2018

Effect of Professional Development on Achievement of Fourth Grade Emotionally Distirbed Students

Willette Jones
Walden University

Walden University

College of Education

This is to certify that the doctoral study by

Willette Jones

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Shelly Arneson, Committee Chairperson, Education Faculty
Dr. Nicolae Nistor, Committee Member, Education Faculty
Dr. Beate Baltes, University Reviewer, Education Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2018

Abstract

Effect of Professional Development on Achievement of Fourth Grade Emotionally Disturbed Students

by

Willette Jones

MA, Antioch University, 1989

BS, Temple University, 1977

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

December 2018

Abstract

This study investigated the low literacy and math achievement of 4th grade students with emotional disturbances (ED) in an urban school district in Pennsylvania. Researchers have speculated that teachers possess limited knowledge of the behavioral health needs of students with ED needed to support their behavior and achievement. Therefore, this study was conducted to assess the effect of behavioral health professional development (BHPD) on the Pennsylvania School System of Assessment (PSSA) achievement of 4th grade students with ED. The theoretical framework of this study was Dewey's educational philosophy, which focused on educating the whole child. This study used a quantitative, comparative, between-groups design. Two research questions were used to determine if there were statistically significant differences in students with ED's PSSA literacy and math change scores from 3rd to 4th grade taught by 3 teachers who participated in the district's 1-year BHPD class and students taught by 3 teachers who did not participate. The study sample included 83 students. The Mann-Whitney test showed that there were no statistically significant differences in PSSA change scores between groups, with medium effect sizes. These findings indicated a need to search beyond BHPD to address the problem of low literacy and math PSSA achievement of 4th grade students with ED. A white paper for educators was written in which a School-Wide Positive Behavior Interventions and Support model was discussed that could improve the low PSSA achievement of students with ED. The positive social change is that teachers could better address and monitor students' behavior and academic progress to ensure positive outcomes on the PSSA.

Effect of Professional Development on Achievement of Fourth Grade Emotionally Disturbed Students

by

Willette Jones

MA, Antioch University, 1989

BS, Temple University, 1977

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

December 2018

Dedication

This study is dedicated to my phenomenal mother, Veresta Bland Hymen, for all of her words of wisdom throughout my life. My mother, a life-long learner, instilled in me the value of education. I thank God for her steady love and unwavering resolve on my behalf. This journey would not have been possible without her raising me to believe that in God I move and have my being and that all things are possible through God's love.

Acknowledgments

Thank you God! I am so grateful to everyone that has given me the love and support needed to complete this work. First, I would like to acknowledge my husband, George, who was relentless in his support from the start to the finish. His love, support, and commitment to this work sustained me throughout this process. My next acknowledgement is to my three sons, Gregory, Emmanuel, and Bradley, for their unwavering love and belief that I could accomplish my dream. I hope my life-long love of learning will encourage them. Next, to my daughter-in-law, Ayanna, granddaughter, Arianna, and grandson, Bradley Jr., your love kept me focused on the joy of life when times were most challenging. Next, I acknowledge my brother, Reginald, for stepping in to support family during a critical time during this process. His love and support of family allowed me to continue my work without interruption at God speed. I was fortunate to have worked with a brilliant doctoral committee chair, Dr. Shelley M. Arneson, whose feedback and suggestions were timely and incredibly valuable. I would also like to thank Dr. Arneson for her patience, support and encouragement throughout this entire process. She was indeed my greatest cheerleader! I would like to acknowledge my methodologist, Dr. Nicolae Nistor, whose expertise and feedback renewed my confidence that I could complete this study. Also, I would like to acknowledge Dr. Beate Baltes, my University Review Reviewer, for her straightforward feedback. Her suggestions and recommendations heightened my understanding of this doctoral study. Lastly, I would also like to thank my school district for allowing me to retrieve the data to make this study possible.

Table of Contents

List of Tables

Section 1: The Problem

The problem addressed in this study was the low academic achievement of 4th grade students with emotional disturbances (ED) in an urban school district in northeastern Pennsylvania. The Pennsylvania School System of Assessment (PSSA) test scores show that fourth grade students with ED do not meet minimum benchmarks in literacy and math (Pennsylvania Department of Education, 2016). Gage (2013) found that the low achievement of students with ED must be addressed in order to increase their trajectory of academic success. Students with ED often have difficulty self-managing their internal and external behaviors, which adversely effects their ability to meet their learning goals and objectives (Weeden et al., 2016). Students with ED may exhibit inappropriate behaviors, such as property destruction, cursing, and aggression towards peers and teachers and/or social withdrawal behaviors, such as avoiding interactions with peers (Weeden et al., 2016), These behavioral difficulties often lead to missed learning opportunities and poor relationships with peers and teachers (Weeden et al., 2016). Allman and Slate (2013) asserted that educators' limited understanding of the behavioral, social, and emotional needs of students with ED often led to more punitive disciplinary measures as a first, rather than last, resort. Although the Individuals with Disabilities Education Improvement Act (IDEA) of 2004 legislation mandated that districts and schools provide interventions to promote optimal learning opportunities for students with ED, little attention is placed on Behavior Health Professional Development (BHPD) as an intervention to improve the academic achievement of students with ED (Kutash, Duchnowski, & Green, 2015).

The Local Problem

In this study, I investigated the low literacy and math achievement of fourth grade students with ED in a local school district in northeastern Pennsylvania. The PSSA is a state mandated standardized assessment used by the district to measure students' progress and achievement in meeting required state standards (No Child Left Behind [NCLB], 2004). The results of the PSSA measure the progress of a district's schools based on the percentage of students scoring proficient and advanced in reading, math, and science in April of each school year in Grades 3-8 (Pennsylvania Department of Education, 2016). The difference in PSSA academic achievement of students with Individualized Education Plans (IEPs), including students with ED, compared to the academic achievement of their non-disabled peers, is significant (School District of Philadelphia, 2016).

Table 1 illustrates the 2015 and 2016 proficient and advanced rates of regular education students and IEP students in Grades 3 through 4. The performance levels of students with ED are included in the IEP category results. The 2016 data indicate that less than 50% of the district's students in regular education in Grades 3 through 4 scored proficient or advanced on the PSSA in literacy and math, and less than 26% of the district's IEP students in Grades 3 through 4 scored proficient or advanced. These results showed a significant gap between regular education students and special education students. The noticeable gaps in literacy and math and low performance of special education students on the district's 2016 PSSA illustrated a need to explore interventions that might increase the achievement levels of students with ED in the elementary school setting. The PSSA (2016) reports showed that the district lagged behind in meeting the

national, state, and local goals identified by the Pennsylvania State Board of Education for all students to perform at proficient levels on the PSSA.

The 2015 proficient and advanced rates of regular education students and IEP students in Grades 3 through 4 are similar to the 2016 PSSA results in each reporting grade and category. Fewer than 50% of the regular education students scored at 50% or above in proficiency and advanced. Less than 25% of the IEP students scored proficient and advanced. These results also showed a need for interventions that will improve the low achievement of students with ED. Increased emphasis on BHPD opportunities for all teachers working with students with ED may support them in developing the competencies necessary to address the behavioral health needs and academic achievement needs of all students with ED (Dieterich & Smith, 2015). Research has shown that focused attention must be placed on the developmental needs of the whole child to avoid fragmented learning that can impede overall student functioning and academic achievement (Stuckart & Glanz, 2007).

Table 1

2015 and 2016 District-Wide PSSA Results for Regular Education and IEP Students in Grades 3 through 4

Subject	Grades	Proficient & advanced regular education students	Proficient & advanced IEP students
2016 ELA	3	33%	11%
2016 Math	3	24%	11%
2016 ELA	4	31%	13%
2016 Math	4	19%	12%
2015 ELA	3	36%	14%
2015 Math	3	20%	13%
2015 ELA	4	31%	10%
2015 Math	4	18%	9%

Note. ED students are assumed to be representative of all IEP students.

According to Dieterich and Smith (2015), a recurring criticism of IDEA is that teachers possess limited knowledge of educational programs with effective interventions to address the social, emotional, and behavioral needs of special education students and often find that addressing the needs of students with ED is even more challenging. Therefore, in this study I focused on BHPD as an intervention that might be beneficial to improving the trajectory of achievement and success of 4th grade students with ED in the elementary classroom setting.

Rationale

The PSSA results displayed above showed special education students, including students with ED, lagged significantly behind across all subject areas in Grades 3 through 4. As indicated in Table 1, fewer than 25% of IEP students in Grades 3 through 4 scored

proficient on the PSSA in literacy and math. Schools that do not meet their performance goals established by the district may receive unfavorable ratings that could lead to negative consequences (School District of Philadelphia, 2015). To address this problem of low achievement of students with ED, the district has provided BHPD to teachers working with students with ED, particularly in low achieving schools, to support their teacher's ability better to address their students' social, emotional, and behavioral functioning to improve their students' academic achievement. However, through conversations with teachers during formal and informal meetings, I found that many believe that all teachers working with students with ED should receive BHPD to improve their competencies in behavioral health in order to increase the academic achievement of all students with ED.

The purpose of this study was to measure the effect that the district's 1-year BHPD class had on the literacy and math achievement of 4th grade students with ED. The academic achievement was measured by comparing the changes in PSSA test scores in literacy and math from one year to the next year of students with ED whose teachers participated in the district's 1-year BHPD class and those 4th grade students with ED whose teachers did not.

Definition of Terms

Academic achievement: A student's need, drive, and performance toward success in academic work (Wang & Neihart, 2015).

Academic engagement: A student's on-task involvement and commitment with learning activities (Wang & Neihart, 2015).

Behavioral health: Refers to the scientific study of the emotional, and behavioral conditions that impact students' social, emotional, and academic development and adjustment due to mental problems (Swick & Powers, 2018).

Classroom emotional support: Reflects the type of care and respect that teachers provide to their students to create a positive rapport with their students in the classroom (Lee & Bierman, 2015).

Differentiated instruction: A learning approach that allows teachers to plan strategically to meet the individual learning of all students based on students' individualized social and emotional needs, readiness, preferences, and interest in addition to curricular levels of students (Suprayogi, Valcke, & Godwin, 2017).

Diverse learners: Students with a broad range of cultures, exceptionalities, racial/ethnic, linguistic, and socio-economic backgrounds with a broad spectrum of academic, social, and emotional capacities and needs (Moreno, Wong-Lo, & Bullock, 2014).

Emotional disturbances: The current federal primary category for students with emotional and/or behavioral disturbances includes students who exhibit maladaptive behavioral characteristics in regular classroom situations (Mattison, 2015). The acronym ED will be used throughout this study to refer to students with Emotional Disturbances.

Inclusion: refers to ending separate educational placements for special education students and placement of special education students in the regular education setting with the necessary special education supports for them to successfully achieve their IEP goals (Bull-Holmberg & Jeyaprathaban, 2016).

Least restrictive environment: An educational placement for students with disabilities in an educational environment most similar to the educational environment they would receive services if their disability were not present (Individuals with Disabilities in Education Improvement Act, 2004).

Pennsylvania System of School Assessment (PSSA): A standardized, standards-based, criterion-referenced test used to measure students' mastery of the Pennsylvania academic standards (Philadelphia School District, 2015).

Proficiency: A performance level used to express the level of mastery of required standards achieved by students on the PSSA at a single point in time within a specific grade level (Philadelphia School District, 2015).

Teacher professional development: Activities to support the learning of self and colleagues through implementation of strategies to improve teacher self-efficacy through motivating and influencing others to achieve high goals (Evans, 2014).

Whole child: To educate a student toward a holistic thinking that integrates knowledge gained from experiences, social, emotional, behavioral, and cognitive that enables them to reflect upon the order of their thinking and relationships to make judgments meaningful to them that can contribute to their learning (Dewey, 1897).

Significance of the Study

The results of this study may provide the district with data on whether BHPD resulted in higher test scores of 4th grade students with ED on the PSSA. Also, this study adds to the research that local, state, and national educational stakeholders may reference to effectively plan, develop, and implement behavioral interventions and supports needed

to address the behavioral challenges experienced by 4th grade students with ED so they may learn better and achieve higher on the PSSA.

Research Questions and Hypotheses

In this quantitative study, I investigated the low achievement of fourth grade students with ED on the standardized PSSA. The teachers of both groups of students with ED implemented the district's differentiated literacy and math curriculum to their 4th grade students with ED. However, one group of teachers participated in the district's 1-year BHPD. This study then measured the effectiveness of the BHPD by comparing the literacy and math change scores of 4th grade students with ED. For this study, the independent variable was the district's 1-year BHPD and its values are dichotomous (BHPD participation yes/no). The teachers who participated in the district's 1-year BHPD received on-going behavioral health support from community mental health experts throughout the school year. The PSSA in science is not administered to 3rd grade students. Therefore, only the literacy and math PSSA scores between 4th grade students with ED were compared in this study. I used the end-of-year PSSA literacy and math change scores from 2015 as pre-test scores and the end-of-year PSSA literacy and math change scores from 2016 as post-test scores. The dependent variable was the PSSA change scores. Archival data were used. The research questions and corresponding hypotheses were:

Research Question 1: What is the difference in literacy PSSA change scores of 4th grade ED students who were taught for one year by teachers who participated in the

district's 1-year BHPD and students who were taught for one year by teachers who did not participate in the district's 1-year BHPD?

$H_0$1: There is no significant difference in literacy PSSA change scores of 4th grade ED students who were taught for one year by teachers who participated in the district's 1-year BHPD and students who were taught for one year by teachers who did not participate in the district's 1-year BHPD.

H_a1: There is a significant difference in literacy PSSA change scores of 4th grade ED students who were taught for one year by teachers who participated in the district's 1-year BHPD and students who were taught for one year by teachers who did not participate in the district's 1-year BHPD class.

Research Question 2: What is the difference in math PSSA change scores of 4th ED students who were taught for one year by teachers who participated in the district's 1-year BHPD and students who were taught for one year by teachers who did not participate in the district's 1-year BHPD?

$H_0$2: There is no significant difference in math PSSA change scores of 4th grade ED students who were taught for one year by teachers who participated in the district's 1-year BHPD and students who were taught for one year by teachers who did not participate in the district's 1-year BHPD.

H_a2: There is a significant difference in math PSSA change scores of 4th grade ED students who were taught for one year by teachers who participated in the district's 1-year BHPD and students who were taught for one year by teachers who did not participate in the district's 1-year BHPD.

Review of the Literature

To gather materials for the literature review, I search academic databases in education and psychology. The databases searched included Education Research Complete, Education from SAGE, and ProQuest Central. Boolean search terms included, but were not limited to: *behavioral health, teacher professional development, emotional disturbances, differentiated instruction, academic achievement, academic engagement, whole child, diverse learners, inclusion, least restrictive environment, Pennsylvania System of School Assessment (PSSA),* and *classroom emotional support*.

Theoretical Framework

The theoretical framework for this study was Dewey's (1897) multidimensional educational philosophy for addressing the diverse learning needs of the whole child. In today's era of accountability and high-stakes testing, it is worthwhile to re-examine Dewey's philosophical legacy in the context of the demands of the 21st century (Stuckart & Glanz, 2007). Dewey (1897) was a progressive educator who believed that learning begins at birth, albeit on unconscious levels. Dewey asserted that habits, feelings, and emotions shape learning. He understood that learning is different for everyone depending upon the individual's perceptions and experiences, rather than a one-size-fits-all philosophy. Dewey believed that the growth of civilization is reflected by the growth, experiences, and activities transmitted from adults to children. The varying experiences that adults model for children necessarily impact their perceptions, experiences, and growth. Therefore, much attention must be given to the types of educational programs used to promote the individual growth and high achievement of each student.

Dewey's (1897) multidimensional educational philosophy was grounded in fundamental aspects of curriculum that could assist educators in working towards the goal of teaching the whole child, including the development of intelligence, primarily through inquiry, problem solving, the acquisition of socially useful skills, and opportunities for reflection. Stuckart and Glanz (2007) found Dewey's philosophy relevant in today's educational environment as a basis to improve teaching and learning particularly because of its emphasis on addressing the needs of the whole child. Dewey (1897) believed that learning is an undeniable human right for every child in a democratic society.

Learning, according to Dewey (1897), is an intrinsic human endeavor that can be achieved by all students through extending learning beyond rote memorization and transmission of information. He believed that intelligence can be achieved through emphasis on teaching the whole child based on individual learning needs and capacities, and through using activities that relate to the students' experiences so they can use individual past experiences to support their own learning. Dewey (1933, 1971) argued that merely teaching isolated subjects alone does not engage a student's intellectual development. He believed that opportunities must be provided for students to think through authentic inquiry and reflection. Dewey espoused that thinking is a mental activity expressed by its function rather than its structure. Logical thinking is not engaged solely by the academic structure of a discipline; rather, logical thinking is a function of inquiry and reflection that requires engagement of the senses. Students' life experiences contribute to what they perceive as fact and how they plan and order their experiences to

ask critical questions and draw logical conclusions that relate to their learning goals and objectives (Dewey, 1933, 1971). Thus, teachers can support the process of intellectual growth in students with ED by understanding their experiences and their social, emotional, and behavioral needs to gain a more comprehensive perspective of their students' abilities and capacities to support their thinking and facilitate their intellectual growth. These fundamental, multidimensional philosophical aspects of teaching and learning can assist educators to navigate toward the goal of teaching the whole child to improve the academic achievement of students with ED (Dewey, 1897, 1933, 1971).

Kutash, Duchnowski, and Green (2015) affirmed Dewey's belief that teachers must implement interventions to support the needs of the whole child (social, emotional, behavioral, and academic) in order to improve their students' trajectory toward academic success in inclusive learning environments. According to Kutash et al. (2015), less than 1% of students are in the ED category, which is the primary category designated for students with emotional behavioral disturbances to receive special education services. However, 65% of students with ED exhibited externalizing mental health disorders such as non-compliant, aggressive behaviors, and 35% of students exhibited internalizing mental health disorders such as social withdrawal and depression; 60% of students with ED exhibited high levels of both internalizing and externalizing mental health disorders (Kutash et al., 2015). These findings are useful in showing educators and policy makers the depth of mental health problems students with ED may experience, the enormity of challenges that teachers working with students with ED face, and the urgency for finding

effective interventions and programs to support the social and emotional health, functioning, and academic achievement of students with ED.

Individuals with Disabilities Education and Improvement Act

IDEA legislation mandated that school districts must implement a free and appropriate public education to students who are identified as having disabilities, or who are in need of special education and related services. Schools used the severe discrepancy model to determine those students eligible to receive special education services. The discrepancy model was defined as a severe difference between students' ability and achievement (Dieterich & Smith, 2015). If a student was eligible to receive special education services, the IDEA legislation required that special education and related services should be provided in the least restrictive environments to support students' academic achievement and success in careers, college, and beyond (Dieterich & Smith, 2015).

IDEA (2004) required that if a student can achieve academically to his or her fullest ability in a regular education program with supplemental special education services, there is no need for the student to be removed from the regular education classroom. However, if a student does require special education services outside of the regular education classroom, an appropriate educational program must be provided to meet their academic, social, and emotional needs to prepare the student to eventually function successfully in a regular education program, when and if feasible.

The identification and placement of students with disabilities is determined through a team evaluation process commonly called a comprehensive multidisciplinary

team. This team includes administrators, educators, teachers, and parents (Dieterich & Smith, 2015). Dieterich and Smith (2015) further explained that once a student is identified, an evaluation team of administrators, teachers, and parents must meet to develop an individualized educational program (IEP) that will meet the educational, social, and emotional needs of the student. In this IEP plan, measureable goals and objectives are developed and implemented in the classroom by the teacher. The administrators and educators are then required to engage in team collaboration with members of the community, both internal and external, to provide the necessary strategies and interventions to ensure successful achievement of each student's IEP goals and objectives.

Response to Intervention (RTI)

Abou-Rjaily and Stoddard (2017) explained the Response to Intervention (RTI) model. In 2004, under the Reauthorization of IDEA, Congress provided provisions for local education agencies (LEA) to use an alternative method, other than the discrepancy model, for identifying students' eligibility for special education services (Abou-Rjaily & Stoddard, 2017). This alternative method of identification was described as the process of determining if a child responds to scientific, research-based interventions, and is commonly referred to as the RTI model. Abou-Rjaily and Stoddard (2017) further explained that this alternative method of identifying students' eligibility for special education can be used in lieu of the discrepancy model, but LEAs can choose to still use the discrepancy model. Scientific research-based interventions involve an intensive process of implementation and evaluation of students' response to interventions that are

scientific, research-based, and rigorously implemented (Abou-Rjaily & Stoddard, 2017). Congress enacted this alternative method of determining eligibility in response to an outcry from educators that the discrepancy model was insufficient for identifying deficiencies in children prior to kindergarten, which impeded their opportunities to receive supportive interventions at earlier stages to support their development and success in school in later years (Abou-Rjaily & Stoddard, 2017).

In response to the enactment of the alternative method of identification, many scientifically research-based interventions were used to identify students in earlier years, but the RTI model emerged as the most effective model to support students' achievement within the least restrictive educational setting. The RTI model is a multi-tiered data-driven framework implemented to support the learning of all children through school-wide implementation of varying levels of scientific, research-based interventions and progress monitoring of all students (Abou-Rjaily & Stoddard, 2017). If faculty or administrators suspect that a student may need individualized special education services and supports, they make a referral to the RTI interdisciplinary team to determine if an evaluation is needed to determine eligibility for special education support and services to ensure the student's success in school and beyond.

Eagle, Dowd-Eagle, Snyder, and Holtzman (2015) proposed that the integration of a RTI and positive behavioral interventions and support (PBIS), the multi-tiered system of support (MTSS) model, would bring about the most sustainable outcomes in achieving higher academic achievement for all students, including students with ED. Eagle et al. (2015) discussed how the school principal and the school-based psychologist

could be instrumental in planning, developing, and implementing an integrated RTI and PBIS model. Eagle et al. (2015) asserted that the principal's role is critical in cultivating a shared commitment among all teachers and staff. Also, the principal could create internal structures that would provide time for teachers to collect, monitor, analyze, and collaborate on school-wide and classroom level performance data in order to ensure that students' individual needs are addressed and that students achieve their individual behavioral and academic performance goals. Also, a school psychologist's expertise allows them to lead teams to ensure that RTI and PBIS interventions are evidence-based and implemented with fidelity to bring about desired student outcomes. Eagle et al. (2015) argued that, traditionally, RTI models primarily focus on supporting and identifying students with learning difficulties and disabilities. However, due to the large number of students with emotional challenges and disabilities, it would be prudent for schools to adopt school-wide models that integrate RTI and PBIS to bring about optimal achievement and success for all students.

Health Care Reform Act

The prevalence of emotional and mental health problems among young people is a global issue. Nearly 25% of school-aged children in today's schools have diagnosable mental health disorders (Swick & Powers, 2018). The Center for Disease Control and Prevention (2013) reported that there is an increasing prevalence of mental health disturbances in young children, and this increase is largely due to the United States' inclusion of students thought to be eligible for special education services for ED into this category. This increase in the reporting of students thought to be eligible for mental

health services is a contributing factor in the increase in urgency to address the mental health needs of students with ED to improve their academic achievement and opportunities for success.

Wodarski (2014) described the paradigm shifts occurring under the new Health Care Reform Act (HCRA). Of interest in this study was the attention placed on the responsibilities of the school-based social worker. The school-based social worker's primary responsibility is to provide collaboration with teachers to increase their knowledge and competency of the behavioral health needs of their students. Wodarski (2014) contended that the HCRA places increased attention and funding on mental health. Increased focus on and funding for mental health may provide better opportunities for districts and schools to secure the necessary expertise in behavioral health (BH) training needed for teachers with students with ED. The HCRA also places attention on the importance of school collaboration with external mental health professionals to ensure that research-based programs are being evaluated and implemented for students with ED.

Beyond Behavior Modification

According to Farley, Torres, Wailehua, and Cook (2012), students with ED lagged behind their peers while in elementary school, and by the time they reach high school, this gap increases significantly. To decrease the achievement gap of student's with ED, Farley et al. (2012) examined interventions to improve learning in students with ED that focused beyond traditional behavior modification interventions. In this study, Farley et al. (2012) analyzed research-based interventions to determine if the

interventions were effective in improving the academic achievement of students with ED. The interventions were peer-mediated (cross-age, peer modeling, peer monitoring, reciprocal peer tutoring, peer counseling, and peer assessment); class-wide tutoring and cooperative learning; self-mediated monitoring and self-management; evaluation (responsibility for choice of activities decided by the students), and teacher-mediated interventions. The results of these interventions showed that peer-mediated strategies had the strongest positive findings to improving academic performance and self-management interventions had the next strongest positive outcomes. Results from this study highlighted alternative interventions beyond behavior modification that increase learning engagement of students with ED to support their behavioral functioning and academic achievement.

Graziano and Hart (2016) affirmed Farley et al.'s (2012) assertion that educators must consider behavioral interventions beyond traditional behavior modification programs to improve students' behavioral, social, emotional, and academic growth. Graziano and Hart conducted a study to determine the effectiveness of three intervention programs designed to increase readiness of pre-school students who exhibited externalizing behavior problems. The three interventions included a school readiness parenting intervention program (SRPP) and two different versions of a summer readiness program. One version of the summer readiness program included the traditional behavior modification program and academic curriculum preparation, the second version included the traditional behavior modification program, academic curriculum preparation, and also included a social-emotional program, and the third version included behavior

modification, academic curriculum preparation, social-emotional and self-regulation training (STP-Pre-K Enhanced Group). The findings of this study showed that all three programs were effective in improving students' external withdrawal behaviors. However, the STP-Pre-K enhanced program that included the social-emotional and self-regulation training showed greater sustained academic achievement, social-emotional growth, and emotional regulation than the other programs over time. This study provides important knowledge and insight for educators seeking intervention programs beyond behavior modification to address the individual needs of the whole child.

Classroom-Level Behavioral Health Interventions

King and La Paro (2015) examined how teachers' use of language influenced at-risk students' cognitive and emotional development in the primary education classroom. King and La Paro (2015) found that teachers' use of language influenced how children think (decision-making), feel (happy, sad, angry), directional language (look and listen), and desires (hopes and wants). King and La Paro (2015) found that less-experienced teachers' communication with their students was highest in directional language and lowest in emotive language while more experienced teachers used fewer terms in the directional language. Further, findings showed that teachers who used higher rates of emotive and desire mental state talk had greater teacher sensitivity, positive student teacher relationships, and greater positive classroom environments. According to King and La Paro (2015), these results indicated that as teachers gain more teaching experience they may use more verbal talk referenced in the emotive and desire categories to engage students with greater choices and less perception mental state talk which is more

directional to bring about improved student behavior and quality classroom environments. This research could be useful in providing teachers with awareness and insight on how teachers' verbal talk could create improved positive and supportive teacher-student relationships with at-risks students and quality classroom environments that may improve the social, emotional, and academic functioning of at-risk students. Lee and Bierman (2015) also found that, within emotionally supportive teacher-student relationships and well-managed classrooms, students' exhibited fewer social adjustment problems (such as aggressive behavior and social withdrawal), and displayed greater emergent literacy skills.

Wang and Neihart (2015) investigated the influence of caregivers, educators, and classmates on the performance of twice-exceptional students' (2e) academic achievement. Wang and Neihart (2015) defined 2e students as gifted or thought to be gifted, with at least one disability, such as learning disabilities, emotional disturbances, or physical disorders. This study examined the influence of two behavioral constructs, academic motivation, and academic engagement, on the 2e students' academic achievement. The findings showed that support of peers influenced the academic performance of 2e students. Students who participated in the study reported that support from peers influenced their academic motivation. The findings showed that 2e students who received high levels of warmth and caring from their teacher showed increased academic engagement. The students reported that they worked harder to please teachers who showed greater warmth and caring toward them. This research provided evidence for educators that peer-mediated strategies, and emotionally supportive student-teacher

relationships improved the academic engagement and achievement of 2e students, which included students with ED.

Cook, Frye, Slemrod, Lyon, Renshaw, and Yanchen (2015) examined the benefits of an integrated mental health prevention design that combined a social emotional learning (SEL) model, a social emotional curriculum-based approach, and a positive behavioral supports and interventions (PBIS) model to prevent mental illness and promote wellness to students with ED and at-risk students. According to Cook et al. (2015), the benefits of integration of two research-based approaches outweigh the benefits of adoption of either approach separately. Cook et al. (2015) study compared the results of a classroom without behavioral health interventions, business as usual (BAU), and a classroom that implemented a stand-alone SEL approach; a classroom that implemented a stand-alone PBIS approach; and a classroom that implemented a combination of SEL and PBIS (COMBO) to students. Cook et al. (2015) revealed that the COMBO class students showed the most significant improvements in reduction of internalizing and externalizing behaviors when compared to the other groups. Cook et al. (2015) found that BHPD for teachers in both SEL and PBIS is necessary to ensure the effective delivery of an integrated model of SEL and PBIS. Cook et al. (2015) concluded that the integrated COMBO approach provided interventions that prevented behavioral problems that interfered with academic engagement, promoted positive rather than punitive behavioral supports, and placed high value on the importance of teaching social skills to improve the intellectual functioning, behavioral functioning, and academic success of students.

Whole School Mental Health Interventions

Internal. Marsh (2018) discussed the importance of school-wide connectedness as a concept to promote positive, caring teacher-student relationships and positive school climates to foster greater academic engagement of students with ED to increase their academic achievement and prevent school failure. Marsh (2018) contended that students with ED struggle with forming positive relationships with peers and teachers and exhibit behaviors that could lead to unsafe classroom environments. Marsh contended that the implementation of school-wide connectedness interventions and strategies were effective in mediating difficulties that students with ED face in functioning appropriately in the classroom. Marsh (2018) found that students with ED responded more favorably towards their peers and teachers, and showed improved on-task behavior, and a decrease in maladaptive behaviors when they felt a greater sense of nurturing from their teachers and safety within the school-wide climate. Marsh (2018) concluded that interventions that promote school connectedness were effective strategies to increase pro-social behaviors, decrease maladaptive behaviors, and increase the trajectory for academic success of students with ED.

School-based counselors BH support. Hott, Thomas, Abbassi, Hendricks, and Aslina (2015) asserted that school support staff, such as counselors have a critical role as team members in helping students with disabilities achieve academic success. Also, a counselor's background in behavioral health could provide guidance to team members on the impact of planning appropriate behavioral interventions to decrease the number of out-of-class and out-of-school disciplinary referrals. Documented evidence showed that

frequent out-of-class and out-of-school disciplinary referrals hurt academic achievement (Allman & Slate, 2013). Further, school counselors know the testing accommodations for students with disabilities mandated in IDEA (2004). A counselor could ensure that testing accommodations are appropriately provided, and that parents understand such accommodations. The counselor's knowledge of testing accommodations could facilitate assurances these accommodations are included in students' IEPs to promote the academic success of students. Although counselors possess knowledge in BH, many counselors indicated that their background in behavioral health was limited. Additional training for counselors from mental health professionals could improve their knowledge of the needs of students with ED and strengthen their supportive collaboration activities with teachers and direct services to students.

School-based psychologist BH supports. Cappella, Reinke, and Hoagwood (2011) supported Hott, Thomas, Abbassi, Hendricks, and Aslina's (2015) assertion that school support staff played a critical role in providing support to teachers in addressing the needs of students with ED. Cappella, Reinke, and Hoagwood (2011) conducted a study that focused on the role of the school psychologist in the development and evaluation of research-based BH programs and interventions that would benefit students with ED. Cappella et al. (2011) asserted that a school-based BH intervention program should include a clear science base that should be systematically guided by theory, collaborated with teachers and stakeholders, and implemented within embedded systems of resources with a balance of fidelity and flexibility to ensure student growth. Cappella et al. (2011) focused on those social and behavioral programs and processes that affected

academic performance outcomes to determine how they were developed, implemented, and disseminated, and whether they worked, for whom they worked, and how well they worked. According to Capella et al. (2011), this approach is helpful in guiding the development and implementation of behavioral interventions that effect children in diverse school settings. Results from this study brought to light the ongoing need for collaboration between school psychologist, counselors, teachers, administrators, and community experts to explore, evaluate, and support teachers' implementation of research-based BH interventions to improve the behavior and academic achievement of students with ED.

External resource. Segrott, Rothwell, and Thomas (2013) conducted a study on key implementation challenges of an external contracted provider, Bounceback Community Mental Health agency (CMH), encountered when they provided BH services within three elementary schools in South Wales, United Kingdom. The three school settings were located in urban areas that served underachieving and disadvantaged students between the ages of 11 and 14. The implementation challenges addressed included Bounceback staff's therapeutic relationships with the students; communication of students' needs and behaviors to school staff, including the referral process; and the school staff's acceptance of the Bounceback's CMH as part of their school's culture. The Bounceback model included confidential individual therapeutic sessions with students; resiliency training; a toolbox of BH strategies for teachers; coping skills for students; staff trips; assemblies; child protection guidelines; relationship building sessions with teachers and parents; and procedures for outside referrals as needed. Their findings

suggested that Bounceback's CMH behavioral intervention program had promising results in improving student's emotional health, primarily through resiliency building. Another important aspect of the findings was the acceptance of Bounceback CMH services by the school communities and the relationships built between the CMH staff and the schools' staff. Ongoing collaborative, supportive, and professional relationships were established between the Bounceback staff and schools' staff. These collaborative relationships fostered positive interactions between Bounceback staff and the schools' staff on behalf of the students. Also, these collaborative relationships fostered communication and adherence of the schools' staff to Bounceback's goals and referral process. The success of the Bounceback's CMH program provided a model of how the expertise of CMH professionals could provide training to school staff that could improve the functioning and academic achievement of students with ED.

Similarly, Fearnow-Kenney, Hill, and Gore (2016) conducted an evaluation study of Families and Schools Together (FAST), a community-based collaborative program between families and schools to provide mental health services to students with ED to determine its effectiveness. The program was conducted in a school setting and included participants ranging from five to 12 years of age and their parents. The program's goals were to prevent student failure in school through improved parental school involvement, and development of students' social skills to facilitate improved student behavior and academic achievement in the classroom setting. The program included eight weeks of family sessions followed by a two-year follow-up session called FASTWORKS. Through a qualitative analysis of parent and child surveys and focus groups, the researchers found

that after participation in the program, both groups of students, the target and non-target groups, reported healthier relationships with family, teachers, and friends, and that they better dealt with conflict in non-aggressive manners. The target group added that they received better grades because of participation in the program. The parents of students in the targeted group reported that after participation in the program they became more familiar with school and community resources, experienced improved relationships with their children at home, and that their children experienced improved quality relationships at school. The relevance of this study could include increased attention from educators of the importance of integration of school and community programs to bring about improved academic achievement and social functioning of students with ED.

Swick and Powers (2018) also examined the effectiveness of a school-community partnership that provided school-based mental health services to students to in school during school hours to alleviate issues associated with students families that may have difficulty accessing necessary mental health care for their children. Swick and Powers (2018) discussed the negative consequences that students with ED face as a result of inadequate mental health services, alternatives approaches for providing students with mental health services, and the benefits of school-based community mental health services. Swick and Powers (2018) contended that teachers have limited expertise in providing mental health services to students in need of care. As a result, students are referred to community services for support, which in many cases becomes a barrier to them receiving care. Parents may face challenges in accessing community mental health services for their children due to issues related to transporting their children to mental

health centers, lack of insurance health for mental health care, or ability to leave their jobs to take their children to appointments to receive services. Subsequently, students are left without needed services. Swick and Powers (2018) emphasized that schools should seek partnerships with community mental health professionals to provide on-site BHPD to teachers, as well as to provide direct services to students as needed to ensure their social, emotional, behavioral, and academic growth and achievement.

Pre-Service Preparation for Inclusive Educational Settings

Wehby and Kern (2014) contended that teacher certification programs provided minimum coursework on behavior interventions to support the behavioral and social development of students with ED. As a result, both experienced and novice teachers experience difficulty in addressing the challenging behavioral needs of students with ED that may adversely impede their academic development and achievement. Further, Wehby and Kern (2014) believed that this lack of training inadvertently contributes to the low academic achievement of students with ED in inclusive elementary educational settings. Wehby and Kern (2014) suggested that universities revamp their educational coursework to provide teachers that plan to work in inclusive educational settings with the necessary training to support the successful behavioral and academic development and achievement of students with ED. Bull-Holmberg and Jeyaprathaban (2016) supported Wehby and Kern's (2014) view that teachers lacked the training needed to implement effective behavioral health strategies to improve the learning of students with ED in inclusive educational settings. Also, professional development was needed to support teachers' ability to adapt classroom learning activities to address the social,

emotional, behavioral, and academic needs of students with ED in order to improve their behavioral functioning in the classroom and academic outcomes. Further, increased pre-service training in universities could support teachers in increasing their capacities to be successful working with students with ED in inclusive elementary educational settings.

The studies presented in this literature review focused on research-based methods and practices that demonstrated efficacy in educating the whole child to address the problem of low literacy and math achievement of students with ED in the classroom and on the PSSA. Dewey's philosophy on educating the whole child proposed that schools must consider approaches that address students' social and intellectual growth to bring about improved academic achievement. When comparing the efficacy of different types of research-based interventions to support students' social, emotional, and intellectual growth, research affirmed that interventions and strategies that support positive teacher-student relationships, peer-mediated interventions, self-regulation interventions, students' SEL, and school bonding were effective strategies to promote improvement in teaching and learning of students with ED (Graziano & Hart, 2016; King & La Paro, 2015; Lee & Bierman, 2015; Marsh, 2018; Wang & Neihart, 2015). While classroom-level interventions to promote students' social and behavioral development proved noteworthy, some studies emphasized that whole school behavioral health initiatives led by professionals with expertise in mental health showed promising results in promoting positive student behavior, academic engagement, and achievement of students with ED (Cook et al., 2015; Fearnow-Kenney et al., 2016; Segrott, Rothwell, & Thomas, 2013; Swick & Powers, 2018).

In addition, the integrated RTI and PBIS (MTSS) is considered widely accepted in the educational community as an effective model for improving the behavioral growth and academic achievement of all students. The key differences between the MTSS model and stand-alone RTI, PBIS, and classroom-level interventions are the rigorous data-driven progress monitoring of both behavioral and academic performance and achievement data, team-based decision-making on whether interventions were implemented with fidelity, and regular adjustments to students' individual programs as needed to ensure positive outcomes for every student. It appears that such a school-wide commitment to both students' social, behavioral, and academic development along with on-going team-based progress monitoring provides a more comprehensive approach to school improvement. As such, educators and administrators should be cognizant of differences between varied school improvement initiatives when considering which interventions, practices, and processes to adopt to best meet the whole needs of all students being served, including the challenging needs of students with ED.

Further, research contended that BHPD increased teachers' capacity to facilitate a reduction in students' maladaptive internalizing and externalizing behaviors that resulted in behavioral problems that interfered with their academic engagement and achievement in the classroom (Cook et al., 2015; Fearnow-Kenney et al., 2016; Kutash et al., 2015; Segrott, Rothwell, & Thomas, 2013). Therefore, it would be prudent for schools to provide BHPD for teachers working with students with ED in order to increase their capacity to understand the challenging needs of students with ED so they may better understand their needs in order to implement research-based best-practices designed to

improve their social, behavioral functioning, and academic engagement in the classroom, and achievement on the PSSA.

Implications

The current results of the proficiency levels of special education students demonstrated on the 2015 PSSA indicated a need for reform initiatives that will effectively address the learning needs of special education students to improve their academic achievement as measured by standardized tests in accordance with the NCLB (2004) legislation. NCLB legislation has been reauthorized as of 2015 (Fránquiz & Ortiz, 2016); however, the SDP still operated under the NCLB accountability system during the 2015-16 school year, which is the time period, studied here. States, districts, and schools must transition to the Every Student Succeeds Act (ESSA) accountability system during the 2016-17 school year (Fránquiz & Ortiz, 2016). Fránquiz and Ortiz (2016) particularly noted the stringent accountability system that led to ESSA, explaining that because of ESSA, states are no longer mandated to meet NCLB (2002) annual yearly progress targets. Instead, states are provided with more flexibility and autonomy for determining how to calculate schools' effectiveness and student achievement. These changes will have a significant impact on future research.

Research supported BHPD for teachers as an effective intervention for mediating behaviors that adversely impede the academic functioning and engagement of students with ED in the classroom setting. Also, studies suggested that BHPD provided to teachers working with students with ED contributed to improved academic engagement and achievement of students with ED (Lee & Bierman, 2015; Segrott, Rothwell, & Thomas,

2013; Wang & Neihart, 2015). In addition to providing support for teachers working with students with ED from internal and external resources, consideration must also be given to providing pre-service BHPD opportunities for teachers who plan to work in inclusive educational settings (Wehby & Kern, 2014). Further, in today's educational environment, research indicate that leaders must consider developing collaborative partnerships with stakeholders, such as parents, community agencies, universities, and business leaders, to ensure participatory planning and implementation of the necessary supports needed to improve the learning and achievement of students with ED.

This study could contribute to positive social change by increasing knowledge and insight on the effect of BHPD to support the social and behavioral functioning of students with ED in order to improve their functioning in the classroom and increase their academic achievement on the PSSA. Further, this study may serve as justification for providing BHPD for all teachers working with students with ED to ensure their overall wellbeing in the classroom setting.

The outcomes of this study will lead to the development of a white paper project with recommendations for educators to consider implementing a school-wide positive behavioral interventions and support model to promote teachers' professional growth, and to empower teachers with the competencies needed to facilitate improvement in the behavior and academic achievement of all students, including students with ED.

Summary

There was sufficient research presented to support the need for BHPD for teachers working with students with ED. Research indicated that BHPD could equip teachers with

the skills, strategies, and competencies to support students with ED in today's schools. BHPD provides teachers with strategies and interventions to develop emotionally supportive student-teacher relationships, positive peer-peer interactions, and strategies to create effective classroom management to support the learning of students with ED (Lee & Bierman, 2015; Wang & Neihart, 2015). Also, the research suggested that it would be prudent to include research-based BHPD interventions and strategies in pre-service college and university courses to ensure teacher growth, knowledge, understanding, and preparedness to work successfully in inclusive school environment. Dewey's (1897) ideas on teaching students socially useful skills reinforced the critical need for educators to incorporate BHPD strategies into their pedagogy to support the holistic needs of students with ED to better prepare them to meet the demands of 21st century global society.

The purpose of this quantitative, comparative, between-groups design was to assess whether the district's one-year BHPD class increased the academic achievement of students with ED in the elementary classroom setting between two groups of students, those with and without teachers that participated in the district's 1-year BHPD class. The independent variable was the district's 1-year BHPD class, and changes in standardized PSSA test scores during the two study years were the dependent variable; these were measured on a continuous interval scale. The rationale for the study was discussed and definitions of terms utilized throughout the study were provided. The theoretical framework that grounded the study was explained and the literature review expounded on the topics related to the problem.

Section 2 presents the methodology and provides justification for its use in the study. The procedures for choosing participants, confidentiality procedures to protect participants from harm, and any potential effect of the researcher's role with participants in data collection are addressed. A description of setting and population where the data were collected is explained and justified. The instrumentation, data collection, and analysis, including measures to ensure validity and reliability, assumptions, limitations, scope, and delimitations of this study are also explained.

Section 2: Methodology

The purpose of this study was to measure the effect that the district's 1-year BHPD class had on the literacy and math achievement of 4th grade students with ED. Academic achievement was measured by comparing the PSSA test scores in literacy and math from the previous year's test scores, with the following year's test scores in literacy and math between 4th grade students whose teachers participated in the district's 1-year BHPD and those 4th grade students with ED whose teachers did not participate in the 1-year BHPD class.

In this section, I explain the methodology I used in this study and then describe the setting, population, and sample. Next, I review the research questions and hypothesis of this study before offering a description of instrumentation, data collection, and measures to ensure validity and reliability are explained. I conclude the section with discussions of assumptions, limitations, scope, delimitations, and procedures to protect the confidentiality of study participants.

Research Design and Approach

I used a quantitative, comparative, between-groups design with which non-randomly assigned students (intact classrooms), were compared at pre-test (2014-2015 school year PSSA scores) and again at post-test (2015-2016 school year PSSA scores). This design was appropriate because relationships between variables can be numerically measured using instruments such as standardized academic achievement tests (Creswell, 2012). Also, I used non-randomly assigned students (intact classrooms) in this study because the district does not allow researchers to randomly assign students to groups (see

Creswell, 2012). Also, according to Creswell (2012), between-groups designs are typically used in educational research. Between-groups design was appropriate for this study because the research questions addressed the changes in academic achievement scores between two groups of students—those students with ED whose teachers participated in the district's 1-year BHPD class and those students with ED whose teachers did not participate in the district's 1-year BHPD class—to see if the district's BHPD class increased the 4th grade students' academic achievement on the standardized PSSA test.

Setting and Sample

The setting for this study included a selected few elementary schools located in a large urban school district in northeastern Pennsylvania. According to its public data on the website, the district's enrollment included approximately 134,000 students. Of the total enrollment, 18,211 were special education students, and 8,843 of these were in elementary school. Grades 3 and 4 totaled 3,332 special education students, including students with ED. Of these students, 83 4th grade students with ED were included in the sample of this study. Three teachers who taught students with ED participated in BHPD, and three teachers who taught students with ED did not participate in BHPD.

I conducted a Power analysis for a Mann-Whitney U test in G*Power (software version 3.1.2) to determine a sufficient sample size using parameters of alpha of 0.05, a power of 0.80, a medium effect size ($d = 0.5$), and two tails (see Faul, Erdfelder, Buchner, & Lang, 2008). There was an equal allocation of participants in each group. Based on the aforementioned assumptions, the desired sample size was 134. The actual

archival sample provided by the district was $n = 39$, which is considerably less than the desired sample of $n = 134$; therefore, the results have to be interpreted with caution.

I submitted an application to conduct research and collect data for the study to Walden University's Institutional Review Board (IRB). Upon approval from Walden University's IRB, I submitted a data use agreement request was submitted to the district's Office of Research and Evaluation for permission to retrieve de-identified, archived PSSA literacy and math test scores of 4th grade students with ED (3rd and 4th grade PSSA scores matched to the same students) enrolled in the district during the 2014-2015 and 2015-2016 school years whose teachers participated in the district's 1-year BHPD class and those students with ED whose teachers did not participate in the district's 1-year BHPD class. Upon approval from the district, I submitted the appropriate documentation of the district's approval to Walden University's IRB for final approval to conduct research and collect data in the district. Following final approval from Walden University's IRB, approval number 01-09-18-0429144, I began the data retrieval process, including contact with the data specialist in the Office of Specialized Services who was familiar with the school placements of 4th grade students with ED. The schools for this study and participants for this study were determined by the data specialist in the Office of Research and Evaluation. I provided an Excel spreadsheet to the data specialist to enter the individual students' de-identified PSSA test scores. Numbers were used to identify individual student participants.

Instrumentation and Materials

The data for this study were retrieved from the district's 2015-2016 archived PSSA scores of 4th grade students with ED in literacy and math. The PSSA scores of 4th graders were taken while they were in 4th grade and from the year before to control for variations. The PSSA is a mandated standardized assessment regularly administered once a year to the district's students in Grades 3 through 8 to measure students' academic performance in literacy, math, and science (NCLB, 2004). The PSSA scale scores are used to classify students' academic performances on the PSSA (Data Recognition Corporation, 2014). The variables used in this study related to whether there was a difference in the literacy and math PSSA change scores of 4th grade students with ED whose teachers participated in the district's 1-year BHPD compared to the 4th grade students with ED whose teachers did not participate in BHPD. The students' PSSA change scores on the PSSA was the dependent variable and measured on a continuous interval scale. The independent variable was the treatment (BHPD), and its categories are dichotomous (participated/not participated).

The PSSA is a criterion-referenced assessment (Data Recognition Corporation, 2014). Criterion-referenced items measure a student's performance according to specific standards rather than to the performance of other test-takers (Data Recognition Corporation, 2014). The specific standards on the PSSA are aligned with the Pennsylvania state core curriculum. Students are expected to complete all items on the PSSA. The PSSA contains multiple-choice questions with an open-ended question at the end of each section. Students are provided with sample questions prior to beginning each

test section to ensure that they understand the directions for completing test items. Students are expected to answer each question on the assessment to demonstrate their knowledge in the subject area. The PSSA is not a timed test. Students may request additional time to complete the assessment if needed. The PSSA data are disaggregated by students' number correct scores and scaled scores. The number correct scores indicates the total number of questions answered correctly in each reporting category, and the scaled scores are statistically-converted raw scores used to control slight variations from one version of the test to the next (Data Recognition Corporation, 2014). Raw data are available upon request.

Internal and external checks were conducted to ensure validity of the PSSA. Committees of Pennsylvania educators, local and state content and grade-specific experts, write test items based on state performance indicators identified in the core curriculum. Item review committees consisting of teachers, administrators, and subject specialists review test items for accuracy, alignment with curriculum standards, and performance indicators. Item review committee members also review the assessment for bias and sensitivity and make revisions of test items based on feedback. Committees of Pennsylvania State Board of Education representatives ultimately approve all revised test items (Data Recognition Corporation, 2014). All test items are field-tested and must meet validity and reliability standards prior to being approved by Pennsylvania Department of Education (PDE) as test items (Data Recognition Corporation, 2014).

Standardized procedures and scoring guides are used to maintain the validity and reliability of the administration of the PSSA. Each year the local district provides training

for test coordinators and teachers on administration of the PSSA. The training includes administration procedures, storage, and security guidelines to be followed district-wide to ensure standardization of administration of the assessment.

The reliability of the PSSA is most often established by using a reliability coefficient. Reliability coefficients indicate the degree to which differences in test scores in each subject area tested reflect true differences in the subject matter being tested rather than random variations (Data Recognition Corporation, 2014). Reliability coefficients range from 0.0 to 1.0. A high correlation coefficient indicates greater test reliability. The Cronbach alpha coefficient is most commonly used as a correlation index for reporting reliability results of standardized achievement tests, and is used for reporting reliability of the reading, math, and science PSSA (Data Recognition Corporation, 2014). Historically, the overall reliability results of the PSSA using Cronbach alpha is in the low .90s, which are considered excellent results: math Grade 3, 0.95 and Grade 4, 0.94; reading Grade 3, 0.92 and Grade 4, 0.91; Science Grade 4, 0.93 (Data Recognition Corporation, 2014). Students in Grade 3 are not tested in science.

Data Collection and Analysis

I used de-identified archival standardized PSSA achievement data for this study, eliminating the need to secure permission or consent from parents or assent from students with ED. The data specialist in the district's Office of Specialized Services agreed to support the study and identified which 4th grade classes of students with ED were taught by teachers who participated in the district's 1-year BHPD class and those students whose teachers did not participate during the 2014-2015 and 2015-2016 school years.

After obtaining Walden University's IRB approval, I received a letter of support (Appendix B) and approval letter (Appendix C) from the local district Office of Specialized Services and Office of Research and Evaluation granting support and permission to use archival, de-identified, PSSA scaled test scores of 4th grade students with ED for both study years. De-identified PSSA archived literacy and math data were received for 83 students on an Excel spreadsheet from the district's Office of Research and Evaluation.

The purpose of testing is so that schools can measure the literacy and math achievement of their students, as measured by the PSSA. The independent variable was the treatment (BHPD) and its categories were dichotomous (participated/not participated). The students' change scores on the PSSA were the dependent variable and measured on a continuous interval scale. I used SPSS Version 24 to calculate descriptive statistics such as means and standard deviations before and after the intervention for both groups of participants.

A Mann-Whitney test was used to determine if there were statistically significant differences in the PSSA change scores between the two groups of student in literacy and math during the 2014-2016 school years. I conducted the Mann-Whitney tests for literacy and math PSSA scaled test scores of the same participants for the 2015 and 2016 school years. The purpose of testing these two years was to use year 2015 as the pre-test and 2016 as the post-test.

The assumptions necessary for the use of the Mann-Whitney test were met. The first assumption to consider was that there must be only one dependent variable used and

measured on a continuous scale (Laerd, 2015). In this study, I used PSSA literacy and math scores as the one dependent variable and measured them on a continuous scale. The second assumption was that only one independent variable could be used with two groups (Laerd, 2015). I used BHPD as the independent variable, consisting of two groups, participated or not participated. The third assumption was that there be no relationship between the observations in each group or between the groups (Laerd, 2015). In this study, the participants were either in the teachers participated in BHPD group or the teachers did not participate in BHPD group. The fourth assumption was whether or not the distribution of scores for each independent variable group was normally distributed (Laerd, 2015). The data were tested for normality and the normality assumption was violated. Consequently, the standard *t* test to compare the two groups could not be used and so I used a Mann-Whitney test instead.

Assumptions, Limitations and Scope, and Delimitations

An assumption was that students received the support and accommodations needed during testing to complete the assessment to their fullest ability as required by IDEA (2004). Another assumption was that teachers followed testing protocols during administration of the PSSA. Further I assumed, that both groups of students were taught the curriculum standards that were tested in the PSSA.

Another assumption was that the BHPD was well developed and met the needs of all teachers. Evans (2014) indicated that teachers find relevancy in professional development based on their individual and group needs. Therefore, professional development formats must be varied in order to meet the needs of all teachers. Also, I

assumed that the teachers paid attention in the BHPD and integrated what they learned in the BHPD into their instructional practices with their students.

Limitations

The retrieved data only included standardized PSSA achievement test scores of 4th grade students with ED from intact classes of students with ED whose teachers either participated in BHPD or did not. Generalization of study results requires that participants in the study be randomly selected (Creswell, 2012). The district does not allow random assignment of students for research studies. Therefore, convenience sampling was used in this study (non-random) selection, eliminating the possibility for the study results to be generalized beyond the participants included in the sample (Creswell, 2012). The study was also limited to the students' PSSA scores.

Another limitation was whether teachers actively participated in the district's BHPD to enhance their understanding of the needs of students with ED and how to effectively implement the strategies learned in the BHPD with fidelity to better facilitate the social, emotional, and behavioral growth and academic achievement of their students.

Another limitation in this study was the sample size. Based on the power analysis for a Mann-Whitney U, the desired sample size was 134 participants (Faul, et. al., 2008). The actual archival sample received from the district was $n = 39$, which is considerably less than the desired sample of $n = 134$.

Scope

The scope of this study included 4th grade students with ED who was enrolled in the district during the 2014 to 2016 school years. The sample of participants included

students with ED whose teachers participated in the district's 1-year BHPD class and students with ED whose teachers did not participate in district's 1-year BHPD class. The study intended to assess the effect of the district's 1-year BHPD class on the students' scores on the standardized PSSA between both groups of students with ED.

Delimitations

The intent of this study was to assess whether BHPD increased the academic achievement of students with ED by examining changes in PSSA test scores of students with ED taught by teachers who participated in the district's 1-year BHPD class and students with ED taught by teachers who did not participate in the district's 1-year BHPD class. The study was delimited by only using archival PSSA data as the measure of student achievement.

Protection of Participants' Rights

The protocols established by Walden University's IRB for conducting research were followed to ensure confidentiality of all participants in this study. Only de-identified archival PSSA scores were retrieved, thereby eliminating the need to secure permission or consent from parents or assent from participants. Additionally, the National Institute of Health training on protecting human participants was completed. For optimal security and privacy, all data received were stored on a password-protected computer to which only I had access. All data will be maintained for five years. After five years, I will destroy the data. The data collection and analysis begun after IRB final approval from Walden University was granted. To ensure compliance of ethical and confidentiality guidelines for all students participating in the study, only de-identified, archived PSSA literacy and

math test scores were retrieved from the district's Office of Specialized Services in accordance with the district's Office of Research and Evaluation.

Data Analysis Results

Table 2 displays the frequency counts for selected variables. Table 3 displays the descriptive statistics for the outcome variables. Table 4 displays the Mann-Whitney tests for the literacy outcome variables based on BHDP group to answer research question 1. Table 5 displays the Mann-Whitney test for the math outcome variables based on BHDP group to answer research question 2.

Table 2 displays the frequency counts for selected variables. 36 of the students (43.4%) had teachers who attended the BHDP class. 47 of the students had teachers who had not attended the BHPD. Literacy scores were obtained for 44 students (53.0%) and math scores were obtained for 39 students (47.0%). For the sample, most (85.5%) had a pre-test score category of "below basic." At post-test, 81.9% of the students had a "below basic" score (Table 2). These distributions were displayed to provide context for the numbers. The *M* and *SD* are in Table 3.

Table 3 displays the descriptive statistics for the dependent variables. These included the pre-test scores ($M = 849.88$), and the post-test scores ($M = 836.28$). In addition, a change score was calculated by subtracting the student's pre-test score from their post-test score. The mean change score was $M = -13.60$. A negative change score means that the pre-test score was higher than the post-test, which is inconsequential as the pre-test was only to make the two groups more comparable. It should be noted that there were wide fluctuations in the change scores ranging from a low of -207.00 to

+97.00 (Table 3). Also, Table 3 shows the initial univariate comparisons. The bivariate comparisons are shown in Tables 4 and 5.

Table 2

Frequency Counts for Selected Variables (N = 83)

Variable	Category	*n*	%
(a) BHDP class			
	No	47	56.6
	Yes	36	43.4
Subject			
	Literacy	44	53.0
	Math	39	47.0
Pre-test score category			
	Below basic	71	85.5
	Basic	10	12.0
	Proficient	2	2.4
Post-test score category			
	Below basic	68	81.9
	Basic	12	14.5
	Proficient	3	3.6

Table 3

Descriptive Statistics for the Outcome Variables (N = 83)

Outcome	*M*	*SD*	Min	Max
(b) High				
(c) Pre-test	849.88	64.28	678.00	1,011.00
(d) Post-test	836.28	69.44	729.00	1,056.00
(e) Change [a]	-13.60	56.36	-207.00	97.00

[a] Change = post-test minus pre-test.

Research Question 1

The first research question asked: What was the difference in PSSA change scores in literacy between 3rd and 4th grade students with ED who were taught for one year by teachers who participated in the district's 1-year BHPD class and 3rd and 4th grade students with ED who were taught for one year by teachers who did not participate in the district's 1-year BHPD class? To answer this question, Table 4 displays the Mann-Whitney test for the literacy outcome variables based on BHDP group. A Mann-Whitney test was used due to the sample size (n = 44) and the wide fluctuations of change scores within the sample. Inspection of the table found no differences between the groups at pre-test (z [42] = 0.90, p = .37) or at post-test (z [42] = 0.69, p = .49). In addition, there were no statistically significant differences in change scores between the groups, z (42) = 0.29, p = .77 (Table 4). This finding provided support to retain null hypothesis 1. Therefore, it was determined that BHPD did not have an effect on increasing 4th grade students' with ED literacy PSSA proficiency.

Table 4

Mann-Whitney for the Literacy Outcome Variables Based on BHDP Group (n = 44)

Outcome	BHDP Class	*N*	*M*	*SD*	*(f)* r_s	*(g)* *z*	*(h)* *p*
Pre-test					.14	0.90	.37
	No	26	853.65	69.07			
	Yes	18	874.78	67.12			
Post-test					.11	0.69	.49
	No	26	851.23	65.68			
	Yes	18	868.78	81.57			
Change [a]					.04	0.29	.77
	No	26	-2.42	48.42			
	Yes	18	-6.00	52.87			

[a] Change = post-test minus pre-test.

Research Question 2

The second research question asked: What was the difference in PSSA change scores in math between 3rd and 4th grade students with ED who were taught for one year by teachers who participated in the district's 1-year BHPD class and students with ED who were taught for one year by teachers who did not participate in the district's 1-year BHPD class? To answer this question, Table 5 displays the Mann-Whitney test for the math outcome variables based on BHDP group. Inspection of the table found no differences between the groups at pre-test (z [37] = 0.03, p = .99) or at post-test (z [37] = 0.54, p = .61). In addition, no statistically significant differences in change scores were found between the groups, z (37) = 0.66, p = .51 (Table 5). This finding provided support to retain null hypothesis 2. Therefore, it was determined that BHPD did not have an effect on increasing 4th grade students' with ED math PSSA proficiency.

Table 5

Mann-Whitney for the Math Outcome Variables Based on BHDP Group (n = 39)

Outcome	BHDP Class	*N*	*M*	*SD*	r_s	*Z*	*P*
Pre-test					.01	0.03	.99
	No	21	836.43	68.07			
	Yes	18	835.22	42.78			
Post-test					.09	0.54	.61
	No	21	804.19	64.83			
	Yes	18	819.61	47.82			
Change					.11	0.66	.51
	No	21	-32.24	74.62			
	Yes	18	-15.61	42.91			

[a] Change = Post-test minus pre-test.

This study used archival data of 83 students to measure the effect that the district's 1-year BHPD class had on the literacy and math achievement of 4th grade students with ED who were taught by three teachers who participated in the district's 1-year BHPD class and those students taught by three teachers who did not participate during the 2014-2016 school years. The Mann-Whitney test used to answer two research questions to determine if there were statistically significant differences in the literacy and math PSSA change scores between the two groups of students. Hypothesis 1 (differences in literacy scores) was not supported (Table 4). Hypothesis 2 (differences in math scores) was not supported (Table 5). Therefore, this study failed to reject the null hypotheses H_{01} and H_{02}. Therefore, it was determined that BHPD did not have an effect on increasing 4th grade students with ED literacy and math PSSA proficiency. Also, based on the power analysis for a Mann-Whitney U, the sample size was considerably less than the desired sample of $n = 134$. The actual archival sample was $n = 39$, which represented the

available data provided by the district that were within the scope of this study. However, this limitation in the sampling size may have affected the findings of this study.

Additionally, the 4th grade students' 3rd grade test scores were used as a pre-test to statistically account for any pre-existing differences in the literacy and math PSSA scaled scores. The pre-test PSSA data showed that no statistically difference already existed between these two groups. Also, findings from this study indicated that there was no statistically significant differences in post-test PSSA change scores between the two groups after the BHPD experience. As such, the findings showed that BHPD did not have an effect on increasing 4th grade students with ED literacy and math PSSA proficiency. Future research may reexamine the constructs of this study using a much larger sample size.

The findings of this study were inconsistent with those by King and La Paro (2015), Lee and Bierman (2015), and Segrott, Rothwell, and Thomas (2013), which showed that BHPD improved students' behavioral functioning and academic engagement, and achievement. A possible explanation for the dilemma in the study findings and literature may be attributed to the fidelity of implementation of the BHPD strategies learned in the BHPD, an issue not investigated in this study. Abou-Rjaily & Stoddard (2017), Capella, et al., (2011), and Eagle et al. (2015) contended that interventions must be implemented with fidelity in order to bring about desired results. Some research suggested that there is a reciprocal relationship between the fidelity of implementation of professional development and student academic achievement (Cappella et al., 2011; Eagle et al., 2015). Future research may investigate the effect of

constructs related to the fidelity of implementation of BHPD strategies on the literacy and math PSSA achievement of 4th grade students with ED. Such data could enlighten teachers' perspectives on critical constructs that may influence the low literacy and math PSSA performance of students with ED that may be beneficial to educators nationwide.

Capella et al. (2011) contended that in order to improve student achievement, educators and administrators must first analyze existing interventions, processes, and practices to determine what worked and what didn't prior to adopting additional interventions and practices. As such, since the findings of this study did not reveal that BHPD increased the literacy and math PSSA proficiency of 4th grade students with ED, an alternative solution was sought to address the problem of low literacy and math PSSA achievement of students with ED. Dewey's multidimensional educational philosophy was supported in this research study and used as a lens to find an alternative solution to address the low literacy and math PSSA achievement of students with ED.

During an additional search for a solution to address the low literacy and math PSSA achievement of students with ED, the SWPBIS model emerged as a comprehensive viable solution. Based on the findings of this study, a white paper project will be presented with recommendations for schools to consider implementing the SWPBIS model as a solution to the problem of low literacy and math PSSA achievement of students with ED. The SWPBIS model provides a framework that schools can use to address both the behavioral and academic needs of all students with fidelity, flexibility, and balance in order to ensure positive social, behavioral, and academic outcomes for all students, including students with ED (McCurdy et al., 2016). This white paper project has

the potential to contribute to the growing body of research to help students with ED function more successfully in the classroom and achieve higher proficiency on the PSSA.

Section 2 explained the methodology used to analyze the research questions. A discussion of the research design was provided, along with a description of the setting, sample, and population. In order to ensure compliance with ethical procedures, the measures to ensure validity and reliability, protection of participants, as well as assumptions, limitations, delimitations, and scope were explained. Issues related to sampling size and constructs related to the fidelity of implementation of BHPD strategies were discussed as possible limitations that may have influenced the findings in this study. This section concluded with the findings of this research study that resulted in a white paper project with recommendations for educators and administrators to consider implementing a SWPBIS model as an intervention for improving the behavior, social functioning, and academic achievement in the classroom and on the PSSA for all students, including students with ED.

Section 3: The Project

The purpose of this study was to measure the effect that the district's 1-year BHPD class had on the low literacy and math PSSA achievement of 4th grade students with ED. I measured academic achievement by comparing the changes in PSSA test scores in literacy and math from one year to the next year of 4th grade students with ED whose teachers participated in the district's 1-year BHPD class and those 4th grade students with ED whose teachers did not. The data analysis and findings of this study revealed that BHPD did not have a statistically significant effect on the PSSA score gains between the two groups of students in literacy and math. The null hypotheses were retained for both research questions. As a result, I chose a white paper project as an outcome of this study with recommendations for implementing a SWPBIS model in inclusive elementary school settings to address the problem of low literacy and math PSSA achievement of students with ED. This section details the goals, rationale, supporting literature, project description, evaluation, and implications for social change resulting from the white paper project.

Descriptions and Goals

The project is a white paper that reports the findings of a comparison of changes in PSSA literacy and math scores between two groups of 4th grade students with ED, those taught by teachers who participated in BHPD and those taught by teachers who did not participate in BHPD. Although the intent of the study was to address the problem of low literacy and math PSSA achievement of 4th grade students with ED, the recommendation of implementing a SWPBIS model could be beneficial for improving

PSSA achievement of all students, including students with ED, in all grade levels in inclusive elementary schools. The white paper is appropriate for this purpose due to its clear, concise, and brief reporting format.

I have three goals for the white paper. The first goal is to report the findings of this study, which showed that BHPD did not increase the literacy and math achievement of 4th grade students with ED on the PSSA in this study. The second goal is to recommend SWPBIS as a potential solution to address the problem of low literacy and math achievement of all elementary students, including students with ED, in order to increase students' performance on the PSSA. The third goal is to provide an action plan to facilitate the process of implementing a SWPBIS model into inclusive elementary school settings. The white paper includes an introduction, a description of the problem, the study findings, recommendations, conclusions, and references.

Rationale

The Pennsylvania Department of Education determines the progress of districts and schools based on the percentages of students scoring in the proficient and advanced levels on the PSSA. Districts and schools are expected to exceed the prior year's proficiency levels in literacy, math, and science for all students in Grades 3 through 8 each year to demonstrate progress in achieving the state's academic achievement standards (Pennsylvania Department of Education, 2016). The district's 2015 and 2016 PSSA literacy and math results (Table 1) showed low achievement of 4th grade students with ED.

The purpose of the quantitative, comparative, between-groups study that led to this white paper project was to find an effective solution to address the problem of low PSSA literacy and math achievement of 4th grade students with ED in elementary schools located in an urban school district in Pennsylvania. The study compared the 2016 PSSA scores gains in literacy and math between two groups of 4th grade students with ED—those students whose teachers participated in the district's 1-year BHPD class and those students whose teachers did not—to determine if a statistically significant difference in PSSA test score gains existed. I used the Mann-Whitney test to conduct the statistical analysis. The analysis showed there was not a statistically significant difference in the PSSA change score gains between the two groups of students in literacy and math. The study failed to reject both null hypotheses for the study. Therefore, BHPD did not increase the PSSA literacy and math achievement of 4th grade students with ED.

These findings indicated a need to search beyond BHPD as an intervention to address the problem of low literacy and math PSSA achievement of 4th grade students with ED. The results of an additional search for a solution to address the problem of low literacy and math PSSA achievement of 4th grade students with ED led me to the white paper project. The intent of a white paper is to provide information to an organization on a solution to an identified problem in a brief and concise manner (Sakamuro, Stolley, & Hyde, 2015). White papers address issues and problems by including data to provide a synopsis of research studies (Campbell & Naidoo, 2017). I selected a white paper for this project to provide educators and administrators with a framework and recommendations for implementing a SWPBIS model as a solution to the problem of low literacy and math

PSSA achievement of 4th grade students with ED. The implementation of a SWPBIS model could result in improving students with ED behavioral and academic performance in the classroom and raise the PSSA literacy and math achievement of students with ED through the on-going comprehensive use of data.

According to McCurdy et al. (2016), SWPBIS interventions based on multiple types of school-wide behavioral and academic data have the potential to improve teaching and learning for all students. The SWPBIS uses data to frequently monitor what teachers are teaching, the fidelity of implementation of strategies and interventions, and progress monitoring of student performance so that adjustments can be made when needed to ensure positive behavioral and high academic achievement for every student (McCurdy et al., 2016).

Review of Literature

The literature review for this white paper project will begin with a discussion of the purpose, content, and format of the white paper. I will provide an overview of the SWPBIS model, along with a framework for implementing the model. I will also provide a data-review and monitoring plan along with research-based strategies for leadership models of SWPBIS. The literature used in this study was gathered through a detailed search of several databases. These databases included Education Research Complete, EBSCO host, Education: a SAGE full-text database, and ProQuest Central. Search terms included: *white paper, school-wide positive behavior intervention and supports models, achievement of students with emotional disturbances, classroom management of students*

with behavioral disturbances, positive school climate, data-analysis, and *multiple measures of data.*

White Paper

A white paper is a pragmatic, action-driven approach to problem solving that promotes positive social change (Malone & Wright, 2017). Most researchers agree that the white paper genre originated in England during the mid- to late- 1900s as technical governmental policy papers. Also, white papers are described as authoritative documents used to provide information in a brief, clear, and concise manner to a particular audience for the purposes of addressing social issues and solving problems (Willerton, 2013). Pershing (2015) contended that the white paper is an effective tool for performance improvement because the content of the white paper provides insight and knowledge to readers that can help them to better understand the issues associated with a problem and a solution. Malone and Wright (2017) conducted an analysis of the evolution of the white paper and found that, over time, the uses of the white paper evolved beyond governmental technical policy papers and business marketing tools to data-driven policy papers used in various fields, including education, to address societal and organizational issues.

Campbell and Naidoo (2016) found that due to the evolving nature of white papers, greater understanding of the uses of the white paper might be derived by its functionality rather than its purpose. Campbell and Naidoo reported that in many organizations, white papers function as frameworks to understand regulations, organizational progress reports on a specific problem, and position papers with research-

based recommendations for organizational improvement on a particular issue. Stelzner (2007b) contended that white papers are better understood by their purpose, which is to provide background on a service or product, insight on a problem, or a new or improved solution to a technical, business, or social problem. This white paper project will use the lens of its function and purpose, which is to provide background on a problem, research-based information on a solution to the problem, and research-based recommendations on a solution to a particular problem within an organization that will improve teaching and learning for every student.

Malone and Wright (2017) identified the major formal characteristics of the white paper by its format and content. For example, the format should use paragraphs with section headings, and should be distributed in a print document. The length should be brief and written in an authoritative and informational tone targeted toward to a specific audience. The content of the white paper should address the social need that it mediates, such as identification of a problem with a solution in the form of a product or service that provides information in a way to persuade and educate an identified audience on a particular solution to a problem. Also, comparisons should be made that demonstrate the product or service as effective, based on its benefits, and use data to justify the claim. Most importantly, the white paper should focus on the social action needed to address a particular issue or problem by focusing on the key components and benefits of the solution. This white paper addresses the problem of low literacy and math achievement of students with ED on the PSSA.

In the white paper, I make recommendations for the implementation of a SWPBIS model as a solution for improving the behavior and low literacy and math achievement of students with ED in an urban elementary setting in northeastern Pennsylvania. The conclusion of this white paper provides educators with insight and knowledge of the connection between the problem identified and the recommendations (see Willerton, 2013). In the white paper, I summarize how the recommendations support a school culture that could improve and sustain the learning and behavior of all students, including students with ED, in all grades in inclusive elementary schools. Finally, the white paper concludes with emphasis on how SWPBIS could contribute to improvement in proficiency on the PSSA of all students.

Framework for Implementation of a SWPBIS Model

George, George, Kern, and Fogt (2013) conducted a case study of the SWPBIS model at the Centennial School of Lehigh University. George et al. (2013) found that the SWPBIS model was an effective evidence-based model that schools could implement to improve the behavior and learning all students, particularly at-risk students, and students with ED. A significant component of the Centennial School of Lehigh University SWPBIS model was a school-wide focus on prevention of disruptive behavior through explicit proactive interventions, rather than punitive reactive measures, in order to support all students to reach their full potential in school, and in their future careers and adult lives. The SWPBIS model is widely accepted as an effective, comprehensive, data-driven, school-wide solution used in over 18,000 schools and districts nationwide to improve the behavior and academic achievement of all students, including students with

ED, and at-risk students (Office of Special Education Programs (OSEP) Technical Assistance Center on Positive Behavior Interventions and Supports, 2013).

The SWPBIS model was originally developed in the 1980s as an intervention to address the behavioral needs of students with ED. During the 1990s, following the Reauthorization of the Individuals with Disabilities Act (IDEA), the SWPBIS became increasingly popular as an effective research-based intervention to support and improve the behavioral, social, and academic growth of all students within a positive, proactive educational environment that focuses on addressing the needs of the whole child. Dewey (1897) believed that the social, emotional, and behavioral needs of students must be addressed in order to facilitate optimal intellectual development. Embedded in the SWPBIS model are considerations of each students' individuality, past experiences, and unique social, emotional, and academic needs to ensure optimal social and intellectual development to raise academic achievement. These considerations are necessary to determine if interventions are implemented effectively and with fidelity. Some researchers contended that school improvement models must include strategies to monitor the fidelity of implementation of interventions in order to determine if additional professional development may be needed for teachers, or adjustments made in strategies to support individual student needs as necessary, to ensure positive behavioral and academic outcomes for every student (Eagle et al., 2015; Lane et al., 2014; McIntosh et al., 2013). Therefore, it is important that educators consider the fidelity of implementing strategies as a critical component in determining the effectiveness of an intervention prior to determining if the intervention was effective in achieving the desired results. Any

deviation in implementation of strategies as intended could possibly affect the efficacy of an intervention (Lane et al., 2014; McIntosh et al., 2013). Further, Pennsylvania State has focused attention on evaluating the fidelity of SWPBIS models and has taken an active role in providing training for schools to ensure the fidelity of implementation of SWPBIS models and to ensure that students with behavioral disorders and at-risk student needs are met effectively in Tier 2 and Tier 3 of SWPBIS (Runge, Tongwill, Palmiero, & Lamon, 2016).

It is also important to consider staff commitment and support of the SWPBIS model in order to ensure successful implementation. Tyre and Feuerborn (2017) conducted a qualitative study to identify the level of staff support of the SWPBIS model and found that out of 36 schools throughout 9 school districts, only 44 staff were opposed, while 1,166 were supportive of SWPBIS. Some of the concerns of opposed staff included factors such as commitment of stakeholders, leadership, and students; limited understanding of the SWPBIS model, as well as misconceptions of the SWPBIS model; and school climate issues that may interfere with implementation. Although this study showed overwhelming staff support of the SWPBIS model, this study demonstrated the significance of ensuring that staff concerns are addressed prior to implementation of a SWPBIS model to increase buy-in from all stakeholders in order to increase opportunities for successful implementation of SWPBIS.

Conversely, George, Cox, Minch, and Sandomierski (2018) conducted an exploratory study to determine factors related to high-fidelity implementation of the SWPBIS model. The factors that supported high-fidelity implementation of SWPBIS

model included commitment from leadership, staff support and buy-in, data collection, analysis, and monitoring systems, central office support, school climate, collaboration and communication among teams, and student behavioral and academic outcome data. Each indicator was viewed as a driver needed for successful implementation of SWPBIS. Effective leadership, staff buy-in, and data collection, analysis, and monitoring systems, and student outcome data were highly rated drivers for sustaining capacity that enabled successful implementation of high-fidelity SWPBIS models. This study could be useful as a blueprint that educators could use as a reference for implementing high-fidelity SWPBIS, as well, as for identifying key factors that could be problematic in the successful implementation of SWPBIS models.

McCurdy et al. (2016) described SWPBIS as a comprehensive, three-tiered, data-driven model to problem solving contextualized within a system. The SWPBIS system focuses on school-wide planning of behavioral and academic expectations, direct teaching of social skills, and differentiated instruction within a collaborative team-based approach that provides frequent opportunities for schools to organize and evaluate their support systems to improve student behavior and academic achievement (McCurdy et al., 2016). On the classroom level, teachers maintain daily data on student behavior to guide and improve teacher practice and student outcomes. On a school level, staff and administration make ongoing efforts to improve efficiency and effectiveness of operational practices and processes to improve school climate. Direct teaching of social skills is the core of SWPBIS model. Direct teaching of social skills increases students' capacity to exhibit appropriate classroom behaviors and decrease disruptive behaviors

that impede the teaching and learning process. McCurdy et al. (2016) emphasized that effective leadership and staff commitment is essential to the success of the SWPBIS model. School-based team leadership provides the structure for on-going school-wide collaboration, planning, and continuous monitoring of student outcomes against specific measurable goals through the comprehensive use of data. The SWPBIS model allows each school to identify and tailor its program to fit their own unique school culture (McCurdy et al., 2016). The SWPBIS problem-solving model includes:

- Identification of potential behavior problems deemed disruptive,
- Establishment of a set of expected behaviors to promote positive social development and academic achievement of students,
- Direct teaching of behavioral expectations,
- Recognition systems that reward students for demonstrating desired behaviors,
- Intervention plans developed to identify students' academic needs, supports and additional services that may be needed,
- Continuous observation, monitoring, evaluation, revision, and documentation of student progress in achieving goals based on data, and
- Staff reflection and professional development for teacher growth based on student behavioral and academic progress data.

Tier 1

Tier 1 provides targeted school-wide and classroom level interventions for all students to help them avoid disruptive behaviors by clearly defining school-wide and

classroom level rules in a concise manner through the implementation of a high degree of structure, consistency, and support (McCurdy et al., 2016). All students are taught school-wide expected behaviors, school rules, and academic expectations. Staff members acknowledge students who meet the expected behaviors during a pre-planned, school-wide rewards program in a public setting within the school. It is expected that the majority of students respond to this level of intervention and supports (McCurdy et al., 2016). Many researchers believe that the successful implementation of Tier 1, with a high degree of fidelity, is a predictor of the success of the overall program (McIntosh et al., 2013). Fidelity is defined as a data-driven measure used to assess the effectiveness of the implementation of Tier 1 of SWPBIS (McIntosh, et al., 2013). McIntosh et al. (2013) compared different types of tools to measures the fidelity of SWPBIS interventions. The degree of fidelity is linked to teacher performance and targeted behavioral and academic student outcomes. McIntosh et al. (2013) found that the School-Wide Evaluation Tool (SES), a self-assessment tool, was commonly used to measure fidelity of implementation of Tier 1 of SWPBIS. Additionally, McIntosh et al. (2013) findings indicated that the team's use of data when making decisions and capacity building were the most significant indicators of sustained success of Tier 1 SWPBIS interventions.

Further, Lane et al. (2014) contended that approximately 80% of students should show improvements in behavior and academics if school-wide level 1 and classroom level 1 interventions of the SWPBIS model are being implemented with fidelity. Further, teacher professional development should be considered prior to moving students to Tier 2

to ensure that necessary strategies were implemented and implemented effectively in Tier 1. Some commonly used Tier 1 strategies are listed below:

- Teacher training in research-based Tier 1 strategies, such as differentiated instruction, allows opportunities for teachers to plan varied lessons that provides students choices of learning activities based on teachers' knowledge of students' interests, readiness, and abilities (Suprayogi, Valcke, & Godwin, 2017),
- Opportunities to Respond (OPR) is a strategy that decreases student disruptive behavior by increasing opportunities for students to successfully participate in classroom lessons through a structured method of pacing lessons that optimizes opportunities for student feedback (Menzies et al., 2017),
- The use of praise to acknowledge students for following school and classroom rules and expectations is a commonly used strategy to improve student behavior (Pinter, East, & Thrush, 2015). Pinter et al. (2015) conducted a study using video feedback to demonstrate how effective praise could be used as a management tool to increase positive behavior and academic student outcomes. Praise is a widely accepted evidence-based practice (EBP) to improve social skills and academic engagement.
- The integration of pre-correction techniques is a strategy to prevent problem behaviors that interfere with learning (Ennis, Royer, Lane, & Griffith, 2017). Pre-correction strategies are geared towards addressing internalizing and externalizing behaviors exhibited by at-risk students and students with ED.

> Pre-correction strategies require teachers to have prior knowledge of the times when students tend to engage in disruptive behavior during the day so that they may intervene proactively rather than reactively. Teachers' knowledge of anticipated problem behaviors allows them to provide positive reminders of expected behaviors to offset the disruptive behavior, while also providing the student or students with supportive prompts to assist them to engage using compliant behavior (Ennis et al., 2017).

These effective best practices (EBP) are generally found to improve student behavior and academic performance, if implemented with fidelity (Lane, et al., 2014). Only if these EBP have been implemented effectively in Tier 1 with fidelity on the school and classroom levels would Tier 2 and Tier 3 interventions and supports be appropriate next steps. Teachers generally meet to review students' behavioral and academic progress data, and to collaborate on whether interventions and strategies were implemented effectively with fidelity, prior to determining if a particular student should be referred to Tier 2 for additional supports.

Tier 2

Tier two of SWPBIS focuses on interventions and supports provided on a classroom level for targeted small groups of students who may need additional supports in understanding school-wide behavioral and academic expectations (Sugai & Simonsen, 2012). Also, some targeted small groups of Tier 2 students may have difficulty self-managing their own behaviors, are at-risk, or are students with diagnosed behavioral disturbances (Sugai & Simonsen, 2012). These students may require re-teaching of Tier 1

interventions in small groups and/or additional interventions and supports to help mediate their behavior. Tier 2 strategies rely upon ongoing team collaboration and data-driven decision-making to identify students for interventions and strategies for progress monitoring to ensure positive behavioral and academic outcomes (Rodriguez et al., 2016).

Some researchers found tootling to be an effective Tier 2 strategy to promote pro-social behavior (McHugh, Tingstrom, Radley, Walker, & Barry, 2016). Tootling is a positive reward strategy that relies on students working in groups to identify and record privately, on note cards, positive peer behaviors observed in the classroom to their teacher on a daily basis. The classroom teacher collects the note cards and randomly selects a few cards to read aloud each day. McHugh et al. (2016) conducted a quantitative study on the effectiveness of tootling as a peer-mediated strategy to promote positive behavior class-wide and among targeted groups of students. They found that teachers considered tootling to be an effective strategy that required minimum resources for reducing disruptive classroom behaviors while increasing positive behaviors and academic engagement. Within this approach, students are acknowledged and publicly praised by their peers for following the expected classroom behavioral rules and academic expectations. Teachers read aloud note cards randomly. The amounts of tootles rewarded are proportionate to the amount of tootles submitted by the class. Also, the more tootles students receive from their peers, the more recognition and rewards the class receives. The teacher is responsible for maintaining and publicly displaying the amount of tootles received daily by the students and providing individual, group, and/or class

rewards. The teacher also maintains private records of the progress of targeted Tier 2 groups of students. McHugh et al.'s (2016) study results indicated that students in classrooms where teachers implemented the tootles strategy demonstrated less disruptive behavior and higher levels of student engagement.

Tier 2 supports may also include small group support in reading and math instruction, cooperative grouping, and book studies (Lane et al., 2014). McIntosh et al. (2013) and Lane et al. (2014) also stressed the importance of implementation of Tier 1 with fidelity prior to moving students to Tier 2 and or Tier 3 in order to maintain the integrity of the SWPBIS model and to ensure that the necessary Tier 1 core considerations and supports were provided to students effectively prior to moving to Tiers 2 and 3.

Tier 3

Tier 3 of the SWPBIS framework focuses on students who may need individualized support to improve behavior and academic achievement (Lane et al., 2014). At this level, a functional behavioral assessment (FBA) may be developed to gain greater insight into the social, emotional, and behavioral needs of an individual student. Based on the results of the FBA, the team may develop an individualized behavior plan (IBP) to support the student's behavior and learning. The IBP may include commonly used strategies such as behavior contracts. Behavioral contracts are popular EBP for students who may need support in self-monitoring their own behavior (Lane et al., 2014). Teachers at the Centennial School of Lehigh University found that the taking time strategy was an effective Tier 3 strategy for helping individual students to self-manage

their own behavior (George et al., 2013). This behavioral self-management strategy teaches students self-awareness of their own behavioral needs. It teaches students to independently de-escalate their own behaviors. Students are encouraged to raise their hand and ask permission to take a break if needed when experiencing a difficult situation to regain composure rather than engage in behaviors that could lead to disruption during class time. Also, within this self-management strategy, students are taught to raise their hand and ask for help when needed prior to becoming overwhelmed by a situation, as well as to request 1:1 instructional support when needed (George et al., 2013).

Another Tier 3 strategy commonly used is the check-in and checkout system. This is a coaching strategy that allows for individual students to review and discuss their daily goals with teachers at different intervals during the day. Students receive rewards for positive achievement of daily individual goals. A token system may be used to provide privileges to students for positive goal attainment (Reinke et al., 2014). As well, some Tier 3 students may require more intensive behavioral support such as wraparound services. Wraparound services may require students to have a 1:1 assistant to support their daily functioning inside and outside of the classroom. The amount of time that a student would receive wraparound services is generally written into an IBP developed by a school-based leadership team, supported and monitored by the school's special education teacher (Lane et al., 2014).

Data Review and Monitoring

Lane et al. (2014) discussed the importance of using multiple sources of data to identify students accurately for Tier 2 and 3 supports and for monitoring students'

progress in meeting their behavioral and academic goals. Lane et al. (2014) emphasized that the data review process must include school-wide performance data (Tier 1), classroom performance data (Tier 2), and student-specific performance data (Tier 3) in order to determine the most appropriate interventions for improving students' learning and behavior. The data review and monitoring process ensures that all necessary considerations are made to ensure students' positive behavioral functioning, academic growth, and achievement. The use of Tier 1 fidelity surveys and professional development considerations for teachers ensures that students are properly identified for supports needed and that teacher training is aligned with student needs, behavior and academic performance outcomes. Lane et al. (2014) recognized a team-based approach for reviewing, implementing, and monitoring student data sources as a critical component of the SWPBIS model. The team-based, collaborative data review and monitoring process is described below.

- Step 1: school-based teams meet to determine the types of data to be monitored for decision-making, such as school-based assessments that may include formative assessments like benchmark assessments, report card data, behavioral data, disciplinary referrals, in-school and out-of school suspensions; and social data, such as counselor referrals, attendance, and tardiness. Also, in this step, summative assessments are reviewed, such as PSSA data. Tier 1 fidelity survey data should also be considered.

- Step 2: Create an assessment schedule that reflects the types of data, dates when data are collected, and dates that data such as benchmark data, report card data, standardized test data, and fidelity surveys could be reviewed.
- Step 3: School-based teams should meet to determine that all data sources are included in the assessment schedule and that the assessment schedule reflects multiple data sources in each domain: academic, social, and behavioral.
- Step 4: School-based teams should meet regularly to review and analyze all available data in each domain. During the data analysis process, teams should identify and designate staff responsible for gathering and monitoring each type of data.
- Step 5: School-based teams reflect to determine if instructional strategies were implemented effectively or if additional professional development is needed based on student outcomes.
- Step 6: Adjustments and revisions in students' programs and goals are made if necessary to ensure success for every student.

SWPBIS Leadership

Staff leadership, commitment, and collaboration are critical to the effectiveness and success of a SWPBIS model (McCurdy et al., 2016). Voelkel and Chrispeels (2017) found that school principals were crucial to the development and success of school-based interventions due to their knowledge of internal and external structures to support student learning. Also, school principals have impact on teacher responsibility and accountability. School principals also have access to critical school-based and central

office supports needed to ensure successful implementation of SWPBIS, such as school and/or district psychologists, central office expertise, external mental health consultants, and professional development opportunities aligned with student needs. Most importantly, school leaders impact the development of internal school structures, processes, and practices that support on-going collaboration among staff on multiple forms of school-wide and individual student data, services and supports needed to remediate failure and improve opportunities for behavioral and academic success for all students.

McCurdy et al. (2016) suggested that school psychologists were in a unique role to provide leadership of the SWPBIS model due to their role and understanding of the diverse needs of students in inclusive school settings. Some schools and districts have opted to use external consultants to provide leadership of the SWPBIS model, such as community mental health professionals due to their expertise in behavioral health (Garbacz, Watkins, Diaz, Barnabas, Schwartz, & Eiraldi, 2017). Garbacz et al. (2017) found that external mental health professionals possessed a broad knowledge of EBPs that could contribute to staff's knowledge and insight on the needs of students with ED. Garbacz et al. (2017) contended that external mental health professionals possess the expertise to provide direct services to students, co-partner with teachers, and provide professional development for teachers to broaden their overall insight of particular EBPs that could positively support students' behavioral functioning and improve their academic growth and achievement.

Many current researchers believe that school-based professional learning communities (PLC) are the most effective approach for implementing the SWPBIS model (George et al., 2013). Effective PLCs can be described as school-based, shared leadership teams embedded in a culture of small communities of learning that meet regularly to reflect and collaborate on students' progress towards meeting identified goals (George, et al., 2013). Also, PLCs ensure that the necessary resources needed to support all students' progress in learning to their fullest ability are available (Voelkel & Chrispeels, 2017). Administrators, school psychologists, school-based data specialists, counselors, external consultants, and teachers often share the leadership role in PLCs (George, et al., 2013; Hatch, 2014). George, et al. (2018) emphasized that PLCs are ideal school structures for implementation of SWPBIS. Overall, leadership, data-driven decision-making, monitoring of student progress and outcomes, and staff collaboration are the critical drivers that provide support to sustaining an effective school culture for the successful implementation the SWPBIS model. Further, Fairchild, Farrell, Gunton, Mackinnon, McNamara, Trachtman, and New Visions for Public Schools (2014) emphasized that design-based, school-wide collaboration and decision-making through the strategic use of data is the cornerstone to successful teaching and learning, and positive student outcomes in early years, through high school, and beyond.

Project Description

The implementation of this project included researching, writing, and delivery of the white paper. The white paper will be delivered to the executive director of specialized services to share with teachers and administrators working in inclusive elementary

schools. Also, the administrative staff in the Office of Research and Evaluation will receive a copy of this white paper report. The white paper could also be published on the district's Office of Research and Evaluation's website to share with teachers and administrators.

Resources, Supports, and Potential Barriers

The resources for implementation of this white paper project included Walden University's Library to conduct an extensive Boolean search for peer-reviewed research related to the white paper genre, SWPBIS model, interventions to improve behavior and academic performance of students with ED, data models, data progress monitoring, school improvement, and team collaboration. As a result of this resource, articles related to SWPBIS and white paper genre were retrieved for this white paper project. The administrators in the Office of Research and Evaluation expressed interest in receiving this project and provided an opportunity for presentation of this project during their monthly research and evaluation forums located in the central office building. Principal school teams, staff from the Office of Specialized Services, and community stakeholders will be invited to attend the forum. The school principals and teams attending this forum, if interested, will serve as the major resource for implementing this white paper project. Additional supports needed are photocopies of the white paper and a projector to conduct the presentation.

A potential barrier of this project is a rejection of the findings and recommendations of this white paper for a SWPBIS model as a solution to improve the behavioral functioning and low literacy and math achievement of elementary students

with ED in the classroom and on the PSSA. Also, the white paper recommends PLCs be implemented in inclusive elementary schools to provide the structure for implementing the SWPBIS model. The PLCs could provide ongoing structured opportunities for teachers to collaborate, plan, implement, monitor, and receive regular training on the SWPBIS model. Depending on the district's budget, allocation of such funding for schools to develop PLC's could be a barrier. A potential solution to this barrier could be to pilot the SWPBIS model in schools that currently have PLCs. Also, funding for photocopies of the presentation materials could be an issue and present an additional barrier. This barrier could be addressed by limiting the number of presentation materials to one copy per school to share.

Another potential barrier could be low staff commitment to the SWPBIS model. This barrier could be addressed by using counselors, school social workers, or external consultants to collaborate with staff to address their concerns regarding implementation of the SWPBIS model prior to its implementation to ensure buy-in to increase the effectiveness of the SWPBIS model.

Proposal for Implementation and Timeline

Once Walden University grants approval of this doctoral project study, the white paper will be e-mailed to the director of specialized services and administrators in the Office of Research and Evaluation. The administrators in the Office of Research and Evaluation will schedule a time for presentation of this project at their subsequent monthly research and evaluation forum. The director of Specialized Services agreed to invite principals and their PLC leadership teams to the meeting to learn the framework

for implementation of the SWPBIS model. Also, the administrators in the Office of Research and Evaluation will invite community stakeholders to attend the forum. All attendees at the forum will be provided with a hard copy of the white paper presentation. In addition, the white paper project will be published on the local district's Office of Research and Accountability website.

Roles and Responsibilities of Student and Others

As a student, my responsibility was to provide the research findings and develop a project that would address the problem of low literacy and math achievement of 4th grade students with ED on the PSSA in inclusive elementary schools within the local district. The findings from the data collection and analysis, and further research, resulted in a white paper recommending a SWPBIS model as a solution to improve the behavioral functioning and academic achievement on the PSSA of all elementary students, including students with ED.

Walden University's IRB gave approval to collect and analyze district data for my study. The local district's director of research and evaluation gave approval to retrieve the district's de-identified literacy and math archival PSSA data of 4th grade students with ED for this study to answer the research questions in this study. The director of specialized services gathered the data for this study. My committee chair, methodologist, and University Research Review (URR) committee member provided guidance and constructive feedback to ensure the quality of this study.

Project Evaluation Plan

The white paper provided the research, findings of the study, and purpose of the white paper project. The goal of the white paper project was to explain the rationale for implementing a SWPBIS model as a solution to the problem of low literacy and math achievement on the PSSA of 4th grade students with ED in the district's elementary schools. The literature review included an explanation of the white paper genre and the framework for implementing the SWPBIS model, including the use of multiple sources of data as suggestions to address the problem.

A formative evaluation will be used to evaluate the effectiveness of the white paper presentation. The goal of a formative evaluation is to gain feedback during or after a program or presentation in a timely manner so that adjustments for improvements can made to increase its effectiveness (Creswell, 2012). A questionnaire using a Likert scale will be used to collect the quantitative data from the stakeholders attending the white paper presentation. The stakeholders include the school teams, administrators and teachers, administrators from the Office of Specialized Services, and the Office of Research and Evaluation. The questionnaire will be distributed to participants immediately following the presentation. The questions on the questionnaire will be used to evaluate the participants' understanding of the recommendations presented in the white paper, whether they might implement the recommendations, potential barriers to implementing the recommendations, and strengths and weaknesses of the presentation, such as the organization of materials, pacing, quality of materials, and whether stated objectives were met, and facilitator's professional knowledge and competencies. The

results of the questionnaire will be analyzed and used to inform improvements in future presentations. The white paper project will be considered successful if the district adopts the SWPBIS model as a solution to improve the low literacy and math PSSA achievement of students with ED.,

Project Implications

Local Community

This goal of this white paper project was to find a solution to problem of low literacy and math PSSA achievement of 4th grade students with ED. The white paper may result in social change by introducing the SWPBIS model as a solution that could potentially increase the learning and PSSA literacy and math proficiency of 4th grade students with ED. Further, this project could provide insight to teachers on the needs of students with ED and strategies to help teachers address the needs of their students better so that their students may learn and achieve on higher levels and have a greater chance of being prepared to be successful in college, careers, and future life. Also, this project could support the local district in meeting federal annual progress goals.

Far-Reaching

The far-reaching implications for social change are that teachers, educational leaders, and policy-makers could consider adopting the SWPBIS model as a solution to the problem of low literacy and math PSSA achievement of students with ED in inclusive, urban elementary educational settings. Also, this project could bring about positive social change by providing knowledge that could be referenced by university faculty to consider offering SWPBIS training to all pre-service teachers planning to work

in inclusive, urban elementary educational settings to increase their trajectory for success. Further, local, state, and federal policy-makers may consider providing additional funding to evaluate, monitor and support the successful implementation of SWPBIS models.

Conclusion

Section 3 discussed the goals, rationale, supporting literature, implementation, evaluation, and implications for social change for this project. The white paper project included a recommendation for implementing a SWPBIS model as an intervention to increase literacy and math PSSA proficiency in elementary schools. Research related to the genre of the white paper, SWPBIS model, multiple sources of data, and leadership of SWPBIS model was discussed. The conclusion of section 3 provided potential local and far-reaching implications for positive social change that may result from this white paper project.

Section 4: Reflections and Conclusions

Project Strengths

The project study addressed the problem of low literacy and math PSSA achievement of 4th grade students with ED within an urban school district located in northeastern Pennsylvania. The white paper is the strength of this project. White papers are commonly used as effective formats to provide information to educators, administrators, and community stakeholders on an identified problem and a solution to the problem (Malone & Wright, 2017). This white paper provided information on the problem of low PSSA literacy and math achievement and discussed how the problem could be addressed through the implementation of the SWPBIS model in a clear, brief, and concise problem-solution reporting format. Also, another strength of the white paper project is the presentation of the white paper to the district teachers, administrators, and community stakeholders to facilitate understanding of the framework of the SWPBIS model. This presentation of the white paper will provide an opportunity for the district's teachers, administrators, and stakeholders to collaborate regarding the content of the white paper. This collaboration regarding the implementation of a SWPBIS model as a solution to the problem could afford opportunities for teachers, administrators, and stakeholders to discuss how they may adjust the SWPBIS framework to meet the unique needs of their individual schools.

Project Limitations

There are three limitations of the project. First, the invitations to attend the presentation of the white paper are limited only to teams of elementary school teachers

and principals from inclusive schools currently working with students with ED. The second limitation of the project is that funding to implement PLCs as a structure for the SWPBIS model may cause a financial hardship on the district. The third limitation is that funding for photocopies of the presentation materials could also be an issue for the district.

Recommendations for Alternative Approaches

The potential problem related to the implementation of PLCs as a structure to provide leadership of the SWPBIS model could be remediated by inviting schools to the presentation that already have PLCs in their schools, eliminating the cost to establish them. Also, the potential problem related to the cost for duplicating the presentation materials could be addressed by distributing the presentation materials only to school teams to share rather than to each participant. The limitation regarding the number of teams invited to the presentation could be remediated by inviting teams from inclusive elementary schools, even though they may not be currently working with students with ED. Many of the strategies introduced in the SWPBIS model are applicable to all students, including at-risk students.

In this study, I could have focused on the fidelity of implementation of BHPD strategies as the independent variable and the PSSA scores the dependent variable. A fidelity implementation survey could have been selected to measure the fidelity of implementation of BHPD strategies and the students' PSSA change scores could have been used to determine if the fidelity of implementation of BHPD strategies increased the literacy and math PSSA achievement of students with ED. As a result of such a study, the

project could have been a professional development plan intended to provide training for teachers on the implementation of BHPD strategies with fidelity. Another recommendation to address the problem in this study could have been to create a tool-book of research-based behavioral and academic strategies for teachers to support the behavioral and academic needs of students with ED in order to increase their literacy and math PSSA achievement.

Scholarship, Project Development, and Leadership and Change

Scholarship

I have learned many skills during this project study that have enhanced my skills as a 21st century scholar-practitioner. First, I have gained the knowledge needed to conduct a research study. Although much of this knowledge was learned through my coursework, the writing process helped me to gain an understanding of how to apply the skills learned. I have gained significant skills in searching for peer-reviewed articles to use in my research-based writing. Also, I have advanced my skills in using various online search engines to gather research to address my area of study, developed a greater understanding of how to use key words and phrases to find research related to my area of study, and learned how to identify and use different types of sources, such as primary, secondary, and seminal. Second, I have learned how to manage information included in my study. I used a spreadsheet to collect, manage, and store the literature that I included in my study, which was very helpful in referencing sources when needed. Also, I have learned to write for publication, and I have come to learn the importance of reading through a draft several times and having reviewers read through a draft to ensure the

quality of my document. My greatest challenge was learning how to effectively use APA style writing, and ensuring proper grammar and punctuation in my writing. My committee was very helpful and supportive in this regard. As a result of the skills and competencies I have acquired, my appreciation of research and desire to conduct research in the future has grown exponentially.

The structure of the online learning environment enhanced my ability to dialogue with my peers and colleagues in a virtual setting. This setting enhanced my use of email, Skype, discussion boards, and Zoom meetings. As a result of these experiences, my confidence level for using technology for communication purposes and as a tool to manage information improved significantly. Overall, my experience through this project study increased my research skills, collaboration, critical thinking, and analysis skills, and information management skills. I look forward to continuing my growth as a scholar-practitioner and believe that this learning process has equipped me with the knowledge needed to bring about significant positive social change in 21st century teaching and learning.

Project Development

The white paper project selected for this study was based on the findings of the study. The decision to choose a white paper project was based on the brief, clear, and concise problem-solution reporting format. I considered the white paper to be a teacher-friendly approach that would provide a brief summary of the problem identified in the study, findings of the study, and recommendations of a solution to the problem. I used key words in a search for a school-wide, data-driven solution that would address the

behavior and academic needs of students with ED in order to improve their low PSSA literacy and math achievement. The SWPBIS model emerged as a possible solution that addressed the behavioral and academic needs of all students through the use of school-wide monitoring of multiple sources of behavioral and academic data to ensure students' progress in achieving individual goals. In addition, I chose the white paper project because I was able to present information on several research-based strategies as part of the solution that teachers may find useful in increasing their capacity to address the needs of the whole child to support their behavioral and academic growth and achievement in the classroom and on the PSSA. As a result of this project, I learned many research-based strategies to support the learning and behavior of all students, including students with ED. Most importantly, I learned the importance of progress monitoring and adjusting students' programs and professional development for teachers as needed to ensure implementation of strategies with fidelity and positive student outcomes.

Leadership and Change

During my time at Walden University, I have strengthened many leadership skills as a scholar-practitioner through collaboration with peers and colleagues, listening with heart and mind, and reflection. In my role as a scholar-practitioner, I have learned to research problems for solutions, seek knowledge and understanding of how to address problems, and share research with colleagues for discussion and reflection prior to taking a position on an issue or making a decision regarding an issue or problem. Also, my experience at Walden University has encouraged me to become an inspirational leader through promoting growth and self-efficacy in others. Through my project, I have learned

the importance of building cultures of respect and trust, collaborative relationships, and data-driven team-based decision-making to solve problems to achieve positive social change in order to better serve our students, organizations, and communities.

Reflection on the Importance of the Work

This project study addressed the problem of low literacy and math achievement of 4th grade students with ED on the PSSA. The overall importance of this work was to bring attention to the challenges students with ED face in the classroom and the effect these challenges have on their academic achievement on the PSSA. I suspected that the students with ED whose teachers participated in the district's BHPD class would achieve higher PSSA score gains than those students with ED whose teachers did not. However, the findings of this one study showed that BHPD did not increase the PSSA change scores of students with ED whose teachers participated in BHPD. As a result of these findings and reviewing further research to find an alternative solution to the problem of low literacy and math PSSA achievement of 4th grade students with ED, the white paper project emerged. The white paper project, with recommendations to implement a SWPBIS model, was chosen because of its problem-solving, brief, and concise format. Through my research and practice, I have learned that there is a sense of urgency in the district and the nation to improve the behavioral functioning and academic achievement of students with ED in the classroom and on PSSA. This study could bring about positive social change by providing teachers, administrative leaders, and community stakeholders with greater understanding of the needs of students with ED, as well as strategies and best practices that could improve teaching practices and progress monitoring strategies to

ensure better teaching and higher achievement of students with ED in the classroom and on the PSSA.

Implications, Applications, and Directions for Future Research

This study sought to determine the effect of BHPD on the PSSA literacy and math achievement of 4th grade students with ED by comparing the changes in PSSA literacy and math scores between students whose teachers participated in BHPD and students with ED whose teachers did not. The Mann-Whitney test was used to determine if a statistically significant difference existed between the two groups. The findings of this study indicated that there was no statistically significant difference in PSSA literacy and math scores gains between the two groups. Therefore, this study determined that BHPD did not have an effect on increasing 4th grade students with ED literacy and math PSSA proficiency. A limitation of this study was the sample size. The sample size in the current study was considerably smaller than the desired sample size indicated by a Mann-Whitney power analysis. Therefore, a larger sample size might have produced different results. Future research should reexamine the constructs of this study using a much larger sample.

Another limitation of this study was the fidelity of implementation of BHPD strategies learned in the BHPD. The fidelity of implementation of BHPD was not considered a predictor of literacy and math PSSA proficiency in this study. Some researchers suggested that there is a reciprocal relationship between the two variables, fidelity of professional development and student achievement (Cappella et al., 2011; Segrott, Rothwell, & Thomas, 2013). Capella et al. (2011) emphasized that teachers must

consider and address the fidelity of implementation of strategies to determine if the strategies were implemented as intended to bring about desired results. A future study that examines the impact of the fidelity of implementation of BHPD strategies on the literacy and math PSSA achievement of students with ED may be beneficial. Such a study could provide teachers, administrators, and policy makers with data that could contribute to the professional growth of teachers and the learning and achievement of students with ED in the classroom and on the PSSA. Further, Dewey's multidimensional educational philosophy provided a foundation that educators can reference to ensure that factors that could influence student learning and achievement are considered in order to increase teachers' capacity to address the needs of the whole child to ensure optimal social and academic growth and achievement in every child.

Findings from this study led to a white paper project with recommendations for educators to consider a SWPBIS model as solution to the problem presented. The SWPBIS model provides educators and administrators with a structured collaborative process of analyzing behavioral and academic data to ensure that the individual needs of every student are met (McCurdy, et al., 2016). Within the SWPBIS model varying levels of supports and intervention are provided based on individual student needs. Also, prior to moving students from one level of support to another, teachers collaborate on the students' progress and goals, and the fidelity of implementation of strategies to determine if additional professional development may be needed (McCurdy, et al., 2016).

Application of this study and project is recommended for inclusive elementary schools in the district. This study and project will be made available to principals,

administrators, and community stakeholders during a presentation at the district's research and evaluation forum. The study and project will also be available on the district's research and evaluation website. Also, it is my plan to work as a university professor to continue to share my expertise in this area. Future research on the fidelity of implementation of the SWPBIS interventions and achievement of students with ED is needed to provide the district with valuable data in planning targeted, research-based professional development for teachers to improve achievement of students with ED in the classroom and on the PSSA.

This study and project has implications for positive social change by improving school-level and district-level accountability for better teaching and higher achievement of every student, including students with ED, in all elementary grades in the classroom and on the PSSA. Additionally, local universities may consider providing SWPBIS training for pre-service teachers to improve their trajectory for success in addressing the needs of the whole child in inclusive urban elementary school settings. Also, this study could bring about positive social change by providing data to district administrators and policy-makers that could support additional funding and resources for schools to ensure successful implantation of the SWPBIS model.

Conclusion

The problem investigated in this study was the low achievement of 4th grade students with ED in a local urban school district. This study was conducted to assess the effect of BHPD on the academic achievement of 4th grade students with ED, as measured by the PSSA. This study used a quantitative comparative between-groups design to

determine if there were statistically significant differences in PSSA literacy and math change scores between 4th grade students with ED who were taught by teachers that participated in the district's 1-year BHPD class and students whose teachers did not during the 2014-2016 school years. The Mann-Whitney test was used to determine if a statistically significant difference existed between the two groups. The findings of this study showed that there were no statistically significant differences between the two groups at pre-test or at post-test. As such, BHPD was not proven in this study to be a predictor of literacy and math PSSA achievement of 4th grade students with ED.

This study supported the contention that students with ED have severe social skills deficits, which adversely affect their relationships with teachers and peers and interferes with their learning (Kutash et al., 2015; Weeden et al., 2016) However, many studies focused on addressing the behavioral challenges students with ED encounter in the classroom, but often inadvertently overlooked monitoring of their academic deficiencies to ensure optimal social and academic development and achievement (Kutash et al., 2015; Weeden et al., 2016). Dewey's multidimensional educational philosophy, which was the theoretical framework for this study was used as the lens for assessing researched-based interventions to ensure that the social, behavioral, and academic needs of the whole child are met. Research suggested that targeting behavioral and academic deficiencies through implementation of research-based interventions that include on-going, team-based progress monitoring of students' behavioral and academic progress is necessary to ensure high achievement for every student (Capella et al., 2011; Eagle et al., 2015; George et al., 2013). As such, the results of this study led to a white

paper project with recommendations for educators and district-level administrators to consider implementing a SWPBIS model as a solution to address the problem of low literacy and math PSSA achievement of 4th grade students with ED. The SWPBIS model provides a structured, multi-tiered, data-driven framework for addressing the behavioral and academic needs of every student, including students with ED (George et al., 2013; McCurdy et al., 2016)). The findings of this study concluded that educators should consider implementing research-based interventions designed to address the whole needs of all students, including students with ED, with balance, flexibility, and fidelity to ensure positive behavioral and academic outcomes in the classroom and on the PSSA.

References

Abou-Rjaily, K., & Stoddard, S. (2017). Response to intervention (RTI) for students presenting with behavior difficulties: Culturally responsive guiding questions. *International Journal of Multicultural Education, 19*(3), 85-102. doi:10.18251/ijme.v19i3.1227

Allman, K. L., & Slate, J. R. (2013). Disciplinary consequences assigned to students with emotional disorder, learning disability, or other health impairment: Effects on their academic achievement. *Journal of Education Research*, *7*(1), 83-101.

Bull-Holmberg, J., & Jeyaprathaban, S. (2016). Effective practice in inclusive and special needs education. *International Journal of Special Education*, *31*(1), 119-134.

Campbell, K. S., & Naidoo, J. S. (2017). Rhetorical move structure in high-tech marketing white papers. *Journal of Business & Technical Communication*, *31*(1), 94-118. doi:10.1177/1050651916667532

Cappella, E., Reinke, W. M., & Hoagwood, K. E. (2011). Advancing intervention research in school psychology: Finding the balance between process and outcome for social and behavioral interventions. *School Psychology Review*, *40*(4), 455-464.

Center for Disease Control and Prevention. (2013). *Children's mental health: New report*. Retrieved from http://www.cdc.gov/features/childrensmentalhealth/

Cook, C. R., Frye, M., Slemrod, T., Lyon, A. R., Renshaw, T. L., & Yanchen, Z. (2015). An integrated approach to universal prevention: Independent and combined

effects of PBIS and SEL on youths' mental health. *School Psychology Quarterly, 30*(2), 166-183. doi:10.1037/spq0000102

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson Education.

Data Recognition Corporation. (2014). *Technical report for the 2014 Pennsylvania system of school assessment.* Maple Grove, MN: Author.

Dewey, J. (1933/1971). *How we think.* Chicago: Henry Regnery.

Dewey, J. (1897). *My pedagogic creed*. New York, Chicago: EL Kellogg.

Dieterich, C. A., & Smith, K. J. (2015). The impact of special education law on career and technical education. *American Secondary Education*, *43*(3), 60-72.

Eagle, J. W., Dowd-Eagle, S. E., Snyder, A., & Holtzman, E. G. (2015). Implementing a multi-tiered system of support (MTSS): Collaboration between school psychologist and administrators to promote systems-level change. *Journal of Educational and Psychological Consultation, 25*(2-3), 160-177. doi:10.1080/10474412.2014.929960

Evans, L. (2014). Leadership for professional development and learning: Enhancing our understanding of how teachers develop. *Cambridge Journal of Education, 44*(2), 179-198. doi:10.1080/0305764x.2013.860083

Fairchild, S., Farrell, T., Gunton, B., Mackinnon, A., McNamara, C., Trachtman, R., & New Visions for Public Schools. (2014). Design and data in balance: Using design-driven decision-making to enable student success. Retrieved from https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED547420

Farley, C., Torres, C., Wailehua, C. T., & Cook, L. (2012). Evidence-based practices for students with emotional and behavioral disorders: Improving academic achievement. *Beyond Behavior*, *21*(2), 37-43.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2008). G*Power version 3.1.2 (computer software). Universitat Kiel, Germany. Retrieved from http://www.psycho.uni-duesseldorf.de/abteilungen/22p/gpower3/download-and-register

Fearnow-Kenney, M., Hill, P., & Gore, N. (2016). Child and parent voices on a community-based prevention program (FAST). *School Community Journal*, *26*(1), 223-238.

Fránquiz, M. E., & Ortiz, A. A. (2016). Co-editors' introduction: Every Student Succeeds Act—A policy shift. *Bilingual Research Journal*, *39*(1), 1-3. doi:10.1080/15235882.2016.1148996

Gage, N. A. (2013). Characteristics of students with emotional disturbance manifesting internalizing behaviors: A latent class analysis. *Education & Treatment of Children*, *36*(4), 127-145. doi:10.1353/etc.2013.0038

Garbacz, S. A., Watkins, N. D., Diaz, Y., Barnabas, R., Schwartz, B., & Eiraldi, R. (2017). Using conjoint behavioral consultation to implement evidence-based practices for students in low-income urban schools. *Preventing School Failure*, *61*(3), 198-210. doi:10.1080/1045988X.2016.1261078

George, H. P., Cox, K.E., Minch, D., & Sandomierski, T. (2018). District practices associated with successful SWPBIS implementation. *Behavioral Disorders*, *43*(3), 393-406. doi:10.1177/0198742917753612

George, M. P., George, N. L., Kern, L., & Fogt, J. B. (2013). Three-tiered support for students with EBD: Highlights of the universal tier. *Education & Treatment of Children*, *36*(3), 47-62. doi:10.1353/etc.2013.0022

Graziano, P. A., & Hart, K. (2016). Beyond behavior modification: Benefits of social-emotional/self-regulation training for preschoolers with behavior problems. *Journal of School Psychology, 58*, 91-111. doi:10.10.1016/j.jsp.201607.004

Hatch, T. (2014). *The use of data in school counseling*. Thousand Oaks, CA: Corwin.

Hott, B., Thomas, S., Abbassi, A., Hendricks, L., & Aslina, D. (2015). It takes a village: Counselor participation with students, families, and other school personnel in serving students with special needs. *National Forum of Special Education Journal, 26*(1), 1-9.

Individuals with Disabilities in Education Improvement Act (IDEA) of 2004. PL 108446, 20 U.S.C. 1400 et. seq.

King, E., & La Paro, K. (2015). Teachers' language in interactions: An exploratory examination of mental state talk in early childhood education classrooms. *Early Education & Development*, *26*(2), 245-263. doi:10.1080/10409289.2015.989029

Kutash, K., Duchnowski, A. J., & Green, A. L. (2015). Meeting the mental health needs of youth with emotional and behavioral disorders. *Beyond Behavior*, *24*(2), 4-13. doi:10.1177/10742956l502400202?journalCode=bbxa

Lane, K. L., Oakes, W. P., Ennis, R. P., & Hirsch, S. E. (2014). Identifying students for secondary and tertiary prevention efforts: How do we determine which students have tier 2 and tier 3 needs. *Preventing School Failure*, *58*(3), 171-182. doi:10.1080/1045988X.2014.895573

Laerd, A. (2015). Mann-Whitney u test in SPSS. Retrieved from https://statistics.laerd.com/premium/mwut/mann-whitney-test-in-spss.php

Lee, P., & Bierman, K. L. (2015). Classroom and teacher support in kindergarten: Associations with the behavioral and academic adjustment of low-income students. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, *61*(3), 383-411. doi:10.13110/merrpalmquar1982.61.3.0383

Malone, E. M., & Wright, D. (2017). "To promote that demand": Toward a history of the marketing white paper as a genre. *Journal of Business & Technical Communication, 32(*1), 113-147. doi:10.1177/1050651917729861

Marsh, R. J. (2018). Building school connectedness for students with emotional and behavioral disorders. *Intervention in School and Clinic, 54*(2), 67-74. doi:10.1177/1053451218765219

Mattison, R. E. (2015). Comparison of students with emotional and/or behavioral disorders as classified by their school districts. *Behavioral Disorders*, *40*(3), 196-209. doi:10.17988/0198-7429-40.3.196

McCurdy, B. L., Thomas, L., Truckenmiller, A., Rich, S. H., Hillis-Clark, P., & Lopez, J. C. (2016). School-wide positive behavioral interventions and supports for

students with emotional and behavioral disorders. *Psychology in the Schools*, *53*(4), 375-389. doi:10.1002/pits.21913

McHugh, M. B., Tingstrom, D. H., Radley, K. C., Walker, K. M., & Barry, C. T. (2016). Effects of tootling on class-wide and individual disruptive and academically engaged behavior of lower-elementary students. *Behavioral Interventions*, *31*(4), 332-354. doi:10.1002/bin.1447

McIntosh, K., Mercer, S. H., Hume, A. E., Frank, J. L, Turri, M. G., & Matthews, S. (2013). Factors related to sustained implementation of school-wide positive behavior support. *Exceptional Children, 79*(4), 293-311.

Menzies, H. M., Lane, K. L., Oakes, W. P., & Ennis, R. P. (2017). Increasing students' opportunities to respond: A strategy for supporting engagement. *Intervention in School & Clinic*, *52*(4), 204-209. doi.10.1177/1053451216659467

Moreno, G., Wong-Lo, M., & Bullock, L. M. (2014). Assisting students from diverse backgrounds with challenging behaviors: Incorporating a culturally attuned functional behavioral assessment in pre-referral services. *Preventing School Failure*, *58*(1), 58-68. doi:10.1080/1045988X.2012.763156

Muñoz, M. A., & Branham, K. E. (2016). Professional learning communities focusing on results and data-use to improve student learning: The right implementation matters. *Planning & Changing, 47*(1/2), 37–46.

No Child Left Behind Act (NCLB). (2001). Public Law 107-110.

OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports. (2013). Schools that are implementing SPPBIS. Retrieved from http://www.pbis.otg/default.aspx

Pennsylvania Department of Education (PDE). (2016). Pennsylvania School System of Assessment (PSSA). Retrieved from http://www.pa.gov/k-12

Pershing, J. A. (2015). White paper. *Performance Improvement*, *54*(8), 2-3. doi:10.1002/pfi.21505.

Pinter, E. B., East, A., & Thrush, N. (2015). Effects of a video-feedback intervention on teachers' use of praise. *Education & Treatment of Children*, *38*(4), 451-472. doi.10.1353/etc.2015.0028

Reinke, W. R., Stormont, M., Herman, K., & Newcomer, L. (2014). Using coaching to support teacher implementation of classroom-based interventions. *Journal of Behavioral Education, 23*(1), 150-167. doi:10.1007/s10864-013-9186-0

Rodriguez, B. J., Loman, S. L., & Borgmeier, C. (2016). Tier 2 interventions in positive behavior supports: A survey of school implementation. *Preventing School Failure, 60*(2), 94-105. doi:1080/1045988x.2015.1025354

Runge, T. J., Tongwill, D. A., Palmiero, J., & Lamon, T.M. (2016). The Pennsylvania Positive Behavior Support Network: Describing our scale-up. *Education Research Quarterly*, *40*(2), 3-35.

Sakamuro S., Stolley, K., & Hyde C. (2015) White paper purpose and audience. Retrieved from https://owl.english.purdue.edu/owl/resource/546/1/

School District of Philadelphia. (2015). PSSA & keystone performance. Retrieved from http://philasd.org/

School District of Philadelphia. (2016). Performance/school information. Retrieved from http://philasd.org

Segrott, J., Rothwell, H., & Thomas, M. (2013). Creating safe places: An exploratory evaluation of a school-based emotional support service. *Pastoral Care in Education*, *31*(3), 211-228. doi:10.1080/02643944.2013.788062

Stelzner, M. A. (2007b). Writing white papers: How to capture readers and keep them engaged. Poway, CA: WhitePaperSource.

Stuckart, D, W., & Glanz, J. (2007). What Dewey can still teach us. *Principal Leadership, Middle Level ED, 8(*4), 16-21.

Suprayogi, M. N., Valcke, M., & Godwin, R. (2017). Teachers and their implementation of differentiated instruction in the classroom. *Teaching & Teacher Education, 67,* 291-301. doi:10.1016/j.tate.2017.06.020

Swick, D., & Powers, J. D. (2018). Increasing access to care by delivering mental health services in schools: The school-based support program. *School Community Journal, 28*(1), 129-144.

Thornton, F. (2018). Counselors and special educators in rural schools working together to create a positive school community. *International Electronic Journal of Elementary Education, 10*(3), 385-389. doi:10.26822/iejee.2018336197

Tyre, A. D., & Feuerborn, L. L. (2017). The minority report: The concerns of staff opposed to school-wide positive behavior interventions and supports in their

schools. *Journal of Educational and Psychological Consultation*, *27*(2), 145-172. doi:10.1080/10474412.2016.1235977

Voelkel, R., & Chrispeels, J. (2017). Within-school differences in professional learning community effectiveness: Implications for leadership. *Journal of School Leadership, 27*(3), 424-453.

Wang, C. W., & Neihart, M. (2015). How do supports from parents, teachers, and peers influence academic achievement of twice-exceptional students? *Gifted Child Today*, *38*(3), 148-159. doi:10.1177/1076217515583742

Weeden, M., Willis, H. P., Kottwitz, E., & Kamps, D. (2016). The effects of a class-wide behavioral intervention for students with emotional disturbances and behavioral disorders. *Behavioral Disorders, 42*(1), 285-293. doi:10.17988/bd-14-12.1

Wehby, J. H., & Kern, L. (2014). Intensive behavior intervention: What it is, what is its evidence base, and why do we need to implement now? *Teaching Exceptional Children, 46*(4), 38-44. doi:10.1177/0040059914523956

Willerton, R. (2013). Teaching white papers through client projects. *Business Communication Quarterly, 76*(1), 105-113. doi:10.1177/1080569912454713

Wodarski, J. S. (2014). The integrated behavioral health service delivery system model. *Social Work in Public Health*, *29*(4), 301-317. doi:10.1080/1937191

Appendix: The Project

Increasing the PSSA Achievement of elementary Students with Emotional Disturbances (ED) through School-wide Positive Behavioral Interventions and Supports (SWPBIS)

A White Paper

Presented by:

Willette Jones

Introduction

The problem addressed in this white paper project is the low PSSA achievement of students with ED in a local district in northeastern Pennsylvania. As a result of the low PSSA achievement of students with ED, teachers and district administrators continuously search for interventions to increase their trajectory for success in the classroom and on the PSSA. This white paper provided the results of a study that compared the changes in literacy and math PSSA scores between two groups of 4th grade students with ED, those students whose teachers participated in BHPD and those students whose teachers did not, to determine if a statistically significant difference existed in score gains between the two groups. The findings of the study did not reveal a statistically significant difference in literacy and math PSSA gains between the two groups. As a result of the findings, the SWPBIS model emerged during an additional search as an alternative solution to the problem of low literacy and math PSSA achievement of 4th grade students with ED. The

white paper project was chosen because of the concise, brief, and clear problem-solution reporting format (Malone & Wright, 2017)

This white paper project begins with an overview of the problem that guided the study. Findings from the study are presented, followed by a comprehensive discussion of the SWPBIS model. The white paper provides information on the SWPBIS framework that can potentially lead to improvement of students with ED behavioral functioning in the classroom and achievement on the PSSA. The white paper concludes with recommendations that educators and administrators could consider when deciding to adopt a SWPBIS model.

The Problem

The problem investigated in this study was the low literacy and math achievement of fourth grade students with ED in a local school district in northeastern Pennsylvania. The Pennsylvania Department of Education measures the progress of the district's schools based on the percentage of students scoring proficient and advanced on the PSSA administered in reading, math, and science each school year in grades three through eight (Pennsylvania Department of Education, 2016).

Table 1 illustrates the 2015 and 2016 proficiency and advanced rates of regular education students and IEP students in grades 3 through 4 (School District of Philadelphia, 2016). The performance levels of students with ED are included in the IEP category results. The 2016 data indicated that less than 50% of the district's students in regular education in grades 3 through 4 scored proficient or advanced on the PSSA in literacy and math, and less than 26% of the district's IEP students in grades 3 through 4

scored proficient or advanced. The 2015 proficiency and advanced rates of regular education students and IEP students in grades 3 through 4 are similar to the 2016 PSSA results in each reporting grade and category. Fewer than 50% of the regular education students are scoring at 50% or above in proficiency and advanced levels. Less than 25% of the IEP students scored at proficient and advanced levels.

These results illustrate a need for interventions that will increase the low literacy and math PSSA achievement of students with ED to improve their academic success.

Table 1

2015 and 2016 District-Wide PSSA Results for Regular Education and IEP Students in Grades 3 through 4

Subject	Grades	Proficient & Advanced Regular Education	Proficient & Advanced IEP Students
2016 ELA	3	33%	11%
2016 Math	3	24%	11%
2016 ELA	4	31%	13%
2016 Math	4	19%	12%
2015 ELA	3	36%	14%
2015 Math	3	20%	13%
2015 ELA	4	31%	10%
2015 Math	4	18%	9%

Note: Students with ED are assumed to be representative of all IEP students.

Findings of Study

A quantitative, comparative, between-groups study was conducted to examine the changes in the academic achievement scores between students with ED whose teachers participated in the district's one-year BHPD class and those students with ED whose

teachers did not participate to determine if the district's BHPD class increased the students' literacy and math proficiency on the PSSA. A Mann-Whitney test was used to determine if there were statistically significant differences in the PSSA literacy and math change scores between the two groups of students during the 2014-2016 school years. The 4th grade students' 3rd grade test scores were used as a pre-test to statistically account for any pre-existing differences. The pre-test PSSA data showed that no statistically difference already existed between these two groups. Also, findings from this study indicated that there was no statistically significant differences in post-test PSSA change scores between the two groups after the BHPD experience. As such, the findings showed that BHPD did not have a statistically significant effect on increasing 4th grade students with ED 2016 literacy and math PSSA proficiency.

As a result of the findings, additional research was conducted to find a solution to the problem of low literacy and math PSSA achievement of 4th grade students with ED. Boolean searches were conducted related to: *school improvement, white paper, improving behavior and academic student performance, assessments, students with ED, data progress monitoring, data models,* and *team collaboration*. The SWPBIS model emerged as a potential solution that administrators could consider implementing to address the problem of low literacy and math proficiency of students with ED.

Framework for Implementing a SWPBIS Model

McCurdy et al. (2016) described SWPBIS as a comprehensive, three-tiered, data-driven model to problem solving contextualized within a system. The SWPBIS system focuses on school-wide planning of behavioral and academic expectations, direct

teaching of social skills, and differentiated instruction within a collaborative team-based approach that provides frequent opportunities for schools to organize and evaluate their support systems to improve student behavior and academic achievement (McCurdy et al., 2016). On the classroom level, teachers maintain daily data on student behavior to guide and improve teacher practice and student outcomes. On a school level, ongoing efforts are made by staff and administration to improve efficiency and effectiveness of operational practices and processes to improve school climate. Direct teaching of social skills is the core of SWPBIS model. Direct teaching of social skills increases students' capacity to exhibit appropriate classroom behaviors and decrease disruptive behaviors that impede the teaching and learning process. McCurdy et al. (2016) emphasized that effective leadership and staff commitment is essential to the success of the SWPBIS model. Bohanon, Wahnschaff, Flaherty, and Ferguson (2018) affirmed that schools that foster a climate of mutual commitment to work together with colleagues and students to achieve common goals to meet the behavioral and academic needs of every student experienced greater positive relationships and engagement with students during the teaching and learning process. School-based team leadership provides the structure for on-going school-wide collaboration, planning, and continuous monitoring of student outcomes against specific measureable goals through the comprehensive use of data. The SWPBIS model allows each school to identify and tailor its program to fit their own unique school culture (McCurdy et al., 20016). The SWPBIS problem-solving model includes:

- Identification of potential behavior problems deemed disruptive,

- Establishment of a set of expected behaviors to promote positive social development and academic achievement of students,
- Direct teaching of behavioral expectations,
- Recognition systems that reward students for demonstrating desired behaviors,
- Intervention plans developed to identify students' academic needs, supports and additional services that may be needed,
- Continuous observation, monitoring, evaluation, revision, and documentation of student progress in achieving goals based on data, and
- Staff reflection and professional development for teacher growth based on student behavioral and academic progress data.

Tier 1

Tier 1 provides targeted school-wide and classroom level interventions for all students to help them avoid disruptive behaviors by clearly defining school-wide and classroom level rules in a concise manner through the implementation of a high degree of school-wide structure, consistency, and support (McCurdy et al., 2016). All students are taught school-wide expected behaviors, school rules, and academic expectations. Staff acknowledges students that meet the expected behaviors during a pre-planned, school-wide rewards program in a public setting within the school. Weeden, Willis, Kottwitz, & Kamps (2016) also found that school-wide goal setting, award systems, and differentiated strategies to reinforce Tier 1 strategies were successful for most students. The majority of students respond to Tier 1 level intervention and supports (McCurdy et al., 2016). Many

researchers believe that the successful implementation of Tier 1, with a high degree of fidelity, is a predictor of the success of the overall program (McIntosh et al., 2013). Fidelity is defined as a data-driven measure used to assess the effectiveness of the implementation of Tier 1 of SWPBIS (McIntosh, et al., 2013). McIntosh et al. (2013) compared different types of tools to measures the fidelity of SWPBIS interventions. The degree of fidelity is linked to teacher performance and targeted behavioral and academic student outcomes. McIntosh et al. (2013) found that the School-wide Evaluation Tool (SES), a self-assessment tool, was commonly used to measure fidelity of implementation of Tier 1 of SWPBIS. Additionally, McIntosh et al. (2013) findings indicated that the team's use of data when making decisions and capacity building were the most significant indicators of sustained success of Tier 1 SWPBIS interventions.

Further, Lane et al. (2014) contended that approximately 80% of students should show improvements in behavior and academics if school-wide level 1 and classroom level 1 interventions of the SWPBIS model are implemented with fidelity. Further, teacher professional development should be considered prior to moving students to Tier 2 to ensure that necessary strategies were implemented and implemented effectively in Tier 1. Some commonly used Tier 1 strategies are listed below:

- Teacher training in research-based Tier 1 strategies, such as differentiated instruction, allows opportunities for teachers to plan varied lessons that provides students' choices of learning activities based on teachers' knowledge of students' interest, readiness, and abilities (Suprayogi, Valcke, & Godwin, 2017),

- Opportunities to Respond (OPR) is a strategy that decreases student disruptive behavior by increasing opportunities for students to successfully participate in classroom lessons through a structured method of pacing lessons that optimizes opportunities for student feedback (Menzies et al., 2017),
- The use of praise to acknowledge students for following school and classroom rules and expectations is a commonly used strategy to improve student behavior (Pinter et al., 2015). Pinter et al. (2015) conducted a study using video feedback to demonstrate how effective praise could be used as a management tool to increase positive behavior and academic student outcomes. Praise is a widely accepted evidence-based practice (EBP) to improve social skills and academic engagement. Weeden, Willis, Kottwitz & Kamps (2016) also emphasized that teacher praise was an effective strategy for increasing students' on-task behavior and decreased the need for teacher reprimands.
- The integration of pre-correction techniques is a strategy to prevent problem behaviors that interfere with learning (Ennis et al., 2017). Pre-correction strategies are geared towards addressing internalizing and externalizing behaviors exhibited by at-risk students and students with ED. Pre-correction strategies require teachers to have prior knowledge of the times when students tend to engage in disruptive behavior during the day so that they may intervene proactively rather than reactively. Teachers' knowledge of anticipated problem behaviors allows them to provide positive reminders of

> expected behaviors to offset the disruptive behavior, while also providing the student or students with supportive prompts to assist them to engage using compliant behavior (Ennis et al., 2017).

These effective best practices (EBP) are generally found to improve student behavior and academic performance, if implemented with fidelity (Lane, et al., 2014). Only if these EBP have been implemented effectively in Tier 1 with fidelity on the school and classroom level would Tier 2 and Tier 3 interventions and supports be appropriate next steps. Teachers generally meet to review students' behavioral and academic progress data and collaborate on whether interventions and strategies were implemented effectively with fidelity prior to determining if a particular student should be referred to Tier 2 for additional support. Many researchers affirm that the implementation of Tier 1 research-based interventions with fidelity is critical to safeguarding the integrity of the SWPBIS model (Runge, Tongwill, Palmiero & Lamon, 2016).

Tier 2

Tier 2 of SWPBIS focused on interventions and supports on a classroom level for targeted small groups of students who may need additional supports in understanding school-wide behavioral and academic expectations (Sugai & Simonsen, 2012). Also, some targeted small groups of Tier 2 students may have difficulty self-managing their own behaviors, are at-risk, or students with diagnosed behavioral disturbances (Sugai & Simonsen, 2012). These students may require re-teaching of Tier 1 interventions in small groups and/or additional interventions and supports to help mediate their behavior. Tier 2 strategies rely upon ongoing team collaboration and data-driven decision-making to

identify students for interventions and strategies for progress monitoring to ensure positive behavioral and academic outcomes (Rodriguez et al., 2016).

Some researchers found tootling to be an effective Tier 2 strategy to promote pro-social behavior (McHugh, Tingstrom, Radley, Barry & Walker, 2016). Tootling is a positive reward strategy that relies on students working in groups to identify and record privately, on note cards, positive peer behaviors observed in the classroom to their teacher on a daily basis. The classroom teacher collects the note cards and randomly selects a few cards to read aloud each day. McHugh et al. (2016) conducted a quantitative study on the effectiveness of tootling as a peer-mediated strategy to promote positive behavior class-wide and among targeted groups of students. They found that teachers considered tootling to be an effective strategy that required minimum resources for reducing disruptive classroom behaviors while increasing positive behaviors and academic engagement. Within this approach, students are acknowledged and publicly praised by their peers for following the expected classroom behavioral rules and academic expectations. Teachers read aloud note cards randomly. The amounts of tootles rewarded are proportionate to the amount of tootles submitted by the class. Also, the more tootles students receive from their peers, the more recognition and rewards the class receives. The teacher is responsible for maintaining and publicly displaying the amount of tootles received daily by the students and providing individual, group, and/or class rewards. The teacher also maintains private records of the progress of targeted Tier 2 groups of students. McHugh et al.'s (2016) study results indicated that students in

classrooms where teachers implemented the tootles strategy demonstrated less disruptive behavior and higher levels of student engagement.

Tier 2 supports may also include small group support in reading and math instruction, cooperative grouping, and book studies (Lane et al., 2014). McIntosh et al. (2013) and Lane et al. (2014) also stressed the importance of implementation of Tier 1 with fidelity prior to moving students to Tier 2 and or Tier 3 in order to maintain the integrity of the SWPBIS model, and to ensure that the necessary Tier 1 core considerations and supports were provided to students effectively prior to moving to Tiers 2 and 3.

Tier 3

Tier 3 of the SWPBIS framework focuses on students who may need individualized support to improve behavior and academic achievement (Lane et al., 2014). At this level, a functional behavioral assessment (FBA) may be developed to gain greater insight into the social, emotional, and behavioral needs of an individual student. Based on the results of the FBA, the team may develop an individualized behavior plan (IBP) to support the student's behavior and learning. The IBP may include commonly used strategies such as behavior contracts. Behavioral contracts are popular EBP for students who may need support in self-monitoring their own behavior (Lane et al., 2014). Teachers at the Centennial School of Lehigh University found that the taking time strategy was an effective Tier 3 strategy for helping individual students to self-manage their own behavior (George et al., 2013). This behavioral self-management strategy teaches students self-awareness of their own behavioral needs. It teaches students to

independently de-escalate their own behaviors. Students are encouraged to raise their hand and ask permission to take a break if needed when experiencing a difficult situation to regain composure rather than engage in behaviors that could lead to disruption during class time. Also, within this self-management strategy, students are taught to raise their hand and ask for help when needed prior to becoming overwhelmed by a situation, as well as to request 1:1 instructional support when needed (George et al., 2013).

Another Tier 3 strategy commonly used is the check-in and checkout system. This is a coaching strategy that allows for individual students to review and discuss their daily goals with teachers at different intervals during the day. The check-in and checkout system is a popular, commonly used strategy to increase on-task student behavior (Swoszowski, McDaniel, Jolivette, & Melius, 2013). Students receive rewards for positive achievement of daily individual goals. A token system may be used to provide privileges to students for positive goal attainment (Reinke et al., 2014). Also, some Tier 3 students may require more intensive behavioral support such as wraparound services. Wraparound services may require students to have a 1:1 assistant to support their daily functioning inside and outside of the classroom. The amount of time that a student would receive wraparound services is generally written into an IBP developed by a school-based leadership team, supported and monitored by the school's special education teacher (Lane et al., 2014).

Data Review and Monitoring

Lane et al. (2014) discussed the importance of using multiple sources of data to identify students accurately for Tier 2 and 3 supports and for monitoring students'

progress in meeting their behavioral and academic goals. Lane et al. (2014) emphasized that the data review process must include school-wide performance data (Tier 1), classroom performance data (Tier 2), and student-specific performance data (Tier 3) in order to determine the most appropriate interventions for improving students' learning and behavior. The data review and monitoring process ensure that all necessary considerations are made to ensure students' positive behavioral functioning, academic growth, and achievement. The use of Tier 1 fidelity surveys and professional development considerations for teachers ensures that students are properly identified for supports needed and that teacher training is aligned with student needs, behavior and academic performance outcomes. Lane et al. (2014) recognized a team-based approach for reviewing, implementing, and monitoring student data sources as a critical component of the SWPBIS model. The team-based, collaborative data review and monitoring process is described below.

- Step 1: school-based teams meet to determine the types of data to be monitored for decision-making, such as school-based assessments that may include formative assessments like benchmark assessments, report card data, behavioral data, disciplinary referrals, in-school and out-of school suspensions; and social data, such as counselor referrals, attendance, and tardiness. Also, in this step, summative assessments are reviewed, such as PSSA data. Tier 1 fidelity survey data should also be considered.

- Step 2: Create an assessment schedule that reflects the types of data, dates when data are collected, and dates that data such as benchmark data, report card data, standardized test data, and fidelity surveys could be reviewed.
- Step 3: School-based teams should meet to determine that all data sources are included in the assessment schedule and that the assessment schedule reflects multiple data sources in each domain: academic, social, and behavioral.
- Step 4: School-based teams should meet regularly to review and analyze all available data in each domain. During the data analysis process, teams should identify and designate staff responsible for gathering and monitoring each type of data.
- Step 5: School-based teams reflect to determine if instructional strategies were implemented effectively or if additional professional development is needed based on student outcomes.
- Step 6: Adjustments and revisions in students' programs and goals are made if necessary to ensure success for every student.

Bruhn et al. (2018) contended that some school teams find progress monitoring cumbersome considering the current demands on teachers. However, Bruhn believes that as teachers develop expertise in planning progress monitoring activities and selecting the appropriate tools for progress monitoring, and evaluation methods, they will become more at ease with progress monitoring and find the process less cumbersome. Betters and Donahue (2016) contended that school counselors' expertise in students' social-emotional developmental needs and collaboration are critical skills that could help the

successful implementation of the SWPBIS model in today's schools. Betters and Donahue (2016) stressed that school counselors could be instrumental in providing professional development on students' social-emotional needs, progress monitoring during tier 3 interventions, and in building teachers' capacity to effectively coordinate activities between colleagues, administrators, and internal and external mental health consultants. Such support and training could alleviate potential hardships on teachers in implementing the SWPBIS model.

SWPBIS Leadership

Staff leadership, commitment, and collaboration are critical to the effectiveness and success of a SWPBIS model (McCurdy et al., 2016). Voelkel & Chrispeels (2017) found that school principals were crucial to the development and success of school-based interventions due to their knowledge of internal and external structures to support student learning. Also, school principals have an impact on teacher responsibility and accountability. School principals also have access to critical school-based and central office supports needed to ensure successful implementation of SWPBIS, such as school and/or district psychologists, central office expertise, external mental health consultants, and professional development opportunities aligned with student needs. Most importantly, school leaders impact the development of internal school structures, processes, and practices that support ongoing collaboration among staff on multiple forms of school-wide and individual student data, services, and supports needed to remediate failure and improve opportunities for behavioral and academic success for all students.

McCurdy et al. (2016) suggested that school psychologists were in a unique role to provide leadership of the SWPBIS model due to their role and understanding of the diverse needs of students in inclusive school settings. Some schools and districts have opted to use external consultants to provide leadership of the SWPBIS model, such as community mental health professionals due to their expertise in behavioral health (Garbacz, et al., 2017). Garbacz et al. (2017) found that external mental health professionals possessed a broad knowledge of EBPs that could contribute to staff's knowledge and insight on the needs of students with ED. Garbacz et al. contended that external mental health professionals possess the expertise to provide direct services to students, co-partner with teachers, and provide professional development for teachers to broaden their overall insight of particular EBPs that could positively support students' behavioral functioning and improve their academic growth and achievement.

Additionally, Messina, Kolbert, Hyatt-Burkhart and Crothers (2015) contended that schools that are in need of increasing family involvement might consider integrating a Structural Family Therapy (SFT) program into tier 3 of the SWPBIS model. The services provided through a SFT program include a four-step implementation process. In the first step would of the SFT program, the mental health worker would build a rapport with the family to gain acceptance and conduct an informal assessment of the family dynamics. The second step would include a formal assessment of the student's interaction with the family in respect to the student's needs and school goals. The third step involves implementation of strategies to bridge collaboration between teachers, administrators, support staff, and the family around the needs of the child. The fourth step would involve

setting up meetings with the family and school to establish goals, and to develop and implement research- based strategies to increase the students social-emotional functioning and academic achievement in school. Messina et al. (2015) postulated that schools that implemented the SFT program into tier 3 of the SWPBIS model found it to be an effective approach to increasing family partnerships with schools and improve student's social, emotional, behavioral, and academic development and achievement. The SWPBIS framework allows for schools to adjust the model to fit their unique needs. The SFT program is an effective research-based program that schools in need of strengthening their school-family partnerships may consider. School teams could consider piloting such a program to determine its effectiveness prior to formally integrating it their SWPBIS framework.

Many current researchers believe that school-based professional learning communities (PLC) are the most effective approach for implementing the SWPBIS model (George, et al., 2013). Effective PLCs can be described as school-based, shared leadership teams embedded in a culture of small communities of learning that meet regularly to reflect and collaborate on students' progress towards meeting identified goals (George, et al., 2013). Also, PLCs ensure that the necessary resources needed to support all students' progress in learning to their fullest ability are available (Voelkel & Chrispeels, 2017). Administrators, school psychologists, school-based data specialist, counselors, external consultants, and teachers often share the leadership role in PLCs (George, et al., 2013; Hatch, 2014). George et al. (2018) emphasized that PLCs are ideal school structures for implementation of SWPBIS. Overall, leadership, data-driven

decision-making, monitoring of student progress and outcomes, and staff collaboration are the critical drivers that provide support to sustaining an effective school culture for the successful implementation the SWPBIS model. Further, Fairchild, et al. (2014) emphasized that design-based, school-wide collaboration and decision-making through the strategic use of data is the cornerstone to successful teaching and learning, and positive student outcomes in early years, through high school, and beyond.

Recommendations

This white paper recommends SWPBIS as a solution to address the problem of low literacy and math achievement of all students, including students with ED in inclusive elementary school environments to increase learning in the classroom and proficiency on the PSSA. It is recommended that school leaders consider the following action plan:

- The district approves and distributes the white paper to all district school leaders.
- The white paper be shared on the district's research and evaluation website to provide insight and knowledge on SWPBIS as an intervention to improve behavior, literacy, and math achievement of elementary students, including students with ED, in inclusive settings.
- School leaders and teacher teams working in inclusive elementary settings are invited to participate in professional development on the three-tiered SWPBIS model.

- The district provides funding for all schools to establish PLCs to provide leadership and implementation of a SWPBIS model with ongoing collaboration and monitoring of students' behavioral progress and academic outcomes.

SWPBIS Model Implementation Timetable

The following timeline will be implemented to increase awareness, understanding, and capacity of teachers and administrators to effectively implement the SWPBIS model.

- January 2019: E-mail the white paper project to the administrators in the Office of Research and Evaluation for review and approval of the white paper. If approved by the Office of Research and Evaluation, a copy of the white paper will be emailed to the director of specialized services.
- February 2019: Collaborate with the director of the Office of Research and Evaluation and the director of specialized services to schedule a date to present the white paper during a scheduled research and evaluation monthly forum. Prepare all materials, supplies, and technology resources needed for the presentation.
- March 2019: Present the white paper. Following the presentation, participants will be provided with an opportunity to collaborate with colleagues on implementation of the SWPBIS model, provide feedback and concerns regarding any foreseeable issues related to implementation of the SWPBIS model. At the end of the presentation, participants will complete a survey to provide an evaluation of the white paper.

- April 2019: Schools interested in implementing the SWPBIS model will collaborate with the director of specialized services and gain approval and necessary resources needed to implement the SWPBIS model effectively within their schools.
- May 2019: School teams will meet to share plans and discuss implementation of the SWPBIS model in their schools. Also, establish monthly meetings to share feedback, data monitoring systems, and progress on implementation of the SWPBIS model in their schools.

Conclusion

The white paper resulted from a study to determine if BHPD could increase the low PSSA math and literacy achievement of students with ED as a potential solution to improve the low PSSA proficiency of students with ED. However, the findings of the study revealed that BHPD did not show a statistically significant difference in the PSSA literacy and math PSSA score gains between the two groups of students that participated in the study. As a result, this white paper was presented to provide the district with an alternative solution to improve the low PSSA literacy and math achievement of students with ED in all elementary grades. The SWPBIS model could potentially improve the PSSA literacy and math achievement of students with ED through a framework that focuses on addressing students' behavioral and academic needs through school-wide implementation of research-based strategies to support students' behavioral functioning and academic needs. The SWPBIS model integrates continuous progress monitoring of students' behavioral and academic performance data to ensure positive behavioral, social,

and academic outcomes for every student. The SWPBIS model also provides strategies to ensure that interventions are implemented with fidelity and that teachers receive targeted professional development as needed. Further, in-school structures such as PLCs are developed to ensure team collaboration and data-driven decision-making on student needs to ensure that successful student outcomes are achieved. The effective implementation of the SWPBIS model, through ongoing collaboration and professional development among schools and district administrators regarding successful implementation practices could result in significant improvement for every student, including students with ED in the classroom and on the PSSA.

References

Betters-Bubon, J., & Donohue, P. (2016). Professional capacity building for school counselors through school-wide positive behavior interventions and supports implementation. *Journal of School Counseling, 14*(3). 1-35.

Bohanon, H., Wahnschaff, A., Flaherty, P., & Ferguson, K. (2018). Leading schools under pressure: Considerations of systems theory and school-wide behavior support efforts during school actions. *School Community Journal, 28*(1), 195-216.

Bruhn, A. L., McDaniel, S. C., Rila, A., & Estrapala, S. (2018). A step-by-step guide to tier 2 behavioral progress monitoring. *Beyond Behavior, 27*(1), 15-27. doi:10.1177/1074295618756984

Ennis, R. P., Royer, D. J., Lane, K. L., & Griffith, C. E. (2017). A systematic review of precorrection in PK-12 settings. *Education & Treatment of Children, 40(*4), 465-495. doi:10.1353/etc.2017.0021

Fairchild, S., Farrell, T., Gunton, B., Mackinnon, A., McNamara, C., Trachtman, R., & New Visions for Public. (2014). Design and Data in Balance: Using design-driven Decision-making to enable student success. Retrieved from https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED547420

Garbacz, S. A., Watkins, N. D., Diaz, Y., Barnabas, R., Schwartz, B., & Eiraldi, R. (2017). Using conjoint behavioral consultation to implement evidence-based practices for students in low-income urban schools. *Preventing School Failure*, *61*(3), 198-210. doi:10.1080/1045988X.2016.1261078

George, H. P., Cox, K.E., Minch, D., & Sandomierski, T. (2018). District practices associated with successful SWPBIS implementation. *Behavioral Disorders*, *43*(3), 393-406. doi:10.1177/0198742917753612

George, M. P., George, N. L., Kern, L., & Fogt, J. B. (2013). Three-tiered support for students with EBD: Highlights of the universal tier. *Education & Treatment of Children*, *36*(3), 47-62. doi:10.1353/etc.2013.0022

Hatch, T. (2014). *The use of data in school counseling*. Thousand Oaks, CA: Corwin.

Lane, K. L., Oakes, W. P., Ennis, R. P., & Hirsch, S. E. (2014). Identifying students for secondary and tertiary Prevention Efforts: How do we determine which students have tier 2 and tier 3 needs. *Preventing School Failure*, *58*(3), 171-182. doi:10.1080/1045988X.2014.895573

Malone, E. M., & Wright, D. (2017). "To Promote That Demand": Toward a history of the marketing white paper as a genre. *Journal of Business & Technical Communication, 32(*1), 113-147. doi:10.1177/1050651917729861

McCurdy, B. L., Thomas, L., Truckenmiller, A., Rich, S. H., Hillis-Clark, P., & Lopez, J. C. (2016). School-wide positive behavioral interventions and supports for students with emotional and behavioral disorders. *Psychology in the Schools*, *53*(4), 375-389. doi:10.1002/pits.21913

McHugh, M. B., Tingstrom, D. H., Radley, K. C., Barry, C. T., & Walker, K. M. (2016). Effects of tootling on class-wide and individual disruptive and academically engaged behavior of lower-elementary students. *Behavioral Interventions*, *31*(4), 332-354. doi:10.1002/bin.1447

McIntosh, K., Mercer, S. H., Hume, A. E., Frank, J. L, Turri, M. G., & Matthews, S. (2013). Factors related to sustained implementation of school-wide positive behavior support. *Exceptional Children, 79*(4), 293-311.

Menzies, H. M., Lane, K. L., Oakes, W. P., & Ennis, R. P. (2017). Increasing students' opportunities to respond: A strategy for supporting engagement. *Intervention in School & Clinic*, *52*(4), 204-209. doi:10.1177/1053451216659467

Messina, K. C., Kolbert, J. B., Hyatt-Burkhart, D., & Crothers, L. M. (2015). The role of mental health counselors in promoting school-family collaboration within the tiered school-wide positive behavioral intervention and support (SWPBIS) model. *Family Journal, 23*(3), 277-285. doi:10.1177/1066480715574471

Pennsylvania Department of Education (PDE). (2016). *Pennsylvania School System of Assessment (PSSA)*. Retrieved from http://www.Pa.gov/k-12

Pinter, E. B., East, A., & Thrush, N. (2015). Effects of a video-feedback intervention on teachers' use of praise. *Education & Treatment of Children*, *38*(4), 451-472. doi:10.1353/etc.2015.0028

Reinke, W. R., Stormont, M., Herman, K., & Newcomer, L. (2014). Using coaching to support teacher implementation of classroom-based interventions. *Journal of Behavioral Education, 23*(1), 150-167. doi:10.1007/s10864-013-9186-0

Rodriguez, B. J., Loman, S. L., & Borgmeier, C. (2016). Tier 2 interventions in positive behavior supports: A survey of school implementation. Preventing School Failure, 60(2), 94-105. doi:10.1080/1045988x.2015.1025354

Runge, T. J., Tongwill, D. A., Palmiero, J., Lamon, T. M. (2016). The Pennsylvania positive support network: Describing our scale-up. *Education Research Quarterly*, *40*(2), 3-35.

School District of Philadelphia. (2016). Performance/School Information. Retrieved from http://philasd.org

Sugai, G., & Simonsen, B. (2012). Positive behavioral interventions and supports: History of defining features and misconceptions, pbis.org. Retrieved from http://www.pbis.org/school/pbis_revisted.aspx.

Suprayogi, M. N., Valcke, M., & Godwin, R. (2017). Teachers and their implementation of differentiated instruction in the classroom. *Teaching & Teacher Education*, *67*, 291-301. doi:10.1016/j.tate.2017.06.020

Swoszowski, N. C., McDaniel, S. C., Jolivette, K., & Melius, P. (2013). The effects of tier II check-in/check-out including adaptation for non-responders on the off-task behavior of elementary students in a residential setting. *Education & Treatment of Children, 36*(3), 63-79. doi:10.1353/etc.2013.0024

Voelkel, R., & Chrispeels, J. (2017). Within-school differences in professional learning community effectiveness: Implications for leadership. *Journal of School Leadership, 27*(3), 424-453.

Weeden, M., Willis, H.P., Kottwitz, E., & Kamps, D. (2016). The effects of a class-wide behavioral intervention for students with emotional disturbances and behavioral disorders. *Behavioral Disorders, 42*(1), 285-293. doi:10.17988/bd-14-12.1