

Decreasing Classroom Disruptions Through The Use of
Emotional Regulation Small Groups Infused With Mindfulness-Based Practices

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Abstract

This study examines the effectiveness of infusing mindfulness-based practices with emotional regulation skills training small group to reduce classroom disruptions in first graders. Six first-grade students were identified by their classroom teachers as having difficulties regulating their emotions and disrupting classroom instruction. The children participated in a twice weekly, four week long, 30 minute small group which taught mindfulness-based yoga practices and emotional regulation skills. Teachers of the participants were given pretests and posttests to evaluate the student's' emotional regulation skills and frequency of classroom disruptions. Results from the study show this type of intervention may be effective at reducing classroom disruptions and increasing emotional regulation in first grader students, however due to a small sample size, more studies are needed.

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Numerous studies have shown the social, emotional, and academic benefits associated with high levels of emotional regulation in children (Sprung, Münch, Ebesutani, & Hofmann, 2015). Likewise, children who do not develop the ability to regulate their emotions are at an increased risk of failing school and developing physical and mental health problems later in life (Bergen-Cico, Razza, & Timmins, 2015; Langevin et al., 2015; Razza, Bergen-Cico, & Raymond, 2015). New research is emerging to support the effectiveness of mindfulness-based practices such as yoga and meditation at increasing emotional regulation (Hagen, & Nayar, 2014; Razza, Bergen-Cico, & Raymond, 2015). The current study focuses on the effectiveness of emotional regulation curriculum paired with mindfulness-based practices to decrease classroom disruption in first grade students. Implications for integrating mindfulness-based curriculum into emotional regulation small groups are discussed with recommendations for future research.

Literature Review

Emotional regulation according to Thompson (1994) is defined as “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (as cited in Langevin, Hébert, & Cossette, 2015, p. 2). A child’s ability to monitor, evaluate and modify their emotional reactions in relation to the world around them is crucial to healthy development and has a significantly positive impact on their later health, education and well-being (Langevin et al., 2015; Sawyer et al., 2015).

In a study by Langevin et al., competency in emotional regulation for school-age children was defined as emotional self-awareness, empathy, appropriate emotional expression, and positive engagement with others (2015). Langevin et al. found that competence in emotional regulation mediated internalized and externalized behavior problems due to child sexual abuse (2015). Individuals without the ability to regulate their emotions were found to be at an increased risk for dropping out of school and juvenile delinquency, as well as developing physical health problems, attention deficit hyperactivity disorder (ADHD), conduct disorder, addiction/substance abuse, depression, and anxiety disorders (Bergen-Cico, Razza, & Timmins, 2015; Langevin et al., 2015; Razza, Bergen-Cico, & Raymond, 2015). “Promoting the optimal development of [emotional regulation] could prevent the emergence and exacerbation of behavior problems in these at-risk children and, in turn, foster resilience” (Langevin et al., 2015). Emotional regulation training as a way to promote resiliency is especially important because children who have experienced trauma early in life are the least likely to develop emotional regulation skills on their own (Flouri, Midouhas, & Joshi, 2014; Sawyer et al., 2015).

In addition to behavior problems, deficits in emotional regulation during the early years of childhood have also been linked to decreased academic success and school failure (Razza, Bergen-Cico, & Raymond, 2015; Sawyer et al., 2015). “Self-regulation is considered a critical component of school readiness, as these skills facilitate peer acceptance and social success, as well as academic performance in early elementary school” (Razza, Bergen-Cico, & Raymond, 2015, p. 372). Research shows that children who were able to calm their frustration during a difficult task at 6 years of age, had higher school grades at 10 years of age (Sawyer et al., 2015). In another study, researchers found that improvements in emotional regulation in 2-3 year olds

were positively correlated with increased literacy at 6-7 years (Sawyer et al., 2015). This evidence suggests the improvements in emotional regulation early in life may allow children to learn more effectively, and be better equipped for formal education settings (Sawyer et al., 2015).

A meta-analysis of emotional regulation training programs suggests that regardless of children's background or clinical status, training on the recognition of emotions and understanding the external causes of emotions is an effective protective factor and the benefits are enduring (Sprung, Münch, Ebesutani, & Hofmann, 2015). Given that various beneficial outcomes (e.g. increased academic performance, better social skills and fewer psychological problems) have been linked to emotional regulation and increased emotional understanding, the results of the meta-analysis underscore the feasibility of emotional regulation training as a preventive intervention (Sprung et al., 2015)

An intervention which has received growing attention for enhancing emotional regulation skills are mindfulness-based practices, such as yoga and meditation (Razza, Bergen-Cico, & Raymond, 2015). Bergen-Cico, Razza, and Timmins (2015) write:

It has been proposed that the cultivation of mindfulness promotes balanced self-regulation, which enables the psychological flexibility and self-understanding that are essential to psychological dimensions of wellbeing. Indeed, mindfulness is characterized by attentive awareness that is conceptually grounded in self-regulation theory and therefore the two constructs are interrelated. (p. 3448)

A meta-analysis of research suggests that in addition to improving emotional regulation, yoga and mindfulness-based practices may also alleviate stress, improve concentration, increase

self-confidence, and help regulate the sympathetic nervous system and the hypothalamic-pituitary-adrenal (HPA) axis (Hagen, & Nayar, 2014). The sympathetic nervous system and HPA are responsible for the fight or flight response and can be triggered when there is a sensory overload (Hagen, & Nayar, 2014). Yoga calms the heart rate which then activates the parasympathetic nervous system, signaling to the brain that the individual is safe and ready to learn (Hagen, & Nayar, 2014).

Given these benefits, educators and researchers alike are interested in developing and implementing effective school-based prevention programs, particularly in the early elementary years, to foster resilience and well-being in the face of everyday adversity (Bergen-Cico, Razza, & Timmins, 2015, p. 3448). In a study conducted by Harvard professor Sat Bir Khalsa, yoga with high schoolers helped students improve emotional regulation, mood and resilience pertaining to emotions and stress (Hagen, & Nayar, 2014). A research study on the effects of mindful yoga on middle schoolers, found significant increases in both long-term and global emotional regulation compared to the control sample (Bergen-Cico, Razza, & Timmins, 2015). In a study on preschool students, researchers found mindfulness-based yoga interventions to be effective at promoting emotional regulation; the same study also found that preschool children who were most at risk of emotional regulation deficits benefited the most from the intervention (Razza, Bergen-Cico, & Raymond, 2015).

There have been numerous research studies supporting the positive benefits of emotional regulation in children (Sprung, Münch, Ebesutani, & Hofmann, 2015) and new research emerging to support the effectiveness of mindfulness-based practices at increasing emotional regulation (Hagen, & Nayar, 2014; Razza, Bergen-Cico, & Raymond, 2015). However, very

little research has been done which investigates the relationship between emotional regulation in individual students and the classroom environment, specifically classroom disruptions.

Classroom disruptions have a rippling effect which not only impacts the individual but the entire school community (Friberg, Huzinec, & Templeton, 2009). “Classroom disruptions steal valuable teaching and learning time, which has direct implications for academic and student performance” (Friberg, Huzinec, & Templeton, 2009). Meaning that students who lack the skills to regulate their emotions, might also be putting their classmates at risk of academic failure.

Friberg, Huzinec, and Templeton (2009) go on to say:

Disruptive student behaviors have implications beyond the learning environment; they can inhibit how and what the teachers feel they can teach. Student behavior can also frame the degree of latitude in what teachers are willing to teach. Teachers are reluctant to incorporate active learning methods when student behavior becomes an interceding factor. Alternatively, when students are self-disciplined, they are able to work in less controlled settings, enabling teachers to use more complex instruction that includes cooperative learning, interactive centers, and research projects. (p. 64)

The current study hopes that by increasing emotional regulation skills through the incorporation of mindfulness-based practices, in the students with the highest number of classroom disruptions, not only with the participant's benefit but the decrease of classroom disruptions will improve the classroom environment as well.

Method

Participants

The participants were six students (five girls and one boy) from three first grade classrooms within the same public elementary school in Portland, OR. The school served students living in a high poverty, low socioeconomic area and 100% of the students attending the school received free lunch. Of the participants, half identified as white, two identified as American Indian, and one identified as African American. The mean age of the participants during the study was 6 years and 9 months. Two participants were identified as title 10/homeless and one was receiving special education services for a communication disorder.

The participants were selected by their teachers as needing additional support with reducing classroom disruptions. Once the teachers made their recommendations, the school counselor then contacted the parent(s)/guardian(s) of each child to explain the study and ask if they would be interested in their child participating. The response rate was 100% positive, and consent forms with additional information were sent home to each family. Unfortunately only four consent forms (66%) were returned. Of the two participants for whom consent forms were not received, one dropped out of the group after the second session and the other decided to participate throughout the entire small group with verbal permission from their guardian, although no data could be collected.

Measures

Teachers were asked to evaluate participants' classroom disruptions and emotional regulation skills utilizing a pretest/posttest design. Teachers rated students by selecting one of the following for each question: never; once a month or less; multiple times a month; multiple times a week; multiple times a day. For classroom disruptions, participants were rated on the following categories: makes screaming sounds in classroom; talks to classmates during teaching; argumentative with teacher; initiates quarrels with other students; leaves class without permission; walks around room during instruction; deliberately destroys materials; ignores directions from teacher; steals items from teacher or classmate; blames others for his/her behavior. For emotional regulation, participants were rated on the following areas: expresses basic emotions (happy, mad, sad); utilizes effective strategies when experiencing unpleasant emotions; adjusts behavior to match context; reacts appropriately to the emotions of others; displays appropriate classroom behavior 80% of the time. Pretests were given the day before the group started, and posttests were given four days after the group had ended.

Materials and Procedure

The small group consisted of eight 30 minute sessions over the course of four weeks. Because of space limitations, the group was held in a corner of the school gym while the gym was not in use. Each session began and ended with five minutes of yoga from the book *Yoga Calm for Children: Educating Heart, Mind and Body* (Gillen, & Gillen, 2007). Yoga Calm for Children was selected because it offers safe and easy to do mindfulness-based practices (Gillen, & Gillen, 2007). The group practiced different combinations of yoga poses each session, these poses included: pulse count, tree circle, star pose, volcano breath, activate/relax walk, twist, leg

extensions/foot circles, boat, plank, child's pose, rock and roll, mat twist, downward dog, and roots (Gillen, & Gillen, 2007).

For the 20 minutes in the middle of each group, the students did activities out of *the Zones of Regulation: A Curriculum Designed to Foster Self-Regulation and Emotional Control* (Kuypers, 2011). The Zones of Regulation is a curriculum designed to help students recognize and communicate how they are feeling by categorizing emotions into four neutral zones (red, yellow, green, and blue) (Kuypers, 2011). A large poster of the Zones of Regulation was created to help the group become familiar with the concept of the Zones and the feelings associated with each color (Kuypers, 2011). For our first session we created group rules, introduced the concept of the Zones and had the students act out each zone as a way to become familiar with the material. In the second session, students played Zones Bingo in order to deepen their understanding of the Zones while practicing recognizing facial expressions, and increasing their vocabulary of emotions. For the third and fourth sessions, students were given Me in My Zones activity workbooks and asked to draw a time when they were in each of the four zones. The purpose of this activity was to increase the participants awareness of how they look and feel in each zone, and to provide the students with concrete examples from their own lives. The fifth session comprised of a guided meditation titled "Train Your Anger Dragon Relaxation Script" (Jazwierski, 2015). After listening to the guided meditation with their eyes closed, participants were given the opportunity to discuss their experience. In the sixth session, participants discussed situations that moved them from the green zone (calm and focused) to the yellow zone (activated) or red zone (activated with loss of control) in order to build awareness around triggers and learn to avoid and/or cope with them. For the seventh session, participants reviewed healthy

coping skills that they can engage in to self-regulate. The eighth and final session gave students a chance to review and reflect on what they had learned and finish up their workbooks. After the conclusion of the small group, a copy of each workbook was given to the student's teachers for reference and the laminated originals were given to the participants to take home.

Results

Of the six students recruited for the study, one dropped out of the group and one was not included in the data sample because of a lack of written consent from the parent, leaving a sample size of four participants. In this pretest/posttest design, each participant was rated by their classroom teacher on the frequency of classroom disruptions and emotional regulation behaviors. The following quantitative values were assigned to the data: 1=never; 2=once a month or less; 3=multiple times a month; 4=multiple times a week; and 5=multiple times a day. The averages of the participants' pretest and posttest data was then compared (see Tables 1 and 2).

Table 1 *Descriptive statistics for classroom disruption variables*

Classroom Disruptions	Pretest Average Score	Posttest Average Score	Changes in Group Average
Makes screaming sounds in classroom	1.5	1.5	0
Talks to classmates during teaching	4.75	3.75	-1.0
Argumentative with teacher	2.5	2.5	0
Initiates quarrels with other students	2.5	2.25	-.25
Leaves class without permission	1.5	1.25	-.25
Walks around room during instruction	2.75	2.75	0
Deliberately destroys materials	1	1	0
Ignores directions from teacher	2.75	2	-.75
Steals items from teacher or classmate	1.25	1	-.25

Blames others for his/her behavior	3.25	3	-.25
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Table 2 *Descriptive statistics for emotional regulation variables*

Emotional Regulation	Pretest Average Score	Posttest Average Score	Changes in Group Average
Expresses basic emotions (Happy, mad, sad)	4.25	4.25	0
Utilizes effective strategies when experience unpleasant emotions	2.75	3.25	.50
Adjusts behavior to match context	3	3.5	.50
Reacts appropriately to the emotions of others	3.25	3.5	.25
Displays appropriate classroom behaviours 80% of the time	3.5	4	.50

Results from the pretest and posttest show on average a decrease in classroom disruption and an increase in emotional regulation for participants of the small group. The strongest results showed a decrease in talking to classmates during instruction and a decrease in ignoring directions from teachers after completing the intervention. There was also a post-intervention moderate increase in utilizing effective strategies when experiencing unpleasant emotions, an increase in adjusting behavior to match the context, and an increase in displaying appropriate classroom behavior. For five of the fifteen variables, no changes in behavior were observed.

Discussion

The current study examined the feasibility and effectiveness of using an emotional regulation small group infused with mindfulness-based practices to decrease classroom

disruptions in first grade students. Based on the evaluations of classroom teachers, the results of the study suggest that this type of intervention may be effective at increasing emotional regulation and decreasing classroom disruptions in young elementary school students, particularly those who have been identified by their teachers as the most in need of developing emotional regulation skills.

While the results on the current study are promising and add to a growing body of research on the positive benefits of emotional regulation and mindfulness-based practices, there are several limitations to this study. The first and most obvious limitation is the small sample size. Having only collected and analyzed data on four participants, the study had limited power and therefore more research using this intervention must be done before drawing statistically significant conclusions. Secondly, the quasi-experimental design, means that students were not randomly assigned the intervention and there was no control group, meaning the results of the study may be due to an unknown extraneous variable. In the future, it is encouraged that students would be randomly assigned to either an intervention group or a control group. Thirdly, the subjective measure with which teachers rated the participants decreases the internal validity of the study. Because the teachers knew which students were in the intervention they may have expected their behavior to improve and therefore an expectation bias may have skewed the results. In future replications of this study it is recommended that data be collected from multiple sources, including direct observations. Finally, the lack of longitudinal data means that one cannot be sure if the intervention has any lasting effects. Ideally, future studies would evaluate participants every couple of months to determine the long term effects of small group interventions. Despite the limitations of this study, the potential benefits of such interventions

vastly outweigh the costs. The growing body of research which associates increased emotional regulation with greater health, education and well-being, means that studies such as the current one should be a top priority in the field of educational research.

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