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**Self-Regulation of Stress in the Context of Emotional and Behavioral Disorders in
Middle and High School Students**

by

Margo Johnson

A Starred Paper

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Chapter 1: Introduction

Self-regulation is a series of abilities, dispositions, and personal understandings that allows one to respond in an adaptive manner to environmental stimuli that could generate maladaptive behaviors (Hall & Fong, 2007). The ability to self-regulate results from the balanced interplay of cognition, affect, and executive function. Disruption in any one of these areas may interfere with an individual's ability to self-regulate.

Maladaptive behavior in students identified as having emotional or behavior disorders (EBD) may result from cognitive, affective, or executive factors. Students with EBD often have comorbid academic and cognitive difficulties (U.S. Department of Education, 2017). These deficits may cause maladaptive behaviors to accelerate rapidly and slow the process of behavioral de-escalation. Self-regulation strategies have been acknowledged as a means for preventing maladaptive behavior in the population with EBD.

Historical Background and Context

Self-regulation was first investigated during the early 1900s (Osher et al., 2016). The seminal studies were completed in clinical environments. The early work drew upon research in medicine, in anthropology, in sociology, and in psychology. Adults were often the participants in the studies.

With the introduction of cognitive psychology during the 1980s, self-regulation moved from the hospital and the laboratory. Researchers (Osher et al., 2016) learned that children and adolescents have general metacognitive skills, and the idea that metacognition could affect behavior led to attempts to use self-regulation strategies with children. Studies focusing on

emotion regulation in adolescents have steadily increased over the past decade and the different outcomes it has on them during the vulnerable time of adolescence (Daly et al., 2015)

Statement of the Problem

Since the 1990s, the self-regulation of stress in students has been widely investigated (Osher et al., 2016); however, the identification and the implementation of strategies that target students with emotional and behavioral disorders is less understood. Specifically, studies that address how these students express stress, internalize and externalize the symptoms of stress, and how deficits in self-regulation manifest maladaptive behaviors need to be analyzed and synthesized.

Techniques for self-regulating stress vary depending on an array of factors, and as a high school special education teacher, understanding these factors and the techniques that will be the most effective based on the student's needs is imperative. Students with EBD demonstrate distress in different ways. The behavioral continuum includes being out of control, panic attacks, and shutting down. Techniques for self-regulation depend on how individual students demonstrate their dysregulation.

Despite the differences in causal agents and in the manifestations of maladaptive behavior, a set of competencies associated with self-regulation in general have been identified. The Collaborative for Academic, Social, and Emotional Learning (CASEL; 2015) identifies self-awareness, self-management, social awareness, relationship skills, and responsible decision making as the principal elements of self-regulation. Strategies that include all or some of these elements will be included in the review.

In addition to understanding how stress factors may influence or produce maladaptive behaviors, the source and functions of stress among students with emotional and behavioral disorders needs to be examined. Students with emotional behavioral disorders need to be able to generalize the skill of self-regulating stress in across different environments to be successful. This paper examined the most effective interventions for self-regulating stress in adolescent students with EBD.

Three issues guided the review. First, psychological models of self-regulation are examined. Second, techniques for developing self-regulation are compared and contrasted. Finally, classroom-based strategies for improving the self-regulation skills of students who have emotional and behavioral disorders are analyzed.

Rationale

Personal Goals and Outcomes. This is my third year of teaching special education, and of my teaching experience has been at a K-12 federal setting IV program. I have a dual license in Emotional and Behavioral Disorder (EBD) and Academic Behavioral Strategist (ABS). All our students in our setting fall under the category of Autism Spectrum Disorder (ASD) or Emotional Behavioral Disorder (EBD) and have significant behavior needs. Social emotional learning (SEL) is a focus that we have within our program. Although I have only been teaching social emotional learning in a school for two and a half years, I have been teaching these same skills for the past 17 years as a coach.

Social emotional learning (SEL) is not a new idea. Educators, coaches, and families are routinely teaching children and adolescents how to manage their emotions, to self-regulate, and to make good decisions. My experience in a federal setting IV program has shown me the

importance of social emotional learning for students in general and for especially for students with EBD. I feel that students with EBD benefit more from the explicit instruction of SEL that includes how to use the skill, when to use it, and why they are important. Often students with EBD have not learned these skills and need more explicit instruction, practice, and constant feedback to help shape and improve these skills.

My experience over the past few years in the school setting has only increased my interest in finding and implementing new ways to find effective techniques to instill in my students. I want to learn new ways to teach my students the skills needed for social and emotional learning with a greater focus on self-regulation of stress and through this I want to focus on the different programs that offer effective techniques for both internal and external stress. The focus of internal and external stress factors stems from recent experience both as a teacher in the school setting and as a coach in an athletic setting. In my experience, I have seen more students express their stress externally in manners such as shouting or crying, and I feel I am better able to reach out and help them cope with their stress. However, in recent events, I have had more students who have expressed, or lack thereof, their stress internally by bottling up inside and are experiencing stress internally. Their stress was not always easy to see, and they often appeared calm and collected in class or on the field, when later I would find out they were going through an internal battle of their own with anxiety or depression, which unfortunately led to some of the students attempting suicide. Once I realized what was going on, I was upset with myself for not seeing the signs or being better prepared to help them cope through their stress. Through these experiences, it led me to want to learn more about the locus of control students have and how I can better equip myself as an educator and effectively teach my students how to

help them regulate their stress through effective techniques based on the type of stress they demonstrate.

Applied Consequences. In addition to my personal goals, the results from this review may have practical applications. The findings may help educators improve their practice within schools. Teachers may better understand the different types of stress and the antecedents that may trigger stress in students. They may learn how to recognize such triggers and to prevent concomitant episodes of maladaptive behavior. The use of self-regulation strategies may create more positive classroom climates. These skills may also generalize to non-school settings.

Self-regulation intervention programs will be examined. These results may help educators identify and implement programs that meet the unique environment of their setting. Representative curricula include Social and Emotional Learning (SEL) (CASEL, 2015) and Mindfulness-Based Stress Reduction (MBSR) (Biegel et al., 2009).

Theoretical Implications

Self-regulation theory emerges from several theoretical models, and this review may contribute to understanding these models in school settings. Self-regulation reflects the tenets of Vygotsky's Social Learning Theory (SLT), Cognitive Behavioral Theory (CBT), Dialectical Behavior Therapy (DBT), and mindfulness (Osher et al., 2016). While these models have been investigated widely, their use in school settings and in EBD settings is less understood.

Definition of Terms

The glossary includes terms used throughout this proposal. Denotations for the terms are provided. The glossary is arranged alphabetically.

Adolescent.: a student who is in middle or high school and is between the ages of 10-19.

Emotion regulation: a specific type of self-regulation that involves cognitive, physiological, and behavioral processes that are responsible for monitoring, evaluating, and modifying emotional reactions to accomplish personal goals (Osher et al., 2016).

Emotional and Behavioral Disorder: according to IDEA 2004 (2017), Emotional disturbance means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance:

- (A) an inability to learn that cannot be explained by intellectual, sensory, or health factors;
- (B) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
- (C) inappropriate types of behavior or feelings under normal circumstances;
- (D) a general pervasive mood of unhappiness or depression;
- (E) a tendency to develop physical symptoms or fears associated with personal or school problems. (p. 1)

Mindfulness: one's ability to be in the present moment through attention, openness, and acceptance of experiences in a non-judgmental way to promote physical and emotional well-being (Felver et al., 2018; Morrish et al., 2018)

Self-regulation: an individual's ability to identify, manage, and control their thoughts, emotions, and stress to calm, relax, or slow themselves down. Self-regulation involves being aware and in control of your emotions, using tools and practices to help regulate your emotions

and prevent dysregulation, as well as using problem-solving skills to reduce stress (Eva & Thayer, 2017).

Stress: a person's mental or emotional state ranging in responses from calm to distress or out of control in a way a person demonstrates the "fight, flight, or freeze" response and are emotionally dysregulated.

Chapter 2: Review of Literature

This review examines the most effective interventions for self-regulating stress in adolescent students with EBD. In Chapter 1, the research questions and the significance of the study were addressed. In Chapter 2, studies examining topic are presented and analyzed. In Chapter 3, the findings from the analysis will be presented and the implications of the research will be addressed.

Scope of the Review

I searched the Academic Search Premier database, the ERIC (EBSCO) Publishing database, and the SAGE Journals database computationally. I used the following descriptors to locate studies. First, I searched Academic Search Premier using “emotional regulation” and “behavior” as search terms. This search yielded 270,661 studies. To reduce the number of retrieved materials, I conducted a subsequent search using the combined search terms of “emotional regulation,” “behavior,” and “adolescents,” which yielded 94,065 hits. To narrow the search even further, I changed “behavior” to “behavior disorders,” which produced 48,490 studies. To substantively narrow the focus, I combined “emotional regulation,” “EBD,” and “adolescents” as search terms to produce 438 studies.

The second computational search of constructs in the Academic Search Premier database focused on the search term of “stress” and included the search terms “stress management,” “behavior,” and “adolescents.” This search yielded 139,828 studies. Next, I searched “stress management,” “behavior disorders,” and “high school students,” which generated 90,742 studies. Then, I adjusted the search to “stress management,” “EBD,” and “adolescents.” These descriptors narrowed my search to 362 studies.

I used bibliographic branching to locate fugitive studies. A review of the initial set of retrieved studies led to the identification of additional “stress regulation” studies. Shifting the search terms around “stress regulation” narrowed the results. The next search conducted included the combination of the terms “stress regulation,” “interventions,” and “adolescents.” This ceded 68,392 studies. The ensuing search used the previous search terms but specified “intervention strategies” instead of “interventions” alone. This produced 45,850 studies. Then the addition of “emotional behavior disorder” narrowed the resources to 21,474.

The final set of descriptors that I searched stemmed from the term “Social Emotional Learning (SEL).” The combination of “Social Emotional Learning (SEL),” “behavior disorders,” and “stress regulation” produced 39,741 materials. To narrow the results even further, the following search used the same search terms and added “adolescents,” which yielded 21,790 studies. Next, I searched “Social Emotional Learning (SEL),” “EBD,” and “adolescents” to reduce the results to 1,261.

Review of the Literature

This literature is organized topically. The initial review of studies revealed three patterns across the studies. First, psychological models of self-regulation are examined. This includes the internalization and externalization symptoms of stress and their relation to students with EBD. Second, techniques for developing self-regulation are compared and contrasted. This section focuses on social and emotional learning (SEL) and its relation to the development of self-regulation techniques; specifically, mindfulness techniques and social skills instruction. Finally, classroom-based interventions for improving self-regulation skills of students who have emotional and behavioral disorders are analyzed. The three classroom-based interventions focus

on the integration of SEL and the theory of mindfulness and include yoga, Learning to BREATHE (L2B), and Transformative Life Skills (TLS) intervention programs.

Psychological Models of Self-Regulation Review

Stress affects everyone differently and can present itself in different forms that are related to physiological, psychological, and behavior (Sebastian, 2013). Although stress is part of healthy development in the right environment, unmitigated stress causes greater effects to one's physical and mental health which then affects how one thinks, feels, and acts (Frank et al., 2014). Adolescence is a critical time in a student's life; not only are adolescents undergoing many developmental changes physically, emotionally, behaviorally, and cognitively, but they are also encountering stress on a variety of levels across different channels of their life (Felver et al., 2018). As if these changes are not enough, students who face added adversity such as poverty or environmental stressors experience the added challenge of developing psychosocial health problems such as depression, anxiety, violence/crime, school failure/dropping out, and substance abuse (Eva & Thayer, 2017). These social and/or emotional challenges are prevalent among nearly one-fifth of all students and can manifest in one of two types of behaviors: externalizing and internalizing (Zolkoski & Lewis-Chiu, 2019). According to Zolkoski and Lewis-Chiu, internalizing behaviors present themselves as anxiety or depression, while externalizing behaviors are considered disruptive behaviors that are more obvious such as fighting or physical aggression.

Internalizing behaviors are becoming an increasing concern in adolescents worldwide. According to Eva and Thayer (2017), about 25% of adolescents experience symptoms of anxiety and depression. Exposure to chronic stress during adolescence can manifest in anxiety disorders

which affect an estimated 31.9% of adolescents (Frank et al., 2016). Depression is also a growing concern worldwide and in the United States. Research indicates approximately 8 to 20% of adolescents are affected by depression before the age of 18 worldwide, and during a 12-month span in 2015 in the U.S. research showed that adolescents between 12 and 17 years demonstrated 12.7% of major depressive episodes (Chi et al., 2018). Depression can also lead to physical and psychological issues in adolescents and adulthood including social and mental disorders, drug use, self-injurious behavior, including suicide, and behavioral problems (Chi et al., 2018).

Stress in adolescents can also be related to externalizing behaviors including disruptive behaviors and physical aggression that encompasses fighting, hitting, kicking, biting, pushing, shoving, and spitting that is directed toward another person (Lopata et al., 2006; Zolkoski & Lewis-Chiu., 2019). Many students who demonstrate these maladaptive behaviors at an intense level are identified as students with emotional and behavioral disorders (EBD) (Zolkowski & Lewis-Chiu, 2019). According to research, 75% of students with EBD demonstrate aggressive behaviors in the school setting (Lopata et al., 2006). Although students with EBD represent less than 1% of the student population and 6% of students with disabilities, they are at a higher risk of having negative outcomes beyond the school setting (Zolkoski & Lewis-Chiu, 2019).

Research shows that physical aggression, that can be demonstrated in students with EBD, is considered one of the most complex and problematic behaviors with both long- and short-term effects on students including risk of academic failure, including students with EBD having the largest dropout rate and the most in and out of school suspensions/expulsions; insufficient social and emotional skills, peer rejection, delinquency, and an overall higher rate for lifelong

psychosocial problems and negative outcomes (Lopata et al., 2006; Zolkoski & Lewis-Chiu, 2019).

Techniques for Developing Self-Regulation

Stress and environmental stressors that adolescents encounter will always be around in some form. It is important for students to gain the necessary skills to prevent or manage the negative effects that stem from stress and have positive coping mechanisms (Foret et al., 2012). Studies show that Social Emotional Learning (SEL) is one approach that has shown to have a greater impact on students' overall well-being and better outcomes in school (Durlak et al., 2011). Research in SEL programs within schools have increased significantly and the importance and effectiveness of these programs have been in the forefront (Durlak et al., 2011). SEL intervention programs are rooted from social learning theory (SLT) and cognitive behavioral therapy (CBT) with similarities in the implementation of modeling. According to CASEL (2015):

Social and emotional learning (SEL) is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. Social and emotional skills are critical to being a good student, citizen, and worker, and many behaviors (e.g., drug use, violence, bullying, and dropping out) can be prevented or reduced when multiyear, integrated efforts are used to develop students' social and emotional skills. (p. 1)

Building social-emotional skills in young people is very important and has been proven to improve a variety of aspects in their lives. Studies show that SEL programs are connected to lower levels of problem behaviors and emotional distress (Durlak et al, 2011). SEL supports the well-being of youth by lowering rates of depression and anxiety, drug use, and teen pregnancy, as well as reducing school dropout rates but 5-12% and lowering physical aggression (Committee for Children, 2019). SEL has also been linked to school performance and academic achievement. According to Committee for Children, SEL is a better predictor of school performance than one's IQ.

A key aspect in SEL is emotion regulation. Emotion regulation is a very important skill that needs to be developed and is considered an essential part of positive adolescent development that has long-lasting effects (Morrish et al., 2018). It provides students with the skills needed to control negative reactions and impulse behaviors to achieve personal goals and meet the demands of any given situation (Frank et al., 2014). A student's ability to regulate their emotions have been found to be more successful in school, have better mental health, and are more successful transitioning into adulthood (Frank et al., 2014). Emotion regulation has also been linked to alleviating the negative effects of stress and is a factor mediating the relationship between situational stress and maladaptive behaviors and developmental outcomes (Frank et al., 2014).

Although evidence shows the positive student outcomes that SEL programs offer, according to Frank et al. (2014), less than 13% of the available SEL programs are available to use with high school age students. This is concerning as research shows that high school students face a significant amount of stress and combined with limited number of SEL programs that are

geared for high school students to help them regulate their stress can lead to more negative outcomes. Significant stress in high school students has been linked to increases in school dropout rates as well as negative effects on academics, healthy decision-making, cognitive functioning skills, and the overall well-being of the student (Levitan et al., 2018). Studies have shown that students who lack social-emotional competencies become less connected to school and engage in high-risk behaviors (Durlak et al., 2011). According to Durlak et al., approximately 30% of high school students engage in multiple high-risk behaviors such as depression, attempted suicide, sex, violence, and substance abuse that affect student's overall wellbeing, academic performance, and future success. The school setting is a logical place to teach the strategies needed to reduce stress and promote the social-emotional competencies to encourage healthy attitudes and behaviors (Levitan et al., 2018).

While SEL is not a new concept in the classrooms, SEL-related approaches such as mindfulness-based interventions are increasing in popularity across schools and classrooms (CASEL, 2015). Mindfulness is an increasingly popular practice that is based on three intertwined foundations: intention, attention, and attitude (Zolkoski & Lewis-Chiu, 2019). According to Biegel and colleagues (2009), intention is the effort put for toward the practice of mindfulness, attention is being in the moment, and attitude focuses on one's openness and acceptance in a nonjudgmental way.

The development of mindfulness in the classroom is another tool for students to learn and use in their everyday lives. The benefits of mindfulness can be seen in many facets of student's lives. Research shows that mindfulness practices can reduce stress, anxiety, depression, anger, and behavioral problems in youth (Zolkoski & Lewis-Chiu, 2019). According to Fishbein et al.

(2015), mindfulness also increases in attention, concentration, focus, and self-efficacy in emotional regulation. In regard to students with EBD, the development of mindfulness strategies can help students regulate their own behaviors and is a positive, proactive approach to self-awareness and management (Zolkoski & Lewis-Chiu, 2019).

One of the most widely researched mindfulness-based interventions programs is the mindfulness-based stress reduction (MBSR) program (Fishbein et al., 2016). Originally, MBSR was developed to help patients in behavioral medicine settings deal with pain, stress, and negative emotions, but has progressed to the general population and is a foundation for many variations of mindfulness interventions (Chi et al., 2018). The effectiveness of MBSR in the education setting has led to the different interventions we see in schools today that focus on attention, focus, being in the moment, and even the incorporation of movement. According to Fishbein and colleagues (2016), one of the most effective components of MBSR in reducing psychological symptoms is yoga.

Classroom-Based Interventions for Improving Self-Regulation Skills with EBD

Mindfulness-based interventions (MBIs) that align with extant SEL practices are the current and future direction for classroom-based interventions (CASEL, 2015). Based on overall design, implementation, and program impact, CASEL identified Yoga, Learning to BREATHE, and Transformative Life Skills as efficacious programs. Each of these programs reflects the principles of Mindfulness-Based Stress Reduction (MBSR) by focusing on a key element or integrating aspects of MBSR into a new program to better meet the needs of a school setting (Eva & Thayer, 2017; Fishbein et al., 2015; Frank et al., 2016).

Yoga

The use of yoga in classrooms has increased, and the greater use of these exercises have contributed to enhanced student emotion regulation (Frank et al., 2016) and to improved behavioral and academic functioning (Frank et al., 2014). Yoga is a mind and body intervention that combines breathing, meditation, and movement to alleviate stress and enhance wellness (Fishbein et al., 2015). Research (e.g., Fishbein et al., 2015) has shown that yoga interventions are effective in reducing psychiatric symptoms, such as anxiety and depression, and improving mental health and well-being. Simple yoga and meditation practices focus on developing essential emotion regulation skills, which have been shown to reduce stress and tension in youth (Frank et al., 2014).

The effectiveness of yoga interventions with adolescents who are considered high-risk for reducing maladaptive behavior and improving psychological well-being has been investigated empirically (Fishbein et al., 2015). Students in grades 9-12 who were not successful in traditional schools and attended a “credit recovery” school participated in the study. The students were identified as at risk of dropping out, behind in credits because of absenteeism, exhibited academic issues, and reported personal or family problems (Fishbein et al., 2015). The students who participated in the yoga intervention demonstrated decreases in problems and negative outcomes. They also showed improvements in social skills and social functioning (Fishbein et al., 2015). Although the yoga intervention did not directly target prosocial behaviors, it may have yielded an indirect effect. The students felt calmer and less stressed, and these changes may have produced related improvements in social skills such as offering help and encouragement to others (Fishbein et al., 2015).

The efficacy of yoga and meditative practices has been demonstrated among students with diverse backgrounds and who have an array of disabling conditions. Yoga improves the academic performance and the behavior of students exhibiting attention deficit disorder, depression, and anxiety (Frank et al., 2014). Among the strategies based on mindfulness, yoga is the most effective component of MBSR in reducing psychological symptoms and reducing depression, anxiety, perceived stress, and negative emotions (Frank et al., 2016). The benefits of yoga may also include reduced anger, reductions in mood disturbances and negative affect, and improved positive affect (Frank et al., 2016). Children with atypical development including autism, intellectual disabilities, emotional disorders, and specific learning disabilities have benefitted from yoga interventions. Lower levels of stress and increased attention and concentration have been reported. Typically developing children show decreases in anxiety and negative behaviors, and their self-concept and their emotional balance have improved (Frank et al., 2016).

Learning to BREATHE

Based on the results from systematic review of universal SEL programs for secondary school students, CASEL (2015) identified two programs as particularly effective. The first program, Learning to BREATHE (L2B), uses the principles of mindfulness as a means for gaining awareness and emotion regulation that target the SEL competencies of self-awareness and self-management (van de Sande et al., 2019). Learning to BREATHE (L2B) is a mindfulness-based curriculum created for classroom or group settings. Versions of the program are available for adolescents and college aged adults (Broderick, 2009). BREATHE is an acronym, and the letters represent elements of mindfulness: (B) Body (awareness), (R)

Reflections (thoughts), (E) Emotions, (A) Attention, (T) Tenderness; take it as it is, (H) Habits for a healthy mind with the ultimate goal of (E) Empowerment (Eva & Thayer, 2017; Felver et al., 2018). L2B is designed for use in school settings. A scope and sequence of skills introducing mindfulness and that connects the program to academic standards is provided. The outcomes included improving emotional regulation and attention, understanding and managing stress, improving distress tolerance, enhancing self-care, increasing compassion, improving executive functioning skills to promote overall well-being and learning, and integrating mindfulness into everyday life (Broderick & Frank, 2014; Eva & Thayer, 2017; Felver et al., 2018).

Eva and Thayer (2017) piloted the L2B curriculum in an alternative high school, with learning priorities focused on increasing self-esteem and reducing stress. The students enrolled in the school were considered at-risk for dropping out. After the completion of the 6-week intervention, students who participated in the L2B intervention reported a reduction in stress. They stated that they were less nervous and more “on top of things,” and felt life was “going their way” (Eva & Thayer, 2017). Another pilot study of twelfth-grade students showed improvements in their self-regulation skills with reduction in negative mood and increases in calmness and self-acceptance (Broderick & Frank, 2014). According to Eva and Thayer (2017), the benefits of L2B include self-regulation, attention awareness, and positive thinking.

Broadly, self-regulation addresses a student’s ability to internally control or manage their emotions, thoughts, breath, and stress to calm, relax, or slow themselves down using body scans and breath awareness (Eva & Thayer, 2017). Previous studies also demonstrated that L2B intervention may reduce levels of perceived stress, increase levels of efficacy in affective

regulation, improve emotion regulation, and reduce depressive symptoms (Felver et al., 2018). For at-risk students, the use of body scans and breath awareness were reported as the most valued elements of L2B (Eva & Thayer, 2017). Both components can be implemented in the daily lives of students as tools to calm, relax, and slow down and manage their stress. Their control over their thoughts and emotions increased directly.

According to Felver and his colleagues (2018), the length of an intervention must be considered. Studies have varied in sessions from a shortened 7-session version to a longer 18-session version. Shortened interventions yielded no change in students' rates of problem behavior, attendance, or academics. Briefer versions of L2B may not have provided students with enough exposure of the MBI to demonstrate change.

Transformative Life Skills

CASEL (2015) also recognized the efficacy of Transformative Life Skills (TLS). TLS is based on mindfulness, and its foci include self-awareness, self-management, and relationship skills. The main objectives of the program are reducing stress and promoting psychosocial health and prosocial behavior (van de Sande et al., 2019). TLS combines yoga, breathing techniques, and centering meditation through Action-Breathing-Centering activities (ABCs). The program was designed for students in middle school and high school (Frank et al., 2014; Frank et al., 2016).

TLS was designed to provide instruction in a predictable, sequenced practice that is consistent with best practices in student pedagogy, connecting skills to the overall theme of the unit (Frank et al., 2016). The TLS curriculum is based on four-unit themes of stress management, body and emotional awareness, self-regulation, and building healthy relationships. Individual

lessons focus on the overall theme and then building from the previous lessons (Frank et al., 2014).

The efficacy of TLS was investigated in an alternative high school (Frank et al., 2014). Students enrolled in school were considered at-risk, and they demonstrated at least one of the following risk factors: academic failure/poor grades, truancy, disruptive behavior, repeated suspension, or expulsion. Participants in the study showed significant reductions in anxiety, depression, and global psychological distress. They also reported less hostility and were less motivated to seek retaliation and revenge against peers (Frank et al., 2014).

TLS was used with sixth and ninth grade students in an inner city, combined middle and high school. The school also had high levels of poverty. The intervention produced significant improvements in school engagement, emotional regulation, positive thinking, positive stress-coping strategies, and cognitive restructuring coping strategies. Unexcused absences, detentions, and students' attitudes toward violence were reduced (Frank et al., 2016). The researchers argue that TLS and SEL competencies show promise and can reduce risk factors in adolescents.

While all three intervention programs showed improvements in the areas of self-regulation, research on the effects of mindfulness-based interventions for improving self-regulation skills among students who have been identified as having emotional and behavioral disorders is limited. At-risk status and alternative school settings are not assumed synonyms for emotional and behavior disorders. However, students who attend alternative schools often have been suspended or expelled for disruptive classroom behavior (Frank et al., 2014). In these settings, incidence rates for disabilities range from 12% to 19%, and over half of students receiving disability services are classified as emotionally disturbed.

A Comment on the Relation Between EBD and Dropout Risk

Dropout rate or risk for dropping out are often alternate measures for emotional and behavioral disorder incidence rates. Students with EBD have a greater dropout rate than non-disabled peers and overall peers with disabilities. According to the National Center for Education Statistics (2019), during the 2016-2017 school year, 37,891 students between the ages of 14-21 years were classified as having the disability of emotional disturbance, approximately 9% of all disabilities. Among those with emotional disturbance disability, 13,128 students dropped out. This represents a 34.65% dropout rate for students with emotional disturbance. For all students who have disabilities, the dropout rate for students with emotional disturbance is 18.59% of dropouts. Of the 12 categories of disabilities used in education, students with emotional disturbance had the highest dropout rate in the 2016-2017. The rate was nearly twice the level for students under the categories of Other Health Impairments (OHI) (17.57%) and Specific Learning Disability (SLD) (16.51%); OHI and SLD follow EBD as the disability categories with the highest risk for dropouts. Consequently, studies conducted in settings designed to reduce dropouts are more likely to be composed of students with EBD than comprising non-disabled peers or peers with other disabilities.

Chapter 3: Summary and Discussion

The purpose of this research paper was to examine the most effective interventions for self-regulating stress in adolescent students with EBD. This included examining the two psychological models of self-regulation, internalizing and externalizing symptoms of stress, and the development of self-regulation techniques through mindfulness and social skills through social and emotional learning. Through the review of the integration of SEL and mindfulness, three classroom-based interventions emerged: yoga, Learning to BREATHE (L2B), and Transformative Life Skills (TLS) intervention programs.

Summary of Findings for MBI Interventions

All three of the interventions based on the principles of mindfulness: yoga, L2B, and TLS show promising results; however, a number of factors may affect the efficacy of these programs in EBD classrooms. First, research with a specific focus on students with EBD is limited. Second, many of the studies were based on small samples. Third, school-based variables may affect the efficacy of interventions. According to Broderick and Frank (2014), establishing feasible and sustainable mindfulness education programs within the school setting can be challenging. Limited time may be available during the school day to conduct program activities. Teachers and support staff must receive training in the MBI curriculum to implement it with high-fidelity (Fishbein et al., 2015). Although trainings are provided and teachers are interested in implementing these interventions, the time commitment and the shortened focus on academic classes are key determinants (Levitan et al., 2018). While teachers see value in SEL in the classroom and would like to incorporate social and emotional learning, they have concerns with

the lack of time, funding, training, and school/building structure as barriers for implementation (Buchanan et al., 2009).

Discussion: MoveMindfully Intervention

At the beginning of the new year, I had the opportunity to attend a MoveMindfully professional development workshop. The interactive workshop was an introduction to MoveMindfully, which integrates simple breathing exercises, yoga-based movement, and social-emotional activities (MoveMindfully, 2021). The 2-hour workshop provided information about the MoveMindfully intervention and how to implement practical mind-body interventions for youth. MoveMindfully uses BREATHE-MOVE-REST techniques and social-emotional skill-building activities, that fall within CASEL's core competencies, to introduce simple mind-body practices in a structured and consistent manner that reduces stress, develops self-regulation, and increases emotional stability (MoveMindfully, 2021). Prior to the workshop, participants were provided with a toolkit to use during the workshop and in the classroom. The toolkit included the MoveMindfully Card Deck (74 cards), a Hoberman Sphere, and a pack of four Permission to Pause Posters.

The MoveMindfully Card Deck provides educators with a deck of cards that provides students with simple visuals of the movement on the front of each card and a short script on the back of the card as a guide for the technique including the positive affirmations for the students to practice along with the movement or breathing exercises. The card deck is organized into three categories: BREATHE, MOVE, and REST and it is recommended to choose one or two cards from each category to implement for students. The deck also provides cards with suggested

sequences of cards to implement based on the needs of your students and the effects desired ranging from focused to energizing.

After my experience in with the workshop, I decided to implement the program in my Personal Enrichment class. My class consists of seven high school students that are a combination of students who are in grades 10, 11, and 12, as well as a student who is beyond 12th grade. Of the seven students, two are identified with ASD and five with EBD, and all but one student is male. Prior to implementing the MoveMindfully intervention in class, I presented it to the class discussing what and why we were going to start to incorporate MoveMindfully in our class. The initial reaction of my students was what I expected, “this is stupid,” “I don’t want to do it,” and “I don’t care.” Knowing that this was going to be their reaction, I then proceeded to tell them about my experience with it when I attended my professional development workshop. I was able to relate my personal experience of not wanting to do the workshop because I had too much to do and was too stressed to try to focus on a mindfulness training in which we had to participate and practice the program ourselves. It opened a great discussion of growth mindset and trying new things that at first that we may feel are “dumb” or “pointless” and how if we change our mindset and try, we are able to grow. My students appreciated my honesty about it and my own reluctance to try a new program that focused on movement, posing, positive affirmation, and breathing. I believe that if I had not attended the workshop prior to implementing the intervention, I would have not been able to have as much “buy in” with my students or success. Having experienced some of the same initial reactions towards the intervention helped me better relate to my students and their needs to get on board and participate with the intervention for it to be successful.

We began the MoveMindfully intervention at the start of the third quarter and I was met with quite the pushback of “why do we have to do this” and “this is dumb.” We started each class with a combination of three sequenced BREATHE-MOVE-REST cards with a given theme. Each week students slowly showed a change in their attitude towards the intervention and an increased effort in their participation. Recently, one of my most begrudging students asked if he could choose the cards for the start of class based on how he was doing that day. I complied with his request and it was the best day of participation since we started the intervention. We used this time each day to regain focus, be in the moment, and reduce the stress of the daily grind. One part that I did not foresee happening from the MoveMindfully was the in-depth discussion and reflection that follows the activity. Students are more involved in the reasons “why” we take time each day to do these activities and how we can implement them throughout our day.

Although I did not collect any data during this intervention, I have seen a difference with students in this specific class. Participation in the activities have increased, as well as the effort given toward the activities, such as taking time be “all in” with the breathing and movement. I have also seen a change in the majority of the student’s attitudes toward the intervention. Instead of coming in and complaining, over half the class wanted the opportunity to choose the card sequence for the day. Although I am not sure if the MoveMindfully card deck was meant for students to choose the sequencing, I allowed one student a day to choose the activities for the class to participate in.

Recommendations for Future Research

Although research surrounding the development of social and emotional skills including self-regulation is in abundance, there is very little research that focus specifically on students with EBD. Most of the research that was reviewed focused on students with behavior needs or those who were attending an alternative school or considered at risk of dropping out due to various factors, but not all students were identified as having EBD. While there is a strong correlation with these factors and students with EBD, it does not mean it applies to all students with EBD. Future research could focus on the benefits of mindfulness interventions with students with EBD across a variety of schools and levels, from students who are full time in the mainstream schools to those in different settings such as impatient, juvenile detention centers, and alternative schools that focus on students with EBD, much like the school I work for.

Another limitation of these studies reviewed was the consistency within the different interventions with implementation and the various umbrella areas that the data focused on. Although having the ability to implement a classroom-based intervention with some flexibility is very important for teachers and schools, it is not ideal for data research. The different variations among the same interventions offer conflicting data, depending on how it is implemented and what and how it is measured. The wide variety of mindfulness techniques complicates things as many different techniques fall under this category but collect different data or are implemented in a different manner (Beauchemin et al., 2008). Future research with the same focus points and measurements would also be beneficial for the effectiveness of the mindfulness interventions in the classroom.

Implications for Practice

Through this review and my personal experiences as a special education teacher working primarily with EBD students with high needs in self-regulation and other SEL competencies, I feel that implementation of a classroom-based intervention that integrates mindfulness and social-emotional learning will be beneficial. With my experience with MoveMindfully, I feel that students have learned that it is okay to take time out of their day to focus on themselves and be in the moment. We have built in a time where they can step away from their stresses or pressures from everyday life and try to focus on themselves and the good in their lives. Mindfulness interventions allow students to learn different techniques to help them alleviate and manage their stress. I also feel that the mindfulness interventions researched and implemented are teacher-friendly in the fact that they can be modified and implemented in ways that best suit the needs of the students in the classroom. Although this can be an issue when it comes to reliable research and data collection, it is beneficial for the classroom. Every student learns differently, and every teacher has their own unique teaching style and to have the option to modify the mindfulness intervention within its own framework, allows flexibility in the classroom and has the possibility of being more successful.

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