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Positive Behavioral Interventions and Supports for Elementary Students with Emotional and Behavioral Disorders

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Positive Behavioral Interventions and Supports for Elementary Students with Emotional and Behavioral Disorders

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Table of Contents

Page

List of Tables 3

Chapter

1. Introduction 4

    Historical Overview 4

    Statement of the Problem 6

    Rationale 6

2. Literature Review 8

    Focus of the Review 8

    Scope of Review 8

    Review of Positive Behavioral Interventions and Supports Studies that Address Impact on Students both Academically and Behaviorally 9

    Review of Positive Behavioral Interventions and Supports Studies that Address Impact of Faculty and Staff 31

3. Summary of Findings 48

    Conclusion 48

    Implications 51

    Further Research 52

References 53

List of Tables

Table Page

1. Summary of Studies for Impact on Students 9

2. Summary of Studies of Impact on Faculty and Staff 31

Chapter 1: Introduction

The use of behavioral interventions based on the tenets of positive reinforcement is a foundational element of educational programs for students with disabilities in general and for students with emotional and behavioral disorders in particular. This review will examine Positive Behavioral Interventions and Supports (PBIS) that school districts implement. Positive Behavioral Interventions and Supports and related terms will be defined both operationally and theoretically. In addition, the historical antecedents of how PBIS will be examined. Current models of PBIS will be investigated. The best practices associated with initiating and maintaining PBIS will be reviewed. Although school-wide PBIS programs are used with students who have disabilities and with their peers who do not have disabilities, the review will be completed with a specific focus on students who exhibit emotional and behavior disorders.

Historical Overview

Positive Behavior Interventions and Supports emerges from the tenets in the ‘80s. Behaviorism became a dominant paradigm of psychology in the United States during the early twentieth century (Sugai & Simonsen, 2012). Over the twentieth century, the research and applied emphases of behaviorism moved from classical conditioning to operant conditioning.

In 1902, Pavlov reported the effects of reinforcement on behavior (Wise, 2009). He reported that a neutral stimulus could become associated with a stimulus that produces an involuntary response. With sufficient repetitions, the neutral stimulus could elicit the response in the absence of the associated stimulus. Over time, this pattern of associative learning became known as classical conditioning. Pavlov believed such conditioning could become the foundation for theories of education.

In the United States, researchers, e.g., Watson and Skinner, extended Pavlov's model of conditioning into approaches for shaping and for modifying behavior. The model identified as operant conditioning (OC) differs from classical conditioning in that OC associates voluntary behavior with a consequence. Operant conditioning was more readily applicable to education in general and to behavior management.

Beginning in the 1970s, behavior management based on operational conditioning became a dominant approach in special education. First, positive reinforcement was shown to produce more permanent behavioral change than punishment. As a result, reward and reinforcement classroom management and behavioral systems replaced more traditional systems based on punishment. Second, external rewards associated with adaptive behavior were introduced proactively to reduce the likelihood of maladaptive behaviors emerging. Students learned the behavioral expectations for classrooms and emulated such behaviors to achieve a desired consequence. Finally, behavioral change was viewed as occurring through successive approximation. Rather than rewards or punishments occurring as a function of complete behavioral sets, students received reinforcement as their behavior increased in its social appropriateness. These trends became the foundation for Positive Behavioral Interventions and Supports.

Positive Behavioral Interventions and Supports (PBIS)

PBIS is the "systematic use of the science of behavior to find ways of supporting desirable behavior rather than punishing the undesirable behavior; positive reinforcement (rewarding) procedures that are intended to support a student's appropriate or desirable behavior" (Hallahan et al., 2012, p. 463). PBIS includes assessment, plans for modifying

maladaptive behavior and for maintaining adaptive behavior, and approaches for implementing and instantiating the system.

Statement of the Problem

Maladaptive behaviors affect academic and social success of students. Students with emotional and behavior disorders (EBD) have lower levels of academic achievement, have fewer friends, and are more likely to be involved in antisocial behaviors than their peers who do not have disabilities. PBIS is offered as a means for reducing maladaptive behaviors among students with EBD. This review will examine PBIS.

Research Foci

Three questions guide the analysis. First, the theoretical and pragmatic foundations of PBIS will be examined. Second, the best strategies associated with PBIS will be identified and described. Finally, the efficacy of PBIS approaches with students who have emotional and behavior disorders will be investigated.

Rationale

The effects of maladaptive behavior and the management of behavior in educational settings are two of the most intractable problems in schools. The results from this review may have both practical consequences and theoretical implications for these issues.

Practical Consequences

Myriad practical consequences may arise from the results of this review. Teachers may benefit from the identification of strategies that attenuate maladaptive behaviors in their classrooms. More time may be available for instruction, and lesson continuity may be increased.

Teachers and students may benefit from safer classroom environments. Students with emotional and behavior disorders may have opportunities for in-depth learning.

Theoretical Implications

Many behavioral systems based on reinforcement are implemented in a theoretical manner. Students may receive the same reinforcement schedule, may be evaluated using the same assessment system, and may have similar goals for their behavior regardless of disability and setting. This paper may contribute to the collective understanding of type by treatment differences for different disabilities and of environmental variables that contribute to the efficacy of PBIS.

Chapter 2: Literature Review

In Chapter 1, PBIS (Positive Behavior Interventions and Supports) was introduced as the principal focus for the paper. The historical foundations of PBIS in behaviorism were described. Two ancillary research foci were promulgated. These research areas include best practices in PBIS and the use of PBIS to modify maladaptive behavior in the specific context of emotional and behavioral disorders. In Chapter 2, research addressing PBIS that appears in the literature of education and of psychology will be reviewed. In Chapter 3, the findings from the analysis are summarized, and the implications of these findings are described.

Focus of the Review

This review examines the efficacy of Positive Behavioral Interventions and Supports (PBIS) for students who have Emotional and Behavioral Disorders (EBD). The outcomes and the consequences for staff members implementing PBIS are also reviewed. The chapter is organized thematically, First, students with a target population of students are presented. Second, professional educators and staff focused studies are critiqued.

Scope of Review

Several approaches were used to locate published and fugitive studies on the use of PBIS. I completed computational searches of the database *LibSearch*. The descriptors used in the search were *positive behavior, emotional/behavioral disorders, PBIS, positive behavior support and interventions, elementary, positive reinforcement, positive behavior interventions, PBIS and staff, behavior modification, and schoolwide.*

Review of Positive Behavioral Interventions and Supports Studies that Address Impact on Students both Academically and Behaviorally

Table 1

Summary of Studies for Impact on Students

Authors	Study Design	Participants	Procedure	Findings
Childs, Kincaid, George & Gage (2016)	Quantitative	1,122 elementary, middle, and high schools in collaboration with Florida's Positive Behavior Support: A Multi-tiered System of Supports.	Each participant received SWPBIS training, coaches/facilitators receive training to accurately complete and submit all evaluation requirements. The Benchmark of Quality (BoQ) and the Outcome Data Summary data were used.	The study showed a trend that decreased across all three discipline outcomes (office discipline referrals, in-school suspension, and out of school suspension). ODR decreased by an average of six per year.
Marin & Filce (2013)	Quantitative	96 state targeted schools who have received training, coaching, or both from the State Personnel Development Grant during the 2011-2012 school year.	Analysis of relationship between the distinct types of training and coaching received by the 96 schools and their performance on state accountability measures.	The schools that received training and on-site coaching received a higher mean in comparison to those that received only training.
Walker, Cheney, Stage, Blum, & Horner (2005)	Quantitative	A group of 72 students who were identified as 'at risk' within three elementary schools were already implementing PBIS systems.	Students were identified using a Systematic Screening for Behavior Disorders. These selected students were then matched to existing support and were examined twice a month.	When identifying students that are 'at risk' early in the school year, tracking progress, and providing PBIS support can lessen the number of students that are referred to a higher level of interventions in the future.
Gage, Whitford, & Katsiyannis (2018)	Quantitative	90 schools included across four studies. Three studies included only elementary schools while one study included only secondary schools.	Systematic review of research studies that look at the relationship between PBIS and disciplinary exclusion. The level of implementation within each school setting and the number of disciplinary exclusions	No significant effect on disciplinary exclusions, but some effect and statistically significant effect on school suspensions.

Table 1 (continued)

Muscott, Mann, & LeBrun (2008)	Quantitative	28 early childhood education programs and K-12 schools.	A statewide informational summit on school discipline was held. This included a 2-day event to inform districts of PBIS.	Most schools were able to implement schoolwide PBIS interventions and support within 2 years. Adding this to schools resulted in a reduction of 6,010 office discipline referrals and 1,032 suspensions, with middle and high school students experiencing the greatest benefit.
Curtis, Van Horne, Robertson, & Karvonen (2010)	Quantitative	The location of this study was in a rural elementary school within North Carolina	The examination of the effects of SWPBIS and the number of behavior referrals and/or suspensions within a 4-year span	Findings resulted in a significantly less amount of behavior referrals and/or suspensions. Included there was an increase in the amount of instructional time.
Scott & Barrett (2004)	Quantitative	An elementary school in Maryland that has been implementing PBIS for 3 years.	A study examining the impact PBIS has on office referrals, suspensions, and if PBIS is cost effective.	A reduction in the number of office discipline referrals and suspensions. Results also showed PBIS to be cost effective.
Bradshaw, Mitchell, & Leaf (2010)	Quantitative	Randomized controlled effectiveness trial with 37 public elementary schools in Maryland.	21 schools were randomly assigned to the intervention condition group and 16 were assigned to the comparison condition group. Study measured the fidelity, office referrals, suspensions, and academic achievement.	The schools that received training in SWPBIS scored much higher and in a more positive manner across the board than the comparison group.
Cressey, Whitcomb, McGilvray-Rivet, Morrison, & Shander-Reynolds (2014)	Quantitative	600 students, 40 classroom teachers, and 60 staff members. Bilingual K-5 elementary school in the Northeast.	Implementation of schoolwide PBIS over the course of 5 years using data sources such as interviews, observations, Self-Assessment Survey, and School-wide Evaluation Tool.	The school counselor working in collaboration with the stakeholders in the school community showed to be a powerful resource/tool to help reach a satisfactory level of implementation fidelity.

Childs et al. (2016) conducted a study that examined the relationship between school-wide implementation of Positive Behavior Intervention and Supports (SWPBIS) and student discipline outcomes. Three specific research questions guided the study. The first question was to examine if there was a decrease in the frequency of student discipline outcomes across time for schools. Second, they wanted to look if the Benchmark of Quality (BoQ) score related to differences in school-level discipline outcomes at initial status and across time after controlling for school-level characteristics (such as school size, number of years implementing SWPBIS). The final research question examined if the BoQ subscale scores related to differences in school-level discipline outcomes at initial status and across times after controlling for school-level characteristics.

The method of the study used a longitudinal design to examine the connection between the BoQ total score and subscale scores and school-level behavioral outcomes. Four years of data from 1,122 schools were collected between the academic years of 2010-2011 and 2013-2014. The schools that were included in the research were also collaborating with Florida's Positive Behavior Support: A Multi-Tiered System of Supports (FLPBS:MTSS) Project. There were three necessary elements of evaluation: School Profile (demographic information), School-Wide Benchmarks of Quality (implementation fidelity measure), and the Outcome Data Summary (student discipline data). Participants completed three days of training which included lectures, team activities, and video of Florida schools to assist with visualization of the implementation. In addition to the three-day training there was assistance in the application of SWPBIS strategies at the Tier 1 level. This included practices for responding to both appropriate and inappropriate behaviors that one may encounter in the classroom setting (Childs et al., 2016).

Measures used included the Benchmark of Quality (BoQ) which is defined as a psychometrically strong evaluation instrument universally used to assess implementation fidelity at the Tier 1/universal level of SWPBIS using a 53-item rating scale. The average BoQ total score was 78%, with critical features being implemented at the elementary school level (Childs et al., 2016).

Expository results were found within the research conducted. The first suggests that there was a decreasing trend across all three discipline outcomes (office disciplinary referrals, in-school suspensions, and out of school suspensions). The greatest difference was located between elementary and secondary school settings. It should be noted however, that time only accounted for 5% of the variance across all three measures. This suggests minor changes across time. Second, growth modeling suggests that, in connection to implementation fidelity, office disciplinary referral (ODR), in school suspension (ISS), and out of school suspension (OSS) outcomes were similar across time, indicating that fidelity did not foresee differences in growth trajectories. It does however appear that implementation fidelity is critical to maintain a decrease in discipline incidents, but that higher fidelity does not generate swifter changes in results. The results of this study determined the critical role that the fidelity of school-wide application of SWPBIS has on the achievement of valued student outcomes (Childs t al., 2016).

Marin and Filce (2013) reported on their study of the relationship between implementation of school-wide positive behavior interventions and supports and performance on state accountability measures. Participants came from 96 schools in the target state. These 96 participants have received training, coaching, or both from the State Personnel Development Grant (SPDG) during the 2011-2012 school year. The main focus of this research had been to

determine (a) the amount of training and coaching that schools received was related to their Quality of Distribution Index (QDI); (b) if the schools' classification into "model sites" or "non-model sites" based on the results of the School-Wide Evaluation Tool (SET) instrument related to the schools' QDI; (c) if the levels of training and coaching plus the results of the SET instrument that classified the schools into appropriate sites were related to the schools QDI; (d) if the level of SWPBIS implementation fidelity, BoQ, was related to the schools' performance classification, QDI, or Growth status.

To conduct this research study a sample of schools were coded into categories of either training only or training and on-site coaching of SWPBIS. Next, participants reported scoring on the Benchmark of Quality (BoQ) to the director of the SPDG. These scores were used to code each participant as self-reported implementation fidelity (80% or higher) or no self-reported implementation fidelity. ("The Relationship Between Implementation of School-Wide ...") Those that were categorized as self-reported implementation fidelity received an invitation to be externally evaluated using the SET system. Those schools that scored 80% or higher on the SET and were listed as a 'model site' were obtained. The final sample group included 96 schools. For 91 of these schools there is accessible data on the number of years of SWPBIS implementation. ("The Relationship Between Implementation of School-Wide ...") 10 of these selected schools started implementing SWPBIS during the 2006-2007 school year, 1 school during the 2007-2008 school year, 2 within 2008-09 school year, 1 during the 2009-10 school year, 8 within the 2010-11 school year, and 69 schools began implementation of SWPBIS during the 2011-12 school year (Marin & Filce, 2013).

Descriptive results suggested four conclusions. The first addressing the amount of training and coaching that schools received was related to their Quality of Distribution Index (QDI). Findings suggest that schools who received training plus on-site coaching ("intensive") had higher QDIs than the schools that received training only ("non-intensive"). The second research objective, which addresses if the schools' classification into "model sites" or "non-model sites" based on the results of the School-wide Evaluation Tool (SET) instrument related to the schools' QDI, concluded that schools listed as 'model sites' had higher QDIs than the schools that were considered 'non-model sites'. Third objective conducted an ANOVA test to determine if the levels of training and coaching, and the results of the SET had any impact on the schools' QDI. The findings concluded that those listed as 'model sites' had a higher QDI score due to receiving training and coaching on-site. The fourth and final research objective, which addressed if the level of SWPBIS implementation fidelity, BoQ, was related to the schools' performance classification, QDI, or Growth status, revealed a positive relationship and a medium effect between the BoQ and performance classifications. In addition, results showed a positive relationship and a small effect between the BoQ and Growth (Marin & Filce, 2013).

Overall, the findings of the study showed themselves to be consistent with studies conducted in the past. Schools that receive training and coaching receive a higher QDI score, are considered to be 'model sites', these 'model sites' continue to receive training and coaching which positively impacts their results in the classrooms, and the level of SWPBIS implementation fidelity relate to the schools' performance classification, QDI, and Growth status. In addition, this research suggested that improving academic achievement is possible. The

staff within the school seemed more knowledgeable and better equipped to address behavioral strategies without whole class disruption (Marin & Filce, 2013).

Walker et al. (2005) conducted a descriptive study analyzing the social functioning of 72 students who had been identified at risk for emotional or behavioral disorders in three elementary schools with established PBIS systems. Each of these schools are located within different regions of Washington State and all have been implementing PBIS for a minimum of three years. Five primary questions were established as the focal point for this study. First, what percentage of students from grades 1 through 6 in the schools were at risk of school failure due to externalizing and internalizing behavioral problems as measured by the *Systematic Screening for Behavior Disorders (SSBD)?* Next, how did teachers rate at-risk students' social skills and problem behaviors on the *Social Skills Rating System (SSRS)?* Third, what differences were there in the SSRS for externalizing and internalizing students? Fourth, what was the distribution of the students identified as at risk on the measure of office disciplinary referrals, and how will this distribution be reflected by SSBD type? Finally, what were the number and percentage of at-risk students referred for further evaluation and support at meetings such as Student Study Teams, Positive Behavior Support Teams, and qualifying for special education?

Welker created two stages to determine the sample group of participants. The Screen for Behavior Disorders was used by teachers to identify those students who were at-risk. Consent from parents was given to all those participating. In total only 58% of identified students were given permission to participate (Walker et al., 2005).

The main tool that was used during the study is the Screening for Behavior Disorders (SSBD). This tool involved three sections to help identify those at risk for developing ongoing

internalizing and externalizing behavior concerns. The first stage involved teacher nomination, followed by state two, in which teachers complete a Critical Events Inventory and a short adaptive and maladaptive behavior checklist for those student nominees. The final stage involved a fifteen-minute observation within two settings. For this specific study only stages one and two were completed due to determining early identification. Office discipline referrals (ODR) were tracked using a system called the *Schoolwide Information System (SWIS)* which is an online data tracking source that allows school staff to enter information and continue to examine and monitor (Walker et al., 2005).

Data from the participating schools was analyzed in two ways. The first being done through an ANOVA to examine the total number of office discipline referrals was done. The results showed that in two of the elementary schools less than 10% of students had two or more ODRs. Within the first school only two students had six or more referrals and at the second eight fell into the same category. At the third school location 78% of those involved in the study did not have multiple referrals. However, 16% landed in the middle, or two through five ODR range, and 15 students had six or more ODRs for the school year. The second method of analyzing was done using a frequency analysis to help determine the grade level of students identified at risk who received ODRs. To properly examine grade levels a creating of two groupings was created: grades 1 through 3 were categorized as the primary grades and grades 4 through 6 were titled intermediate. Of the 55 students with no more than one ODRs, 30 were in the primary grades and 25 were in the intermediate. Of the 11 who had received ODRs in the 2 through 5 range, 7 were primary students, and 4 were intermediate. At the 6 or greater level, 5 of the 6 students were primary level and 1 was intermediate (Walker et al., 2005).

This study had a focus on five primary questions. The first question refers to the percentage of students during stage 2 that would be identified at risk of the Systematic Screening for Behavior Disorders (SSBD). Across all three schools, 33% of the students passed stage 2. This indicates that after three years of implementation of schoolwide Positive Behavior Intervention and Supports, the number of students expressed as at risk for development of more serious emotional or behavior struggles remains high. Second, the teacher's rating of the at-risk students' social skills and problem behaviors were assessed using the SSRS. The students identified as externalizing and internalizing across the two SSRS scales were examined first. The two groups were labeled problem behavior and social skills. The findings determined a significant difference in social skills between the groups seemed to underscore those students identified as externalizing have a higher probability of being identified by staff as having a deficit within social skills in comparison to those with more internalizing behaviors. Third, the distribution of office discipline referrals was analyzed. The findings shared that almost all ODRs within the schools and all those identified at risk receiving two or more ODRs were identified as showing externalizing behaviors. The findings of this reveal that using ODRs as determining factor to identify those that may be at risk is not the most beneficial system. Additionally, the findings of this study revealed that most office disciplinary referrals were received within the primary school-age students. The hypothesis of this is due to all schools implementing the SWPBIS system for a minimum of 3 years. Those students that are at a higher grade level have been receiving this support from an early age. It is believed that those at higher grade levels are shown to be more mature due to experience within the system. Finally, the study addressed the number of at-risk students referred to the continuum of school support teams by the number of

ODRs received. The findings revealed that about half of these students were stabilized and/or maintained by the schools' pre-existing support team. These students were identified as needing intervention but not yet needing to be evaluated for extensive support (Walker et al., 2005).

Gage et al. (2018) conducted a systematic review of SWPBIS as a framework used for reducing disciplinary exclusions. This review included experimental, group-design SWPBIS research focusing on disciplinary exclusion following What Works Clearinghouse (WWC) procedures. Gage et al. put an emphasis on experimental group design research. Three research questions were proposed: (a) how many groups experimental design studies have been conducted to assess the effects of SWPBIS on disciplinary exclusions, (b) what the quality of those studies is based on WWC standards, (c) what the overall treatment effect of SWPBIS on disciplinary exclusion is and is there a difference by study quality (Gage et al., 2018).

The method of this study was conducted in three phases: (a) abstract search and coding, (b) full text review, and (c) final coding and data extraction. Phase 1, abstract search and coding, consisted of an electronic search using ERIC, PsycINFO, and Educational Full Text, Education Index Retrospective, Psychology and Behavioral Science Collection, and Academic Search Premier in EBSCOhost. Through this search there were 138 abstracts in ERIC and 771 abstracts across all databases in EBSCOhost. The final number of abstracts gathered after duplicates were removed was 778. Once duplicates were removed the 778 abstracts were coded using four inclusion criteria. First, being if the abstract was a peer reviewed journal. Second, all abstracts were reviewed to determine if the reference was (a) empirical, research that was validated through observation or experience, (b) not empirical, or (c) unclear. Next, each abstract was coded by the type of research design, including single-case design, pre-post design, correlational,

one-to-one school comparison, group experimental design, or unclear. The fourth step is to code each abstract for the type of intervention, including SWPBIs, single intervention, or proprietary schoolwide model. At the completion of phase 1 there were 33 studies to continue to phase 2. Phase 2 consists of reviewing the full text of the 33 abstracts using four inclusion criteria. If the study was coded as a yes to all four criteria the study was passed on to phase 3, full coding and data extraction. Only four studies were passed onto this phase. The characteristics were extracted using the following codes during their review: (a) setting of the study, (b) the number of schools, (c) the number of students, (d) student/school chrematistics, (e) number of years implementing SWPBIS, (f) levels of SWPBIS implementation, (g) implementation fidelity, (h) the research design, and (i) a description of the results (Gage et al., 2018).

The results of the overall study found three critical features. These features include the study characteristics, quality, and meta-analysis. A total of 90 schools were identified across the four studies. These studies were conducted across the United States with two studies being conducted in the Pacific Northwest and one in the mid-Atlantic and another in the Southeast. Two schools implemented only Tier 1 PBIS while the other two implemented SWPBIS at all three tiers. Consistent with all abstracts, schools had been implementing SWPBIS between 1 and 4 years. Within three of the four studies implementation fidelity was reported. When looking at the quality of the studies that made it through to the final phase, two of the studies did not meet evidence standards. The reason being due to no established baseline equivalence on the primary outcome measures. All four studies did meet the meta-analysis inclusion criteria. Overall, SWPBIS showed to reduce disciplinary exclusions by 0.61 standard deviation units across the

studies. The findings of the long-term impact suspensions can have one a student is of a plethora. Any level of SWPBIS implementation a school can do is socially important (Gage et al., 2018).

Muscott et al. (2008) completed a study on the effects of large-scale implementation of schoolwide Positive Behavior Intervention and Supports on student discipline and academic achievement within the state of New Hampshire. Schools were invited to participate in a statewide informational summit on school discipline. This began the search for participants. To join as a sample school ten commitments and assertions were needed from administrators: (1) a commitment that PBIS is one of the top three school initiatives; (2) a commitment to a systems approach to behavior change that emphasizes positive and preventive strategies as well as consistent and thoughtful responses to student behavior; (3) a commitment to teach social behavior; (4) a commitment to organize faculty, staff, and families into school-based teams that address the three tiers of PBIS (universal leadership, targeted, and intensive) over a 3-year period; (5) a commitment to regular and active involvement including membership in the Universal Leadership Team; (6) a commitment to the comprehensive collection, review and analysis of data for decision making; (7) a commitment to partnering with families and community stakeholders; (8) a commitment to individualized approaches for students with intensive needs; (9) a comm31itment to make time available for teams to meet regularly and for team members to attend New Hampshire Center for Effective Behavioral Interventions and Supports sponsored training; and (10) An assertion that 80% or more of the school staff is willing to embrace the features of PBIS described above (Muscott et al., 2008).

Five evaluation questions were established for this study. The first question is: can PBIS-NH schools supported with training and technical assistance by the New Hampshire CEBIS

implement and sustain a universal schoolwide system of discipline with fidelity? School leadership teams conduct a self-assessment two times per year to examine if appropriate SWPBIS features are established properly or not. Once this self-assessment has been complete the results are taken to plan appropriate changes to better the system. Schools want to receive an 80% or higher on the assessment as this score communicates that the school is on track with proper implications. The Schoolwide Evaluation Tool, also known as SET, was used to test the schools' level of fidelity. The SET contains 28 items clustered in seven features. At the end of the evaluation a summary score is given as a percentage that can range from 0% to 100%. Visits to participating schools were made by evaluators. This visit consisted of interviews with administrators about their implemented program, a review of discipline-related documentation and tours of the facility to determine if expectations were visible to students in various places on the school grounds. Results indicate that 15 of the 28 programs, or 54%, met the SET standard score within 3 months of their initial PBIS launching with students. During the second year of the trial this percentage increased to 21 of 24 programs, or 88%. The data showed that the programs that were receiving support from the New Hampshire Center for Effective Behavioral Interventions and Supports adjusted quickly to expectations and were able to swiftly make the needed adjustments to sustain growth and fidelity (Muscott et al., 2008).

Evaluation question number two looked to see if those programs who were supported with training and technical assistance by the NH CEBIS were able to implement and sustain an effective universal preventative schoolwide system of discipline that supports the prosocial behavior of most of the students. In the first year of implementation, 70% of the programs were successful in creating a universal system where the percentage of students receiving zero or one

office discipline referral were consistent with the standard of their respective instructional level. Within the second year of the study 93% showed themselves to be successful at sustaining the standard. This information supports the prosocial behavior of most of the students in most programs and sustains effective implementation for an additional year (Muscott et al., 2008).

Evaluation question number three looks to determine if those schools receiving support by the NHCEBIS can reduce major behavioral infractions that result in office disciplinary referrals and/or suspensions by the implementation of SWPBIS. Gathered evidence states that the 22 schools that data was obtained from showed reduced ODRs by 6,010 or 28% between the first and second year of implementation. In addition, the data indicates that 19 of the 23 schools reduced the average rate of ODRs per day per 100 students between the first and second years of implementation. Out-of-school suspension and in-school suspension data was also gathered for the same 22 schools. ISS was reduced by 31% and OSS by 19%. Collectively, results indicate that by implementing SWPBIS on the number of both ISS and OSS referrals was positive as both numbers, ISS and OSS, decreased (Muscott et al., 2008).

Question number four searched to know if schools supported by the NH-CEBIS find that implementing SWPBIS provides (a) students with increased instructional time and opportunities for academic achievement, and (b) teacher more time to teach, and (c) administrators more time for leadership activities. The results concluded two important outcomes. On average it was found that office discipline referrals cost students 45 minutes of classroom instructional time, teachers 10 minutes of teaching time, and administration 15 minutes of leadership time. This study did not indicate the amount of time lost for ISS and OSS disciplinary measures. Results state that the amount of time recovered at the participating schools due to implementation of SWPBIS

between years one and two totaled 584 hours (about 3.5 weeks) of learning, 130 hours (about 5.5 days) of teaching, and 195 hours (about 1 week 1 day) for leadership (Muscott et al., 2008).

The final question looks to examine if those that have implemented SWPBIS with fidelity show associated increases in academic achievement. To assess whether schools showed an increase in academic achievement, an analysis of results from the New Hampshire Education Improvement and Assessment Program was conducted. Data was collected for the academic years 2002-2003 and 2003-2004. Students in grades 3, 6, and 10 participated in reading/language arts and mathematics exams. New Hampshire changed to a different statewide assessment tool for the2004-2005 academic year which made any conclusions challenging (Muscott et al., 2008).

Curtis et al. (2010) looked to examine the relationship between schoolwide implementation of Positive Behavior Intervention and Supports and student discipline outcomes. The study used Glenn C. Marlow Elementary school for its sample. This school is a K-5 building in western North Carolina. A leadership team was established, consisting of the school counselor, a special education teacher, two classroom teachers, the principal, a social worker, and two parent representatives. The school began implementation of the SWPBIS program in August of 2003.

The method for this study included gathering data for the years 2003-2006. Data topics included referrals to the principal for behavior reasons, extended timeouts within the school day, out-of-school suspensions, and instructional days lost. The data that was obtained for the 2002-2003 academic year was used as baseline data. At the start of the study, the school had a system set in place where all behavior incidents were directed to the school counselor. Once the

implementation of SWPBIS began the principal became more involved with the discipline actions, including how and who would handle them (Curtis et al.,2010).

The results from the study were incredibly positive. To show consistency all results were as percentages. The four areas of focus included behavioral referrals, extended timeouts, out-of-school suspensions, and instruction days lost. Between the 2002-2003 school year and the 2006-2007 academic year behavioral referrals decreased by 47.8%, extended timeouts decreased 1.7%, out-of-school suspensions decreased 67%, and instructional days lost decreased 56.5%. Each area of focus decreased within the baseline year to the fourth year of intervention. The greatest decrease being in the number of out-of-school suspensions. When looking at the greatest decrease percentage change for each category over each academic year the change stayed consistent between year two (initial implementation) and year three (full implementation). Behavior referrals dropped 8.42%, extended timeouts dropped 1.91%, OSS dropped 6.66%, and instructional days lost decreased 12.14%. The overall conclusion that can be drawn from this study is that with appropriate implementation and facilitation, disruption within the classroom and school setting due to negative behavior can decrease significantly (Curtis et al., 2010).

Scott and Barrett (2004) started the research process of identifying if Positive Behavior Intervention and Supports showed a positive impact on office discipline referrals, suspensions, and if it was cost effective. The participating school was an elementary school in an urban location in Maryland. During the summer months in 2000, the school district sent a team of five to a 2-day training event on SWPBIS. Once returning from training the team was able to share the newly learned information with the other staff. As a whole staff, common student problems, predictable times, and locations of occurrence were determined. The team developed teachable

expectations; clear and consistent routines; and physical arrangements to prevent these predictable problems. The administrators identified lost time as a critical barrier as well. A goal of 25% reduction within office discipline referrals and student disciplinary suspensions was set.

The System-Wide Evaluation Tool (SET) was used to measure and monitor the fidelity of the program in the fall of 2001 and again in the spring of 2002. Measures of 79% and 80% for the two SET assessments indicated that PBIS was reliably implemented. An examination of the past year's disciplinary records was done to determine the average time of various incidents in terms of the time lost by adults and students. It was determined that an average of 10 minutes of administrator time to process discipline referrals. When processing a typical suspension 45 minutes of administrators' time was lost. When looking at the time students spent out of the classroom due to behaviors it came to be an average of 20 minutes (Scott & Barrett, 2004).

Results indicated that student behavior problems decreased in comparison to the baseline data obtained and are continuing to decrease into the next year of implementation. Over the 3 years of monitoring at this specific location in Maryland the number of office discipline referrals decreased from 608 during the baseline year to 108 after year one and again to 46 in year two. Suspension rates decreased from 77 in the baseline year to 31 in year one and down again in year two to 22. When looking at the amount of time administration spends on discipline it was found that a baseline of 10 minutes on average was spent per office referral. After carrying out this study it was found that there was a decrease in the time spent within each implementation year. Total administrator minutes dedicated to office discipline referrals reduced from 6,080 during the baseline year to 1,080 during the first implementation year and to 460 in the second year. This translates to a consecutive total average savings of 10.4 workdays saved between the baseline

and the second year, considering administrators work an 8-hour day. The average time administrators spent on average handling a suspension during baseline was 45 minutes. Within the 2 years of implementation this decreased from 3,465 in total to 1,440 during the first year and 990 in the second year. This data gives a 2-year average net savings of 2,250 administrator minutes. These findings were multiplied by administrator's daily salary to indicate the cost of the time saved. The amount was $6,024.84over baseline in the first year of implementation and $6,932.69 over baseline in the second year of PBIS implementation (Scott & Barrett, 2004).

Analyzing the instructional time data that were gathered during the study showed a positive correlation. The less time that a student(s) is out of the classroom, the more time they are receiving academic instruction. Findings suggest that the total number of instructional minutes lost due to office discipline referrals decreased from 12,160 during baseline to 2,160 during the first year of implementation and down to 920 in the second year. This comes out to an average gain of 10,620 minutes. A typical school day, on average, is 6 hours. The amount of time gained due to the decrease in school suspensions decreased from 462 during baseline to 192 in the first year and 132 in the second year. This indicates a gain of 55 days over baseline in the second year (Scott & Barrett, 2004).

Bradshaw et al. (2010) conducted a research model that examined the effects of schoolwide Positive Behavior Intervention and Supports on student outcomes. The results are from a randomized controlled effectiveness trial in 37 Maryland public elementary schools from five districts, both rural and suburban. Each school was matched with select baseline demographics, of which 21 schools were randomized to the intervention condition and 16 were assigned to the comparison condition. Unlike other research base studies, the training that

schools received was not directed by the researchers. This study had schools receive their training from the states SWPBIS typical training procedures.

Three measures were addressed: implementation fidelity, the effective behavior support survey, and student outcomes. When addressing implementation fidelity, the School-wide Evaluation Tool (SET) was used. The SET was administered by a verified observer who determined the degree to which a school had implemented each of the model's seven critical features. Review of written materials and the established discipline procedures was complete along with identifying 10 specific locations throughout the school grounds that listed the three to five behavior expectations. At each subject school 12 staff members were selected at random to complete an interview about school procedures, policies, and standards for positive behavior and rule infractions. The Effective Behavior Support Survey (EBS) was utilized to measure fidelity. All staff in both conditions were given this survey to complete. The results helped determine the extent to which the four behavior support systems were considered in place in the school: (1) schoolwide discipline systems, (b) non-classroom management systems, (c) classroom management systems, and (d) systems for individual students engaging in chronic problem behaviors. The data gathered on office discipline referrals was collected from the schools that had been training in years 1 through 4 using the school-Wide Information Systems (SWIS). This system is used by schools to collect and manage discipline referrals. The suspension levels within the school were obtained from the Maryland State Department of Education (MSDE) for the baseline year through year 4 of the study (Bradshaw et al., 2010).

The result of the trial indicated high fidelity to the schools that received training in SWPBIS. Additionally, the number of office discipline referrals and suspensions were

significantly reduced. Those schools that did not receive training and were categorized as the comparison group had suspension rates that remained unchanged. These results suggest that when schools receive training and support, long-term changes can occur (Bradshaw et al., 2010).

Cressey et al. (2014) directed a research study at a time when a group of third grade students began to show significant and challenging behaviors. The school counselor took the initiative to lead the implementation of schoolwide PBIS over the course of 5 years. The study took a focus from a grade-level pilot to school-wide implementation. Reports during the 2008-2009 school year showed that the third-grade class was struggling to form responsible, safe, and respective learning environments. Reports of verbal and physical altercations were noted along with a concern in student engagement.

From the concerns that were brought forward within the third grade, the PBIS pilot intervention in grade four began. The school developed core values to address within their learning environment: class, academics, respect, and effort. Classroom expectations were defined as a whole group during classroom meetings. This format was used to help increase student input for setting their own expectations. A system for positive reinforcement was also developed and introduced to the fourth-grade students. To recognize those students who are showing CARE (the acronym for the core values) teachers would hand out sunshine tickets to students on a regular basis. In addition, the school counselor scheduled six assemblies throughout the school year to recognize the success of students for demonstrating CARE values (Cressey et al., 2014).

The success of the fourth-grade pilot program was evaluated using informal sources of evidence, based on teacher judgement and observations. Three times during the school year teachers were asked to rate student behavior using six competencies that were consistent with the

school report card: (a) listens carefully and follows directions; (b) cooperates with peers and teachers; (c) respects rights, opinions, and property of others; (d) accepts help and suggestions for improvement; (e) completes required work; (f) shows effort. This information was shared with the school counselor. During grade-level meetings this information was shared and reviewed three times per school year to determine if students were receptive to the CARE program. Based on behavior improvement documented by school staff the grade-level team came to an agreement that the initial PBIS program had been successful. At this time, the school counselor took the information gathered from the fourth-grade team and shared it with the fifth-grade team to prepare them for the implementation of PBIS. The remaining years of the study consisted of the pilot program being expanded to fifth grade during year two, year three consisted of implementing the CARE program within all grade levels and years four and five were meant to focus on sustaining the school-wide CARE program (Cressey et al., 2014).

Data addressing results gathered from the self-assessment survey (SAS) indicated exponential growth. The eight areas that were monitored included: (a) expectations defined; (b) expectations taught; (c) reward system; (d) violations system; (e) monitoring; (f) management; (g) district support; and (h) implementation average. During year two all staff reported all areas to be below the desired level of 80% or higher implementation fidelity. During year three it was found that three of the eight categories met the 80% or higher implementation fidelity (expectations defined, expectations taught, and reward system). Year four this increased to four of the eight categories (expectations defined, expectations taught, reward system, and monitoring). By year five there were six categories that the self-assessment survey shows 80% or higher implementation fidelity (expectations defined, expectations taught, reward system,

monitoring, management, and implementation average). Between years 3-5 there was not much growth for the area of violations system. However, around district support there was a greater jump between years 4 and 5. These two categories did not reach the desired 80% or higher implementation fidelity (Cressey et al., 2014).

Average Office Discipline Referrals (ODRs) per day, per month were also closely examined during years three through five. The data shows an increasing trend in the average number of ODRs. This increase is said to be expected due to the increase in enrolment each year. In year three there were 570 students enrolled, year four had 605, and in year five a total of 620 students were enrolled. According to the SAS, teachers are completing ODR forms more consistently each year. This can account for accountability and improvement within the data system. The negative consequence of relying on the data from the ODR forms completed is that not all referrals were entered into the system. Once data became more consistent, staff were able to analyze the data by identifying the times of day and/or location in which maladaptive behaviors are occurring more frequently. For example, ODR data from years three and four state that the behavior that occurred most frequently was defiance. Narrowing down that information on another level, it was found that this was shown most often within the classroom setting (Cressey et al., 2014).

The school counselor showing initiative in administering and supporting schoolwide positive behavior intervention and support was powerful in this study. The counselor worked with stakeholders in the school community thus allowing engagement with teachers, administrators, students, and families in a multi-year process. During this study, the amount of time allocated by the school counselor stayed to be consistent with the allocation prior to the

implementation. By the end of the study, it was estimated that the counselor spent about 10% of their schedule on PBIS and another 10% on other areas of program management and school support (Cressey et al., 2014).

Review of Positive Behavioral Interventions and Supports Studies that Address Impact on Faculty and Staff

Table 2

Summary of Studies of Impact on Faculty and Staff

Authors	Study Design	Participants	Procedure	Findings
Ross, Romer, & Horner (2012)	Quantitative	Elementary schools in Oregon. Preexisting SET scores were used. 26 low-scoring schools (below 80% on the SET) and 25 high-scoring schools.	A 54-item survey completed by staff at random. Maslach Burnout Inventory-Educators Survey. Teachers' Sense of Efficacy Scale was completed.	Schools with more experience of implementation of PBIS and higher socioeconomic status had significantly higher composite teacher efficacy scores, lower average scores on Emotional Exhaustion, lower scores on teacher depersonalization, and higher scores on personal accomplishment.
Houchens, Zhang, Davis, Niu, Chon, & Miller (2017)	Quantitative	151 Kentucky schools participating in SWPBIS in 2010-2011.	Completion of the BoQ fidelity implementation self-assessment, gathering a baseline from non SWPBIS schools in Kentucky. Researching difference in teacher perceptions of teaching conditions.	Teachers implementing SWPBIS reported more clearly defined expectations, and missions and visions for their schools. Differences in teacher perceptions of managing student conduct. Found more participation and community involvement in the schools implementing SWPBIS.
Tyre, & Feuerborn (2017)	Qualitative	36 schools from 9 districts in western Washington. Each school had been engaged in SWPBIS for at least 1 year. Districts located within three cities, five suburbs, and one rural area equaling 25 elementary schools, eight middle schools, and three high schools.	Analysis conducted with school staff who reported their nonsupport of the SWPBIS initiative in their school through open-ended concern statements	Of the 1,210 staff who participated, 44 expressed their disagreement with SWPBIS implementation in their schools. Of those voicing this disagreement, 48% were from elementary schools, 36% from middle schools, and 16% from high schools. Of the Non supportive staff, 75% were certified teachers and support staff who had been in the profession for an average of 7.9 years.

Table 2 (continued)

Reinke, Herman, & Stormont (2013)	Quantitative	33 elementary schools that have implemented SWPBIS with high fidelity.	Direct observations of classroom management strategies	Classrooms had stated classroom rules at high rates. The teacher's use of specific praise and the ratio of positive praise to negative interactions were below expectations.
Bambara, Goh, Kern, & Caskie (2012)	Quantitative	293 professionals with experience in implementing PBIS across five states: West Virginia, George, Delaware, New Jersey, and Kansas.	Survey implementation	Results indicated that the greatest barriers were also the most experienced by those surveyed and consisted of factors related to beliefs, time, and training.
Vancel, Missall, & Bruhn (2016)	Quantitative	314 teachers from 37 elementary schools, 14 middle schools, and 11 high schools in Iowa with implementation of PBIS.	Iowa Social Validity Scale	Teacher social validity was lower at the high school level in comparison to the elementary and middle school levels. Characteristics of staff did not act as significant predictors of social validity ratings.

Ross et al. (2012) saw a need to examine teacher well-being and the implementation of school-wide Positive Behavior Interventions and Supports. They had found that most researchers put an emphasis on the impact PBIS has on students but were not able to find the impacts it has on faculty and staff. A total of 51 Elementary schools in Oregon were recruited. Two groups were formed based on preexisting SET scores. The first group consisted of 26 schools that received a low score on the SET. The second group had a preexisting score of above 80% on the SET which is a high score. Of the 51 schools that were recruited, only 40 schools committed to the study, 20 from each category.

Two measurement types were used: Microsystem and Mesosystem. When conducting the microsystem measurements, a 54-item survey, that took 15 minutes to complete, was sent to randomly selected teachers. This survey looked at two embedded measures. The first being teacher gender, ethnic/racial identification, highest degree awarded, year of student teaching,

years teaching, the number of positive school tokens (small rewards) the teacher had given out to students over the past month, the number of times the teacher had reviewed the school-wide expectations with their class over the past month, and the number of office discipline referrals the teacher had completed for students over the past month. The second embedded measure of the survey asked teachers about their view of teacher stress and burnout as measured by the Maclach Burnout Inventory-Educators Survey (MBI-ES). This survey looks specifically at three factors that contribute to burnout levels: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Once information was gathered during the microsystem measurement phase and teacher level was considered, the research team looked at the environmental factors and school-level practices. Next, the level of socioeconomics was measured by the percentage of students receiving free or reduced meals. Finally, the average number of students per teacher was considered and the level of implementation of SWPBIS using the SET tool. A multilevel regression approach called the HLM6 was used to analyze the microsystem and mesosystem variables (Ross et al., 2012).

Results from this research conducted by Ross et al. (2012) were found when three models were applied to the efficacy and burnout data. First was an unconditional model that examined within- and between-school variation. This was used as the baseline model for comparison with other models. This showed that there were significant differences between schools for each of the outcomes that were measured: teacher efficacy, emotional exhaustion, personal accomplishment, and deserialization. Next, they attempted to find the best set of microsystem variables among teachers out of the following: years of teaching, years of student teaching, office discipline referrals, positive rewards, and reviews of school-wide expectations. Only the number

of reviews of school-wide expectations was significant and therefore retained for further analysis. For depersonalization, only positive rewards given were significant. The remaining two subscales of teacher burnout, emotional exhaustion and person accomplishment had no found microsystem predictors significant enough to retain for further analysis. The third model that was used looked to predict mesosystem variables in the microsystem parameters. To identify the best predictors from the eight context variables there were several initial analyses that needed to be completed. The eight context variables that were focused on included: SET scores, school socioeconomic status, average number of students per teacher FTE, average years teaching, average years student teaching, average positive school tokens, average school-wide expectation reviews, and average office discipline referrals. Findings included SET scores and school socioeconomic status being closely related to all the burnout and efficacy outcomes. For the areas of teacher efficacy, emotional exhaustion, depersonalization, and personal accomplishment it was found that schools with a higher implementation rate of SWPBIS and higher socioeconomic status had significantly positive composite scores. This means that the level of teacher efficacy increased, teacher exhaustion and depersonalization decreased, and personal accomplishment scores increased. School-wide Positive Behavioral Intervention and Supports improves teaming dynamics, increases opportunity for collaboration, and helps grow more positive interactions between adults and students (Ross et al., 2012).

Houchens et al. (2017) researched the impact of positive behavior interventions and supports on teachers' perceptions of teaching conditions and student achievement. The three research questions that they crafted were looking to see if there was a significant difference in teacher perceptions of teaching conditions between schools in Kentucky that participate in

SWPBIS and schools that do not. Their second research question asked if the school's fidelity level of SWPBIS implementation determined by the BoQ affects Kentucky teacher's perceptions of the teaching conditions in their schools. Lastly, does the school's fidelity level of SWPBIS implementation affect Kentucky student academic outcomes and to what extent does the fidelity score predict student academic outcomes?

One hundred fifty-one schools in the state of Kentucky completed the Benchmark of Quality (BoQ) fidelity of implementation self-assessment. The results of this assessment were matched with schools in the state that were not implementing SWPBIS and used as a comparison group. The educators within the school were asked to complete the Teaching, Empowering, Learning and Learning (TELL) survey. This survey measures their perception of working conditions. Raw TELL Kentucky data was aggregated to the school level to merge school or teacher demographics with the TELL Kentucky survey responses and student academic outcomes. In this data, groups of individual data (observations) were replaced with summary statistics based on those observations (Houchens et al., 2017).

The use of existing datasets was used in this study. These sets included PBIS implementation data, TELL Kentucky 2011 survey data, and School Accountability data. The data from the Benchmark of Quality was provided in addition. The first research questions regarding whether there were significant differences in teacher perceptions regarding their teaching conditions between SWPBIS school and non-SWPBIS schools was addressed using a MANOVA test. If this test showed significant treatment effect on a particular TELL construct, ANOVA tests were performed to examine the treatment differences on each survey item. The next research question looked to find whether the level of a school's fidelity of implementing

SWPBIS affected teachers' perceptions of their teaching conditions. To analyze this question the BoQ scores were utilized. These scores indicated that the schools implementing SWPBIS were classified as low-fidelity implementers (34 schools implementing 70% of program benchmark or less), medium-fidelity implementers (67 schools implementing 71%-89% of program benchmarks), or high-fidelity implementers (50 schools implementing 90% or more benchmarks). The third and final research question investigated whether the level of a school's fidelity of implementing SWPBIS affected student academic outcomes. Overall scores as dependent variables and implementation status as the independent variable were used to conduct an ANOVA test (Houchens et al., 2017).

The results for the three research questions were gathered. The first question looked at the differences in teacher perceptions of teaching conditions between SWPBIS and non-SWPBIS schools. The results stated significant differences between the two. Teachers in schools that are implementing positive behavior intervention and support reported a higher level of student and faculty understanding of expectations, policies, procedures, and student conduct. Whether school's fidelity of implementation of SWPBIS affected teachers' perceptions of their work conditions was analyzed in the second research question. The levels of implementation on teacher perceptions of managing student conduct, community support and involvement, and teacher leadership were found to be significantly different. Schools that show implementation fidelity at a higher-level distinguished teachers' perception of student and faculty understanding of behavior expectations and satisfactory student conduct and school safety. The final research question looked to address whether the levels of school wide PBIS implementation affected student academic outcomes. This research question found no significant differences between

those schools that are implementing SW-PBIS and those that are not. Overall, the positive implementation of SWPBIS impacts teachers' perception of conflict management and school leadership (Houchens et al., 2017).

Tyre and Feuerborn (2017) conducted a qualitative analysis with a sample set of 36 schools within nine districts in western Washington. Districts were located within three cities: 25 elementary schools, eight middle schools, and three high schools. The analysis of the study was to determine staff reported concerns to implementation of School-Wide Positive Behavior Intervention and Supports. A total of 1,210 responses to a survey were received from staff that work directly with students. Of the staff that responded to the survey, 67.6% were certified teachers, 17.2% were classified staff, 8% were administrators, and the remaining 4% reported their role as “other”.

Data were collected through an online survey tool, the Staff Perceptions of Behavior and Discipline survey (SPBD). The survey was used to identify those that may be unsupportive of SWPBIS, demographic items to understand more about these staff, and an open-ended qualitative item to understand the specific nature of their concerns. A comparison of demographic information of those staff that expressed their support was paired with those that voiced concerns. To do a proper comparison the demographic information of staff was looked at, including their school level, job role, years of experience, SWPBIS implementation level, self-reported level of knowledge of SWPBIS, and the amount and quality of SWPBIS-related professional development provided to them. The SET was used to assess the level of implementation fidelity in 30 of the 36 schools that were participating in the research. Due to

logistical constraints data from the remaining six schools was not gathered (Tyre & Feuerborn, 2017).

Administrators from participating schools requested their staff to complete a survey that was sent out. This survey was shared with all staff that work with students. Researchers independently read each response to the open-ended concerns statement and created codes or first-order abstractions to categorize the content of all responses. To confirm the level of validation several methods were used. First, data were coded independently by Tyre and Feuerborn along with a high rate of ICA. Second, leading up to and at the conclusion of each coding stage a discussion was held to eliminate potential biases, predispositions, and other issues that may impact the reliability of the process and findings. The implementation of an external audit was implemented to increase the trustworthiness of the findings (Tyre & Feuerborn, 2017).

Out of the 1,210 staff who responded to the surveys conducted, 44 of these staff expressed their disapproval for SWPBIS. 48% of these staff were at the elementary level, 36% from the middle school level, and 16% at the high school level. Seventy-five percent were certified teachers and certified support staff. The staff that showed to not support SWPBIS averaged 7.9 years of experience in their current job role. When looking at the knowledge level of SWPBIS, 20.5% of respondents expressed limited knowledge, 45.5% reported basic knowledge, and 34% reported an important level of knowledge. Non-supportive staff received 2.6 hours of professional development related to behavioral support in the past year, with a range of 0 to 7 hours. Of those that received training and professional development on behavioral support, 61% found it to be beneficial. Consistency was another area of focus presented within the study. This was the most notable these in the data set, accounting for 18% of the codes, with

39% of respondents expressing concerns related to this theme. The greatest trend expressed was that staff felt their colleagues may share that they are willing to implement SWPBIS to the public but not follow through with their words. This caused a concern with consistency being implemented for all staff, regardless of job title. Another notable concern was the climate and stress level of staff, accounting for 15% of codes with 32% of responding to this concern. It should be noted however that SWPBIS was not necessarily connected to the overall concern of climate and stress. It was reported through open-ended statements that climate problems are attributed to accountability for students, concerns for the maladaptive behavior of students, and results from staff-student interactions. The last of support from administrators was another area of concern reported. This consists of the last of leadership and failure to clearly communicate expectations to staff and hold others accountable. This concern comprised of 14% of the codes with 30% respondents expressing concerns related to this theme. Implementation concerns were found to be specific to the school and not the general framework of SWPBIS. Elementary staff were noted to be more concerned with this however in comparison to middle and high school staff. Overall, many participants expressed that they support SWPBIS. Those that did not express support were ones that did not have as high of knowledge in the framework (Tyre & Feuerborn, 2017).

Reinke et al. (2013) conducted research with a focus on identifying areas of enhancement within classroom-level positive behavior supports in schools that are implementing School-wide Positive Behavior Intervention and Supports. An evaluation between teachers reported self-efficacy with classroom management and emotional exhaustion and observed classroom management practices and students' maladaptive behavior was completed. Measurements for

this study were done by recruiting teachers to participate in a large group randomized trial evaluating the efficacy of the Incredible Years Teacher Classroom Management Program. The data that were presented into the study was gathered prior to the implementation of the intervention. Participants included 33 elementary teachers (kindergarten through third grade) from three elementary schools. Each school showed to be implementing SCPBIS with high fidelity. Participants had an average teaching experience of 12.71 years.

Measurements for this study consisted of direct observation of behavior from staff and students, a classroom ecology checklist, a look at teacher efficacy, and emotional exhaustion. Direct observation was conducted by independent observers. The behavior of both staff and students was noted along with teachers' use of general praise, specific praise, explicit reprimands, harsh reprimands, and opportunities to respond using Multi-Option Observation System for Experimental Studies (MOOSES). MOOSES is a computer-based observation system designed to be used to record student-student and student-teacher interactions within the classroom setting. When conducting the observations, a new target student is focused on every 5 minutes. All classroom observations were completed within a single day with each observation lasting between 20 and 80 minutes. The student and teacher behaviors were operationally defined as follows: Student disruptive behaviors was defined as any behavior that disrupts direct instruction; general praise was defined as any verbal statement or gesture that indicated approval and does not name a specific behavior; specific praise was defined as any verbal statement or gesture that indicated approval and names a specific behavior; explicit reprimands were defined as verbal comments or gestures by the teacher that indicate disapproval of behavior, but were brief and issued in a normal tone of voice; and harsh reprimands were defined as verbal

comments or gestures indicating disapproval of a behavior that is prolonged, uses excessive force, or uses a voice louder than typical for the setting or harsh, critical, or sarcastic tone. Classroom ecology checklists were completed immediately following classroom observations. This checklist consisted of a 20-item questionnaire that assesses the classroom on the following dimensions: (a) classroom structure, (b) behavioral expectations, (c) instructional management, (d) interacting positively, (e) responding to appropriate behavior, and (f) responding to inappropriate behavior. The Teacher Sense of Self-Efficacy Scale, which is a 24-item adaption of Gibson and Dembo's teaching efficacy scale, analyzes three 8-item subscales relating to (a) efficacy for instructional strategies, (b) efficacy for classroom behavior management, and (c) efficacy for student engagement. The teacher verion of the Maslach Burnout Inventory, a 22-item measure assessing how frequently teachers experience the feel of burnout, was given to participants. This was completed by all participants in the month of October at the time of the study (Reinke et al., 2013).

To begin the study interested teachers were provided informed consent to participate. Next, parental consent forms for students in the participating teachers' classrooms were given out. Of the total number of parental consent forms sent, 83% of parents gave approval. Data collection was performed during the first 3 weeks in October with observations and teacher completion of self-report measures occurring simultaneously. The analytic plan included observations of behaviors to identify positive to negative interactions ratio. Next, the mean rates and ranges of staff and student behaviors in the classroom were reported by the school. Finally, a linear regression analysis with direct observation variables as dependent variables and teacher

self-efficacy and emotional exhaustion as predictor variables was conducted (Reinke et al., 2013).

The result showed an overall result that teachers' ratios of positive to negative interactions were less than optimal. The hope is that teachers would provide four positive interactions for every one negative interaction with students. This result shows that teachers are giving more reprimands to students. Only one teacher involved in the study met the criteria of four positives to one negative. It was also found that teachers show higher chances of giving general praise over specific praise. Research suggests that teachers provide at least three to five opportunities during direct instruction. Kindergarten teachers were found to be more likely to provide three or more opportunities per minute, with four out of eight participants meeting this criterion. One second grade teacher also met this criterion. Observations revealed that classroom expectations were clear to someone coming into the room. The connection between teacher practices with teacher's' reports of self-efficacy in classroom management and emotional exhaustion was evaluated. Results suggested a positive relationship between the use of general praise given by teachers and self-efficacy with classroom management. The rate of student disruptions was negatively related to self-efficacy. The staff that reported a higher level of emotional exhaustion were found to have lower rates of positive interactions with students (Reinke et al., 2013).

Bambara et al. (2012) conducted a survey looking to identify to which extent school-based professionals experienced barriers and enablers. In addition, a closer look to identify the perceived level of impact on hindering or supporting the implementation of PBIS in schools. A total sample population of 293 educators with experience in the implementation of PBIS

participated in the study. The population of the study consisted of teachers (34.8%), behavior support specialists (18.8%), school administrators (15.0%), and staff who reported as serving as a "regular team member" (50.2%). There was a total of 94 participants that reported their job title under the categories of serving as a team leader, facilitator, or coach (33.9%). The participants were located within five states, including West Virginia, George, Delaware, New Jersey, and Kansas.

Those that volunteered for the study completed a four-part questionnaire. Part one held items related to basic demographic information including age, gender, educational level, position, and where/type of educational agency they were employed. Part two asked for information regarding the level and amount of training they participants had received in PBIS and their role on student-centered teams. Part three (barriers) and part four (enablers) held a list of potential barriers and enablers that may impact the implementation level of PBIS. For each item, participants were asked to (a) indicate whether they experienced the item as a barrier or enabler and (b) indicate the perceived level of impact the barrier/enabler had on the implementation of PBIS in the workplace based on their experience. Each section within part three and four were followed up with an open-ended question looking to identify any additional barriers/enablers not listed within the survey (Bambara et al., 2012).

The recruitment process began with contacting directors of state-level technical assistance organizations that delivered training and consultation to schools on the implementation of PBIS. A meeting with state trainers at the annual Association for Positive Behavior Support conference was also attended. Three criteria were sought for when meeting with organizations: (a) maintained active and recent contact information on their trainees,

(b) willingness to provide contact information or distribute the questionnaire, and (c) provide a series of training to teach about PBIS as they implemented practice in their schools. Each questionnaire was sent out with a brief overview of the research purpose and instructions for completing the survey. This questionnaire was distributed over a 5-month period. Of the 939 that were given out, 338 (36%) were returned. Of the 36% that were returned, 45 people indicated that this study was not appropriate for them to participate in resulting in a total of 293 questionnaires for the final study (Bambara et al., 2012).

Participants' responses were analyzed using the Predictive Analytic Software (PASW) Statistics, Version 17, for descriptive and inferential statistical analyses. Barrier and enabler items were categorized into three domains based on Bambara et.al. (2009): (a) Administrative/ Organizational Structure, (b) School Culture, (c) Professional Development and Practices. To determine the internal consistency for each of the domains for barriers and enablers Cronbach's alpha values were calculated. Enabler items were broken down into two categories with one category combining *not much/not at all* and *weak* responses and the other combining *moderate* and *substantial* responses. To examine the differences between PBIS team leaders and regular team members within the responses to the barriers and enablers a one-way multi-variate analysis of variance was used (Bambara et al., 2012).

A vast number of results were gathered through this study. Overall, it was found that all barriers were reported as being experienced. Within the domain of school practices, the area of "basic PBIS principles and practices not understood by the entire school staff" was most frequently experienced with a rate of 91.7%. The least experienced barrier within this domain was "school philosophy and practices restrict inclusion of students with disabilities in general

education classrooms" with an overall experience percentage of 46%. In the domain of Administrative/Organizational Structure the most experienced area was found to be insufficient time for school personnel to implement PBIS activities with an experience percentage of 89.2%. Basic PBIS principles and practices are not understood by the entire school staff with an experience percentage of 91.7% was found under the domain of School Culture. In the Professional Development and Practices domain, "the amount of time required to develop and implement individualized support for a student" was ranked number one with a percentage of 91.6% (Bambara et al., 2012).

When looking at the enablers, all were noted as being experienced by the participants. The results showed however that fewer of the respondents noted experiencing enablers compared to barriers. The most experienced enabler landed in the domain of Professional Development and Practices. Positive working relationships with those on the team were reported by 85.7%. The least experienced enabler was found to be the knowledge of basic principles and practices of PBIS by the entire staff with a percentage score of 28%. Respondents (48.1%) felt that teachers and other school personnel are trained in PBIS, 85.6% felt that school personnel have observed or experienced positive outcomes from working with students with challenging behaviors, and 85.5% of survey participants felt the data collected on student performance are used to make decisions about behavior support. When taking a closer look at these results it was observed that the barriers reported as most frequently experienced also were the same barriers that were the most problematic. The overall findings of enablers were less clear. Most of the enablers were viewed to have a moderate to substantial impact on the implementation and support of PBIS. The findings were based on speculations and not direct experiences (Bambara et al., 2012).

Vancel et al. (2016) conducted a study addressing the level of social validity of staff as higher levels of validity can provide better implementation of SWPBIS. Participants consisted of 314 teachers from 37 elementary schools, 14 middle schools, and 11 high schools in the state of Iowa. Over half of the participants had been implementing SWPBIS for 1 to 4 years. The primary measurement for the study was the Iowa Social Validity Scale (ISVS). This is an 18-item rating scale with a 6-point Likert-tyle scale. It had been adapted from the Primary Intervention Rating Scale (PIRS) that was used to measure the perception of the "social significance of intervention goals, social acceptability of intervention procedures, and likelihood of socially important outcomes." To adapt the scale the wording of each item in the (PIRS) was changed from intervention to PBIS and replacing the words' "purpose" with "establishing safe, healthy, and caring learning environments that result in improved behavioral and academic outcomes for students."

Procedures and data analysis were conducted through the completion of the ISVS electronically. Teachers who completed the survey were entered into a drawing for one of 30 $10 gift cards. The first page of the survey consisted of an informed consent statement about participation followed by a brief demographic questionnaire. All surveys were completed anonymously. The ISVS was considered complete if each item within the survey was responded to. Any responses that were missing one or more items was discarded from the data analysis. Only a total of seven surveys were omitted from the results. The first research question, "To what extent do social validity ratings vary between school levels?", was answered through group comparisons using the Kruskal-Wallis test. The answer to the second research question, "Within

each school group which teacher characteristics predict higher social validity ratings for implementing SWPBIS?" was found using multiple regression (Vancel et al., 2016).

The total scores of each respondent ISVS responses were calculated. The average score was 86.05 for elementary teachers, 84.48 for middle school teachers, and 77.37 for high school teachers. Looking at the first research question addressing the differences in social validity between school levels, it was found that there were significant differences. The analysis revealed that high school teachers had lower social validity scores in comparison to elementary and middle school teachers. Multiple regression analysis revealed no teacher characteristics showed to be significantly related to the total ISVS score. Characteristics included gender, age range, and years of teaching experience (Vancel et al., 2016).

Chapter 3: Summary of Findings

The purpose of this research paper was to investigate if efficacy of Positive Behavioral Interventions and Supports (PBIS) for students who have Emotional and Behavioral Disorders (EBD). The outcomes and the consequences for staff members implementing PBIS was also reviewed. Chapter 1 provided background information on PBIS, and Chapter 2 presented a review of the research literature. In this chapter, I will discuss the findings of the research, including implications and recommendations.

Conclusion

I reviewed 15 studies that examined the efficacy of PBIS for students who have Emotional and Behavior Disorders and the outcome and consequences for staff members implementing PBIS. Nine of the studies focused on the efficacy of Positive Behavioral Interventions and Supports (PBIS) for students who have Emotional and Behavioral Disorders (Bradshaw et al., 2010; Childs et al., 2016; Cressey et al., 2014; Curtis et al., 2010; Gage et al., 2018; Marin & Filce, 2013; Muscott et al., 2008; Scott & Barrett, 2004; Walker et al., 2005) while six emphasized outcomes and the consequences for staff members implementing PBIS (Bambara et al., 2012; Houchens et al., 2017; Reinke et al., 2013; Ross et al., 2012; Tyre & Feuerborn, 2017; Vancel et al., 2016).

Student Focused Studies

Childs et al. (2016) found that there was a decreasing trend across the discipline outcomes of office discipline referrals, in-school suspensions, and out of school suspensions for those schools that had implemented SWPBIS. Marin and Filce (2013) found findings that had been consistent with past studies showing first, that schools receiving training and coaching in

PBIS had a higher Quality of Distribution Index (QDI) in comparison to those that received only training, second, the schools that had been classified as “model sites” based on SET scores also had a higher QDI score and third, schools that were classified as “model sites” had received a higher QDI score, training, and coaching in PBIS.

Walker et al. (2005) revealed five key findings. These include the finding that the number of students expressed as at risk for development of more serious emotional or behavioral struggles remains high even after three years of PBIS implementation. Next, there was a significant difference in social skills between those who internalize and externalize their behaviors. Those students that show externalizing behaviors are more likely to be identified as having a social skill deficit. In addition, the students that show externalizing behaviors were more likely to receive two or more office discipline referrals. Most of the referrals were received at primary school age. Finally, the students that were identified as needing intervention but not yet being evaluated received more referrals for discipline.

Gage et al. (2018) Conducted a systematic review of research studies to examine the relationship between PBIS and disciplinary exclusion. There was no significant effect on disciplinary exclusions found, but some effect and statistically significant effects on school suspensions. Muscott et al. (2008) gathered results that showed most schools involved in their study were able to implement SWPBIS interventions with support within a 2-year period. Adding this to the school's system resulted in a reduction of 6,010 office disciplinary referrals and 1,032 suspensions, with middle and high school students experiencing the greatest benefit.

Curtis et al. (2010) findings resulted in a significantly less amount of behavior referrals and/or suspensions within a 4-year span of implementation. The study also found that due to the

decline in maladaptive behaviors there was an increase in instructional time. Scott and Barrett (2004) noted a reduction in the number of office discipline referrals and suspensions and that PBIS was found to be more cost effective. Bradshaw et al. (2010) found through a randomized controlled effectiveness trial that schools receiving training in SWPBIS scored much higher and in a more positive manner when looking at fidelity, office referrals, suspensions, and academic achievement in comparison to those not implementing SWPBIS. Cressey et al. (2014) found through a 5-year research with a focus on the school counselors collaboration efforts that the level of implementation and fidelity grew significantly with stakeholders in the community and in the school setting.

Teacher Focused Studies

Ross et al. (2012) completed a quantitative study finding that schools with more experience of implementing OBIS and higher socioeconomic status had significantly higher composite teacher efficacy scores, lower average scores on Emotional Exhaustion, lower scores on teacher depersonalization, and higher scores on personal accomplishment. Houchens et al. (2017) found that teachers implementing SWPBIS reported more clearly defined expectations, and missions and visions for their schools. Differences in teacher perceptions of managing student conduct. Found more participation and community involvement in the schools implementing SWPBIS. Tyre and Feuerborn (2017) revealed that of the 1,210 staff who participated in their study, 44 expressed their disagreement with SWPBIS implementation in their schools. Of those voicing this disagreement, 48% were from elementary schools, 36% from middle schools, and 16% from high schools. Of the Non supportive staff, 75% were certified teachers and support staff who had been in the profession for an average of 7.9 years.

Reinke et al. (2013) found through direct observation of classroom management that classrooms had stated classroom rules at high rates. The teacher's use of specific praise and the ratio of positive praise to negative interactions were below expectations. Bambara et al. (2012) implemented a survey that revealed the greatest barriers staff faced were also the most experienced by those surveyed and consisted of factors related to beliefs, time, and training. Vancel et al. (2016) utilized the Iowa Social Validity Scale and found that teacher's social validity was lower at the high school level in comparison to the elementary and middle school levels. Characteristics of staff did not act as significant predictors of social validity ratings.

Implications

Positive Behavior Interventions and Supports proves to be a successful implementation within the school systems for both students and staff. The implementation can improve the level of academic performance for students, the types of interactions students have with peers and staff, create a lower number of office discipline referrals and suspensions, increase the amount of instructional time staff can deliver, reduce the level of emotional exhaustion staff experience and more. PBIS is a system that all staff need to agree on for the level of fidelity to be high and implementation to be successful. This system is one that takes time, effort, and patience. The longer PBIS is implemented the more positive results a school will experience. This is a foundation that can be built off on as well. The findings of my study can be used to help identify areas of weakness a school who is implementing PBIS may have and how to reverse that weakness. It is one that can give districts a new view on how to support their staff with creating success for their students but also supporting the overall well-being of the school.

Further Research

Sample size was one area noted to bring limitations to some studies that were reviewed. A smaller sample size makes It challenging to make proper conclusions about how PBIS could impact a larger population. Another challenge with a small sample size is the location in which participants are from. PBIS is a foundation that can be implemented across the world, yet when dealing with a small sample size the results are focused on a single population group, such as a state or district. Creating a sample size that consists of multiple states across the country would create a more accurate representation of results nationally.

In addition to the sample size being a limitation that could be further expanded there were some studies reviewed that did not have a comparison group. Many schools across the country have begun implementing SWPBIS or have been implementing it for some time. Finding schools that have not begun this process would give researchers the ability to determine to a higher level the success rate of the intervention.

The greatest limitation noted in the studies reviewed was found to be the lack of baseline data available for collection. The schools that began the process of implementation did not always have appropriate data in the areas of discipline, staff moral and academic achievement. This could be due to not knowing the level of data that would become available to districts once utilizing SWPBIS.

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