

THE IMPACT OF POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS ON
ATTENDANCE RATES AND OFFICE DISCIPLINE REFERRALS AT THE MIDDLE
SCHOOL LEVEL

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements of the Degree

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ABSTRACT

When the No Child Left Behind Act of 2001, and more recently the College and Career Ready Performance Index, was put into effect, schools felt pressure to increase student achievement and bring up attendance rates in order to make adequate yearly progress or now high index scores. Positive Behavior Interventions and Supports (PBIS) is a proactive approach that many schools have implemented in an attempt to decrease disruptive student behavior and possibly increase student attendance. The purpose of this quasi-experimental causal comparative study was to examine the impact of the treatment of PBIS, with its basis in behavioral theory, on office discipline referrals and student attendance rates. Data was collected and analyzed for over 2,000 students in rural southeast Georgia through Infinite Campus and PowerSchool. Using data from the 2011-2014 school years, the study attempted to answer if there is an impact on both office discipline referrals and student attendance rates for middle school students participating in PBIS as compared to middle school students not participating in PBIS. Each null hypothesis was analyzed separately using chi-square testing and an independent samples *t*-test. The results of the study show that there was an impact on attendance rates for the treatment group, but that same impact was not evidenced on office discipline referrals or attendance rates, when controlling for gender. Recommendations for future research include an examination of the factors that contribute to the decline in the impact of PBIS at the middle school level, and the impact of PBIS on different levels of office discipline referrals, office discipline referrals at tier 1, tier 2, and tier 3 separately, and the impact on different levels of absences.

Keywords: Positive Behavior Interventions and Supports, Student Achievement, Attendance Rates, Middle School, Office Discipline Referrals

DEDICATION

I would like to dedicate this study to my amazing husband Gabe and our three beautiful children David, Emily, and Kara. Each of you has stood beside me through all of the ups and downs, late nights, tears, and frustrations. Every time I wanted to give up, you pushed me harder and gave me the confidence to continue. Your encouragement and patience has been immeasurable. I am fully aware that without your support this would not have come to fruition. I love each of you more than you will ever know, and I cannot thank you enough for helping me get through this long journey. It is because of the four of you that I made it to where I am today.

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List of Abbreviations

Adequate Yearly Progress (AYP)

Benchmarks of Quality (BoQ)

College and Career Ready Performance Index (CCRPI)

Common Core State Standards (CCSS)

Career, Technical, and Agricultural Education (CTAE)

English Language Arts (ELA)

English Language Learner (ELL)

Infinite Campus (IC)

Local Education Agency (LEA)

No Child Left Behind (NCLB)

Positive Behavior Interventions and Supports (PBIS)

Randomized Complete Block Design (RCBD)

Response to Intervention (RtI)

Self-Assessment Survey (SAS)

Science, Technology, Engineering, and Mathematics (STEM)

Statewide Longitudinal Data Systems (SLDS)

CHAPTER ONE: INTRODUCTION

Overview

Accountability for student achievement has come to the forefront of education and education reform in recent years due to the passing of the No Child Left Behind (NCLB) legislation of 2001, and more recently the NCLB waiver College and Career Ready Performance Index (CCRPI) for schools. Under NCLB and CCRPI, meeting the requirements for adequate yearly progress (AYP) or receiving high index scores has placed new pressure on school systems to identify and correct any issues that may hinder student achievement. Two areas in many schools that impact student achievement are problem behaviors and student attendance. This study examined how Positive Behavior Interventions and Supports (PBIS), when implemented at the middle school level, affected these two areas.

Background

The implementation of the No Child Left Behind Act of 2001 (NCLB) resulted in amplified emphasis on student achievement and school accountability in education. Possibly the most notable of the many components of NCLB is adequate yearly progress. Adequate Yearly Progress (AYP) as defined by the Georgia Department of Education is a cornerstone of NCLB. Measured annually, GaDOE states it is based on student participation and achievement on statewide standardized assessments along with other academic indicators under Title I of NCLB. Under AYP schools are mandated to meet standards in three areas: Test Participation, Academic Performance, and a Second Indicator. Schools and school districts that fail to meet AYP in the same subject for two or more consecutive years are labeled as Needs Improvement Status. If these schools and districts continue to fail consequences increase for each successive year

(2010). Some of the consequences of the Needs Improvement label are restructuring of the school, corrective action from the state, supplemental services, and finally school transfer options. These consequences can result in replacement of school staff, implementation of new curriculum, bringing in outside experts to advise the school, and possibly restructuring the entire internal organization of the school. This is of great concern as it can lead to loss of employment not just for teachers within a Needs Improvement school, but also for administration and other staff, as well as students having to transfer to a new school outside of his or her school zone (GaDOE, 2010).

AYP defines same subject as two years of not meeting requirements in the Reading/Language Arts (based on participation or academic performance) or in Mathematics (participation or academic performance) or two years of not making the second indicator (GaDOE, 2010). In the state of Georgia, the two major indicators of AYP as defined within this initiative are student achievement as measured by test scores, followed by the second indicator of student attendance rates. As a result, Georgia schools have begun to examine areas of needed improvement in order to meet the requirements of AYP.

In February of 2012, ten states in the US, including Georgia, received a waiver from NCLB known as the College and Career Ready Performance Index (CCRPI). This is a comprehensive school improvement, accountability, and communication platform for all educational stakeholders that will promote college and career readiness for all public school students (GaDOE, 2014). CCRPI requires schools and districts to meet greater expectations to earn a higher score. For the 2015 school year in the state of Georgia, the indicators for receiving higher scores at the middle school level are the percentage of students scoring at proficient or

better on the Georgia Milestone in English/Language Arts, Mathematics, Science, and Social Studies, with a required participation rate at or greater than 95%, as well as the percentage of students missing fewer than six days of school (GaDOE, 2014).

As educational institutions are looking inward for factors that influence successful achievement of AYP or CCRPI index scores, a number of schools are finding that it is difficult for student learning to occur in chaotic environments (Reed, 2012; Reinke, Herman, & Stormont, 2012). Student disorder affects student achievement directly through disruption of instruction and distraction of student energy from learning (Chen & Weikart, 2008; Osman, 2012; Weeks, 2012). Many school personnel are growing more frustrated with the influence of student behavior on their schools (Algozzine & Algozzine, 2010; Banks, 2014; Simonsen, Sugai, & Negrón, 2008). Stansberry-Brusnahan and Neilsen-Gatti (2009) stated challenging behaviors, ranging from the disruption of classroom teaching to physical violence, are safety and disciplinary concerns for schools nationwide. A growing need exists for successful approaches to address challenging behavior, particularly at the middle school level (Faul, 2012; Malloy, Moore, Trail, Van Epps, & Hopfer, 2013). Addressing this challenging behavior through a positive approach may lead to greater student achievement for attainment of AYP or high CCRPI index scores.

Managing behavior in the classroom setting in order to increase student learning has always been a concern of education personnel (Farmer, Reinke, & Brooks, 2014; Fitzgerald, Gerarci, & Swanson, 2014; Little & Akin-Little, 2008; Sullivan, Long, & Kucera, 2011). In past response to problem behaviors, schools have moved to get-tough strategies in which strict rules are set and severe consequences are doled out for students who choose not to abide by these

rules. However, these restrictive and punitive measures have very little effect on student behavior (Sugai & Horner, 2008; Wahab, Mansor, Awang, & Ayob, 2013). Given the failure of these past approaches for dealing with behavior issues, recent research has emerged that supports the idea of a proactive, rather than reactive, approach to handling and changing inappropriate behavior in students (Coffey & Horner, 2012; Murphy & Korinek, 2009; Trussell, 2008).

Along with student behavior, student attendance rates are theoretically of great importance to student learning. Empirical evidence suggests that attendance is a vital determining factor in academic performance (Ahmed, Zeynab, & Ahmed, 2013; Androutsou & Anastasiou, 2014; Gottfried, 2010; Newman-Ford, Fitzgibbon, Lloyd, & Thomas, 2008). An increasing consensus of research indicates chronic absenteeism, as defined by the national policy group Attendance Counts as missing 10% of school or more, is one of the strongest and most frequently overlooked indicators of a student's risk of becoming disengaged, failing courses, and behavior problems (Sparks, 2010). Hough and Schmitt suggested that school disorder affects student achievement indirectly mediated by student attendance. Students who feel that the school climate is disorderly or unsafe may choose not to attend. Thus, it is possible that behavior issues affect attendance, which affects student achievement and schools making AYP or high index scores.

According to Bradshaw, Mitchell, and Leaf (2010), given the increased emphasis on accountability for student achievement and discipline problems stemming from NCLB and now CCRPI, school districts and administrators are gradually moving to school-wide prevention models to promote a positive school climate, reduce discipline problems, and increase student attendance rates. In order to bring about a positive change, responses to behavior must be

positive and teach the correct behavior (Banks, 2014; Dupper & Dingus, 2008; Hough & Schmitt, 2011; Ross, Romer, & Horner, 2012).

In reaction to demands to improve accountability, school climate, and the structures of discipline systems in public schools across the United States, schools and districts are turning to an approach known as Positive Behavior Interventions and Supports (PBIS). This approach is a universal prevention strategy that aims to modify the school behaviors. The basis for PBIS stems from a problem-solving model and the goal is to prevent inappropriate behavior by teaching and reinforcing desired behaviors (U.S. Office of Special Education Programs [OSEP], 2009). The approach of positive responses to bring about desired behavior is based upon the theories of notable psychologists E. L. Thorndike, John B. Watson, and B. F. Skinner. Thorndike's Law of Effect laid the foundation of behavioral theory based on the idea that behavior is influenced by anticipated results, not by a triggering stimulus (Skinner, 1953; Weiner, 2010). Watson's learning theory built upon Thorndike's ideas by suggesting that behavioral changes come when one is a part of proper experiences to teach the desired outcome. Skinner took these theories even further with his studies of operant conditioning, which examined responses controlled by their consequences (Ashford & LeCroy, 2009; Skinner, 1953). The theories of Thorndike, Watson, and Skinner are at the root of PBIS (Osher, Bear, Sprague, & Doyle, 2010). It is a system based on altering human behavior with a reward system. The findings of this study, along with the literature review, are organized based on the framework of these theories on behavioral modification to achieve desired results.

PBIS is a process that aligned with the core principles of Response to Intervention (RtI), which integrates assessment and intervention within a multi-level prevention system to maximize

student achievement and to reduce behavioral problems. With RtI, schools utilize data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the concentration and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities (Kearney & Graczyk, 2014; National Center on Response to Intervention, 2010). Much like RtI, PBIS offers a wide range of interventions that systematically apply to students based on their demonstrated level of need, and address the role of the environment as it applies to development and improvement of behavior problems. Both RtI and PBIS establish the limits of critical factors and components to be in place at the universal (Tier 1), targeted group (Tier 2), and individual (Tier 3) levels (Harlacher, Walker, & Sanford, 2010; Robins & Antrim, 2013); however, the focus of RtI is student academic performance, and the focus of PBIS is student behavior. In order to move the approach of PBIS forward as an evidence-based practice, a more rigorous evaluation is needed (Malloy et al., 2013; McIntosh et al., 2013; Scott & Cooper, 2013). Although much research still needs to assess PBIS implementation, efficacy, and effectiveness, there appears to be a growing body of evidence to suggest many K-12 professionals are adopting this approach (Dunlop, 2013; Sugai & Horner, 2008).

Problem Statement

The implementation of NCLB and CCRPI has placed added pressure upon school systems to make AYP or a high index score. For many states, including the state of Georgia, the major indicators of AYP or high index scores are student achievement as measured by standardized test scores and attendance rates. There is a growing predicament in schools of challenging behavior and poor attendance rates affecting academic achievement. The problem is

many schools are incorporating reactive, rather than proactive approaches to dealing with discipline, as well as lax attempts to get students to attend school every day and actually remain from bell to bell. Little research was found as to the significance of PBIS in relation to student attendance. This critical gap needs to be filled, as it can reveal motivating factors within schools to increase student attendance (Malloy et al., 2013; Spencer, 2009; Wilkins, 2008). This study examined over 2,000 middle school students in rural Georgia participating in the PBIS approach to address these issues.

Purpose Statement

The Positive Behavior Interventions and Supports (PBIS) approach has been incorporated into many schools across the nation in order to address behavior issues in students. The purpose of this quasi-experimental causal comparative study was to contribute to the current body of knowledge available to determine how the implementation of PBIS affects student attendance rates, defined as the number of academic school days missed, and office discipline referrals, defined as an event, as observed by a school staff member, of a student violating a school rule, which results in submission of documentation to school administration for corrective action, at the middle school level. The research explored the possibility that the implementation of PBIS will have an impact on student attendance rates and office discipline referrals.

The behavior modification theory for this study was based on the findings of Thorndike, Watson, and Skinner, as it was used to modify behavior based on desired outcomes. This theory indicates that human behavior can be manipulated and controlled when a desired behavior is rewarded with a positive consequence (Skinner, 1953). As applied to this study, the theory of behavior modification indicates that PBIS will influence student attendance rates and office

discipline referrals because the entire basis of this approach is rewarding a desired behavior to achieve a desired outcome.

The independent variable of this study was the treatment of the PBIS approach. PBIS is defined as providing an operational framework for improving student academic and behavior outcomes. It is a structure for the selection and implementation of the best evidence-based practices for improving vital academic and behavior outcomes for each student (U.S. OSEP, 2009). The PBIS approach emphasizes systems of organizational change, which promotes long-term change and durable effects (Frey, Lingo, & Nelson, 2008). The implementation of the independent variable for this study began in August 2009, concurrent with the beginning of the academic school year. Thus, the treatment had been in place for five full academic years at the end of the 2014 school year.

Dependent variables in this study were the outcomes of the treatment and control groups on attendance rates, defined as the number of academic school days missed (Sparks, 2010), and office discipline referrals, defined as an event, as observed by a school staff member, of a student violating a school rule, which results in submission of documentation to school administration for corrective action (Pas, Bradshaw, & Mitchell, 2011). The effect of PBIS in relation to attendance and office discipline referrals was found by examining reports from Infinite Campus (IC) and PowerSchool.

It is assumed the treatment of PBIS within this study was implemented at the school level with fidelity and in the same manner. The guidelines for PBIS are simply that, guidelines. It is also assumed that, during the control group's absence of the implementation of PBIS, a similar approach to behavior and attendance management was not inadvertently administered.

Limitations to this study include the level of implementation of the treatment of PBIS at each middle school site. While the basis was the same for all schools choosing to implement PBIS, it was simply a guide for the best way to address behavior issues. It could have been altered to meet the needs of individual schools. A covariate of gender served to address threats to validity of the study.

Many schools implementing PBIS push attendance as a factor for receiving rewards, whereas, other schools do not. The level of the effect of PBIS on attendance can be influenced by how each individual school approaches this. This threat to validity is in the control of the school and not the treatment itself.

Significance of the Study

Due to the diversity of schools today, educators need numerous tools to ensure that student learning occurs and achievement goals are met. RtI provides a tiered approach to aiding students struggling in the area of academics (Harlacher et al., 2010; Robins & Antrim, 2013). In the event that challenging behavior is a deterrent to student success, PBIS serves as a support for both teachers and students in eliminating the problem behavior and teaching the desired behavior (Simonsen et al., 2008). However, little was found as to the best approach to increase student attendance rates for students. With American educational institutions facing financial difficulties, it is pertinent to make use of approaches that could possibly address more than one issue. This study examined how PBIS can bring about change in two areas that influence earning AYP status or CCRPI index scores for Georgia schools: behavior issues as it relates to student achievement and attendance rates.

Research Questions

This study will attempt to answer the following research questions:

RQ1: Is there an impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports?

RQ2: Is there an impact on the number of office discipline referrals for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports?

RQ3: Is there an impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports, while controlling for gender?

Definitions

1. *Attendance rates* – Attendance rates are the number of academic school days missed (Sparks, 2010).
2. *Adequate Yearly Progress* – Adequate yearly progress is an annual measure of student participation and achievement on statewide assessments and other academic indicators under Title I of NCLB (GaDOE, 2010).
3. *Office Discipline Referral* – An office discipline referral is an event, as observed by a school staff member, of a student violating a school rule, which results in submission of documentation to school administration for corrective action (Pas et al., 2011).
4. *No Child Left Behind Act* – No Child Left Behind is a federal law representing legislation that attempts to accomplish standards-based education reform (Rush & Scherff, 2012).

5. *Response to Intervention* – Response to Intervention is a process to aid students who are struggling in academics and identify those that may qualify for special education services (National Center on Response to Intervention, 2010).

CHAPTER TWO: LITERATURE REVIEW

Overview

School systems across the United States are seeking positive approaches to improve student learning and school climate. The diverse population of students in school systems can provide challenges in meeting all of their needs. The implementation of the NCLB Act of 2001, presented by President George W. Bush, and more recently the CCRPI, placed greater emphasis on student achievement based on AYP or high index scores. This emphasis has pushed educators to utilize various approaches to ensure all students have equal opportunity to learn and succeed. Two factors influencing student achievement that must be addressed are attendance rates and student behavior. Research has shown a connection between student achievement and student behavior. The need to increase student achievement resulted in a search for procedures to impact increasing behavior problems is not simply an issue of safety but is also associated with issues such as school failure (Johnson & Hannon, 2014). Stemming from the similar approach of RtI, PBIS is a proactive system based on eliminating challenging behavior preemptively through teaching appropriate behaviors and rewarding these behaviors. PBIS has been implemented in numerous elementary schools across the United States to address challenging behavior, and in some cases, has also been employed in certain schools to address the issue of attendance rates.

Theoretical Framework

The causes of human behavior have long been questioned and studied (Solway et al., 2014). Theorists and researchers have examined the underlying factors that make people do

what they do for hundreds of years. Through the study of human behavior, many assumptions have been suggested for modifying differing behaviors in humans.

E. L. Thorndike was one of the first to undertake serious attempts to study the changes brought about by the consequence of behavior. According to Cooper-Twamley and Null (2009), Thorndike is perhaps one of the most influential of all American psychologists. He introduced important procedural innovations to behavioral science. Thorndike laid the methodological and philosophical foundation of the behavioral psychology of John B. Watson and B. F. Skinner. Known for The Law of Effect, Thorndike theorized the behavior that produces the desired effect becomes dominant and, therefore, occurs faster in the next experiments. He argued that more complicated behavior was influenced by anticipated results, not by a triggering stimulus as Pavlov had supposed (Skinner, 1953). Sloan gave Thorndike's explanation of The Law of Effect, which suggests that man as a higher animal demonstrates no behavior apart from notions based on the measures of instinct, exercise, and effect. Therefore, inquiries of the effects of reward and/or punishment observed in animals could yield general laws of learning to be applied to humans. Thorndike's work in this area came to be known as behavioral psychology, establishing behaviorism as a major branch within educational psychology (2013).

John B. Watson brought behaviorism into the forefront of psychology in 1913 by asserting that psychology must abandon its focus on subjective mentalistic concepts and instead focus exclusively on behavior (Moore, 2011; Reynolds, Vannest, & Fletcher-Janzen, 2014). Watson has been recognized as the father of behaviorism, a learning theory that is based on observable behavior. His belief that development is dependent upon learning launched the initial phase of the Behavioral Revolution: if given the proper experiences, learning will occur (Virues-

Ortega & Pear, 2015). Watson's theory differs a great deal from the theories of Freud and Piaget, each of whom believed changes in behavior only occur as a child moves through different stages of development. The crux of Watson's behavior theory is observable stimuli and observable responses to stimuli.

B. F. Skinner built on Watson's learning theory by advancing the study of operant conditioning, a form of learning that occurs when responses are controlled by their consequences (Moore, 2011). Skinner correctly described some of the basic, and many times underestimated, determinants of what causes human behavior. He placed the principle of reinforcement in the scientific arena (Lamal, 2010). According to Skinner (1953), the examination of why people act as they do must take into account any condition or event which can be shown to have an effect upon behavior (p. 23). He explained by discovering and analyzing these causes that behavior can be predicted, to the extent that it can be manipulated and therefore controlled. He observed in his studies that behavior repeats when followed by positive consequences. When consequences such as rewards are dependent upon behavior, they can have a prevailing control on behavior. In the realm of education, Skinner explained education establishes behavior that will be advantageous to the individual and others at a future time. Behavior will somehow be reinforced in many ways, but reinforcements by the educational agency are for the purpose of conditioning (p. 402).

The theories of Thorndike, Watson, and Skinner, which basically prove that any rewarding consequence of behavior is a reinforcement of that behavior and increases the probability of that behavior continuing (Skinner, 2012), are at the core of PBIS. It is a system based on altering human behavior with a reward system. The behavior then becomes intrinsic as

a result of the reward, and the reward can be slowly weaned from the individual, while the desired behavior remains.

Related Literature

Historical Background

Corporal punishment. A parent or educator hitting a child with the intent of educating the child is known as corporal punishment (Alsaif, 2015). Isaacs (2011) states there is a long history of parents and teachers alike executing corporal punishment, with the intent of adhering to Proverbs 13:24, which reads “He who spares his rod hates his son,”. While it is legal in 19 states at the school level, there is little evidence that it is successful in the prevention of problem behaviors (Han, 2014). Fuller (2010) stated that there have been four trends in American practices of discipline: the movement from a very strict to a lax form of discipline; the involving of authority for expertise within the arena of childhood discipline; legislative movements focusing on child rights; and fathers experiencing change in childrearing and discipline as mothers entered the workplace. Within all of these trends, corporal punishment, defined as any punishment in which physical force is used and intended to cause some degree of pain and discomfort, without injury, for the purpose of correcting or controlling a child’s behavior (Isaacs, 2011; Renteln, 2010; Frechette, Zoratti, & Romano, 2015) has been implemented as a form of child discipline. Although the use of corporal punishment has been intended to curb and correct antisocial behavior, it often has the opposite effect (Alsaif, 2015; Han, 2014; Holden, Brown, Baldwin, & Caderao, 2014; Zolotor, Theodore, Runyan, Chang, & Laskey, 2011).

Until the latter part of the 19th century, compulsory public education was unknown in the United States, and children received the education their parents chose to provide for them

(Rauscher, 2014). It was the place of the parents to educate their children not only in academics but also in acceptable behavior as well. When children eventually became wards of public education, the teacher's authority over the student consequently became known as *in loco parentis*, which means in place of the parents (Rumel, 2013). Walker (2014) gave Blackstone's classic formulation of the doctrine, which states that a parent can assign part of his authority as a parent to the educational leader of his child. The leader is then *in loco parentis*, and the power of the parent to restrain or correct may be necessary and executed by the leader (2014).

Change in this doctrine began to occur at the beginning of the 20th century. These changes in primary education challenged *in loco parentis* as a justification for carrying out corporal punishment in schools. Due to the adoption of publicly operated, compulsory education by all states, parents could no longer decide whether to place their child in a school or not. *In loco parentis* began to lose its power, and in an effort to maintain an educator's privilege of discipline through corporal punishment, states turned to *parens patriae*.

Parens patriae literally means "father of his country" (Pope, 1920, p. 1127). This designated the state as a sovereign power of guardianship. Walker (2014) stated discipline in schools under *in loco parentis* centered on the individual child. Discipline under public education and compulsory school attendance laws has come to be justified by the state's need to maintain order in its schools, in order to create an environment in which the students receive a proper education (2014).

As schools have progressed, there has been a movement away from corporal punishment as it had been used in the past (Zolotor et al., 2011). Child discipline has become a hot topic, often controversial in nature (Appleton & Stanley, 2011). Many studies have found associations

among the use of corporal punishment and antisocial behavior (Feinstein & Mwachombela, 2010; Han, 2014; Frechette et al., 2015). Lenta (2012) stated as new research emerges and earlier research is reexamined, it is being found that there has been a misguided emphasis on providing only negative consequences when students misbehave. Too often teachers assume that children enter school knowing how to behave and negative, often harsh, punishment is utilized to change the undesired behavior. This focus on negative behavior teaches students that negative behavior elicits attention, the teacher is a negative person, and, therefore, the classroom is a negative place. There has recently been a movement to reduce corporal punishment in public schools and replace it with positive repetition to reinforce the students when they exhibit appropriate, desired behaviors.

No Child Left Behind

The NCLB Act of 2001 is conceivably the most extensive education policy initiative in the United States in the last forty years (Dee & Jacob, 2010; Frey, Mandlawitz, & Alvarez, 2012). Its extensive calls for testing, stepping in to improve low-performing schools, and policing the quality of teachers has made it the most large-scale legislation on K-12 schooling in American history (Husband & Hunt, 2015). The underlying theme of NCLB is that accountability will improve performance (Hemelt, 2011). The stated purpose of NCLB is to “ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments” (Brown & Clift, 2010, p. 775). At the center of NCLB, a reauthorization of the Elementary and Secondary Education Act, are numerous

measures devised to advance extensive gains in student achievement, as well as create higher accountability for states and schools concerning student progress (No Child Left Behind, 2011).

Unlike other education initiatives, NCLB targets all students, not simply particular subgroups. It adds several new initiatives to create a stronger system of educational accountability (Frey, Mandlawitz, Alvarez, 2012). No Child Left Behind (2011) identifies these initiatives:

- Annual Testing, in which states were required to initiate testing students in grades 3-8 yearly in mathematics and reading, beginning in the 2005-2006 school year. Students had to be tested in science at least once in elementary, middle, and high school, beginning in 2007-2008. A representative sample of 4th and 8th grades from every state had to take part in the National Assessment of Educational Progress testing program in math and reading biennially in order to produce a comparison point for state test results;
- Academic Progress, which requires states to have all students at the proficient level on state assessments by the 2013-2014 school year. This entails making AYP for the entire student population and for particular subgroups.
- Report Cards, beginning in the 2002-2003 school year, requires states to provide annual report cards showcasing a spectrum of information on the school district's performance.
- Teacher Qualifications, in which all teachers in the core content areas employed by a public school have to be highly qualified, meaning the teacher is certified and proficient in the subject material.

- Reading First, a program funded at \$1.02 billion in 2004 that is designed to provide research based reading programs for grades K – 3.
- Funding Changes, better designed to target the resources for school districts with a high number of economically disadvantaged students.

These initiatives help direct schools and school districts to the overall goal of AYP. AYP is measured annually, based on student participation and achievement on statewide standardized assessments and other academic indicators under Title I of NCLB (GaDOE, 2010). The goal of AYP is to determine if schools are effectively educating students. AYP is measured through the state assessments and indicators that are described in the plan of each state. GaDOE indicates under AYP schools are required to meet standards in three areas: Test Participation, Academic Performance, and a Second Indicator (2010). There are seven itemized requirements with which every state must comply: there has to be consistency in applying the standards to all schools; these standards must be statistically reliable and valid; the result must be steady and meaningful academic progress for all students; the primary measure of AYP must be academic assessments and should include distinct measurable yearly objectives for student achievement; there has to be growth in four specific subgroups; and graduation rates and any additional academic indicator are also a measure of AYP (Dee & Jacob, 2010).

For the state of Georgia, the requirements of meeting AYP are student achievement as measured by test scores, followed by the second indicator of student attendance rates (GaDOE, 2010). Test scores for AYP are based on Reading/Language Arts (participation or academic performance) and Mathematics (participation or academic performance). Failure to meet in either test scores or attendance would result in failure to make AYP status. Schools and school

districts that do not meet AYP in the same subject for two or more consecutive years are labeled as Needs Improvement Status with increasing consequences for each successive year. Same subject for AYP is defined as two years of not meeting mandates in the Reading/Language Arts (based on participation or academic performance) or in Mathematics (participation or academic performance) or two years of not making the second indicator (GaDOE, 2010).

There are successive consequences for schools and/or school districts that fail to meet AYP. The Georgia School Council Institute outline the consequences of not meeting AYP. After the initial first two consecutive years of failure, a school is placed on the Needs Improvement list. This requires schools to offer students an opportunity to transfer to a higher performing school within the district.

If after a year the school still does not make AYP, the school is placed in the category of Corrective Action. This entails the school to not only offer a transfer option, but one of the following must also take place: relevant school staff is replaced; a new curriculum is implemented based on scientific research that offers the assurance of improving achievement in low-achieving students; the management authority within the school is decreased dramatically; an outside expert is brought in to guide and advise the school on its progress based on an agreed upon plan; extension of the school day and/or school year; or a complete restructuring of the school's internal organization.

If the school continues to fail to make AYP, an Alternate Governance plan is put into place. This requires the failing school's program to be replaced in one of five ways: the school may be reopened as a charter school; relevant personnel to the failure of AYP will be replaced; an outside management company could bind a contract to operate the school; the school could be

turned over to the state education agency if permitted under state law; or any other major restructuring arrangement could be made with the guarantee that the arrangement will enable the school to make AYP (GaDOE, 2010).

College and Career Ready Performance Index

In February of 2012, ten states in the US, including Georgia, received a waiver from NCLB. This waiver allowed for a new statewide accountability system known as the College and Career Ready Performance Index (CCRPI). This is a comprehensive school improvement, accountability, and communication platform for all educational stakeholders that will promote college and career readiness for all public school students (GaDOE, 2014). CCRPI requires schools and districts to meet greater expectations to earn a higher index score. For the 2015 school year in the state of Georgia, the indicators for receiving higher scores at the middle school level are the percentage of students scoring at proficient or better on the Georgia Milestone in English/Language Arts, Mathematics, Science, and Social Studies, with a required participation rate at or greater than 95%, as well as the percentage of students with absences from school being fewer than six days (GaDOE, 2014).

CCRPI is defined as an all-inclusive school improvement, accountability, and communication platform for all educational stakeholders that will support college and career readiness for all students attending Georgia public schools (GaDOE, 2014). The purpose of this new accountability system is based on Common Core State Standards (CCSS), which are used in the determination of whether students are college and career ready (Camara, 2013). The states receiving the NCLB waiver are required to take part in CCSS in the hopes of decreasing the need for remediation at the college level (Jones & King, 2012).

Under the new accountability system, schools are identified as Priority, Focus, and Reward. Priority and Focus Schools replace current Needs Improvement Schools, and Reward Schools replace the current Distinguished Schools. Alert Schools, which are unique to Georgia, are also identified in three categories: Subgroup Alert Schools, Subject Alert Schools, and Graduation Alert Schools (GaDOE, 2014). Within CCRPI, schools are measured on students' performance on achievement data from all core content areas and graduation rates. At the middle school level grades 6-8, indicators for Exceeding the Bar and supplemental indicators are seen in Figure 1.

Content Mastery	<ul style="list-style-type: none"> • Percent of students scoring at proficient or higher on the Georgia Milestones ELA (required participation rate greater than or equal to 95%) • Percent of student scoring at proficient or higher on the Georgia Milestones mathematics (required participation rate greater than or equal to 95%) • Percent of student scoring at proficient or higher on the Georgia Milestones science (required participation rate greater than or equal to 95%) • Percent of student scoring at proficient or higher on the Georgia Milestones social studies (required participation rate greater than or equal to 95%)
Post Middle School Readiness	<ul style="list-style-type: none"> • Percent of English Language Learners with positive movement from one Performance Band to a higher Performance Band as measured by the ACCESS for ELLs • Percent of Students With Disabilities served in general education environments greater than 80% of the school day • Percent of students in grade 8 achieving a Lexile measure equal to or greater than 1050 on the Georgia Milestones • Percent of students completing 2 or more state defined career related assessment/inventories and a state defined Individual Graduation Plan by the end of grade 8 • Percent of students missing fewer than 6 days of school
Predictor for High School Graduation	<ul style="list-style-type: none"> • Percent of students in grade 8 passing at least four courses in the content areas (ELA, mathematics, science, social studies) and scoring at proficient or higher on all Georgia Milestones • Percent of students scoring at the highest performance level on all Georgia Milestones
Supplemental Indicators for Additional Points	<ul style="list-style-type: none"> • Percent of students earning a passing score in three middle school courses in the fine arts, or career exploratory, or world languages by the end of grade 8 (courses must be in the same area of concentration) • Percent of students earning at least one high school credit by the end of grade 8 (ELA, mathematics, science, social studies, world languages, fine arts, CTAE) and scoring at proficient or higher on all required Georgia Milestones • School has earned a Georgia Science, Technology, Engineering, and Math (STEM) Program Certification • Percent of teachers using the Statewide Longitudinal Data Systems (SLDS) • School or LEA-defined innovative practice accompanied by data supporting improved student achievement, such as Charter System, Georgia College and Career Academy, Race to the TOP, Striving Reader initiative, dual language immersion program, Literacy Design

	<p>Collaborative (LDC) and/or Mathematics Design Collaborative (MDC), Response to Intervention (RTI), Positive Behavioral Interventions & Supports (PBIS), local instructional initiatives, etc.</p> <ul style="list-style-type: none"> • School or LEA Research/Evidence-based Program/Practice designed to facilitate a personalized climate in the school; such as Teachers as Advisors program, mentoring program, Positive Behavioral Interventions & Supports, service-learning program, peer mediation, and conflict mediation
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Figure 1. Exceeding the bar indicators.

School Climate and Student Behavior

School climate is a term that reflects the quality of the school environment that participants experience, how it affects their behavior, and their combined perception of behavior in the schools (Osman, 2012). Much research over the years shows a strong relationship between the school climate, defined as “the quality of character of school life,” and positive student outcomes such as, but not limited to, behavior of students, student achievement an adjustment, and self-concept (Schneider & Duran, 2010, p. 25). According to Kim, Schwartz, Cappella, and Seidman (2014) there is evidence to suggest that the school climate at the middle school level plays a significant role in young adolescents’ social-emotional and academic adjustment. It plays a very important part in providing a healthy and positive atmosphere for students, and it can yield positive educational outcomes for students and teachers alike (Osman, 2012). Figure 2 gives the dimensions of school climate as defined by Kutsyuruba, Klinger, & Hussain (2015).

Physical	<ul style="list-style-type: none"> • Appearance of the school building and its classrooms • School size and the ratio of students to teachers in classrooms • Order and organization of the classrooms within the school • Availability of resources • Safety and comfort
Social	<ul style="list-style-type: none"> • Quality of interpersonal relationships between and among students, teachers, and staff • Equitable and fair treatment of students by teachers and staff • Degree of competition and social comparison between students • Degree to which students, teachers, and staff contribute to decision-making at the school
Academic	<ul style="list-style-type: none"> • Quality of instruction • Teacher expectations for student achievement • Monitoring student progress and promptly reporting results to students and parents

Figure 2. Dimensions of school climate.

On the other hand, a negative school climate can prevent students from optimal learning opportunities and growth. One of the primary responsibilities of teachers is to help students learn. It is difficult, however, for learning to take place in a chaotic environment (Algozzine, Wang, & Violette, 2011). A substantial body of literature suggests that behavioral problems in schools across America are increasing (Reinke, Herman, & Stormont, 2013). Student disorder affects student achievement directly through disruption of instruction and distraction of student energy from learning (Ratcliff, Jones, Savage-David, & Hunt, 2011; Tsouloupas, Carson, & Matthews, 2014). Many school personnel are growing more frustrated with the influence of student behavior on their schools (Sun & Shek, 2012; Martens & Andreen, 2013). Thompson (2011) and Alter, Walker, & Landers (2013) stated challenging behaviors, ranging from the disruption of classroom teaching to physical violence, are safety and disciplinary concerns for schools nationwide. It has been found that a growing need exists for successful approaches to address challenging behavior, particularly at the middle school level (Thompson, 2011).

Addressing this challenging behavior through a positive approach may lead to greater student achievement for attainment of AYP or CCRPI score.

Managing behavior in the classroom setting in order to increase student learning has always been a concern of education personnel (Ducharme & Shecter, 2011; Gu, Lai, & Ye, 2011; Thompson, 2011). Han and Akiba (2011) stated that addressing the increasing levels of disruptive behavior and improving discipline is a national matter. Schools have typically responded to students exhibiting disruptive behavior with some form of external discipline, namely office referrals, corporal punishment, suspension and expulsion. In past response to problem behaviors, schools have moved to get-tough strategies in which strict rules are set and severe consequences are doled out for students who choose not to abide by these rules. However, these restrictive and punitive measures have very little effect on student behavior (Flannery, Fenning, McGrath Kato, and Bohanon, 2013). These reactions only result in a short-term fix to a problem that is often long-term and chronic (Osher et al., 2010). Given the failure of these past approaches for dealing with behavior issues, recent research has emerged that supports the idea of a proactive, rather than reactive, approach to handling and changing inappropriate behavior in students (Martens & Andreen, 2013).

The structure and organization of middle schools can often result in challenges to the successful development of early adolescents (Rusby, Crowley, Sprague, & Biglan, 2011). Middle schools particularly are in need of healthy climates. School climate refers to the impressions, beliefs, and expectations held by the school community in reference to their school as a learning environment. A healthy or positive school climate exists when every students feels comfortable, wanted, accepted, valued, and secure (Thapa, Cohen, Guffey, & Higgins-

D'Alessandro, 2013). Research has shown the positive effects of a healthy school climate on student outcomes. It has shown to have an impact on grade point average, standardized test scores, reading levels, academic writing, and adjustment to school (Caldarella, Shatzer, Gray, Young, & Young, 2011). School climate has also been correlated with reduced occurrences of student misbehavior and absences (Bear, Gaskins, Blank, & Chen, 2011; Kutsyruba et al., 2015). Student behavior and discipline problems are often more taxing than in elementary classrooms, particularly since middle school is now considered the most violent time in the life of students (Killam, Roland, & Weber, 2014; Farrell, Mehari, Mays, Sullivan, & Le, 2015). Rusby et al. (2011) stated early adolescence is an important period of development because it is a time when various problems begin to surface and these problems often have more negative long-term consequences than problems that emerge later. Problem behavior resulting in exclusion from school often results in arrest later in life (Maynard, Kjellstrand, & Thompson, 2014; Monahan, VanDerhei, Bechtold, & Cauffman, 2014). Research has found that the organization and structure of middle schools can pose further challenges to early adolescents' successful development (Rusby et al., 2011). Interventions that target the social environment of the school have significant effect on problem behaviors, such as delinquency, truancy, and school dropout (Horner, Sugai, & Anderson, 2010; Noltemeyer, Ward, & Mcloughlin, 2015).

Numerous studies have found relationships between academic achievement and problem behavior at the middle school level. Research is very clear that academic achievement in schools is highly correlated to the amount of time a student spends engaged in instruction (Parke & Kanyongo, 2012; Morrissey, Hutchison, & Winsler, 2014). Correlations between grade point average and specific office discipline referrals, such as fighting, harassing and threats of

violence, and nonviolent misbehavior, have been found for males in sixth grade (Putnam, Horner, & Algozzine, 2012). School is a major contributor to the creation of citizens, instilling the values of a society and culture in children (Voight, Geller, & Nation, 2014; Kupchik & Catlaw, 2015). Prevention is the most effective form of behavior management; although, in the recent past, most public school systems have turned to a reactive form of discipline to manage behavior. Corporal punishment itself has been a type of childhood discipline since colonial times, although it often has the opposite effect on behavior (Ferguson, 2013; Tong et al., 2015). Malloy et al. (2013) stated the most efficient way to eliminate misbehaviors is to prevent the occurrence or escalation from the beginning. When schools focus on individual situations rather than the entire school climate, they provide only a short-term solution (Flannery et al., 2011). Bagwell (2006) insisted teaching correct behavior in school is necessary in a society that often fails to teach those skills in the home.

As schools are moving away from corporal punishment and into a more positive approach, they are also simultaneously trying to close the ever-widening gap to ensure that all students make AYP (Lee & Reeves, 2012). Schools are seeing the need to invest in a proactive approach, rather than the reactive approaches of the past. Numerous schools throughout the United States are welcoming three-tiered models of prevention to improve student behavior at the elementary level (Reinke et al., 2013). However, less attention has been dedicated to the investigation of these three-tiered approaches at the middle school level (Lane, Capizzi, Fisher, & Ennis, 2012). The limited inquiry with older students may be a result of larger enrollment and faculty sizes relative to elementary schools (Robertson & Lane, 2007).

Student Attendance

The issue of students not attending school as needed is an increasingly serious problem (Kearney & Graczyk, 2014). What once was a fun notion of skipping school has grown to become an issue of growing concern for middle school accountability (Spencer, 2009). Improving school attendance has become an integral part of government policy to raise educational standards. Students have a greater chance of succeeding in academics when they consistently attend school. Stronger test performance has been linked to students with better attendance records (Flower, 2014; Gottfried, 2010). When students are frequently absent from school, they miss instructional time, which is an integral component for raising student achievement (Froagh, Burton, & Chapman, 2012). The NCLB legislation and CCRPI place emphasis on the influence of attendance as an indicator of adequate yearly progress and high index scores in middle school accountability (GaDOE, 2014). Under NCLB, when student attendance has been selected as a state indicator for calculating AYP, a school's attendance rate carries higher stakes for elementary and middle schools than for high schools (GaDOE, 2010).

While education literature has acknowledged the importance of school climate in creating effective schools (Choi & Chang, 2011; Kim et al., 2014; Osman, 2012; Zahid, 2014), investigations into school-related factors that influence absenteeism have been less frequent (Gottfried, 2010). The National Center for School Engagement has cited an unsafe or unwelcoming school climate as one factor contributing to student absences (Osman, 2012; Zahid, 2014). It is not unusual for lack of attendance to be attributed to social, family, and personal variables, but studies have shown that in many instances detachment from school lays within the school setting itself (Parke & Kanyongo, 2012; Havik, Bru, & Ertesvag, 2015). Research has

stressed positive effects of a healthy school climate on student outcomes, including grade point average, standardized test scores, reading levels, academic writing, and school adjustment (Spaulding et al., 2010; Hough & Schmitt, 2011; Maggin, Chafouleas, Goddard, & Johnson, 2011). School climate has also been linked with decreased student misbehavior such as drug use, aggression, antisocial behavior, absences, school violence, and student delinquency (Caldarella et al., 2011). Past studies have taken into account the role schools can have in promoting good attendance (Froagh et al., 2012). However, little research has been conducted on factors that motivate students to attend school. This critical gap needs to be filled (Bear et al., 2011; Gottfried, 2010; Morrisey, Hutchison, & Winsler, 2013).

Although the relationship between individual student attendance and achievement has received modest attention among education researchers at the middle school level, attendance is however, recognized as being a crucial component of school success. A number of studies have noted attendance as valuable enough to be evaluated as an academic outcome, which suggests that increased attendance is a direct gauge of school success (Gottfried, 2014). When students are absent or chronically tardy, achievement levels suffer, especially in middle school and secondary settings (Morrisey et al., 2014). Chronic absenteeism, defined as missing 10% or more of the school year, constitutes up to 15% of overall absences (Kearney & Graczyk, 2014). Gottfried (2011) pointed out that lower attendance rates are cited as being harmful to learning and academic achievement, and a rise in absences in middle school can be a predictor of higher risk factors in future years of education.

Research also points to the connection between chronic school absences with adverse long-term home lifestyles, employment history, and criminality (Gottfried, 2010). Frequent

school absenteeism is a risk factor for social isolation, delinquent activity, substance abuse, teen pregnancy, educational failure, and dropout (Kearney & Graczyk, 2014; Havik et al., 2015).

More long-term effects of regular absence from school that stretch into adulthood are financial issues, marital, occupational, social, and psychiatric problems (Kearney & Graczyk, 2014).

Many schools are recognizing the importance of attendance. To counter the effects of absenteeism and tardiness, districts and states are making some changes (Anonymous, 2002). Further research is needed, however, into the best methods to manage student attendance within schools (Freeman et al., 2016; Kearney & Graczyk, 2014; Havik et al., 2015).

Positive Behavior Interventions and Supports

Historically, the customary response to students' problem behavior in the school setting was to react with progressively more aversive penalties, which has proven to be ineffective in changing the problem behavior and often causing an increase in the problems (Reinke et al., 2013). Staying in trouble causes irritation and anxiety for many students, giving them unpleasant feelings about attending school. This can lead to more problem behaviors and to poor academic performance (Reynolds, 2012). Researchers suggest that the causes of many student problem behaviors are the result of vague expectations, a lack of routine, and poor environmental arrangements (Sullivan et al., 2011).

Beginning in the 1980s, increased attention was directed toward prevention strategies to change student problem behaviors. A grant was legislated in the 1990s due to the reauthorization of the Individuals with Disabilities Act of 1997 to provide schools with technical assistance for improving supports for students with behavioral disorders. Originally developed by Rob Horner, George Sugai, and others at the University of Oregon to support students and adults with

considerable intellectual disabilities and severe behavior issues (Hoyle, Marshall, & Yell, 2011; Osher et al., 2010), PBIS is the systematic implementation of empirically validated practices that are meant to achieve social and learning outcomes as well as prevent problem behaviors (Frey et al., 2010). PBIS is a set of intervention practices and organizational systems meant to establish the social culture and intensive behavior support at the individual level necessary to achieve academic and social success for all students (Coffey & Horner, 2012; Horner et al., 2014). It is a non-curricular, preventative, multi-tiered systematic framework for behavior interventions and supports (Pas & Bradshaw, 2012; Sullivan et al., 2011). A defining feature of PBIS is a variety of behavior support. The features at the core of PBIS are not anything new. They draw from many decades of research and innovation in education, mental health, and behavior analysis (Horner et al., 2010). It integrates applied behavioral analysis as studied by Thorndike, Watson, and Skinner, and positive supports for behavior in order to meet the needs of each individual student within a school (Hoyle et al., 2011; Osher et al., 2010). It is a system based on altering human behavior through the use of a reward system. The ultimate goal of PBIS is provide a positive school environment and climate so that there is a decrease in student problem behaviors and discipline, and an improvement in student academic skills.

A shift to make PBIS a school-wide approach as opposed to simply being implemented for students with behavior disorders occurred in the 2000s (Sugai & Simonsen, 2012). Over the past decade, the trend of implementing PBIS as a school-wide discipline system has increased, with nearly 14,000 schools across the United States currently implementing (Miramontes, Marchant, Heath, & Fischer, 2011; Reinke et al., 2013). With PBIS, primary prevention supports are made available to every student to encourage desired behavior in specific key school

settings (Lane et al., 2012). The basis for PBIS stems from a problem-solving model, and the goal is to prevent inappropriate behavior by teaching and reinforcing desired behaviors (U.S. OSEP, 2009). According to Zehr (2011), 12 states provide strong support for elementary schools to implement PBIS. PBIS

is a proactive, rather than a reactive, approach that allows school systems to effectively support student behavior. It is a framework for the selection and implementation of the best evidence-based practices for improving vital academic and behavior outcomes for each and every student. It refers to a systems change process for an entire school or district. (U.S. OSEP, 2009, para. 2)

The main theme of PBIS is teaching behavioral expectations in the same manner as any academic core subject. It is based on the hypothesis that when appropriate behavior is actively taught through modeling and role-playing, along with reward for appropriate behaviors, the majority of students with mild to serious behavior problems will decrease and the overall climate of the school will improve (Osher et al., 2010). Providing clear expectations, monitoring of student behavior, and consistency in the delivery of positive reinforcement for students adhering to the expectations can cause not only a reduction in aggressive and disruptive behavior but also an increase in cooperative behavior in middle school students (Rusby et al., 2011). Simonsen et al. (2008) state schools that implement PBIS typically see a decrease in inappropriate behavior, as measured by office discipline referrals, as well as an improvement in students' academic performance (Dunlop, 2013; Reinke et al., 2013).

Four integrated elements are the emphasis of PBIS. These elements are: (a) data, the basis for decision-making, (b) outcomes that can be measured and evaluated by the data, (c)

evidence-based practices for attainable outcomes, and (d) school systems that effectively support implementation of the practices (U.S. OSEP, 2009). PBIS is conceptually compatible with the current emphasis on RtI efforts (Miramontes et al., 2011; Bradshaw et al., 2012). Much like RtI, PBIS employs a three-tiered approach to behavior management. With RtI, schools utilize data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the concentration and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities (National Center on Response to Intervention, 2010). Also similar to RtI, PBIS offers a wide range of interventions that are systematically applied to students based on their demonstrated level of need, and address the role of the environment as it applies to development and improvement of behavior problems. Both RtI and PBIS establish the limits of critical factors and components to be in place at the universal (Tier 1), targeted group (Tier 2), and individual (Tier 3) levels (Debnam, Pas, & Bradshaw, 2012; Maggin, Zurheide, Pickett, & Baillie, 2015); however, the focus of RtI is student academic performance, and the focus of PBIS is student behavior. Appendix B provides a comparison of the academic instruction tiers of RtI and behavioral instruction tiers of PBIS (PBIS, 2012).

When implemented correctly, the primary prevention tier should be applicable to approximately 89% of the student body. The secondary prevention tier should apply to approximately 11% of the student population. The tertiary tier is designed to support students whose behaviors are serious enough to require more immediate and intensive support (Hoyle et al., 2011; Sullivan et al., 2011; Bradshaw, 2013; Freeman et al., 2016). Figure 3 gives a breakdown of the core elements at each level of prevention (Horner et al., 2014).

The U.S. OSEP Technical Assistance on Positive Behavioral Interventions and Supports (2009) stated,

schools that establish systems with the ability to implement PBIS with integrity and durability have teaching and learning environments that:

- Are Less reactive, aversive, unsafe, and exclusionary;
- Are More engaging, responsive, preemptive, and productive;
- Address classroom management and disciplinary issues (e.g., attendance, tardiness, antisocial behavior);
- Improve supports for students whose behavior require more specific assistance (e.g., emotional and behavioral disorders, mental health);
- And most importantly, maximize academic engagement and achievement for all students.

The PBIS approach emphasizes systems of organizational change, which promotes long-term change and durable effects. Many school-based approaches for dealing with challenging behavior are characterized by brief behavioral or academic gains that have no long-term sustainability after the intervention has been delivered. Studies of elementary schools that implement PBIS for a second year indicated that the gains observed in the first year were sustained (Frey et al., 2008).

Prevention Tier	Core Elements
Primary	<ul style="list-style-type: none"> • Behavioral expectations are defined • Behavioral expectations are taught • Reward system established for appropriate behavior • Consequences established for problem behavior • Collection and use of data for decision-making
Secondary	<ul style="list-style-type: none"> • Universal screening • Progress monitoring for students at risk • System for increasing structure and predictability • System for increasing contingent adult feedback • System for linking academic and behavioral performance • System for increasing home/school communication • Collection and use of data for decision-making
Tertiary	<ul style="list-style-type: none"> • Functional Behavioral Assessment • Team-based comprehensive assessment • Linking of academic and behavior supports • Individualized intervention based on assessment information focusing on (a) prevention of problem contexts, (b) instruction on functionally equivalent skills, and instruction on desired performance skills, (c) strategies for placing problem behavior on extinction, (d) strategies for enhancing contingency reward of desired behavior, and (e) use of negative or safety consequences if needed. • Collection and use of data for decision-making

Figure 3. Core prevention elements of Positive Behavior Interventions and Supports.

Paraphrasing Horner et al. (2014), there are five stages of implementation for PBIS:

- Exploration, in which schools review any need for change, examine what options are available for achieving the desired change, and determining the practicality of alternatives to current practices;
- Installation, in which any key features such as job descriptions, schedules, etc. needed in order for the new practice to be implemented are identified. It is also in this stage that the school identifies the path to make these effective practices fit within the local social, cultural, geographic, and political contexts;

- Initial Implementation, in which documentation of any practices actually being possible and producing the promised outcomes, and including the capacity for expansion;
- Full Implementation, in which at least one tier, but preferably all three tiers, is implemented with high fidelity. It is also required for implementation to be considered ‘full’ that a high proportion of the schools in the area adopt PBIS. Also in this stage is the establishment of training, evaluation, and coaching to improve the practices; and
- Innovation and Sustainability, in which continuous improvement is searched out in order to have ongoing implementation with fidelity.

In order to begin the implementation of PBIS, a school must begin the process with a self-assessment in order to determine what, if any, core elements of the framework are already in place. Using the results of this self-assessment, an implementation plan is chosen that builds on strengths already existing within the school (Horner et al., 2014). A team of approximately eight members of school employees will then participate in a training of two to three days under the leadership of experienced trainers. This team is made up of administrators, classified staff, and general and special education teachers. This training continues for the same number of days as in-service in each of two years (Hoyle et al., 2011). Schools implementing PBIS focus on three to five behavioral expectations that are easy to remember and stated in a positive manner. Effective expectations must be age appropriate (in language and what is expected), specific and observable, positively stated as to what students should do instead of what they should not do (walk in the hall, listen when others are talking), easy to understand, and enforceable (Reinke et

al., 2013). An example of an expectation for schools currently implementing PBIS is “Be Respectful, Be Responsible, Be Safe.” The use of this common language makes generalizations across the school setting easier.

When the team determines the behavioral expectations created based on the needs of the school, the information is passed along to the staff in order to have at least 80% of the staff buy into the program. Uniformity across the school is vital for successful implementation of PBIS. The team then creates a matrix of the behavioral expectations. This matrix has approximately three to five positively stated examples for each area. Figure 4 shows an example of a school-wide PBIS matrix as presented in the school’s handbook.

	Hallways	Cafeteria	Recess	Assemblies	Bathroom	Library
Be Safe	<ul style="list-style-type: none"> • Use rails for support • Walk • Stay to the right (right is right) • Stay in personal space 	<ul style="list-style-type: none"> • Hands to yourself • Voice level 0 or 1 or 2 • Walking feet • Follow line-up directions 	<ul style="list-style-type: none"> • Hands to yourself, unless playing tag • Follow equipment use instructions 	<ul style="list-style-type: none"> • Enter in a line • Keep hands and feet to self • Follow directions 	<ul style="list-style-type: none"> • Use hand washing procedure • Flush the toilet • Walking feet • Use water to wash hands 	<ul style="list-style-type: none"> • Keep hands and feet and objects to yourself • Enter and exit in a line • Walking feet
Be Respectful	<ul style="list-style-type: none"> • Voice level 0 or 1 • Wave silently to friends • Hats off 	<ul style="list-style-type: none"> • Take turns • Say please & thank you • Use plastic ware • Follow cleanup directions 	<ul style="list-style-type: none"> • Follow line-up procedure • You can use any voice level • Take turns on equipment • Use appropriate language 	<ul style="list-style-type: none"> • Use polite cheering (voice level 0, 1, 2, 3) • Quiet feet • Stand during pledge • Say pledge (or be quiet) 	<ul style="list-style-type: none"> • Clean up after yourself • Keep hands, feet and eyes to yourself • Wait patiently 	<ul style="list-style-type: none"> • Voice level 0 or 1 • Follow adult directions • Sit in small chairs or on the rug
Be Responsible	<ul style="list-style-type: none"> • Enjoy wall displays with your eyes • Empty mouths 	<ul style="list-style-type: none"> • Wait patiently • Pick up trash • Use talk & squawk • Stay in your seat 	<ul style="list-style-type: none"> • Follow snow play procedure • Pick up your own trash • Wait patiently for turn • Use talk, walk, & squawk 	<ul style="list-style-type: none"> • Class sits in designated spot • After the class’s turn, return to the designated spot 	<ul style="list-style-type: none"> • Go back to class to when you’re done • Voice level 0 or 1 • Pick up your own trash 	<ul style="list-style-type: none"> • Return books on time • Stay in personal space • Use library time to search for or read books • Wait patiently to check books in and out

Figure 4. School-wide PBIS matrix example.

Another crucial activity for the PBIS team is to determine the manner in which the behavioral expectations are to be taught. Many schools choose to use several days at the onset of

the school year to take the students around the school to specific locations, where the skills are taught in context. For example, students may be taken to the lunchroom and taught the appropriate behaviors from the matrix in the actual setting for which the behaviors are desired.

The PBIS team also begins the improvement of the office discipline referral (ODR) form. Minor infractions are typically handled by the teacher within the classroom, unless the behaviors are repeated and there is no response from the student to the teacher's disciplinary actions. Major infractions automatically result in an office discipline referral. An example of minor and major infraction definitions is identified in Figure 5.

Problem Behavior	Definition
Minor	
Disrespect/ Non-compliance	Student engages in brief or low-intensity failure to respond to adult requests.
Disruption	Student engages in low-intensity, but inappropriate disruption.
Electronic Device/Technology	Student engages in non-serious, but inappropriate use of cell phone, computer, camera, or other technology device.
Inappropriate Language	Student delivers low-intensity verbal messages/gestures that include swearing, name calling, or use of words in an inappropriate way.
Major	
Fighting	Always a major behavior Immediate Office Referral
Cheating	
Harassment/Bullying	
Theft	
Vandalism	
Out of Area	
Weapons	
Tobacco/Alcohol/Drugs	
Disrespect/ Non-compliance	Student engages in sustained or high-intensity failure to respond to adult requests.
Disruption	Student engages in sustained or high-intensity disruption. Behavior causing an interruption in a class activity. Disruption includes sustained loud talk, yelling, or screaming; noise with materials; horseplay or roughhousing; and/or sustained out-of-seat behavior.
Electronic Device/Technology	Student engages in serious and inappropriate use of cell phone, computer, or other technology equipment.
Inappropriate Language	Student delivers abusive, profane verbal messages/gestures that include swearing, name calling, or use of words in an inappropriate way and directed at others.

Figure 5. Office referral form definitions.

Consistency from every teacher is important for this component. The team must also determine a program of rewards for the exhibition of desired behaviors. The rewards serve to label appropriate behaviors. A reward example is some sort of “bucks” that can be exchanged for particular incentives, such as extra recess or a good phone call home.

Many schools are also recognizing the importance of carrying PBIS over into other non-classroom settings besides those housed within the school building (Cressey, Whitcomb, McGilvray-Rivet, Morrison, & Shandler-Reynolds, 2014). Buses that transport students to and from schools are being included in the implementation, depending on the needs of the school (Goodman-Scott, 2013). Much like the expectations that are posted within the school building, buses have a set of expectations that are posted at the front of the bus. Figure 6 shows an example of an expectation matrix for appropriate bus behavior. These expectations are taught and rewarded just as they are at the school level.

	<i>BE RESPONSIBLE</i>	<i>BE RESPECTFUL</i>	<i>BE SAFE</i>
At the Bus Stop/Bus Loading Area	<ul style="list-style-type: none"> • Arrive 5 minutes before designated pick-up time • Bring your belongings with you 	<ul style="list-style-type: none"> • Respect others' feelings, space, and belongings 	<ul style="list-style-type: none"> • Stay a safe distance from the street • Wait until bus stops before approaching bus
Boarding the Bus	<ul style="list-style-type: none"> • Board in a single file line • Go to your assigned seat 	<ul style="list-style-type: none"> • Line up calmly and quietly • Respect others' feelings, space, and belongings 	<ul style="list-style-type: none"> • Wait for driver's signal before boarding
On the Bus	<ul style="list-style-type: none"> • Stay in your assigned seat • No eating, drinking, or chewing gum • Leave the bus in the same or better condition than you found it 	<ul style="list-style-type: none"> • Follow the bus driver's directions • Use an indoor voice • Use respectful language • Respect others' feelings, space, and belongings 	<ul style="list-style-type: none"> • Stay seated and face forward at all times • Keep hands and head inside the bus • Keep aisle and emergency exits clear of obstructions • Stay seated until the bus stops
Leaving the Bus	<ul style="list-style-type: none"> • Take all belongings • Exit in a single file line • Go directly to your designated area 	<ul style="list-style-type: none"> • Exit the bus calmly and quietly • Respect others' feelings, space, and belongings 	<ul style="list-style-type: none"> • Cross the street 10 feet in front of the bus • Exit the bus at your assigned stop

Figure 6. Bus PBIS matrix example.

The financial aspect of PBIS is relatively low. The OSEP Technical Assistance Center for PBIS supplies many of the materials for training and implementation at no cost (“SWPBIS for Beginners”, 2015). The framework is adaptable to the climate and culture of each

implementing school, and since it is complimentary to strategies already being implemented, it is a welcome addition to teach desired behavioral practices (Pas & Bradshaw, 2012).

Sustainability of PBIS, defined by McIntosh, Campbell, Carter, and Dickey as the “potential for durable implementation with high fidelity, when considering features of the practice, its implementation, and the context of implementation,” is a key factor in the success of PBIS as a long-term effective approach. This sustainability stems from particular school-based practices including: staff commitment, meaning that the entire staff, not simply administration, facilitate the integration of the PBIS practices school-wide; support from administrators, assuring the staff that their continued implementation will be supported; integration of practices into existing and new efforts, determining how the practices will contribute to the desired outcome; and the availability of ongoing resources in order to reduce the challenge of PBIS being viewed as a short-term initiative. All of these factors are topped off by the uses of data for decision making for sustained implementation (2009).

In order to move the PBIS approach forward as an evidence-based practice, a more rigorous evaluation is needed (McIntosh et al., 2013; Pas & Bradshaw, 2012). Although much research is still needed to assess PBIS implementation, efficacy, and effectiveness, there appears to be a growing body of evidence to suggest many K-12 professionals are adopting this approach (Horner et al., 2014; Miramontes et al., 2011; Utey & Obiakor, 2012; Reinke et al., 2012; Reynolds, 2012; Sullivan et al., 2011).

Summary

When chronic problem behaviors occur in schools, the tendency is to react with stringent and restrictive consequences. Recently, however, emphasis has moved toward more proactive

prevention strategies (Dunlop, 2013; Lampron & Gonsoulin, 2013). Corporal punishment as used in the past to control student behavior and improve school climate is fading away. Schools are searching for more preventative measures to manage challenging behavior and make schools a safer and better place for students and staff alike.

Based on the principles of Thorndike, Watson, and Skinner, an approach is emerging that implements positive reinforcements for good behavior and avoids the negative and reactive consequences that have often been the basis of school discipline systems. PPBIS is a proactive, rather than reactive, approach that allows school systems to effectively support student behavior. While there is research available supporting PBIS at the elementary level, few studies have examined the impact of implementation at the middle school level on both attendance rates and office discipline referrals (Caldarella et al., 2011; Lane et al., 2012). PBIS appears to be an approach with the potential to impact student behavior and possibly attendance, but more studies are needed to establish confirmatory evidence (Putnam et al., 2012).

CHAPTER THREE: METHODS

Overview

Using chi-square test and an independent samples *t*-test, collected data was analyzed to examine the impact, if any, that PBIS has on attendance rates and office discipline referrals for middle school students. Data was retrieved from Infinite Campus and PowerSchool student information systems on a population chosen through convenience sampling. Two schools served as the treatment group implementing PBIS, and two schools served as the control group not implementing PBIS.

Design

The purpose of this study was to determine the impact of PBIS on attendance rates and office discipline referrals for middle school students. In order to determine this, a quasi-experimental causal-comparative design, also known as ex post facto, using chi-square test was used to analyze null hypotheses 1 and 3, and an independent samples *t*-test was used to analyze null hypothesis 2.

Research Questions

This study will attempt to answer the following research questions:

RQ1: Is there an impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports?

RQ2: Is there an impact on the number of office discipline referrals for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports?

RQ3: Is there an impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports, while controlling for gender?

Hypotheses

In addressing the research questions, the researcher will reject or fail to reject the following null hypotheses:

H₀1: There will be no impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports.

H₀2: There will be no impact on the number of office discipline referrals for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports.

H₀3: There will be no impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports, while controlling for gender.

Participants and Setting

The participants for the study were chosen through a convenience sampling of middle school students in three school systems located in southeastern Georgia. Convenience sampling was chosen as the treatment of PBIS was out of the researcher's control and the participants were readily available (Warner, 2013). A sample size for quasi-experimental designs requires at least 15 participants per group (Campbell & Stanley, 1963). Statistical power was also taken into account.

Each group in this study met the parameters of middle class income. The treatment group included students from two schools within one school system. The system was located in a county with a population of 30,077 residents. Of the residents, the median household income was \$36,496, with 20.6% of the population living below the poverty line (United States Census Bureau, 2014). The participants in the treatment group attended one of two schools, both of which neither met AYP during the time period of the data collected, nor were they Title I schools (GaDOE, 2014). Both of these schools began implementation of PBIS in the 2009 school year. Data was collected from the 2011–2014 school years. These years were chosen because the treatment group had received the treatment of PBIS for two full years prior to data collection. During the time of implementation, students in the treatment group were given the expectations of “Be Respectful, Be Responsible, Be Safe.” They were taught what was expected during implementation. Posters with the expectations were posted in numerous places throughout the school for high visibility for the students. When students exhibited behaviors listed in the expectations, they were given “bucks,” small pieces of paper much like Monopoly money that they collected each month. Bucks could be given at any location in the school by any school employee. At the end of the month, a PBIS store was open to students to spend their earned bucks. Items in the store ranged from pencils and erasers to school pennants and paraphernalia. Students could choose to keep their bucks instead of spending them in order to buy the larger items at later time in the year when they had enough saved.

The control group included students from two schools in two separate districts. One district had a population of 16,624 residents. Of the residents, the median household income was \$40,044, with 20.8% of the population living below the poverty line. The other district had a

population of 33,157 residents. Of the residents, the median household income was \$63,818, with 12.1% of the population living below the poverty line (United States Census Bureau, 2014). The participants in the control group attended one of two schools, both of which made AYP during the time period of data collected, and one of the schools was labeled Title I. The participants in the control group received typical behavior management instruction. Rules were posted in each classroom, and these rules were taught to the students by the teachers. Failure to adhere to these rules resulted in consequences such as the loss of free time during the day and/or office referrals. No tangible reward was given to the participants for exhibiting the desired behaviors as expected with the given class and school rules. Table 1 gives the demographic enrollment for both the treatment and control groups. Table 2 shows the enrollment for both groups based on socioeconomic status.

Table 1

Enrollment by Demographics

Year	Race	Treatment		Control	
		School A	School B	School C	School D
		<i>n</i> = 606	<i>n</i> = 693	<i>n</i> = 1,527	<i>n</i> = 748
2011-2012	Hispanic	7%	6%	9%	9%
	American Indian	<1%	<1%	<1%	<1%
	Asian	<1%	<1%	2%	1%
	Black	19%	20%	15%	26%
	Pacific Islander	<1%	<1%	<1%	<1%
	White	71%	70%	69%	52%
	Two or more	3%	3%	4%	11%
		<i>n</i> = 640	<i>n</i> = 649	<i>n</i> = 1,568	<i>n</i> = 768
2012-2013	Hispanic	7%	7%	8%	10%
	American Indian	<1%	<1%	<1%	<1%
	Asian	<1%	<1%	3%	3%
	Black	21%	21%	15%	15%
	Pacific Islander	<1%	<1%	<1%	<1%
	White	66%	68%	69%	68%
	Two or more	5%	3%	5%	5%
		<i>n</i> = 692	<i>n</i> = 650	<i>n</i> = 1,625	<i>n</i> = 804
2013-2014	Hispanic	7%	6%	15%	16%
	American Indian	1%	1%	<1%	<1%
	Asian	1%	2%	<1%	1%
	Black	21%	23%	26%	24%
	Pacific Islander	<1%	<1%	<1%	<1%
	White	66%	65%	51%	52%
	Two or more	3%	4%	7%	8%

Note. GaDOE (2014).

Table 2

Enrollment by Socioeconomic Status: Percent Free/Reduced Lunch

Year	Treatment		Control	
	School A	School B	School C	School D
2011-2012	66	61	28	65
2012-2013	66	66	32	72
2013-2014	67	66	32	73

Note. GaDOE (2014).

Instrumentation

The instruments used for data collection on the dependent variables of office discipline referrals and attendance rates were Infinite Campus (IC) and PowerSchool. School personnel at each site received training for their respective information systems to ensure the reliability of the office discipline referrals. Both were computer-based information systems that provide the precise number of office discipline referrals and number of absences per year, behavior of specific groups of students, behaviors in specific settings, and behaviors during specific times of day. They also provide attendance management and tracking. The number of office discipline referrals and number of absences per group ranged from 0+.

IC and PowerSchool have been evaluated in comparison to other measures of behavior and deemed a valid and reliable measure of problem behavior (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004; Tobin & Sugai, 1999; Walker, Cheney, Stage, & Blum, 2005). IC is the largest American-owned student information system. Founded in 1993, IC is used in more than 2,000 school systems in 42 states, managing 6.5 million students. It has been chosen as a Top 100 Product for 2014 by District Administration magazine. It provides districts with the integrated tools needed to streamline administration, facilitate stakeholder collaboration, and individualize

instruction. It records attendance for every student, as well as a detailed account of office discipline referrals (Infinite Campus, Inc., 2010). Appendix C shows a sample report from IC.

PowerSchool by Pearson, developed in 1997, is the fastest growing student information system. It was designed to help school personnel use office referral data to design school-wide and individual student interventions, as well as track and manage student attendance (Pearson, 2012). The elements of PowerSchool provide school personnel the data necessary to evaluate individual student behavior, behavior of specific groups of students, behaviors in specific settings, and behaviors during specific time periods of the school day. Its reports indicate times and/or locations prone to elicit problem behaviors, and allow teachers and administrators to shape school-wide environments to maximize students' academic and social achievements. It currently serves 10 million students in all 50 states and over 65 countries. Appendix D shows a sample report from PowerSchool.

Procedures

Upon completion and submission of the Institutional Review Board (IRB) application and gaining approval, the execution of the research began. A letter and an email was sent to the superintendent of schools in each system in an attempt to gain permission to use the requested middle school student data from the school system for the study (see Appendix A). Upon approval, the PBIS administrator was contacted via email to retrieve attendance reports and office discipline referrals from Infinite Campus and PowerSchool for the academic school years 2011–2014. Data analysis commenced upon receipt of the IC and PowerSchool data.

The data collected was in the form of printed reports obtained from each school site by the researcher. Specifically, the requested data included: number of school-wide office discipline referrals, number of school-wide absences, and number of absences by gender

The requested data was the number of office discipline referrals per school year for 2011-2014, as well as the school-wide attendance reports of the total number of school days students missed by school year. All office discipline referrals were included in the analysis in order to test the effectiveness of PBIS on all levels of problem behavior in students.

Treatment fidelity was addressed through the use of Benchmarks of Quality (BoQ). This is a scoring form obtained from the PBIS website that is used by the PBIS coach and team at each treatment school site in order to assess critical elements of implementation. It is a 53-question form broken down into sections that address specific elements of fidelity in implementation. Once completed, the scored form was turned into the PBIS coordinator for further evaluation.

Data Analysis

Upon receipt of the data from the PBIS coordinator for each group, data analysis proceeded. Data analysis was conducted on each hypothesis separately. Based on Cohen's (1992) convention, $\alpha = .05$ and using the SPSS software, a chi-square test was conducted to determine if there was a statistically significant difference in attendance rates for the treatment and control groups, as well as when controlling for gender. The chi-square test was chosen because the data collected was categorical or frequency data, which suggested the use of a nonparametric statistical test to establish whether the research data in the form of frequency counts are distributed differently for different samples on a single variable of interest (Franke,

Ho, & Christie, 2012; Warner, 2013). An independent samples t-test was conducted to determine if there was a statistically significant difference in the number of office discipline referrals for each group. This analysis was chosen because the means of each independent group were being compared on a continuous variable (Fagerland, 2012).

CHAPTER FOUR: FINDINGS

Overview

Data was analyzed using chi-square testing and an independent samples *t*-test to reject or fail to reject each null hypothesis. Cohen's (1992) convention, $\alpha = .05$, was used for the chi-square tests. For the independent samples *t*-test, Levene's test for equality and Kolmogorov-Smirnov test for normality were used to help determine the impact of PBIS on attendance rates and office discipline referrals for middle school students.

Research Questions

This study attempted to answer the following research questions:

RQ1: Is there an impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports?

RQ2: Is there an impact on the number of office discipline referrals for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports?

RQ3: Is there an impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports, while controlling for gender?

Null Hypotheses

In addressing the research questions, the researcher rejected or failed to reject the following null hypotheses:

H₀1: There will be no impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports.

H₀2: There will be no impact on the number of office discipline referrals for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports.

H₀3: There will be no impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports, while controlling for gender.

Descriptive Statistics

The descriptive statistics were found through a convenience sampling of middle school students in three school systems located in southeastern Georgia. Convenience sampling was chosen, as the treatment of PBIS was out of the researcher's control and the participants were readily available (Warner, 2013). A sample size for quasi-experimental designs requires at least 15 participants per group (Campbell & Stanley, 1963).

Each group in the study met the parameters of middle class income. The treatment group from schools A and B included students from two schools within one school system. The system was located in a county with a population of 30,077 residents. The participants in the treatment group attended one of two schools, neither of which met AYP during the time period of the data collected, nor were they Title I schools (GaDOE, 2014). The control group from schools C and D included students from two schools in two separate districts. The participants in the control group attended one of two schools, both of which made AYP during the time period of data

collected, and one of the schools was labeled Title I. Table 1 shows the demographics of each school. Figure 7 shows the student population for each year 2011-2014 by school.

Table 1

Enrollment by Demographics

Year	Race	Treatment		Control	
		School A	School B	School C	School D
		<i>n</i> = 606	<i>n</i> = 693	<i>n</i> = 1,527	<i>n</i> = 748
2011-2012	Hispanic	7%	6%	9%	9%
	American Indian	<1%	<1%	<1%	<1%
	Asian	<1%	<1%	2%	1%
	Black	19%	20%	15%	26%
	Pacific Islander	<1%	<1%	<1%	<1%
	White	71%	70%	69%	52%
	Two or more	3%	3%	4%	11%
		<i>n</i> = 640	<i>n</i> = 649	<i>n</i> = 1,568	<i>n</i> = 768
2012-2013	Hispanic	7%	7%	8%	10%
	American Indian	<1%	<1%	<1%	<1%
	Asian	<1%	<1%	3%	3%
	Black	21%	21%	15%	15%
	Pacific Islander	<1%	<1%	<1%	<1%
	White	66%	68%	69%	68%
	Two or more	5%	3%	5%	5%
		<i>n</i> = 692	<i>n</i> = 650	<i>n</i> = 1,625	<i>n</i> = 804
2013-2014	Hispanic	7%	6%	15%	16%
	American Indian	1%	1%	<1%	<1%
	Asian	1%	2%	<1%	1%
	Black	21%	23%	26%	24%
	Pacific Islander	<1%	<1%	<1%	<1%
	White	66%	65%	51%	52%
	Two or more	3%	4%	7%	8%

Note. GaDOE (2014).

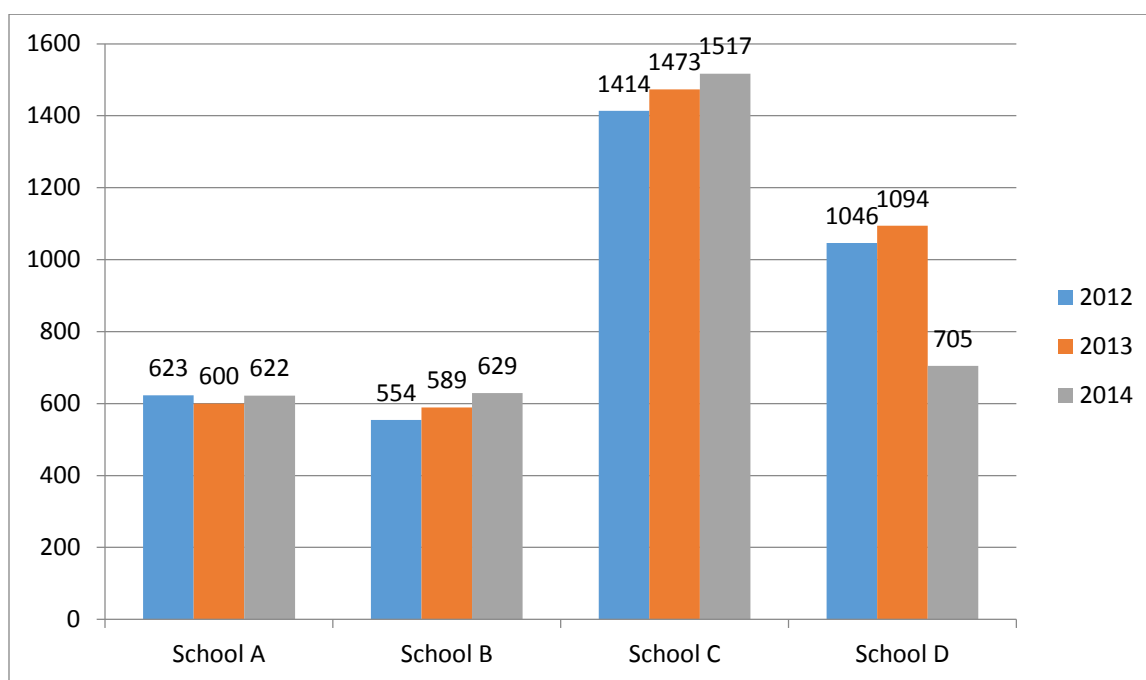


Figure 7. Student population by school GaDOE (2014).

Results

Hypotheses

A chi-square test was conducted to evaluate null hypothesis one, which states that there would be no impact on attendance rates for middle school students participating in PBIS as compared to middle school students not participating in PBIS. The independent variable was the treatment of PBIS, and the dependent variable was the number of student absences. When attendance rates were compared for students participating in PBIS versus students not participating in PBIS, χ^2 analysis confirmed a significant difference in attendance rates for students who participated in PBIS, $\chi^2(1, N=6) = 84.92, p < .01$. Table 3 shows the expected and observed counts.

Table 3

Absence expected and observed counts

	<i>No absences</i>	At least one absence
Treatment expected	420.2	3509.7
Treatment observed	571	3359
Control expected	752.8	6287.2
Control observed	602	6438

Based on the small p -value less than the conventional $\alpha = .05$, there is sufficient evidence to reject the null hypothesis and conclude that there is an impact on attendance rates for middle school students participating in PBIS as compared to middle school students not participating in PBIS. Table 4 shows the breakdown of absences by school.

Table 4

Number of Absences by School by Level

School	2011-2012			2012-2013			2013-2014		
	0	1-5	6+	0	1-5	6+	0	1-5	6+
School A	89	236	281	81	222	337	105	239	348
School B	112	259	322	109	207	333	75	235	340
School C	148	663	716	110	672	786	151	730	744
School D	73	305	370	60	265	443	60	282	462

An independent samples *t*-test for difference in means was conducted to evaluate null hypothesis two, which states that there was no impact on the number of office discipline referrals for middle school students participating in PBIS as compared to middle school students not participating in PBIS. The grouping variable is 1 = NON vs 2 = PBIS, and Total Disciplinary Actions were used from a given school for all three years. Levene's test for equality was significant, $F = 28.246$, $p < 0.001$, indicating the variances are not equal. Table 5 shows the tests for normality.

Table 5

Tests of Normality

Condition	Kolmogorov-Smirnov			Shapiro- Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DISCIP-TOT 1.00	.271	6	.191	.851	6	.133
2.00	.214	6	.200*	.915	6	.471

Results of Kolmogorov-Smirnov test for normality may be assumed. The descriptive statistics for the treatment group are $M = 369.83$, $SD = 118.92$, and for the control group are $M = 752.00$, $SD = 373.09$

The results of the independent samples t -test indicate that the null hypothesis cannot be rejected, $t(6) = 2.391$, $p = 0.054$, given the p -value is 0.054, which is slightly greater than the significance level of $\alpha = 0.05$. The null hypothesis is failed to be rejected indicating that there is not sufficient evidence to conclude that PBIS effectively reduces the number of discipline referrals for middle school students. Figure 8 shows the number of discipline referrals by school for both the treatment and control groups.

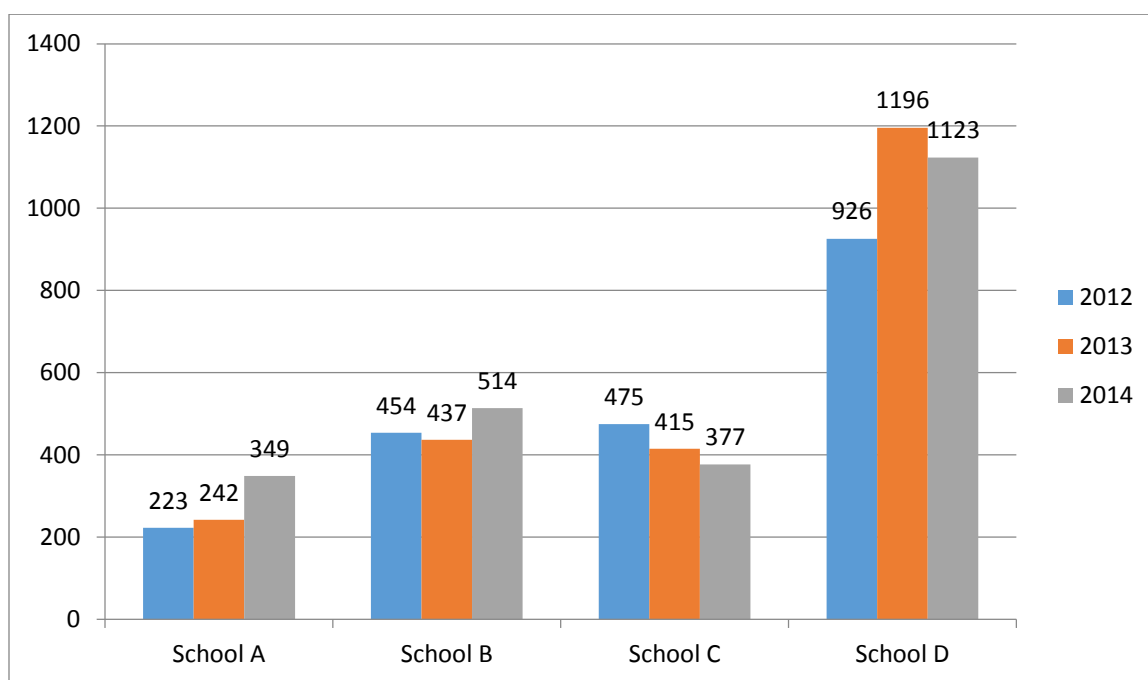


Figure 8. Number of discipline referrals by school.

A chi-square test was conducted to evaluate null hypothesis three, which states that there would be no impact on attendance rates for middle school students participating in PBIS as compared to middle school students not participating in PBIS, while controlling for gender. Analysis shows $\chi^2(1) = 4.61$, $p = 0.05$, indicating evidence of failure to reject the null hypothesis and conclude that there is not an impact on attendance rates for middle school students participating in PBIS as compared to middle school students not participating in PBIS, while controlling for gender. Table 6 indicates the number of absences by gender per school.

Table 6

Number of Absences by Gender

	Male			Female		
	2012	2013	2014	2012	2013	2014
School A	256	281	310	261	278	277
School B	304	271	292	277	269	283
School C	732	788	765	647	670	709
School D	362	384	401	313	324	343

CHAPTER FIVE: CONCLUSIONS

Overview

Although there is an abundance of research on the impact of PBIS on office discipline referrals at the elementary level, there has been little research conducted as to the impact of PBIS on attendance rates and office discipline referrals at the middle school level. The findings of this study indicate that PBIS does have an impact on attendance rates overall for middle school students, as evidenced by the rejection of H_01 , yet not when controlling for gender, as evidenced by the failure to reject H_03 . Past research shows that PBIS can be effective in impacting office discipline referrals for elementary students. However, as the findings show, the failure to reject H_02 indicates the same impact is not found at the middle school level. These results lead to the following implications, limitations, and recommendations for future research.

Discussion

The purpose of this quasi-experimental causal comparative study was to contribute to the current body of knowledge available to determine how the implementation of PBIS affects student attendance rates, defined as number of academic school days missed, and office discipline referrals, defined as an event, as observed by a school staff member, of a student violating a school rule, which results in submission of documentation to school administration for corrective action, at the middle school level. There have been numerous studies done to examine the effect of PBIS on office discipline referrals at the elementary level, but fewer studies have been found regarding the effect of PBIS on office discipline referrals at the middle school level, as well as on the impact of implementation on student attendance rates. This study specifically examined how PBIS impacted middle school attendance rates and office discipline

referrals for the school years 2011-2012, 2012-2013, and 2013-2014, with the control group receiving the treatment for five full academic years at the conclusion of the 2013-2014 academic year.

Null Hypothesis One

H_01 states there will be no impact on attendance rates for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports. Chi-square testing indicates the rejection of this null hypothesis. Research shows the importance of student attendance regarding academic outcomes. Academic success is more likely when students attend school consistently, as evidenced by stronger test performance for students with better attendance records (Flower, 2014; Gottfried, 2010). While research shows many negative impacts of chronic absenteeism, such as social isolation, dropout, and issues that carryover into adulthood, further research is needed into how best manage student attendance within schools (Kearney & Graczyk, 2014; Havik et al., 2015; Freeman et al., 2016). The rejection of H_01 contributes to filling the research gap. Through the implementation of PBIS, schools are teaching students the importance of responsibility, both personal and academic. Although the treatment group in this study did not specifically include attendance in the behavior matrix, it is the teaching of responsible behaviors and the moving to the intrinsic reward that most likely had the effect on student attendance rates when compared to the control group. Many schools that implement PBIS do include some sort of attendance reward although attendance is not directly tied to the behavior matrix utilized. Other studies have found that when comparing students in PBIS schools to students in non-PBIS schools there is an increase in average daily school

attendance (Johnson, Wang, Gilinsky, He, Carpenter, et al., 2013). Prior research across grade levels has shown the implementation of PBIS has been associated with improvements in attendance (Freeman, Simonsen, McCoach, Sugai, Lombardi, & Horner, 2016). The Georgia Department of Education includes attendance in the calculation of CCRPI scores for schools, with schools earning points for the percentage of students missing fewer than six days (2014). The rejection of H_01 shows the implementation of PBIS can be effective in increasing attendance rates for middle school students.

Null Hypotheses Two

H_02 states there will be no impact on the number of office discipline referrals for middle school students participating in Positive Behavior Interventions and Supports as compared to middle school students not participating in Positive Behavior Interventions and Supports. Results of the independent samples t -test for difference in means indicates the null hypothesis is failed to be rejected. This finding is contradictory to numerous studies on the effect PBIS has on office discipline referrals at the elementary level. Zehr (2011) states that 12 states provide strong support for PBIS implementation in elementary schools, and there is growing evidence that suggests many K-12 professionals are adopting this approach (Horner et al., 2014; Miramontes et al., 2011; Utey & Obiakor, 2012; Reinke et al., 2012; Reynold, 2012; Sullivan et al., 2011). However, McIntosh et al. (2013) as well as Pas & Bradshaw (2012) state that a more rigorous evaluation of PBIS is needed to move the approach forward as an evidence-based practice. The failure to reject H_02 contributes to this more rigorous evaluation and suggests that, while PBIS is effective for elementary students, there is a disconnection between the effects at the lower level and at the middle school level.

Research shows that the effect of PBIS on student discipline outcomes is significant and positive for schools implementing with fidelity (Freeman, et al., 2016). The BoQ, which was used to measure implementation fidelity in this study, is a more recently developed tool used by schools implementing PBIS. The spring 2014 BoQ from these schools was collected. This was chosen because it was the final analysis for the time period that the data was collected.

The BoQ is utilized by PBIS teams to evaluate the status of school-wide PBIS implementation and provide a tool to identify areas of strengths and areas of needed improvement. The 53 benchmarks, with subsets of 10 critical elements, allows teams to

- examine the fidelity of implementation at the Universal (Tier 1) level
- document the effectiveness of Tier 1 implementation
- identify Tier 1 strengths and weaknesses

A total score of 70% or higher provides a record of the school's overall fidelity of implementation (Michigan Department of Education, 2015). Table 7 shows the results of total points for the 2014 BoQ for Schools A and B. School A has an overall score of 84%, and School B has an overall score of 90%, indicating that both schools in the treatment group scored themselves as implementing PBIS with fidelity.

The BoQ was created in part to address concerns with the School-wide Evaluation Tool (SET). However, studies have shown that further research would be beneficial as to the predictive validity of the BoQ as a measurement of fidelity (Pas & Bradshaw, 2012). This could be a partial explanation of the contrary results of this study to numerous other studies. The use of the BoQ as a self-rated tool by the PBIS team could be misleading as to the actual fidelity of implementation. While the team may rate themselves as implementing with fidelity, it is actually

dependent upon the individual classroom teachers' interaction with the students (Mathews, McIntosh, Frank, & May, 2014). This could be where the fall-through happens in the lack of reduction of office discipline referrals for this study.

Table 7

Benchmarks of Quality Scores

Critical Element	School A	School B
PBIS Team	6	6
Faculty Commitment	4	5
Effective Procedures For Dealing With Discipline	11	11
Data Entry & Analysis Plan Established	6	6
Expectations & Rules Developed	10	11
Reward/Recognition Program Established	12	13
Lesson Plans for Teaching Expectations/Rules	7	8
Implementation Plan	11	12
Classroom Systems	12	12
Evaluation	11	12
Total	90/107	96/107

Null Hypothesis Three

H₀₃ states there will be no impact on attendance rates for middle school students participating in Positive Behavior Interventions and Support as compared to middle school students not participating in Positive Behavior Interventions and Supports, while controlling for gender. The results of the chi-square analysis yielded $p = .05$. Therefore, the researcher failed to reject the null hypothesis. However, the result is very close to the threshold for rejecting the null hypothesis, $p < .05$, which indicates that there could be an impact on attendance rates of middle

school students who participate in PBIS. The results show that PBIS students had better attendance, just not a statistically significant difference.

Implications

Due to the diversity of schools today educators need numerous tools to ensure that student learning occurs and achievement goals are met. Educators face many challenges in ensuring student achievement for all learners. Rules and legislations are making it increasingly difficult for teachers to meet the expectations placed upon them. National mandates such as AYP and CCRPI scores have forced educational institutions to reexamine the day-to-day management of schools, staff, and students in order to meet the requirements for student achievement, school climate, and student attendance.

Past research studies show student achievement to be directly related to student attendance and behavior. Each day that a student fails to attend school is a day of missed knowledge. Student attendance is considered essential for adaptive functioning in the cognitive and behavioral realms (Parke & Kanyongo, 2012). The NCLB legislation, as well as CCRPI place emphasis on the influence of attendance as an indicator of AYP and high index scores in middle school accountability (GaDOE, 2014; Spencer, 2009). Havik, Bru, and Ertesvag (2015) state that unexcused absences contribute to at least 20% of overall student absences.

According to Reinke et al. (2013), a substantial body of literature suggests that behavioral problems in schools across America are increasing. Stansberry-Brushnahan and Neilsen-Gatti (2009) stated challenging behaviors, ranging from the disruption of classroom teaching to physical violence, are safety and disciplinary concerns for schools nationwide. Nearly 50% of new teachers leave the profession within five years, many attributing student

misbehavior as the primary reason for leaving (Reinke et al., 2013). It has been found that a growing need exists for successful approaches to address challenging behavior, particularly at the middle school level (Lane, Oakes, Carter, & Messenger, 2015).

Schools throughout the United States are welcoming three-tiered models of prevention to improve student behavior at the elementary level (Robertson & Lane, 2007). However, less attention has been dedicated to the investigation of these three-tiered approaches at the middle school level (Lane et al., 2012). With American educational institutions facing financial difficulties, it is pertinent to make use of approaches that could possibly address more than one issue.

To analyze data for research question one on the impact of PBIS on attendance rates, the total number of student absences was collected for each school year 2011-2012, 2012-2013, and 2013-2014. The independent variable was the implementation of the PBIS treatment, and the dependent variable was the number of student absences. Chi-square testing shows that there is significant evidence to support that the implementation of PBIS at the middle school level makes an impact on student attendance.

To analyze the data for research question two on the impact of PBIS on office discipline referrals, an independent samples *t*-test indicates that there is significant evidence of failure to reject the null hypothesis, indicating that the implementation of PBIS at the middle school level does not have an impact on office discipline referrals.

To analyze data for research question three on the impact of PBIS on attendance rates when controlling for gender, the total number of student absences was collected for each school year 2011-2012, 2012-2013, and 2013-2014, as well as the number of student absences by

gender. The independent variable was the implementation of the PBIS treatment, and the dependent variable was the number of student absences based on gender. Chi-square testing indicated failure to reject the null hypothesis, but the result was very close. This result warrants further study to determine whether gender or some other factor influences attendance in a school implementing PBIS.

The findings of this study contribute to the current research available on PBIS and how its implementation impacts increasing attendance rates and decreasing office discipline referrals. While much research points to PBIS as an effective framework that is based on the behavioral theories of Thorndike, Watson, and Skinner, the findings of this study contradict other studies that have found the implementation of the framework to decrease office discipline referrals. However, the findings do indicate that PBIS is effective at increasing student attendance.

Corporal punishment has often been used to maintain order in schools and to create an environment in which the students receive a proper education. However, as schools have progressed there has been a movement away from corporal punishment as it has been used in the past (Lamping, 2011; Shmueli, 2010). Based on the principles of Thorndike, Watson, and Skinner, PBIS is a proactive, rather than reactive, approach that allows school systems to effectively support student behavior. While there is research available supporting PBIS at the elementary level, few studies have examined the impact of implementation at the middle school level on both attendance rates and office discipline referrals (Caldarella et al., 2011; Lane et al., 2012).

One of the indicators of CCRPI index scores adopted in 2012 is the number of students that miss fewer than six days. Attendance is a vital indicator of school-effectiveness and long-

term student outcomes (Freeman et al., 2016). As indicated by the data, the number of students missing six or more days is comparable to those that miss fewer than six days. The findings of this study indicate that PBIS makes a significant impact on attendance rates at the middle school level. However, the treatment does not seem to specifically target the students that impact the CCRPI attendance indicator. While schools can implement this approach in order to address attendance issues as the rejection of null hypothesis one suggests, more evidence is needed as to the best way to intentionally address those students that are missing six or more days of school each year.

Previous research has shown PBIS to be effective in reducing office discipline referrals at the elementary level. However, the failure to reject null hypothesis two indicates that the same impact is not found at the middle school level. When implemented with fidelity, the primary universal prevention tier should be applicable to approximately 89% of the student body. The secondary prevention tier should apply to approximately 11% of the student population, and the tertiary tier is designed to support students whose behaviors are serious enough to require more immediate and intensive support (Horner, 2007; Hoyle et al., 2011; McIntosh et al., 2009; Simonsen et al., 2008; Sugai, 2008; Sullivan et al., 2011). The three-tiered approach of PBIS, very similar to the three tiers of RtI, is not designed to target just one subgroup of the school population—it is designed to meet the behavioral needs of all students. This in turn should create a more positive school climate. PBIS has been shown to improve student behavior in the elementary grades, up to grade 5. Lane et al. (2015) suggested factors that may influence this decrease in the effectiveness of PBIS on students when moving from the elementary level to the middle school level. Middle school itself is a time of transition, but added with the greater

responsibility for managing their own learning, navigating their way through often larger schools with new and different behavioral and academic expectations, and getting accustomed to having 5-7 teachers as opposed to the 2 or 3 teachers they are used to at the elementary level can bring out new attitudes and behaviors in students that place them at risk for school failure.

A major factor that can impact the effectiveness of PBIS is the fidelity of implementation. Implementation quality is of importance because a framework such as PBIS must be delivered with quality to increase the probability of it producing the desired results (Malloy et al., 2013). It has been linked to factors such as characteristics of the individual and the school. While research indicates that PBIS implementation results in lowering the number of office discipline referrals students receive, it is the real-world implementation of a school-based framework that must be examined. This allows for a clearer understanding of the effects of the implementation.

One area that plays a key role in the proper implementation of PBIS is teacher buy-in. Teachers are at the core of effective PBIS implementation. They are the people that have the most impact on how students view and respond to PBIS. In many cases, however, teachers and schools are not given the choice of taking on PBIS; it is required of them in order to meet NCLB standards or gain points as part of CCRPI Exceeding the Bar indicator. This can often be seen as just one more thing to do for teachers, and they do the minimum required to get by without fully embracing the true meaning of PBIS. As a result, students and teachers alike are not seeing the increase in attendance and decrease in office discipline referrals.

Another area that can impact the effectiveness of PBIS implementation is the types of rewards that students are given when exhibiting the expected behaviors from the matrix.

Although it is recommended to obtain student input, many times students are not given a voice in what they would like to receive for the desired behaviors. As is often the case, the PBIS team decides before full implementation what the rewards will be, how they will be dispensed, and when they will be given. For middle school students, the rewards they would like are much different than students at the elementary level and sometimes very unlike what the adults think they would want. In order for PBIS to be effective, the rewards for the expected behaviors have to mean something to the students. Otherwise, there is no real incentive for them to actively participate and try to earn the rewards.

The effectiveness of the PBIS team also has an impact on the success of implementation. In order to assess the effectiveness of the PBIS team, the BoQ is completed annually to indicate what areas of implementation were successful and which need improvement. While the BoQ of a school may indicate that PBIS is implemented with fidelity, as was the case for both schools in the treatment group of this study, it is not an absolute indicator. While the PBIS team goes through an in-depth training to understand all the elements of the framework and prepare them for full implementation, teachers are trained by the team, but not as extensively in most cases. This means that there can be a gap in the team's perception of implementation and the teachers' perceptions of implementation. In order to address this, teams can use the Self-Assessment Survey (SAS).

The SAS is an annual assessment that schools can use in order to identify the perception of the staff of the status of implementation. It can also be used to identify priorities for improvement to assist in the team action plan. At least 80% of the staff should participate in the assessment in order to produce reliable results ("SWPBIS for Beginners", 2015). By using the

results of this survey, the team can identify any discrepancies in their perception of the implementation fidelity with that of the teachers' perceptions. Also, because the BoQ is a self-scored indicator, which could bring into question the validity of the final score each school gives itself, the SAS provides a clearer picture of the overall fidelity. Through the use of the BoQ, schools can examine themselves as to how to make the best use of its resources, identify areas for improvement, and work towards higher implementation quality in the future.

Barrett suggested ten ways to promote and sustain evidence-based practices that affect the implementation fidelity of PBIS (2006):

1. Schools must be honest about what issues and concerns are affecting their school climate. This can be done through the PBIS Self-Assessment Survey, BoQ, ODRs, climate surveys, and satisfaction surveys. The key is to share the data summaries with the faculty, staff, and PBIS team in order to move forward and address these issues.
2. Develop statements that are precise. This precision is critical to efficiency when resources are limited. These statements should answer the 5 "wh" questions: what, where, who, when, and why.
3. The data process must be clear. There must be a coherent process for teachers to follow concerning discipline. Behaviors and types of behaviors (major vs minor) must be defined, written procedures should be in place, a flow chart of the process should be available to all teachers, a uniform office referral form is essential, and there has to be time to discuss this process at faculty meetings. Also, a computer application, usually SWIS, needs to be utilized to quickly generate reports for data

- analysis to track data and assess what steps need to be taken to correct any student misbehavior.
4. Each year, there should be a recommitment to the framework. This is to regenerate teacher buy-in and keep everyone on track.
 5. A marketing plan should be place. This also is to help with the recommitment from year to year.
 6. Staff acknowledgement goes a long way. The purpose of PBIS is not only to improve the school climate for students, but for teachers also. Acknowledging staff lets them know they are an integral part of school improvement.
 7. Educating the staff about evidence-based practices gives them the tools they need to implement PBIS with fidelity.
 8. Become involved in the public – use the local newspaper and school website to highlight the good things going on at school. Make the public aware of PBIS and what it means for their children.
 9. Share effective practices with the staff. Interview teachers who are exemplary in implementation and pass the information on to others.
 10. Empower the staff to make buy-in easier. Provide a handbook that explains the ins and outs of PBIS implementation. Give them on-going coaching support to meet their needs.

The findings of this study contribute to the current body of knowledge by showing that, within the parameters of the schools used, the implementation of PBIS is a step in the right direction for schools wishing to increase student attendance. Although it was not effective at

reducing office discipline referrals for the particular groups used in this study, PBIS has been shown to have a positive impact on reducing office discipline referrals and creating a better school climate.

Limitations

The first limitation of this study is the findings cannot be generalized beyond the population of this study. The schools in the treatment group are in the same school district and were trained together for implementation of PBIS. The coaches of these schools worked closely together in planning and carrying out the implementation. As a result, this could have been a factor in the outcome of null hypothesis two, indicating that PBIS did not have an impact on office discipline referrals for the treatment group.

The second limitation of this study is the treatment being out of the researcher's control. Participants had to be chosen by convenience sampling based on the implementation of PBIS beginning in 2009. The available selection of schools in southeast Georgia fitting that criteria at the time this study began was limited.

A third limitation of this study is the possibility of the schools in the control group inadvertently implementing one or more factors of PBIS. While the control schools did not overtly offer the reward system as outlined in PBIS implementation, it is possible that some teachers made use of student rewards at the classroom level that did not arch over into the school-wide realm. There was nothing officially labeled as PBIS within the control schools at either the school-wide or classroom level, but that does not completely eliminate the possibility that something similar to PBIS was being utilized in some area.

The fourth limitation of this study goes back to the fidelity and level of treatment. While the BoQ for each of the treatment schools indicates that PBIS was implemented with fidelity, it is not a 100% guarantee that the scores given by the team members were a true reflection of what was happening within the classrooms regarding the teaching of expectations and rewarding of the desired behaviors. The schools in the treatment group were instructed to begin the process of implementation of PBIS in 2009. There was no choice in whether to participate or not. Many teachers did not completely buy-in to the entire process necessary for full implementation with fidelity. In other words, although all of the visual evidence of implementation was in place (expectations posted, flowchart of discipline process in view, etc.) to have the appearance of full buy-in, it really comes down to the extent that each individual teacher took part in the process of teaching expected behaviors and rewarding those behaviors in the appropriate manner.

The fact that one of the schools in the control group went from being a grades 4-8 campus to a grades 6-8 campus during the time of this study is the fifth limitation that could have impacted the results. Beginning with the 2013-2014 school year, the school underwent a restructuring. Students in grades 4 and 5 were moved to another school, leaving School D to house only students in grades 6-8. Due to the small size of the county, the demographics of the school were not significantly impacted by the separation, which should not have significantly impacted the results of this study.

Recommendations for Future Research

As a result of the findings of this study, it is recommended that future research examines the factors that contribute to the decline in the impact of PBIS at the middle school level on office discipline referrals when numerous studies indicate it is effective at the elementary level.

There is a lack of research to fill the gap of what causes the breakdown in the effectiveness from grades 1-5 to the ineffectiveness in grades 6-8 and possibly beyond. PBIS is implemented at elementary, middle, and high schools across the United States, with financial resources being utilized in an attempt to correct problem behaviors to create a better school climate and possibly increase student achievement. The economic burdens facing education today do not allow resources to be poured into a plan or framework that does not produce the desired results.

It is also recommended that future research examines the impact of PBIS on different levels of office discipline referrals. Schools implementing PBIS have specifications of what constitutes a major or minor referral. It is possible that PBIS does not have a significant impact on the overall number of office discipline referrals per year, as evidenced in this study, but that it makes a significant difference when considering the referrals at different levels. The utilization of school-wide information systems makes data readily available as to the types of referrals that occur daily, breaking down where and when the most offenses take place so these issues can be addressed.

Another recommendation for future research is the examination of the effect of PBIS on office discipline referrals at tier 1, tier 2, and tier 3 separately. The discipline counts for this study included school-wide ODRs as a whole. It would be of interest to evaluate the impact of the individualized recommendations and accommodations at tiers 2 and 3 on the number of office referrals these students receive. Based on the review of literature, it is the tier 2 and tier 3 students exhibiting the most problematic behaviors that are more likely to experience the negative long-term effects of their behavior.

The final recommendation for future research is to examine how PBIS impacts the different levels of absences: low (1-5 absences), middle (6-15 absences), and high (16+ absences). As shown in this study, PBIS does have a significant impact on student attendance rates as a whole. However, it would be of interest to determine if there is a level of absence that is more greatly impacted by the treatment than another level. It is also of interest to determine if the levels of absences are affected by the variable of gender, as gender did not have an impact on overall attendance rates for the treatment and control groups in this study.

Positive Behavior Interventions and Supports offers schools of all types a framework for decreasing office discipline referrals and increasing student attendance rates. Much like RtI, it is designed to provide support for students at all levels, with support increasing and becoming more individualized as students move up within the tiers. Based in the theories of Thorndike, Watson, and Skinner, PBIS has emerged in the recent past with the focus of implementing positive reinforcements for good behavior and avoiding the negative and reactive consequences that have often been the basis of school discipline systems.

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APPENDIX A: Formal Letter Forthcoming Pending IRB Approval

XX XXXXXX XXXXX
XXXXXXXXXXXX, GA XXXXX
December 10, 2014

Dr. XXX
XXXXXXX
XXXXXXX

Dear Dr. XXX,

I am currently a doctoral student at Liberty University, Lynchburg, VA. I am seeking permission to conduct a study involving XXXXXXX Middle School and XXXXXXX Middle School within the XXXXX County school district. The study will examine the effect of Positive Behavior Interventions and Supports on office discipline referrals and attendance rates. The data for this study will be collected through Infinite Campus and PowerSchool and will pose minimal risk to any students due to confidentiality in the identification of individual students. The PBIS coordinator for your district will be contacted to retrieve the data from the computer information systems for the school years 2011-2012, 2012-2013, and 2013-2014. After the data is analyzed, it will be stored in a locked fire proof safe for no more than three years, after which time it will be destroyed.

If you have any questions or concerns, please feel free to contact me via email at xxxx@xxxxxxxxxxxxxxxx or phone at XXX-XXX-XXXX. Thank you for your timely consideration in this matter.

Thank you,
Amy Gill
Liberty University

APPENDIX B: Designing Schoolwide Systems for Student Success

Image found at <https://www.pbis.org/resource/451/designing-school-wide-systems-for-student-success>.

APPENDIX C: Infinite Campus Sample Report

06-07 Amesse Elementary School 5440 Scranton St, Denver CO 80239 Generated on 03/19/2007 10:19:53 AM Page 1 of 11	Attendance/Membership Report Start/End Date: 07/10/2006 - 06/22/2007 School(s): 1 Calendar(s): 1 Grade: EC ,00 ,01 ,02 ,03 ,04 ,05
--	---

School: Amesse Elementary School Calendar: 292 06-07

	Grade	Student Count	Membership Days	Absent Days	Present Days	ADM	ADA	Unexcused Absences		Percent In Attendance
								Days	Avg. Daily	
	EC	34	5822	61.0	5761.0	33.84	33.50	27.00	0.18	98.95%
	00	107	16907	385.5	16521.5	98.31	96.06	243.50	1.42	97.72%
	01	109	15994	378.0	15616.0	92.96	90.78	219.50	1.30	97.64%
	02	105	16543	287.5	16255.5	96.20	94.47	189.00	1.14	98.26%
	03	75	10874	258.0	10616.0	63.21	61.71	157.50	0.94	97.63%
	04	82	12097	293.5	11803.5	70.34	68.62	180.00	1.10	97.57%
	05	78	12224	292.0	11932.0	71.08	69.36	201.00	1.19	97.61%
Total		7 590	90461	1955.5	88505.5	525.94	514.50	1217.50	7.27	97.84%

APPENDIX D: PowerSchool Sample Report

Attendance Summary By Grade

School Name Here 0123456
Run Date/Time: 2/26/14 3:18 PM
02/10/2014 to 03/07/2014 = 16 days

Grade Level	Carry Fwd	Gain	Loss	Ending	Actual Days	OffTrack	Days N/E	Days Ineligible	Days Absent	Days Attd	ADA	ADA %
6	140	0	0	140	2240	0	0	0	11.00	2229.00	139.31	99.51%
SubTotal	140	0	0	140	2240	0	0	0	11.00	2229.00	139.31	99.51%
7	137	0	0	137	2192	0	0	0	17.00	2175.00	135.94	99.22%
8	140	0	0	140	2240	0	0	0	26.00	2214.00	138.38	98.84%
SubTotal	277	0	0	277	4432	0	0	0	43.00	4389.00	274.31	99.03%
Grand Total	417	0	0	417	6672	0	0	0	54.00	6618.00	413.62	99.19%

To the best of my knowledge,
the above attendance information is correct.

Signed _____

Date _____

Report Calculations

$((\text{Carry Fwd} + \text{Gain}) \times \text{School Days}) = \text{Actual Days}$

$\text{Actual Days} - (\text{Off Track} + \text{Days N/E} + \text{Days Ineligible} + \text{Days Absent}) = \text{Days Attd}$

$[\text{Days Attd} / (\text{Actual Days} - \text{Off Track} - \text{Days N/E} - \text{Days Ineligible})] \times 100 = \text{ADA\%}$