grade students	Mindfulness meditation program (intervention group) and an interactive African history course (control)	They found that the intervention group reported significantly lower self-harm and suicidal ideation but that both groups reported decreased ratings on clinical syndromes.	They concluded that mindfulness may offer its own specific benefits, as well as general improvements
Carboni, Roach & Fredrick (2013)	4 eight-year old boys with attention-deficit/hyperactivity disorder	Multisession mindfulness intervention	They found that subjects showed improved on-task behavior in the classroom, but no significant changes in hyperactive behaviors (although ratings on the Behavior Assessment System for Children, 2 nd Edition by parents and teachers usually showed a decrease).	They concluded that mindfulness interventions may improve on-task behavior, but that lengthier interventions may be necessary for long-term changes in behavior.
Costello & Lawler (2014)	63 primary school children	5-week school-based mindfulness program	They found five common themes in their qualitative interviews and significant decreases in their quantitative measures of child-reported stress levels after the intervention.	They concluded that mindfulness programs in schools have potential to help students deal with stress.
Edwards, Adams, Waldo, Hadfield & Biegel (2014)	20 Latino middle school students	8 group sessions of 'Mindfulness-Based Stress Reduction for Teens' curriculum	They found reductions depression and stress levels, as well as improvements in subjects' self-compassion and mindfulness.	They concluded that the program was beneficial for Latino adolescents.
Felver, Frank & McEachern (2014)	3 elementary school children with high rates of off-task behavior	5-session mindfulness intervention program, 'Soles of the Feet'	They found that the program reduced off-task behavior and increased engagement.	They concluded that this program is a short, cost-effective option for helping students who are displaying disruptive behavior.
Flook, Goldberg, Pinger & Davidson (2015)	68 preschoolers from a public school	12-week mindfulness-based 'Kindness Curriculum'	They found increases in social competence and grades on "learning, health, and social-emotional development" (p. 44).	They concluded that the program could be useful in establishing prosocial behavior and self-regulation in this age group.
Gould, Dariotis, Mendelson & Greenberg (2012)	97 fourth and fifth grade students from four urban public schools	12-week yoga-inspired mindfulness program	They found that intervention outcomes were not affected by gender or grade level, but that baseline depression symptoms did affect reported outcomes.	They conclude that more studies are needed to examine the possible moderating factors in these programs.
Kuyken et al. (2013)	522 students, ages 12-16, from 12 secondary schools	Mindfulness in Schools Program (intervention group)	They found high acceptability of the program, less symptoms of depression, lower stress levels, and improved well-being for the students in the mindfulness program.	They concluded that the program is effective and welcomed.
Lau & Hue (2011)	48 adolescents, ages 14-16, with poor academic performance	6-week mindfulness-based programs in two secondary schools in Hong Kong	They found that one element of well-being significantly improved among subjects and that depression symptoms declined.	They concluded that this program was helpful for adolescents and that larger and longer studies should be conducted on it.
Mendelson et al. (2010)	97 fourth and fifth grade students from four urban public schools	12-week school-based mindfulness and yoga intervention	They found that the intervention was feasible and generally well-accepted. They also found that rumination, intrusive thoughts, and emotional arousal decreased significantly after the intervention.	They concluded that this intervention is feasible for and welcomed by urban schools, as well as capable of improving youth responses to stress.
Metz et al. (2013)	216 public high school students	Mindfulness-based program, 'Learning to BREATHE'	They found decreased stress and psychosomatic complaints, as well as increased emotion regulation ability in students that participated in the mindfulness program.	They concluded that this specific program may be useful in helping students cultivate social and emotional skills.

TABLE 1 CONTINUED

Raes, Griffith, Van Der Gucht, & Williams (2014)	408 students, ages 13-20, from five schools and 24 classrooms	Mindfulness program (intervention group)	They found significantly lower levels of depression after six months in the intervention group.	They concluded that adolescent depression can be addressed through mindfulness programs in schools.
Schonert-Reichl et al. (2015)	99 fourth and fifth grade students from four elementary school classes	Mindfulness-based social and emotional learning program	They found better cognitive control and stress physiology, increased "empathy, perspective-taking, emotional control, optimism, school self-concept...mindfulness," prosocial behavior and peer acceptance, as well as decreased depression and aggression (p.52).	They concluded that the social and emotional learning program has the potential to eliminate problems and promote well-being.
Sibinga et al. (2013)	41 seventh and eighth grade students from an urban school for low-income boys	12-session program on mindfulness-based stress reduction (intervention) or on health education (control)	They found that those in the mindfulness-based program showed significantly less anxiety and rumination, as well as trends for less negative coping and lower cortisol levels than the health education group.	They concluded that this mindfulness program has the potential to improve psychological outcomes for this population.
Van de Weijer-Bergsma, Langenberg, Brandsma, Oort & Bögels (2014)	199 (95 intervention; 104 wait-list) elementary school children, ages 8-12, from three schools	6-week class-based mindfulness program, 'MindfulKids'	They found "primary prevention effects on stress and well-being," as well as on mental health (p. 238).	They concluded that MindfulKids is appropriate elementary school classes.
Viafora, Mathiesen & Unsworth (2014)	28 traditional middle school students, 15 homeless middle school students, and 20 wait-listed students	8-week mindfulness course	They found that traditional students' awareness and acceptance improved significantly and that homeless students experienced significant improvements in emotional well-being and increases in their use of mindfulness techniques both in and out of school.	They concluded that mindfulness is a promising tool for teenagers and suggest further study in this area, as well as on instructor effectiveness.
Zenner, Herrleben-Kurz, & Walach (2014)	1348 students (876 as controls) from 1 st to 12 th grade	Meta-analysis on 24 studies	They found that mindfulness training may be very helpful in promoting youth resilience and cognitive performance.	They concluded that larger studies with active controls should be conducted to provide more supporting evidence.

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