

# Multimodal Exercise as Intervention for School-Aged Children and Youth with Emotional and Behavioral Disorders



**Justin D Garwood\***

*Department of Reading Education and Special Education, Appalachian State University, USA*

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**\*Corresponding author:** Justin D Garwood, Assistant Professor of Special Education, Department of Reading Education and Special Education, Appalachian State University, USA, Tel: 828-262-6085; Email: garwoodjd@appstate.edu

## Abstract

Many school-aged children and youth experience emotional and behavioral struggles that diminish their educational outcomes. One of the thirteen categories of disability recognized in the Individuals with Disabilities Education Improvement Act-the federal law that provides for special education services to students with disabilities is emotional disturbance (ED). Although ED is the actual label under the law, most school-based practitioners and educational researchers prefer the term emotional and behavioral disorder (EBD). Recently, researchers have begun to explore the use of multimodal exercise (e.g., yoga) as an intervention for students with and at risk for EBD to see how it may influence students' emotional and behavioral outcomes. The purpose of this review was to summarize the yoga intervention literature to determine what effects, if any, these interventions have had for students identified with EBD in a school setting. Two studies were identified. Discussion of the two studies is presented and future directions for research are suggested.

**Keywords:** Yoga, Emotional and behavioral disorders, Intervention, Behavior, Engagement, Self-Regulation

**Abbreviations:** EBD: Emotional and Behavioral Disorder

## Introduction

Many school-aged children and youth experience emotional and behavioral struggles that diminish their educational outcomes. One of the thirteen categories of disability recognized in the Individuals with Disabilities Education Improvement Act [1]-the federal law that provides for special education services to students with disabilities – is emotional disturbance (ED). Although ED is the actual label under the law, most school-based practitioners and educational researchers prefer the term emotional and behavioral disorder (EBD). An EBD is characterized by externalizing behaviors, internalizing behaviors, or a combination of both (i.e., co-occurring disorders). Externalizing behaviors are directed towards the social world outside of the person and include aggression, disruption, violence, noncompliance, and delinquent acts [2]. Internalizing behaviors are characterized by depression, phobias, eating disorders, anxiety, and other inward, somatic complaints [3].

School personnel often struggle to support students with EBD, given the myriad of their behavioral, emotional, and social needs [2]. Many students with EBD drop out before graduation because their behaviors become incompatible with the goals of

school [4]. When compared to peers with a physical or learning disability, students with EBD perform worse academically, drop out of school at higher rates, and experience higher unemployment [5]. Considering post-secondary outcomes, students with EBD have the highest rate of criminal arrest (49.4%) when compared to other students served in special education [6]. Although many academic [7] and behavior [8] interventions have been developed and found to be successful in supporting the needs of students with EBD, secondary and post-secondary outcomes for this group are still relatively negative [6]. Recently, researchers have begun to explore the use of multimodal exercise (e.g., yoga) as an intervention for students with and at risk for EBD to see how it may influence students' emotional and behavioral outcomes. The purpose of this review is to summarize the yoga intervention literature to determine what effects, if any, these interventions have had for students identified with EBD in a school setting.

## Review of Studies

In a review of research focused on relaxation techniques for students with disabilities, Zipkin [9] explained that yoga “can

calm disruptive students and stimulate tired ones” (p. 286). Yoga is a multimodal practice that typically includes deep and purposeful breathing, meditation, and physical poses intended to stretch and balance the body [10]. Yoga may be beneficial to students with and at risk for EBD because previous research has shown yoga to be associated with improved emotional regulation and prosocial behaviors among children and youth [11,12]. In a review of research utilizing yoga as an intervention in school settings, Serwacki & Cook Cottone [13] identified 12 peer-reviewed, published studies. Of these 12, only 4 studies (33%) were focused on students with disabilities. Of these four studies, only one included students identified with EBD [14]. In their quasi-experimental study, Powell and colleagues reported on the effectiveness of the Self-Discovery Programme (SDP), a multi-pronged approach that incorporates massage, yoga, and relaxation techniques. The sample in the study included 107 children in England, ages 8-11 (45% female) identified with EBD and/or a learning disability.

Approximately 95% of the participants were Caucasian. Intervention students (n=53) received 45-minute SDP sessions once per week for 12 weeks. Students participating in SDP exhibited significant improvements in confidence (in self and in social situations) and engagement in class (e.g., more contributions), and a significant decrease in total behavior difficulties (i.e., a composite of internalizing, externalizing, hyperactive/inattentive, and peer problem behaviors). Overall, SDP was well received by children in the intervention group and teachers reported seeing their students utilize skills learned during the intervention throughout the school day.

As a follow-up to the review by Serwacki & Cook Cottone [13], I conducted a systematic search of the literature in an attempt to identify any recent (2013-2017) peer-reviewed studies that have used yoga as an intervention for school-aged children and youth identified with EBD. Only one study was located. Using a pre/post design, Steiner, Sidhu, Pop, Frenette, and Perrin [15] included 74 children ages 8-11 (41% female) identified with EBD in the United States. Racial/ethnic demographics were as follows: 49% African-American, 24% Hispanic, 20% Caucasian, 12% Native American, and 5% Asian-American. All children received a 1-hour yoga session twice per week during the school day for 3.5 months. According to teacher reports, after receiving the intervention the children exhibited improved attention and adaptive skills, and reduced externalizing and internalizing symptoms. Regarding satisfaction with the intervention, 64% of teachers and the vast majority of student responses were positive. Seventy-two percent of parents of student participants indicated the intervention had a positive impact on their child.

### Conclusion

Given the myriad of needs common among students with EBD, it is encouraging to see that researchers are beginning to utilize yoga as an intervention for these youth. Although both

studies indicated yoga was effective in helping children and youth with EBD, two studies does not provide a strong enough foundation to classify yoga as an evidence-based practice for this population. More studies are needed with more diverse samples. In fact, it was somewhat surprising to find how similar the samples of children were from the two reviewed studies in terms of age and sex. Although, racial/ethnic demographics were quite different in the two studies, with one sample being fairly homogenous [14] and the other being racially diverse [15]. Larger sample sizes in randomized controlled trials would be ideal in an effort to evaluate the true power of yoga to support the mental health needs of students with EBD. Still, the potential for yoga to improve students' behavior, especially their internalizing symptomology, is reason to be hopeful. Effective interventions for internalizing behaviors are far fewer than those for externalizing behaviors [16]. As more and more students with EBD find themselves in inclusive, general educational settings, schools must be prepared to offer these children the emotional and behavioral supports they need to be successful. Incorporating yoga into a weekly routine for these students may be a worthwhile investment for schools to make.

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