In Practice

Programs of Interventions and Supports: Impact on Students with Disabilities' Behavior and Academic Achievement

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Abstract

As school personnel consider implementing changes to school structure and procedure regarding discipline and curriculum delivery, they must first consider the school's culture and the school's goals, and then consider the most effective ways to achieve those goals. Programs of interventions and supports, such as Positive Behavioral Interventions and Supports (PBIS) and Response to Intervention (RtI), can be tailored to a school's specific needs based on student population and school data. These programs are multi-tiered and address student engagement and behavior through curriculum delivery. In addition, these programs are designed to use student data as a basis for curriculum design and individual student plans at each tier. The literature that has been examined for this review strongly suggests these programs have been successful in improving student behaviors and learning outcomes, and there is a strong relationship between academics and behavior. Continued research is needed regarding effective implementation of intervention and support programs at the high school level and the impact of these programs on students with learning disabilities.

Introduction

A review of the literature regarding the impact of programs of interventions and supports on student behavior and academic achievement demonstrated a strong connection between behavior and achievement in addition to positive behavior and learning outcomes. Positive Behavior Interventions and Supports (PBIS) and Response to Intervention (RtI) were the most commonly discussed programs, and within these programs, there was considerable discussion of universal design for learning, differentiated instruction, and other effective teaching practices. PBIS was developed as a tool to promote inclusion of students with disabilities in the general education classroom and focuses on learned behavior (PBIS, 2014). RtI focuses on academic intervention, and although more often used for students with learning disabilities, can also be applied to students in the general education classroom (Sugai, n.d.). Both PBIS and RtI are tiered programs, which utilize student data to meet the academic and behavioral needs of students, and these programs have great potential to improve school disciplinary systems with a focus on remediation rather than punishment.

Problem Statement

School disciplinary practices and procedures typically address the symptoms of behavioral problems through punishment rather than exploring the problem itself. While the disciplinary action may temporarily remove a student from class (e.g. a visit to the principal or suspension), the disciplinary action does

not address the reason the student exhibited problem behavior in the first place. PBIS and RtI aim to identify the problem at the root of the behavior, such as lagging skills, in order to improve both student behavior and academic achievement (Chitiyo, Makweche-Chitiyo, Ametepee & Chitiyo, 2011).

Purpose Statement

The purpose of this review is to examine the research regarding Positive Behavioral Interventions & Supports (PBIS) and Response to Intervention (RtI) and their effect on the behavior and academic achievement of students with learning disabilities. The number of students identified with learning disabilities has increased dramatically over the last two decades; however, more effective instruction in the general education classroom could reduce the number of students requiring special education services (Byrnes, 2013). As educators seek ways to close the achievement gap between general education students and students with disabilities, certain programs and practices are demonstrating effective results and merit further exploration. This literature review seeks to examine research regarding the impact of such interventions on behavior and academic achievement for students with disabilities.

Research Questions

The following questions guided the research for this literature review:

1. Do programs such as PBIS and RtI improve behavior for students with learning disabilities?
2. Do programs such as PBIS and RtI improve academic achievement for students with learning disabilities?
3. Do programs such as PBIS and RtI impact the relationship between behavior and academic achievement for students with learning disabilities?

Definition of Terms

Attention-deficit Hyperactivity Disorder (ADHD): ADHD is a disorder that makes it difficult for a person to sit still, control behavior, and pay attention. The three main symptoms are inability to pay attention, hyperactivity, and impulsivity (About specific disabilities, 2015).

Autism Spectrum Disorder (ASD): "Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences" (Individuals with Disabilities Education Act, 2004, 300.8(c)(1)(i)).

Culturally and Linguistically Diverse (CLD): CLD refers to students "who may be distinguished from the mainstream culture by ethnicity, social class, and/or language" (Terry & Irving, 2010, p. 110).

Differentiated Instruction: "An approach to teaching that advocates active planning for and attention to student differences in classrooms in the context of high quality curriculums" (Tomlinson, 2008, para.1).

Positive Behavior Interventions and Supports (PBIS): PBIS is a framework or systems approach comprised of intervention practices and organizational systems for establishing the social culture, learning and teaching environment, and individual behavior supports needed to

achieve academic and social success for all students (PBIS, 2014).

Response to Interventions (RtI): "Response to Intervention (RTI) is a multi-tiered approach to help struggling learners. Students' progress is closely monitored at each stage of intervention to determine the need for further research-based instruction and/or intervention in general education, in special education, or both" (Sugai, n.d., para. 1).

Tootling: "Tootling is a term that was constructed from the word 'tattling' and the expression 'tooting your own horn.' Tootling is like tattling, but students report their classmates' prosocial behavior instead of inappropriate behaviors when tootling" (Cihak, Kirk, & Boon, 2009, p. 268).

Universal Design for Learning (UDL): "A set of principles for curriculum development that give all individuals equal opportunity to learn" (What is UDL?, 2012, para. 1).

Review of the Literature
Programs of Interventions and Supports

Positive Behavior Interventions and Supports (PBIS), Response to Intervention (RtI), and related programs are data-driven, multi-tiered programs that address behavioral expectations and student performance school-wide in order to provide students with clear expectations of appropriate behavior and desired learning outcomes. In order for programs of interventions and supports to be effective, school personnel must implement the programs consistently and with fidelity; for this reason, throughout the initial development of a school's program, information is taken back to teachers for review with the hopes of achieving a minimum of 80% buy-in from faculty (PBIS, 2014).

At the primary level of PBIS, schools attempt to prevent problem behavior by teaching expected behavior to all students as any other curriculum would be taught. At the secondary level of implementation, schools address current behavioral issues with a specific group of students. Finally, at the tertiary level, schools attempt to remediate problematic behavior through individualized intervention. At the heart of the PBIS framework is data-driven decision-making and research-based practices geared to reduce and prevent problem behavior that interferes with student learning. In addition, PBIS and related programs seek to provide a more effective alternative to the traditional behavior/punishment practice. There is an increasing awareness that consequences, which exclude students from school, such as suspension, do not address the cause of the problem behavior and do not provide effective solutions (Greene, 2010).

RtI is another example of a multi-tiered program (not limited to, but used more intentionally with students who have learning disabilities) which "promises to change the way schools support students with learning and behavior problems by systematically delivering a range of interventions based on demonstrated levels of need" (MTSS & PBIS, n.d., para. 1). RtI seeks to provide "high quality education" to all students at Tier 1 in the general education, and presumably least restrictive, setting (Werts, Lambert, & Carpenter, 2009). In Tier 2, however, additional instruction is typically provided by a collaboration of the general and special education teacher, and finally, the smaller number of students who demonstrate the highest level of need receive more individualized and specialized instruction at Tier 3 (Werts, et al., 2009).

Research surrounding RtI demonstrates the potential for positive behavior and learning outcomes but also brings to light challenges faced by those who implement RtI. Werts, et al. (2009) report there are some effective fundamental principles of RtI implementation, such as "implementing research based practices in the classroom" and "making instructional decisions based on data collected on individual progress" (Werts, et al., 2009, p. 2). However, they also conclude the inconsistency of implementation of RtI (i.e., who—general education or special education teacher—does what at what level?) poses a challenge for teachers implementing this program (Werts, et al., 2009). Despite the challenges of implementing interventions and supports programs, PBIS, RtI, and related programs provide a framework designed to give teachers the tools to meet the needs of struggling learners. Through targeted and meaningful teacher preparation and professional development, teachers can be prepared to use these tools.

Effective Behavioral Management Practices

A challenge faced by many teachers is that they have been taught to manage classroom behaviors rather than to create tools to re-engage distracted and struggling learners. In addition, modifications and accommodations for diverse learners, including those with specific learning disabilities, are presented as additional work rather than as part of the process for effective teaching (Baglieri, Valle, Connor, & Gallagher, 2011). PBIS and related programs provide a systems approach to support student behavior and achievement, and through a school's data and culture, informed decisions can be made about effective ways to meet the needs of

struggling students and students with learning disabilities. For this reason, these programs and effective practices look different from school district to school district and from elementary to middle to high school.

One example of effective practice at the elementary level is called "tootling". Cihak, Kirk, and Boon (2009) reported that "tootling" demonstrated effectiveness at the elementary level in their research with a group of third grade students. In a classroom that uses tootling, students would be taught to identify prosocial behaviors, such as helping other students, asking questions, being honest, and sharing; then students would daily be given index cards or post-its on which to record their classmates' prosocial behaviors. At the end of the day, students would turn in their tootles for the teacher to read aloud (Cihak, et al., 2009). Results of this study showed the act of tootling reduced disruptive classroom behaviors and promoted positive peer relationships. While tootling, specifically, may not work as well or at all at the middle level or the high school level, other systems of rewards can be utilized to recognize and praise prosocial behaviors.

Another example of effective practice begins at the curriculum design level. Baglieri, et al. promote UDL "as a way to approach all teaching situations, useful to all teachers" (Baglieri, et al., 2011, p. 272). Rather than "retro-fitting" instruction with modifications, through UDL, teachers, recognizing that "*all* students possess unique sets of strengths and needs" create a spectrum of opportunities in the planning stage (Baglieri, et al., 2011, p. 272). Differentiation (also called differentiated instruction) is a practice that is related to UDL and calls for the diversification of instruction to meet the needs of a variety of

students while maintaining rigor and authenticity (Hedrick, 2012). When used appropriately and consistently, these practices are effective tools for designing curriculum in such a way that re-engages struggling learners in a proactive, preventive manner before students become frustrated and begin to exhibit problematic behavior.

Another style of intervention promoted by Greene (2010) is something he calls the "Assessment of Lagging Skills and Unsolved Problems", or A.L.S.U.P. for short (Greene, 2010, p. 30). Greene criticizes that educators spend too much time discussing aspects of a student's life that are beyond school control, (e.g., family situations like divorce, incarceration of a parent, socioeconomic disadvantages). Instead, Greene suggests educators need to focus on specific problems the school can address regarding student behaviors, such as difficulty in maintaining focus or shifting from one task to another. In this way, although there are issues that cannot be resolved, educators can move forward to create a plan that addresses the classroom behaviors and barriers to learning that can be addressed by the school.

There are a variety of effective programs and practices that can be utilized in combination to improve student behavior and learning outcomes for all students, and especially for students with learning disabilities. Coffey and Horner state, "Using evidence-based practices with fidelity is more important than ever as schools, districts, and state departments of education strive to close the gaps between the achievement of students with disabilities and their peers" (Coffey & Horner, 2012, p. 407). In order to close the achievement gap, research regarding the effectiveness of PBIS, RTI, and related

programs must continue, and school personnel at every level must address the challenges to effective implementation of these programs and practices.

Interventions and Supports Programs and Cultural Responsiveness

Another issue that must be addressed in the discussion of interventions and supports programs is the underserved population of students identified as culturally and linguistically diverse (CLD). As teachers strive to provide high quality instruction and engage all learners, these "goals are enriched and complicated by learners with diverse learning histories, unique strengths and limitations, and defining cultural influences" (Sugai, n.d.). CLD students represent a significant number of students who are identified with behavioral issues and learning disabilities. Vincent, Randall, Cartledge, Tobin, and Swain-Bradway (2011) claim "disproportionate discipline outcomes for students from culturally and linguistically diverse (CLD) backgrounds…are a widely documented and well-known reality of the U.S. public school system" (Vincent, et al., 2011, p. 219). Researchers in this specific area of PBIS, RtI, and related programs suggest there need to be specific interventions and supports that address the needs of students from a variety of cultural and linguistic backgrounds. For this reason, a variety of factors need to be explored when labeling CLD students with learning disabilities and determining the appropriate solutions for them.

A variety of factors can impact a student's social and academic success in school. For students from culturally and linguistically diverse backgrounds, "health problems and environmental exposure, the interwoven and far-reaching effects of poverty, and the lack of appropriate

resources for families and children place CLD families and their children at a greater risk for the diagnosis of a disability" (Utley and Obiakor, 2012, p. 42). Programs such as RtI enable educators to use data from students' performance to document progress and develop appropriate interventions to encourage student success. When educators use RtI data, and when general and special educators collaborate to create individualized and specialized interventions for struggling students, students have a greater chance of remaining interested and engaged in school.

There are a variety of factors that impact successful implementation of interventions and supports programs. In order for culturally responsive PBIS and RtI to be implemented successfully, researchers must continue to examine strategies that work for at risk CLD students and their families. In addition, researchers must enlist expert help to consider each factor that impacts these students' success.

Relationship between Behavior and Learning

In his article, *Calling All Frequent Flyers*, Greene (2010) states that research shows students who frequently misbehave do so because they are lacking in skills. For students with certain disabilities, such as ADHD, ASD, etc., "it's the lagging skills, rather than the disorders, that tell us the most about why a student is behaviorally challenging" (Greene, 2010, p. 29). Greene indicates a causal relationship between behavior and learning; the more a student lacks skills, the more likely s/he is to misbehave, and continued misbehavior will result in continuously lagging skills. Along similar lines, McIntosh, Flannery, Sugai, Braun, and Cochrane (2008) conducted a study, which was designed to determine the

predictability of students' achievement in Grade 9 based on their disciplinary record in Grade 8. "Results of the analyses showed statistically significant links between problem behavior in Grade 8 and academic performance in Grade 9 and academic skills in Grade 8 and problem behavior in Grade 9" (McIntosh, et al., 2008, p. 250).

Causation is statistically difficult to prove; therefore, researchers typically focus on the strength of the relationship between behavior and academic achievement. Algozzine, Putnam, and Horner (2012) reviewed 26 studies and claimed the results demonstrate a strong link between academic achievement and behavior. They assert "At the school level, it is critical to focus on teaching social behaviors to children with LD with the same willfulness, intensity, and scrutiny given to teaching academic skills" (Algozzine, et al., 2012, p. 25). In addition, they conclude that "systematic academic instruction and positive behavior support improve achievement…[and] systematic behavior instruction and support improve behavior" (Algozzine, et al., 2012, p. 27). Because of the strong relationship between behavior and achievement, programs such as RtI and PBIS must continue to be developed and implemented in order to effectively monitor student progress and performance so decisions may be data driven and in the best interest of the student.

Challenges to Successful and Sustainable Implementation

One of the largest challenges to the implementation and success of these programs and to overall improved behavior and learning outcomes is a deficiency in teacher training programs and a lack of continued training and meaningful professional development for teachers. A school district can adopt Differentiation or

UDL as a goal and expectation, but district administrators must be prepared to provide time for teachers to work and collaborate, to allow for the revision of curriculum, and to offer a variety of ongoing training opportunities to meet teachers' needs. Schools can adopt programs such as PBIS, but unless the appropriate steps are taken in the initial stages to build teacher support, and unless the program is maintained with consistency, the fullest potential of effectiveness will not be achieved.

In addition to professional development opportunities for teachers, it is necessary to determine what, if any, interventions and supports are most successful and sustainable for students who are making the crucial transition from middle to high school and for high school students with disabilities. Implementation at the high school level presents its own set of challenges. Flannery, Guest, and Horner (2010) in their study of eight high schools implementing a PBIS program indicated it took two years of implementation before there was a statistically significant difference from baseline data. Their results "suggest that unique aspects of the high school context may present specific implementation challenges" (Flannery, Frank, Kato, Doren & Fenning, 2013, p. 267). Flannery et al. (2013) cite several aspects of high school culture that differentiate high school from elementary, such as size of school, department based, diverse course offerings, student autonomy, and strong peer influence to name a few. These differences create a need for greater student buy-in that does not exist at the elementary level. For this reason, student voice must become part of the planning and implementation process.

Sustainability also poses a challenge for the effective use of interventions and supports programs. PBIS and related programs must be implemented with fidelity and must receive continued support in order to be sustainable. Both the research of Coffey and Horner (2012) and the research of McIntosh, Mercer, Hume, Frank, Turri, and Mathews (2013) suggest there are key factors to maintaining positive outcomes for behavior and academic achievement. These factors include but are not limited to administrative support, leadership, ongoing resources, regeneration, and data-driven decision-making (Coffey & Horner, 2012; McIntosh et al., 2013).

Administrative support is crucial to the long-term success of PBIS and RtI programs, and at the high school level this can be more difficult to achieve as high school administration typically consists of a team of administrators. The administrative team must work together to present a cohesive plan for long-term implementation and success. In addition, there must be leadership and support at other levels as well, from the superintendent's office to the faculty and staff. For high schools, this includes student leadership as well.

Ongoing resources and regeneration are also key to the sustainability of these programs. Ongoing resources must be available for teacher training, and processes must be evaluated on a regular basis to determine goals are being met and desired outcomes are being achieved. Finally, it is important data gathered from the program's measurement tools inform decisions made regarding continued implementation and changes.

Conclusion and Implications for Future Research

In their research, Bradshaw, Koth, Thornton, and Leaf (2009) stated "High-

quality implementation of PBIS and enhancements in the schools' organizational health may also increase the capacity of the staff and school environment to implement other preventive interventions for children not responding to the universal model" (Bradshaw et al., 2009, p. 113). This is heartening for those who interact with students with disabilities and must find unique ways to discipline, limit distraction, and improve learning outcomes. Continued research should be based on the effectiveness of these models with the data RtI and PBIS provide in a natural school environment.

The literature reviewed demonstrates a positive relationship between programs of interventions and supports and improved behavior and learning outcomes for students with disabilities. For this reason, the potential implications of continued research are tremendous. If continued research consistently demonstrates a positive relationship between PBIS programs and student behavior and achievement, then the way student discipline is managed could be revolutionized. Similarly, the use of RtI could make significant differences in the ways that curriculum and instruction are delivered to students, especially those identified with learning disabilities. By acknowledging schools are a place for learning academic *and* social behaviors, and by combining these multi-tiered, data-driven programs with high quality education, there is significant potential for improved learning outcomes for *all* students in the general education classroom.

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