IMPACT OF POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS ON AT-RISK, BLACK MALE STUDENTS' ACADEMIC PERFORMANCE

by

Sandra Adomako Letterlough

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

Black male students have experienced disproportionate disciplinary actions at higher rates compared to male students of other races, which has an at-risk effect on academic achievement because of lost instructional time, poor student-teacher relationships, and decreased motivation to learn. Implementing Positive Behavior Intervention and Supports (PBIS) could help to reduce the time spent out of class due to a disciplinary issue, thus increasing the opportunity to learn. The purpose of this causal-comparative study was to determine the impact of PBIS on academic achievement and frequency of office disciplinary referrals (ODR) in a PBIS and non-PBIS alternative middle school. The sample consisted of 54 eighth grade Black male students, 24 who attended a PBIS and 30 who attended a non-PBIS middle school during the 2013-2014 school year. The researcher collected and analyzed data from both groups, which involved the examination of archival data to determine the mean test scores on the 2014 Georgia Criterion Referenced Competency Test (CRCT) Grade 8, Reading and Mathematics. This study examined if there was a statistically significant difference in mean test scores and frequencies of ODR between a PBIS and non-PBIS alternative middle school. Results of this study determined that there is no statistically significant difference in the academic achievement and frequency of ODRs in eighth grade Black male students who attended a PBIS or non-PBIS alternative middle school.

Keywords: at-risk, Black male students, PBIS, CRCT, student behavior, student discipline, academic achievement, middle school, OSS, ISS, ODR

Dedication

I want to dedicate my dissertation to Jay and my children, Isaiah and Jojo. This has been a journey we have taken together and I thank you all for the love, prayers, patience, and understanding you have shown me over the years. I also want to dedicate this to my father, Paul Yaw Adomako; I hope that he is proud of my accomplishment as looks down upon me from Heaven. I also want to dedicate this dissertation to my mother, Victoria Danso Adomako; she has encouraged every step of the way and I appreciate the support she has given me. I want to thank my brothers- Paul Kwaku Adomako, I cannot thank you enough for the recommendations, feedback, and encouragement you have provided me through this process, and Jason Adomako, your support will never be forgotten. Finally, Auntie Jennifer thank you for your persistence in holding me accountable from start to finish, you have been my personal cheerleader. My love goes out to all my family and friends from Canada to the United States and all the way to Ghana and back again, the prayers and encouragement I have received and the belief you all had in me, provided me with the strength to proudly complete my degree. Thank you again to M.S., M.A., K.W., K.D, O.W, B.D, S.W, P.D, A.L., P.L., D.B., T.E., T.W., S.F, C.B., T.J., V.M., E.W., C.W., G.J., V.D, A.C, E.W.M., Y.H., D.C., D.P.E., V.R., S.I., T.B, and D.W., if I left you off, please know it was not intentional and you are in my heart.

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Joshua 1:9 (ESV) "Have I not commanded you? Be strong and courageous. Do not be frightened, and do not be dismayed, for the Lord your God *is* with you wherever you go."

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List of Abbreviations

Alternative Education Setting (AES)

Behavior Education Program (BEP)

Civil Rights Data Collection (CRDC)

Criterion-Referenced Competency Test (CRCT)

Full Academic Year (FAY)

Full Time Equivalent (FTE)

Georgia Performance Standards (GPS)

In-School-Suspension (ISS)

Institutional Review Board (IRB)

No Child Left Behind Act (NCLB)

Office Discipline Referrals (ODR)

Out-of-School-Suspension (OSS)

Positive Behavior Interventions and Supports (PBIS)

U.S. Department of Education (US ED)

CHAPTER ONE: INTRODUCTION

Overview

Student misbehavior should be a concern among all stakeholders in education. Classroom disruptions can lead to missed learning opportunities for not only the disruptive students but for all students in the classroom who had their learning interrupted (Algozzine et al., 2012; Skiba et al., 2014; Sun & Shek, 2013). Lost instructional time can adversely affect academic performance on state, district, and local assessments for all students involved, which is a concern for teachers, administrators, district leaders, parents, community members, and state officials. This chapter will introduce how student misbehavior can negatively affect student learning, how a behavior management strategy could increase the desirable behaviors of students as well as student academic achievement, and will provide an overview of the study methodology.

Background

Disruptive classroom behavior continues to present significant challenges for schools; some of these challenges include teacher burnout, decrease in class learning time, additional administrative attention, and threat to classroom order (Aloe, Shisler, Norris, Nickerson, & Rinker, 2014; Kulinna, 2007; Milner & Tenore, 2010; Reinke et al., 2014). Teacher attrition rates have risen to 23% among new teachers. Classroom misbehavior along with other factors contributes to teacher attrition by creating an undesirable workplace environment increasing likelihood teacher burnout (Larson, 2016; Shernoff et al., 2011). An increasing number of students have difficulties with academic performance, behavioral expectations, or both, which has negatively affected effective classroom instruction and opportunities for student learning (Rathvon, 2008; Shernoff et al., 2011). When disruptive students are removed from class, they

miss instruction, which can lead to increased deficiencies in subjects such as reading, and math, contribute to school failure (Landrum, Scott, & Lingo, 2011; Thompson & Webber, 2010). Noltemeyer, Ward, and Mcloughlin (2015) found increased possibility for long-term and short-term academic detrimental effects for students who misbehave in the classroom.

The correlation between behavior management and student achievement has been documented in many research studies (Brandt, Chitiyo, & May, 2014; Glass, 2014; Polirstok & Gottlieb, 2006; Zimmermann, Schütte, Taskinen, & Köller, 2013). According to McCurdy, Kunsch, and Reibstein (2007) schools have been faced with the challenge of providing efficient behavior strategies to promote success for all students. However, this challenge has been exacerbated by a range of school and community-based factors, such as restrictions on resources, the availability and use of illegal drugs, violence, and gang activity. In combination, these factors can make it difficult for educators to provide effective instruction, affecting student success (Glass, 2014; McCurdy et al., 2007). Miles and Stipek (2006) asserted many disruptive students were academically unsuccessful because "it is difficult to learn when you are spending more time in discipline-related interactions than in those related to learning academic content" (p.105). Algozzine, Wang, and Violette (2011) corroborated a negative relationship between academic achievement and students with behavior disorders. Their research revealed students with existing behavior disorders performed from one to two years below grade level and their achievement problems persisted throughout their education (Algozzine et al., 2011). In his study of student behavior, Boulden (2010) reported students who misbehave in the classroom are not only negatively affecting their own learning, but they are negatively affecting the learning of the whole class, because it takes the teachers' attention from instruction. These studies are examples of the adverse findings regarding school discipline challenges and academic achievement.

Teachers have classroom management strategies divided into two primary patterns, reactive or proactive, and both can have beneficial or detrimental impacts on student behavior (Reinke, Herman, & Stormont, 2013). Reactive strategies follow inappropriate behavior and provide consequences, while proactive strategies use a preventative logic intended to reduce inappropriate student behavior. An example of a proactive strategy many schools are adopting is "Positive Behavior Interventions and Supports [PBIS] to create environments that support social and learning outcomes and in doing so prevent the occurrence of problem behaviors" (Trussell, 2008, p. 179). PBIS is a framework designed to provide school-wide positive behavior supports, defined as a "data-driven, team-based framework or approach for establishing a continuum of effective behavioral practices and systems," (Sugai, Simonsen, & Horner, 2008, p. 5).

PBIS is a research-based alternative approach to discipline, which has less detrimental punitive consequences to disciplinary problems compared to the traditional approach to discipline (Cressey, Whitcomb, McGilvray-Rivet, Morrison, & Shander-Reynolds, 2014; Lassen, Steele, & Sailor, 2006; Lewis & Sugai, 1999; Netzel & Eber, 2003). PBIS has two goals: the first goal is to prevent the development or increase of problem behaviors, and the second goal is to encourage the teaching as well as reinforcement of positive expectations for and appropriate behavior from students by all members of staff (Flannery, Frank, McGrath Kato, Doren, & Fenning, 2013; Sadler & Sugai, 2009; Thompson & Webber, 2010). With the correct implementation of PBIS, schools should have a decrease in disciplinary offenses for classroom disruptions, which should increase academic achievement because students will not lose classroom instruction.

Student behavior problems exist among all ethnic groups, ability levels, across gender and socioeconomic backgrounds, and are present in public and private schools (Barrett,

Bradshaw, & Lewis-Palmer, 2008; Horner, Sugai, & Anderson, 2010). Many researchers have documented the disproportionate disciplinary actions that at-risk, eighth-grade, Black male students experienced compared to students of other races (Cramer & Bennett, 2015; Kunesh & Noltemeyer, 2015; Vincent, Tobin, Hawken, & Frank, 2012). Losen (2013) found Black students were more likely to be disciplined for less serious offenses that could have been handled in the classroom. Other studies summarized Black students have higher suspension rates than their White counterparts, which leads Black males to miss instruction and can negatively influence student academic achievement (Boneshefski & Runge, 2014; Milner & Tenore, 2010). Black male students have been negatively impacted by the inequitable disciplinary consequences received because of classroom behavior.

Student misbehavior and discipline can affect society and the education community in a variety of ways. Lewis and Sugai (1999) reported, "82% of crimes are committed by people who have dropped out of school" (p.1). Researchers surmised students who were punitively punished had an increased chance to exhibit more aggressive behavior, which led to vandalism, tardiness, truancy, and dropping out of school (Lassen et al., 2006; Lewis & Sugai, 1999; Skiba et al., 2014). Several researchers proposed that exclusionary or punitive discipline could increase problem behaviors in students, lower academic achievement, and create a negative school climate. Osher, Bear, Sprague, and Doyle's (2010) work was consistent with previous studies; however, they expanded on the presentation of their peers by stating punitive disciplinary actions only presented a short-term fix and did not correct student behavior. In 2014 Mergler, Vargas, and Caldwell reaffirmed patterns of student failure, increased dropout rates, and eventual involvement with the juvenile justice system to negative discipline practices involving student removal from the classroom. These researchers ascertained that these types of exclusionary

discipline practices cause students more harm than good, which can have negative lasting effects. These findings are supported by Monahan, VanDerhei, Bechtold, and Cauffman (2014) that showed students who were removed from school for disciplinary reasons had an increased risk for interaction with the justice system. Additionally, VanDerhei et al. proposed, if suspended or expelled students were unsupervised by a suitable guardian, they are more likely to be involved in criminal behavior.

Social cognitive theory and operant conditioning, an extension of behaviorism, undergird the theoretical framework of this study. Social cognitive theory relates to student behavior and discipline differently than behaviorism because it "emphasizes the environmental, non-biological influences on behavior and the importance of learning from watching other people in this environment" (Miller, 2011, p. 236). Eggen and Kauchak (1999) defined social cognitive theory as examining "the process involved as people learn from observing others and gradually acquire control over their own behavior" (p. 218). Students follow this learning pattern in developing social behavior in schools.

The behaviorist theory relates to student misbehavior and discipline because it views learning as "a relatively enduring change in observable behavior that occurs as a result of experience" (Eggen & Kauchak, 1999, p. 197). Operant conditioning, a term coined by B. F. Skinner, is an extension of behaviorism in which learning occurs as a consequence of the behavior (Eggen & Kauchak, 1999). Skinner's approach to behavior modification proposed effective and immediate positive reinforcement will increase the probability that the appropriate behavior will be repeated (Bucher & Manning, 2001). Operant conditioning can change student misbehavior because students can learn new acceptable behaviors with positive reinforcement.

Having an effective school-wide management system for disruptive student behaviors is

imperative for schools (Brandt et al., 2014; Crone & Horner, 2003; Lewis & Sugai, 1999). Schools must use school-wide management systems with fidelity to have a positive impact on student behavior and discipline. Schools often place a greater emphasis on dealing with individual students who misbehave rather than focusing on the prevention of the misbehaviors, which occur in and outside of the classroom (Bambara, Goh, Kern, & Caskie, 2012; Gage, Sugai, Lewis, & Brzozowy, 2015; Safran & Oswald, 2003). Miles and Stipek (2006) concluded, students with aggressive behaviors could have their learning negatively affected because when these students are removed from class as a result of their behavior they "reduce the amount of time engaged in meaningful learning activities" (p. 104). Student removal from class may alleviate the current situation; however, it may negatively affect the student learning, which can lead to undesirable outcomes.

Problem Statement

The effect of disciplinary issues on the academic success of at-risk, eighth-grade, Black male students in an alternative school setting presents a challenge to teachers and school leaders. A common theme in the research indicates Black male students are academically at-risk because of disproportionate disciplinary practices resulting in academic failure, grade level retention, and increased dropout rates (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010; Cramer & Bennett, 2015; Fenning & Rose, 2007; Gregory, Skiba, & Noguera, 2010). A copiousness amount of research documents the benefits of PBIS and behavior of students' middle school settings; however, there is a gap in the literature regarding PBIS' benefits and potential effects on academic success for Black middle school male students in an alternative school setting (Bradshaw et al., 2010; Gregory et al., 2010; Milner & Tenore, 2010; Skiba et al., 2014). Researchers have recommended further studies on implementing culturally responsive behavior

interventions, such as PBIS, in urban schools to encourage positive behaviors and increase academic achievement among Black students (Cramer & Bennett, 2015; Lanier & Glasson, 2014; Larson, 2016; Welch & Payne, 2010). The problem is that as cultural diversity increases within schools, the traditional approach to discipline does not support the needs of all learners; therefore, research is needed to support the implementation of PBIS as a non-punitive approach to discipline (Carswell, Hanlon, Watts, & O'Grady, 2014; Edgar-Smith & Baugher Palmer, 2015; Skiba et al., 2014).

Purpose Statement

The purpose of this causal-comparative study is to determine the impact PBIS on the academic success of at-risk, eighth-grade, Black male students in an alternative school setting. PBIS is a behavior management framework used in schools to reinforce positive behavior strategies and interventions to students to improve behavior. This study sought to determine if PBIS has influenced the 2014 Criterion-Referenced Competency Test (CRCT) Grade 8 Reading and Mathematics mean scores of at-risk, eighth-grade, Black male students in an alternative school setting in the third year following its implementation. This study analyzed the mean test scores of the 2014 CRCT Grade 8 Reading and Mathematics tests of Black male students who attended two alternative middle schools, one which had implemented PBIS and the other which had not. An independent sample *t* test was used to compare the differences in the mean test scores of the two groups of students. This study also analyzed the frequency of office disciplinary referrals at both locations to determine if PBIS has had an influence on the outcome. PBIS is defined as the independent variable that will cause a difference in the dependent variable. The 2014 CRCT Grade 8 Reading and Mathematics mean scores are defined as the dependent variable. The CRCT is a standardized criterion-referenced assessment previously

used in Georgia to measure the academic knowledge and skills acquired by students. The population studied in this research was at-risk, eighth-grade, Black male students who attended northeastern Georgia alternative schools. These students were full academic year (FAY) students who took the CRCT during the 2014 Spring administration. This researcher hoped to determine whether the implementation of PBIS affected student achievement scores on the CRCT because of changes in motivation and behavior among students. The results from this study support and add to the body of research on the academic effects of PBIS. This study also addressed the gap in the literature on how PBIS can affect the academic achievement of Black male middle-students in an alternative school.

Significance of the Study

Several studies have identified the need for additional behavior management strategies for Black students in a classroom setting (Carswell et al., 2014; Lanier & Glasson, 2014; Larson, 2016; Xie, Dawes, Wurster, & Shi, 2013). Many studies have documented the use of suspensions has been disproportionately applied to Black students, and Black males who are economically disadvantaged are at a higher risk (Noltemeyer et al., 2015; Skiba et al., 2011; Sullivan, Klingbeil, & Van Norman, 2013). Kinsler (2011) calculated in the 2000-2001 school year Black students accounted for 34% of out of school suspensions; however, Black students only made up 17% of students in U.S. schools. This overrepresentation of Black students warrants additional support for behavior management programs (Cramer & Bennett, 2015; Monahan et al., 2014; Vincent et al., 2012). Literature on PBIS and the effects on office discipline referrals (ODR) and academic achievement can be found; however, there is very little research on the effect PBIS has on academic achievement of Black students (Horner et al. 2014; Mergler et al., 2014; Skiba et al. 2014; Vincent et al., 2012).

The findings from this study address the gap in literature and identify the effects of PBIS on the academic achievement of at-risk, eighth-grade, Black male students in an alternative school. This study contributed to the existing body of knowledge because it investigated a potential solution for the disproportionate disciplinary rates of Black students, which negatively affects academic achievement by interrupting the learning process (Flower, McDaniel, & Jolivette, 2011; Lane, Oakes, Carter, & Messenger, 2015; Swain-Bradway, Swoszowski, Boden, & Sprague, 2013). The implementation of PBIS can positively affect student behavior at any school, because this behavior management framework proactively prepares students to make better choices by reinforcing positive behaviors with fidelity.

Research Questions

The research questions for the study are:

RQ1: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS have a higher mean score on the 2014 CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

RQ2: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements in PBIS have a higher mean score on the 2014 CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

RQ3: Is there a significant difference between the frequencies of office discipline referrals for at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS compared to at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

Definitions

1. *Alternative education setting* - A non-traditional school option for students at risk of academic failure or chronic discipline referrals in the traditional school setting. These schools can be classified simply using two characteristics: how they serve students and the type of students they serve (Genao, 2014; Wilkerson, Afacan, Yan, Justin, & Datar, 2016).
2. *At-risk students* - Students whose past and present conditions make learning, school engagement, and life outcomes problematic because of their higher probability of failure (James, 2012).
3. *Full-Time Equivalent (FTE)* – State funding provided to local school boards in Georgia that provide educational services and programs to students in seventeen categories based on the number of enrolled segments during the school day (Georgia Department of Education, 2018).
4. *Georgia Criterion-Referenced Competency Test (CRCT)* - An assessment designed to measure how well students acquire the skills and knowledge outlined in the state standards in Georgia (Georgia Department of Education, 2013b).
5. *In-School-Suspension (ISS)* - A temporary removal of a student from the regular classroom setting for disruptive behavior or other disciplinary concern, however, the student remains under the direct supervision of school personnel (U.S. Department of Education [US ED], 2014b).
6. *Office Disciplinary Referral (ODR)* - Written documentation reporting an occurrence of an observed problem behavior by a student who violates a school rule (Brandt et al., 2014; Sprague, Sugai, Horner, & Walker, 1999).

7. *Out-of-School-Suspension (OSS)* - A temporary removal from school for students who disrupt the quality of education or threaten the safety of other students (Monahan et al., 2014).
8. *Positive Behavior Interventions and Supports (PBIS)* - A proactive, antecedent-based approach to school discipline that involves: 1) clarifying teacher expectations, and teaching these expectations to the student body and 2) reinforcing students who meet the expectation (Bohanon, Flannery, Malloy, & Fenning, 2009).

CHAPTER TWO: LITERATURE REVIEW

Overview

Student misbehavior can negatively influence the classroom learning environment in several different ways. Classroom disruptions caused by student misbehavior can interrupt learning opportunities for all students in the classroom. Tsouloupas, Carson, and Matthews (2014) described how student misbehavior inhibits the ability of teachers to continue to teach by causing teachers to: 1) disrupt the lesson to address inappropriate behaviors, 2) attempt to restore order to the classroom after the classroom disruption, and 3) necessitate regaining composure before they resume teaching. Student misbehavior can also lead to less instructional time for disruptive students who are removed from the classroom. Several researchers agreed, when students are not in the classroom learning, their academic achievement and opportunity to learn suffers; they also concluded removing disruptive students from the classroom does not solve the problem but rather increases student misbehavior (Edgar-Smith & Baugher Palmer, 2015; Miles & Stipek, 2006; Milner & Tenore, 2010; Owen, Wettach, & Hoffman, 2015; Sherrod, Getch & Ziomek-Daigle, 2009).

Per the report released by the Civil Rights Data Collection (CRDC) in the 2011-2012 school year, more than 3.1 million students were suspended from public school for one or more days (US ED, 2014b). This loss of instructional time resulting from student misconduct can never fully be recovered after students have been suspended from school, even when they return to school from suspension. In their previous research, Skiba et al. (2014) suggested schools needed to consider innovative ways to address classroom management and non-traditional disciplinary approaches to manage student misbehavior because students learn best when they are in the classroom. Sherrod et al. (2009) and Vincent, Randall, Cartledge, Tobin and Swain-

Bradway (2011) agreed conventional attempts to address problem behaviors were often ineffective and may have essentially contributed to these misbehaviors. With increased school accountability, it is important that schools restructure their discipline plans and procedures to create a positive change in students by creating safe and orderly classroom environments (Algozzine, Wang, & Violette, 2011; American Academy of Pediatrics, 2013; Frey, Lingo, & Nelson, 2008; Sherrod et al., 2009; Van Stone, 2013).

The purpose of this study was to determine the effect Positive Behavior Interventions and Supports (PBIS) has on the academic achievement of at-risk, eighth-grade, Black male students in an alternative school setting (Cramer & Bennett, 2015). The focus of this literature review was a critical examination of articles describing a) classroom management, b) academic failure of at-risk students, c) discipline spectrum, d) discipline gap, e) alternative education, and f) PBIS. As suggested by Creswell (2012), this literature review presents results of similar studies related to PBIS, related to this present study in the current discourse of PBIS among researchers, and provides a framework for comparing these results with the results of other studies about the impact of PBIS on academic achievement. The theoretical framework used in this study drove the review of literature, the purpose for this research, collection of data, analysis and interpretation of the data, and reporting and evaluating the research (Creswell, 2012).

Theoretical Framework

The approach to educational research is influenced by theories that explain the phenomenon being studied (Lodico, Spalding, & Voegtle, 2010). As such, social cognitive theory and operant conditioning, serve as foundational frameworks for this study. Both theories explain aspects of how individuals learn, how motivation is achieved and how these factors influence human behavior.

Social Cognitive Theory

Social cognitive theory (SCT) is based on Albert Bandura's research on the three different ways people learn: observation, modeling, and imitation of others (Eggen & Kauchak, 1999). Bandura determined people learn through observing the behavior, attitudes, and outcomes of these behaviors of others (Bandura, 1991). Researchers Nabi and Clark (2008) stated Bandura's social cognitive theory centers on the "functions and processes of vicarious learning" (p. 409). The main precept of this theory posits that people not only learn from their own lived experiences, but they also learn from observing the actions of others and the results of those actions. This theory emphasizes the importance of observing and modeling behavior, attitudes, and emotional reactions of others. Through observational learning, people may formulate their own rules to guide their behavior. This theory explains student behavior in the interaction between cognitive, behavioral, and environmental influences, while focusing on the learning that occurs within a social context.

Social cognitive theory relates to PBIS research because it describes behavior as the interaction of behavioral, environmental, and cognitive effects, which can be learned, not only by imitating the observed behavior of others, but also by other processes within a social context (Miller, 2011; Simonsen & Sugai, 2013). Social cognitive theory focuses on teaching appropriate behavior through modeling and positively reinforcing students for acceptable behaviors. Faculty and staff members work together to establish specific procedures and expectations, which students should follow and will allow time for students to practice and learn these behaviors. School leaders can use a variety of strategies to help reinforce appropriate behaviors: daily announcements, videos, and signs posted around the school building to remind students of the school rules and expectations.

Bandura's (1965; 1977) social cognitive theory asserted people learn behaviors through observing and modeling the behaviors of other individuals. In classrooms, students can adopt behavior patterns from directly observing the behavior of other students and the consequences for their behavior. Through these observations, students are enabled to construct ideas as to how behaviors are performed (Bandura, 1977). Traditionally, school-wide discipline has primarily focused on reacting to student misbehavior with punitive consequences, such as loss of privileges, removal from classroom, office referrals, suspensions, and expulsions. The problem with this approach to school-wide discipline is that many misbehaviors have already taken place. PBIS attempts to create a school climate where students are aware of the specific unacceptable behaviors and the consequences for misbehaviors through a proactive approach of modeling appropriate behavior.

Human behavior can be learned observationally through modeling. A person is able to form an idea of how these new behaviors are performed and on later occasions, this coded information serves as a guide for action (Bandura, 1991). Faculty, staff, and school personnel model desired behaviors using the PBIS approach (Horner et al., 2014; Putnam & Knoster, 2016; Swain-Bradway, Pinkney, & Flannery, 2015). Effective modeling consists of four components: attention, retention, reproduction and motivation. The attention a student pays to observed behaviors can increase or decrease depending on many factors. Individual characteristics including arousal level and past reinforcement affect attention. Retention includes remembering what one paid attention to which includes coding, mental images and cognitive organization (Bandura, 1991; Eggen & Kauchak, 1999; McIntosh, Kelm, & Canizal Delabra, 2016). Reproduction occurs when students can reproduce a desired image or behavior. A student's physical capabilities and self-observations guide their ability to reproduce. Finally, motivation

deals with incentives and past behaviors. Students will be more likely to continue a desired behavior if they are motivated to do so.

Self-efficacy and self-regulated learning relate to PBIS because they are the two primary variables that make up the social cognitive theory (Pajares & Valiante, 2002; Ross, Romer, & Horner, 2012). Bandura (1991) stated a person's self-efficacy as an inner confidence, measured by one's capability of participating in an activity or achieving a given goal. Students must recognize an achievable goal to have the confidence they can reach this goal. Achievable goals are often small goals that lead to larger ones, as students reach mini-goals, their self-efficacy expands and extended goals are possible (Hamre et al., 2013; Pajares & Valiante, 2002; Reinke, Herman, & Stormont, 2013). With regards to positive school behavior, students may not begin with high self-efficacy; however, as students achieve greater success through making positive choices, self-efficacy grows until they begin to believe they can reach positive behavior goals.

Another aspect of the social cognitive theory is self-regulated learning. Researchers Erlich and Russ-Eft (2011) explained self-regulated learning describes the action of students taking responsibility for their learning. To be successful in self-regulating, students must learn new strategies to apply to their learning, which correlates to student behavior because these students are motivated to succeed (Nota, Soresi, & Zimmerman, 2004; Putnam & Knoster, 2016). Students who want to improve their school behavior need strategies to apply to different situations they may encounter. As students receive positive reinforcement for applying these newly learned strategies, they are more apt to try other ones. Self-regulated learning involves self-monitoring behavior and self-reflection of consequences both good and bad (Bandura, 1991; Parks Ennis & Jolivette, 2014).

Skinner's Operant Conditioning

B. F. Skinner's operant conditioning theory is based on the use of extrinsic influences such as rewards and punishments to change or shape behavior (Miller, 2011). Operant conditioning theory explains the deliberate behavior or operant enacted as humans learn to interact with their environment (Tracey & Morrow, 2006). Skinner's research revealed when the frequency of a behavior was increased because of favorable stimuli, positive reinforcement occurred (Miller, 2011). Skinner held the belief of rewarding positive behavior with positive reinforcement while enforcing negative reinforcement when misbehavior occurs (Miller, 2011). Through operant conditioning theory, the belief is that it is possible to shape or change behavior as people react to their environment and this reaction is based on consequences that have either positive or negative outcomes

Since operant conditioning theory is based on extrinsic influences such as rewards and punishments as means to change behavior, it can be useful for understanding PBIS's reward system to change students' behaviors. Teachers use PBIS in their classrooms to identify student behavioral objectives and explicitly teach these behavior expectations to their students to ensure understanding. Learning strategies such as modeling, repetition, and monitoring help to foster their students' understanding of the expected behaviors within the classroom (Miller, 2011). Rewards are given to students for making positive behavioral choices as a means of reinforcement and manipulation of behavior. Students in many PBIS schools can earn tokens or tickets for positive behaviors which can be turned in for prizes; they can also be taken away when negative behaviors are displayed (Doll, McLaughlin, & Barretto, 2013; McIntosh et al., 2016).

Using the operant conditioning theory lens, the reinforcement used to reward positive

behavior choices provides a foundational understanding of using PBIS as a behavior management system. Teachers choose desired behavioral goals for students and then teach these behaviors through direct instruction (Horner & Sugai, 2015; Reinke, Stormont, Herman, Wachsmuth, & Newcomer, 2015; Thornton, 2015). Teachers regularly revisit the desired behavioral goal with their students to promote consistency and understanding. Direct instruction of behavioral goals is a necessary component to aid students in learning appropriate classroom behaviors (Reinke et al., 2013). Behavioral instruction by a classroom teacher relates to operant conditioning because it concentrates student attention on the wanted behavioral goals and shows students how to master them (Altman & Linton, 1971). Teachers are aware of the goals they desire for their students; however, these behaviors should not be expected until they have been taught (Altman & Linton, 1971). Teachers need to understand the individual needs of students to support learning and based on this understanding; teachers need to provide direct instruction ensuring all students know expected behaviors. PBIS supports this notion with reinforcement of students' positive behavioral choices.

Related Literature

Classroom Management

Student learning can be negatively impacted intentionally or unintentionally by disruptive student classroom behavior can unintentionally or intentionally (Hattie, 2009). The misbehavior of students not only negatively influences their own learning but it also influences the learning outcomes for the other students in the class (Reinke et al., 2014). An established classroom management system to reduce classroom disruptions is necessary to maintain a learning environment that will benefit all students.

Teacher's role. A teacher's role in effective classroom management is very important in

determining how students behave in that classroom. Teachers need to be able teach and manage classrooms which may have students with significant learning and behavioral problems (Hafen, Ruzek, Gregory, Allen, & Mikami, 2015; Lewis & Sugai, 1999; Reinke et al., 2015; Ross et al., 2012). Through various teaching programs, some teachers may be teaching in unfamiliar communities and are expected to work in conditions which they may find challenging.

Some teachers believe a child's behavior develops by environmental influences, and they are more likely to use strategies for changing behaviors or actions of the students in the classroom. Furthermore, these teachers are also more likely to take responsibility for establishing effective classroom management procedures (Tillery, Varjas, Meyers, & Collins, 2010; Van Stone, 2013). Alvarez (2007) discovered that teachers who believed a child's behavior was established through nature rather than nurture, were not be as effective in changing undesirable student behavior. His study further suggested that because of limited teacher training in classroom management in teacher preparation programs, teachers are ill equipped to establish classroom management procedures among their students, which can lead to negative student behaviors.

Teacher-student relationship. Research has indicated student behavior, academic success and school engagement can be positively impacted by a close teacher-student relationship (Masten, 2001; Schwab, Johnson, Ansley, Houchins, & Varjas, 2016; Tsai & Cheney, 2012). The dynamics of a teacher-student relationship can play an important role in a student's school outcome. Positive teacher-student relationships have been shown to be an important factor to decrease student behavior problems, abuse of drug/alcohol and dropout rates (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Schwab et.al, 2016). Students who can form positive relationships with teachers are more engaged in learning, while students who

are unable to form positive relationship with teachers have a higher likelihood of problem behaviors and decreased self-worth (Hamre & Pianta, 2001). Teachers form unique connections with each of their students, which can affect student outcomes positively or negatively, therefore it is critical teachers to be able to establish relationships that promote a positive learning environment.

Pianta, Steinberg, and Rollins (1995) proposed three distinctive elements of teacher-student relationships: closeness, conflict and dependency. More recent evidence by Schwab et al. (2016) supported research that found students who reported positive relationships with their teachers were more likely to perform better academically than students without positive teacher-student relationships (Murray & Zvoch, 2011; Tsai & Cheney, 2012). Some studies have shown a close positive teacher-student relationship can also result in students having better social skills, increased belief in their learning ability and school engagement. Pianta and Stuhlman (2004) determined, if a teacher experienced conflict with a student, a negative teacher-student relationship would develop, which could result in students experiencing more problem behaviors, lower academic success and more likely to be suspended for disciplinary infractions (Tsouloupas et al., 2014). Students who experienced a negative teacher-student relationship did not feel a connection to their school and would subsequently display increased problem behaviors within the classroom. Finally, if a teacher feels a student is exceedingly dependent upon them, this would form a negative teacher-student relationship because the student was unable to make progress independently (Sabol & Pianta, 2012).

The research on the characteristics of negative teacher-student relationships conducted by McGrath and Van Bergen (2015) indicated that older students were more likely to form negative teacher-student relationships compared to younger students. This suggests that younger students

may not have experienced as many negative interactions with teachers as the older students; thus, they are less likely to form negative relationships with teachers (Tsouloupas et al., 2014). Marks (2000) also noted that older students were not as engaged in their academic work compared to younger students, consequently increasing the likelihood teachers are more willing to nurture younger students than older students, thus forming positive teacher-student relationships. Younger students are more engaged in learning and pleasing their teachers, so they are more likely to engage in their academic work. McGrath and Van Bergen acknowledged that boys were more likely to experience negative teacher-student relationships compare to girls. Many researchers have found the teacher-student relationship for girls is vastly different from boys. Girls form tighter relationships with their teachers, while boys form confrontational relationships with their teachers (Buyse, Verschueren, & Doumen, 2011; Jerome, Hamre, & Pianta, 2009). Because of the more positive relationship experienced by girls, more academic support is given to them compared to boys. Boys who experience negative teacher relationships could result in the following outcomes: decreased engagement, increased school avoidance, increased academic and behavioral problems (Birch & Ladd, 1997; Furrer & Skinner, 2003; Hafen et al., 2015; Marks, 2000).

Negative teacher-student relationships are more likely to be experienced by high-poverty, minority students rather than low-poverty, minority students (Murray & Zvoch, 2011). Students with behavioral issues are least likely to form positive teacher-student relationships. Teacher-student relationships of inferior quality are also experienced from low-achieving students compared to the higher-quality relationships formed by high-achieving students (McGrath & Van Bergen, 2015). Students who exhibit more than one of these characteristics are at a higher risk for forming negative teacher-student relationships. Teacher-student relationships

significantly effect a student's school experience because it influences the development of social, emotional, behavioral and academic skills (Farmer, McAuliffe Lines, & Hamm, 2011; Murray & Zvoch, 2011; Roorda, Koomen, Split, & Oort, 2011; Tsouloupas et al., 2014). Research on teacher-student relationships have an impact on a student's school success or failure, and studies have shown students whom benefit from positive teacher-student relationships are the ones who are most academically successful at school.

Classroom environment. Classroom organization and structure contribute to positive classroom environments and preventing problem behaviors. Trussell (2008) stated, teachers can create positive learning environments by displaying student work inside and outside of the classroom. Banks (2014) also stated, displaying student work publicly acknowledges the work done by the student meets or exceeds expectation and the teacher is proud of the student's effort. Trussell pointed out classrooms with fewer physical barriers creates a positive learning environment because students are able walk around the classroom without bumping into each other or the teacher, which can cause a class disruption. Teachers can rearrange classrooms to provide enough space for students to move around without encroaching on another student's space (Banks, 2014; Trussell, 2008). Crowded classrooms can lead to potential problem behaviors that could have negative results, therefore by arranging classrooms free of disorder and confusion can positively affect all students.

Grothaus (2013) reported behavioral issues could be avoided if classrooms were setup in an orderly manner with established rules and expectations that remained consistent for all students throughout the year. Trussell (2008) had similar findings and concluded that when classroom rules were not clearly stated, students would not be able to follow these rules because of its lack of clarity. Classroom environments with ambiguous rules and expectations will

contribute to undesired student behavior that can then develop into a stronghold for problem behaviors. Conroy, Sutherland, Snyder and Marsh (2008) agreed that students benefited from posted classroom rules and that when students are systematically taught classroom rules, a positive learning environment can be fostered. Teachers can also effectively influence the classroom environment by monitoring and rewarding their students when they follow the classroom and give out consequences to students who do not follow the rules (Hilberth & Slate, 2014).

Classrooms with a clearly visible, consistently posted schedule can positively impacts student behavior (Banks, 2014; Trussell 2008). Classrooms void of a posted daily schedule unknowingly encouraged disruptive behavior because students took advantage of unscheduled time. By posting a daily schedule, teachers are in control of student transition in and outside of the classroom, which can decrease the likelihood of disruptive student behavior. Students can also benefit when expected "procedures are well thought out and clearly taught" (Trussell, 2008, p. 182). Demirdag (2015) noted students are learners who cannot be expected to always to act appropriately in the classroom; educators also have the responsibility to explicitly teach students expected classroom behavior, thus reducing the number of problem behaviors and increasing student-learning opportunities.

A positive classroom environment created through classroom interventions will decrease the number of problem behaviors within the classroom, however it will not completely eradicate the problem, teachers need to consistently model and reteach the expected behavior (Van Stone, 2013). Teachers will also need to monitor the implementation of any classroom interventions and review student outcomes to decide if any revisions of the classroom interventions need to take place (Conroy et al., 2008). Student misbehavior can be challenging however, teachers can

implement classroom strategies that can foster a positive, engaging classroom environment that would reduce student misbehavior.

Student Behavior

Students with disruptive behaviors can be a challenge for both teachers and school administrators. Student misbehavior can be described as "any source of student distractibility, disengagement, or disobedience in the classroom" (Tsouloupas et al., 2014, p. 164). Challenging student misbehaviors can cause disruption of instructional time and undermine the regular day-to-day classroom operations (Demirdag 2015; McIntosh, Campbell, Carter, & Zumbo, 2010). These misbehaviors deprive teachers and students of valuable instructional time by requiring that time be spent on addressing disruptive student behavior resulting a variety of "costs" in the lost instructional time, money and resources (Demirdag, 2015; Dunlap, Iovannone, Wilson, Kincaid, & Strain, 2010). The effects of disruptive student behavior can influence the learning environment so severely that other students may not be able to successful with that classroom. Hurston (2011) postulated that disruptive student behaviors affect the academic success of not only the students exhibiting the misbehaviors, but also the learning opportunities of the other students within the classroom. Non-disruptive students endure a great disadvantage when the actions of disruptive students continuously affect their learning. Landrum, Scott, and Lingo (2011) listed three elements of patterns of disruptive student behavior; "problem behavior is predictable, problem behavior is preventable and preventing problem behavior requires attention to instruction" (p. 31). Teachers can preemptively extinguish disruptive student behavior if they recognize these patterns beforehand by designing lessons and activities that would prevent undesirable behaviors from occurring.

Landrum et al. (2011) postulated that teachers would be able to manipulate

environmental predictors that would prevent unacceptable behaviors. Teachers would need to observe the triggers for disruptive behavior and organize the classroom environment so that it would diminish the undesirable behavior; this could involve cues, prompts, and preferential seating for certain students as the class transitions from one activity to another (Van Stone, 2013). Teachers can increase the odds of success in the instructional environment by identifying predictors to prevent behaviors (Banks, 2014; Landrum et al., 2011). Teachers can identify triggers that could result in negative behaviors and teach specific skills that would help students to deal appropriately with these events and find success rather than failure.

Teachers have great control over the classroom environment, and they can set the tone of the classroom. Teachers can determine the amount of time spent on an activity, they can also decide on when and how students transition from one activity to another, and choose seating arrangements, these actions would be key in preventing problem behavior coupled with instructional engagement (Banks, 2014; Landrum et al., 2011). Finally, if teachers use effective teacher-based instructional practices this can also prevent problem behaviors from occurring in the classroom. Landrum et al. noted if teachers use clarity, provide students feedback, chances to answer back to questions, effective modeling, and guided practice during instruction, not only will students find academic success, but there is an increased likelihood that this will positively affect student engagement and their behavior.

Behavioral issues, such as insubordination, disrespect, student tardiness, physical altercations, and even assault can interrupt instructional time (Guest, 2011). These types of misbehaviors are commonly observed in the high school setting and they are often linked to the students' probability of completing high school or dropping out (Best, 2012; Guest, 2011). High school students who continue to disrupt classrooms because of their behaviors, have usually

exhausted the opportunities provided by typical behavior intervention programs and may experience frustration that can lead them to be at-risk of dropping out of school. As students' progress through high school the academic expectations increase, causing further frustration, which can lead to a lack of motivation that can cause students to act out (Best, 2012). To assist students at-risk for academic failure, teachers need to use effective strategies that support a students' overall success. Teachers need to be able to address these behaviors with methods that can improve behavior rather than using methods that are punitive in nature. High schools tend to implement consequences that are punitive and reactive, such as restating consequences, increasing the severity of the consequences, zero tolerance consequences and exclusionary consequences- suspension and expulsion (Flannery, Frank, McGrath Kato, Doren, & Fenning, 2013). Elementary and middle schools are using a more proactive, non-punitive approach to addressing student misbehaviors. Many schools use PBIS as a support system to identify problem behaviors, provide early intervention and support to students to prevent the development and increase of student misbehavior (Henshaw, 2012). High schools could benefit from PBIS because it is a preventative disciplinary practice that supports corrective student behavior rather than the typical exclusionary practices.

Struggling readers and student behavior. Effective reading is the foundation of a good education and is the essential factor in academic success (Fitzhugh, 2011). Students without effective reading skills are at a higher risk for school failure. Wise (2009) pointed out students with low literacy skills were unlikely to succeed in high school, college or careers. At-risk struggling readers share traits that impede their reading success. They often struggle with the fear of reading aloud in class, they do not believe that they can read, and they block attempts at reading support (Fox, 2013). Students who struggle with reading do not like to be asked to read

aloud in class because of their fear of being teased by their peers (Goering & Baker, 2010). Students whom struggle with reading will avoid reading aloud in front of their peers to escape being embarrassed. Teachers who recognize struggling readers will allow them to read silently, however, researchers have found that silent reading is a developmental skill that many of these struggling readers have not acquired (Gilliam, Dykes, Gerla, & Wright, 2011). Struggling readers do not believe that they can learn to read and feel that they are in adequate learners (Coombs, 2012). These students have a low self-image because of their low reading ability, which further decreases their motivation to learn. Struggling readers can further increase their risk for dropping out of school by their attempts to block remedial reading support from teachers (Melekoglu, 2011; Slaten, Ellison, Hughes, Yough, & Shemwell, 2015). Berkeley et al. (2012) surmised that students with low reading skills had an increased risk to drop out of school. Lang et al. (2009) found that struggling readers sabotage attempts at reading interventions by avoiding classroom activities that involve reading also supported these findings. These impediments can discourage a struggling reader from actively participating in their learning and risk their academic success.

Behavior challenges also influence the academic success of at-risk struggling readers. Per Lake, Al Otaiba, and Guidry (2010) a student's behavior has been found to be a predicator of academic success. Lane, Carter, Pierson, and Glasesar (2006) found that "students with challenging behavior were more likely to have deficient in reading, math and written language." Cornwall and Bawden (1992) also found a direct relationship between struggling readers and behavior issues, which escalated as these students became adolescents. Thus, teachers must consider not only academic struggles but also the behaviorally challenges of their students to facilitate academic success (Slaten et al., 2015). For these students to achieve literacy mastery,

researchers Oakes, Harris, and Barr (2009) determined that teachers would have to reinforce reading and behavior interventions over time. Not only do educators need to reinforce positive classroom behaviors, they need to do this while teaching literacy skills to struggling readers (Wilkerson, Afacan, Yan, Justin, & Datar, 2016). While some studies have indicated that struggling readers will benefit from literacy instruction, there was no significant improvement in student behavior (Nelson, Lane, Benner, & Kim, 2011; Wilkerson et al., 2016; Wills, Kamps, Abbott, Bannister, & Kaufman, 2010). Algozzine et al. (2011) suggested that teachers use positive behavior supports when teaching reading to struggling students, this would guard against students being distracted by disciplinary issues during instruction. These findings also showed that students benefit when they understand behavioral expectations and will be more receptive to literacy instruction.

Academic Failure of At-Risk Students

Students at risk of academic failure have experienced little to no success in their ability to learn. Suh, Suh and Houston (2007) found that at-risk students who exhibited academic, behavioral or attitudinal problems were at a higher risk for educational school failure compared to their counterparts. Suh et al. supported the idea that students who are at-risk for academic failure could eventually lead to dropping out of school. School dropout is defined as students who fail to complete their high school education (Slaten et al., 2015).

There are three common at-risk factors that contribute to school dropouts; discipline, suspension and poverty (Bulger & Watson, 2006; Hemphill & Hargreaves, 2009). Discipline is as the first at-risk factor that contributes to school dropouts and there are different levels of consequences when students are disciplined for inappropriate school behavior. Consequences range from verbal reprimand to removal from the classroom environment; however, studies have

shown that detention and suspension are the most commonly used disciplinary reactions (Skiba, Peterson, & Williams, 1997). Students disciplined for major inappropriate behaviors are at risk for either out-of-school suspension (OSS) or expulsion depending on the severity of the offense (Shah, 2013).

The second at-risk factor for school dropout is suspension, specifically OSS. Per the policy statement by American Academy of Pediatrics (2013) OSS and subsequent expulsions can have an adverse effect on student academic performance. Furthermore, students who experience OSS and expulsions are 10 times more likely to drop out of school than their counterparts (Shah, 2013). Students who do not complete high school will more than likely earn much less over time and will have fewer educational and employment opportunities. Studies have shown that high school dropouts have been linked to high rates of unemployment, poverty, incarceration, and increased health disparities (Chapman, Laird, Ifill, & Kewal Ramani, 2011; Pleis, Ward, & Lucas, 2010). These types of outcomes can only negatively influence a community.

Poverty is the third leading indicator for high school dropouts (Bulger & Watson, 2006). Kearney and Levine (2016) posited students from low-income households are more likely to drop out of school if they live in a place with a greater gap between the bottom and middle of the income distribution. Per Rumberger (2013), poverty was the leading factor for high school dropout in 2012. The long-term ramifications of dropout include limited job opportunities, lower wages, and greater health risks. Additionally, Belfield and Levin (2007) found that students who dropout are more likely to require government aid, perpetrate crimes, and participate in other activities where they will become a societal financial burden.

Discipline Spectrum

Students are taught school rules and expectations as soon as they enter daycare and

continue until they graduate from high school. Consequences for breaking these rules and expectations are usually taught in tandem and students are fully aware of the impact of misbehavior ahead of time. Students are taught behavior management strategies so that they will understand the consequences for good and bad choices (Tardieu, 2010). The desired student outcome is that they will make appropriate choices and will learn from the consequences if they make inappropriate choices. Traditionally, schools have used punitive disciplinary measures to punish students for misbehaviors in school (Boneshefski & Runge, 2014). The traditional disciplinary spectrum has stretched from the extreme measures such as corporal punishment, zero-tolerance policies, and expulsions to moderate disciplinary measures, such as lunch detentions, office disciplinary referrals (ODR), in-school suspension (ISS), afterschool detention, and out-of-school suspension (OSS) (Dupper, Theriot, & Craun, 2009; Martinez, 2009; Parker-Jenkins, 1998; Skiba, 2010). Schools are moving away from rigid, one size fits all, reactive disciplinary actions to a more proactive disciplinary approach which would promote more positive behaviors for all students, however, some states are still using practices that seem outdated.

Office disciplinary referrals. Office disciplinary referrals (ODR) are written documentations of a school-wide behavioral event in which a student displays behavior that is in violation of a school rule or code of conduct. (Brandt, Chitiyo, & May, 2014; Flannery, Fenning, Kato, & Bohanon, 2011; Sugai, Sprague, Horner, & Walker, 2000). ODRs are written at the discretion of teachers and administrators for minor and major school infractions depending on the offence committed. School administrators can look at the discipline history of the student and use that to determine the consequence, which could range from parent contact to OSS for a maximum of 10 days or less. ODRs could also lead to disciplinary hearings depending on the

severity of the offence, where a student could face long-term suspension from school.

Corporal punishment. One traditional discipline practice that is currently in use in U.S. schools today is corporal punishment. Corporal punishment is a disciplinary method used to intentionally physically strike a child to inflict pain and change behavior (Greydanus, 2010). In many schools, methods of corporal punishment include students being kicked, slapped, banged, punched, hit, pinched, shoved, spanked or shaken (Gregory, 1995; Greydanus, 2010). Students are physically punished in some schools with various objects such as rulers, rods, sticks, straps, belts and wooden paddles. Many states put an end to these practices due to the negative impact, and its ineffectiveness of eliminating undesirable behaviors exhibited by students. In accordance with the US ED (2014a) during the 2011-2012 school year, corporal punishment was administered to an estimated 166,807 students. This number is a sharp decline from the 215,429-estimated number of students who received this form of punishment in 2009 (US ED, 2014a). Paddling is the most used form of corporal punishment with the highest occurrences in the following ten states in descending order: Mississippi, Texas, Alabama, Arkansas, Georgia, Tennessee, Oklahoma, Missouri, Louisiana, and Florida (US ED, 2014a). This form of punishment does not redirect or teach students appropriate, acceptable behavior and report of its use has significantly declined as educators are using other forms of consequences for disciplinary infractions.

In-school suspension (ISS). ISS is a common discipline method used in schools for minor and major behavior infractions. ISS is usually held in a classroom in the building where students serve a certain amount of time for disciplinary infractions that do not necessitate being placed in Out-of-School-Suspension (OSS) (Noltemeyer, Ward, & Mcloughlin, 2015). Morris and Howard (2003) described four different models of ISS: punitive, academic, therapeutic and

combined. The most common model for ISS is punitive, which usually in a very restrictive environment, that may limit talking and regulated restroom usage. Dupper et al. (2009) found that most punitive ISS programs are not well designed and some are purposefully focused as holding tanks or pit stops for students on their way to OSS. This type of discipline model does little to address the behaviors that brought the students to ISS in the first place and usually results in students being assigned busy work. In this type of discipline model, students often return to class after serving out their suspension with the same or even worse behaviors.

The second ISS model is academic; this type of model is used when the belief is that the cause for student misbehavior is a learning difficulty. This model surmises that if academic skills improve, then student misbehavior will decrease, therefore in this model a teacher who can diagnose learning difficulties would run this program and help to instruct students to meet their academic goals (Morris & Howard, 2003; Noltemeyer et al., 2015). An example of this type of ISS program designed by doctoral and university students, Haley and Watson (2000), was called literacy-based behavior management. In this ISS program, students were required to work on their academic skills that were literacy-based, such as writing. Students are taught prewriting strategies, such as brainstorming, clustering, free-writing, listing and outlining while in ISS. These researchers collected qualitative data on each of the student's writing and found that this model of ISS was successful because it improved academic achievement as well as behavioral improvements as students showed respect, reflection and dignity.

The third type of ISS model described by Morris and Howard (2003) is a therapeutic approach. In this model, students are given an opportunity to talk about why they are in ISS and reflect on the actions that brought them there. This type of model can help students to develop problem-solving skills that should lead to positive behavioral changes. Students are encouraged

to write essays about the behavior that brought them to ISS and to reflect on the problem and focus on eliminating these problem behaviors (May, Stokes, Oliver, & McClure, 2015; Morris & Howard, 2003). This type of ISS program is distinctive from other programs because it provides an opportunity for students to improve their self-image with problem-solving skills to understand how they fit in their school environment. The teacher in ISS provides this counseling strategy individually or in peer-to-peer setting. Another important component of this model includes staff development for teachers and staff and the documentation and monitoring of student behavior while they are in ISS and once they leave.

The fourth type of ISS model described by Sheets (1996) was a combined model. This type of ISS model is unique to the individual students because it specifically aims to change student behavior through a variety of strategies (Sheets, 1996). The use of this type of ISS model is on the rise because it evaluates the existing ISS programs that help student misbehavior and can tailor a program that best meets the needs of the students.

Out-of-school suspension (OSS). This type of discipline method is the temporary removal of students from school for a determined amount of time that may be 10 days or less for disciplinary infractions that are disruptive to the learning environment. OSS is used as disciplinary consequence to decrease the likelihood of repeated negative behaviors (Kinsler, 2011; Noltemeyer et al., 2015). School administrators use this type of discipline as a deterrent for other students in the school, because if students witness other students being suspended from schools because of their behavior, then students should be less likely to commit the same offenses knowing that the outcome may lead to OSS.

Kinsler (2011) argued that disruptive behavior decreases academic achievement of middle school students, suggesting that suspending disruptive students from the classroom

environment may increase academic achievement for the population of students who remain in the classroom. American Academy of Pediatrics (2013) stated that OSS might lead to educational outcomes that may not benefit the suspended student, because these students lose educational opportunities, which may lead to school failure and ultimately dropping out. Studies have shown a trending discipline gap between Black and White students suspended from school. Noltemeyer et al. (2015) confirmed that Black students were overrepresented as beneficiaries of school suspensions compared to White students, even when they made up a smaller percentage of the school population.

Zero tolerance. The intent of this rigid approach to discipline was for the most serious offenses committed by students but instead led to a surge in the use of school suspension and expulsions (Martinez, 2009; Monahan, VanDerhei, Bechtold, & Cauffman, 2014; Shah, 2013). This new level of punishment was implemented in 1994, under the federal Gun-Free Schools Act; it required schools that received federal funds to expel students for a minimum of one year if they bring any type firearm to school (Shah, 2013). There are no exceptions to this law; if a student is found with any firearms at school, they are automatically suspended or expelled. An unexpected consequence of this legislation led to students being severely punished for low-level infractions that did not involve firearms, such as bringing a butter knife or nail file to school (Martinez, 2009; Monahan et al., 2014; Shah, 2013). Over 25,000 students have been expelled since this law was passed in 1994, although it has reduced the number of firearms brought to schools, it has met criticism of its lack of flexibility, increased referral to law enforcement and overrepresentation of Black students (Monahan et al., 2014). Opponents of zero-tolerance found that in the 2009-10 school year Black and Hispanic students made 56% of student expelled under this policy while they only represented 45% of school enrollment (Shah, 2013). The unintended

shift of the zero-tolerance policy resulted in students being suspended or expelled from school for minor infractions, which did not reduce student misbehavior rendering it ineffective because of it misuse.

Discipline Gap

Black students and other students of color are suspended from school at staggering higher rates compared to White students. Per the CRDC during the 2011-2012 school year, Black students were suspended and expelled from school three times more than White students (US ED, 2014b). The data collected by the CRDC revealed that although Black students made up only 16% of the student population, 42% of these students were suspended multiple times. In contrast, White students make up 51% of the student population, however; only 31% of these students who were suspended multiple times from school as illustrated in Figure 1 (US DE, 2014b).

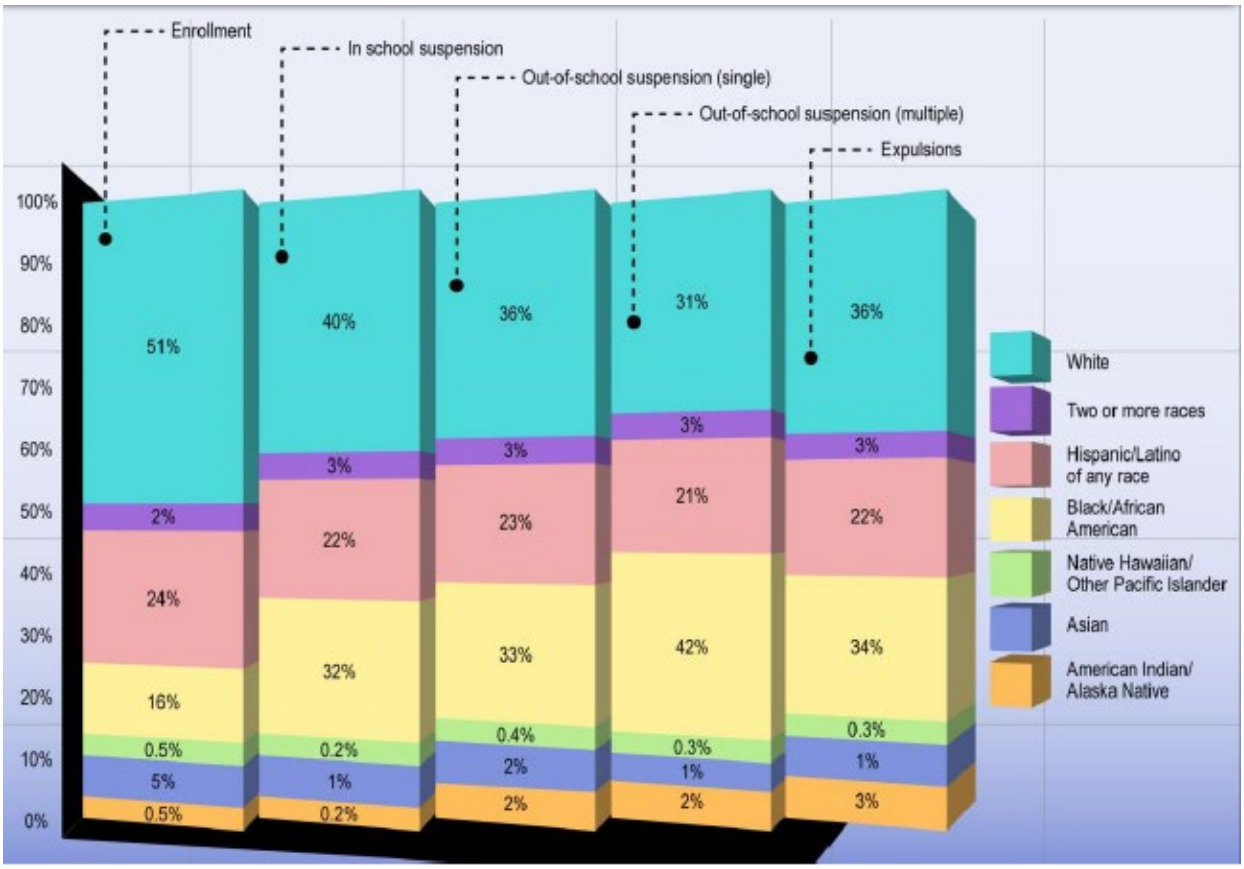

Figure 1. *Suspended and expelled students by race and ethnicity, (See Appendix A) (US ED, 2014b).*

This report also pinpoints the disproportionately high suspension rates experienced by Black preschool students.

Figure 2 illustrates that only 18% of preschool children were Black, but they made up 48% of preschool children who received OSS more than once, on the contrary, White students made up 43% of preschool students however, only 26% of White students were suspended out of school more than once (US ED, 2014b).

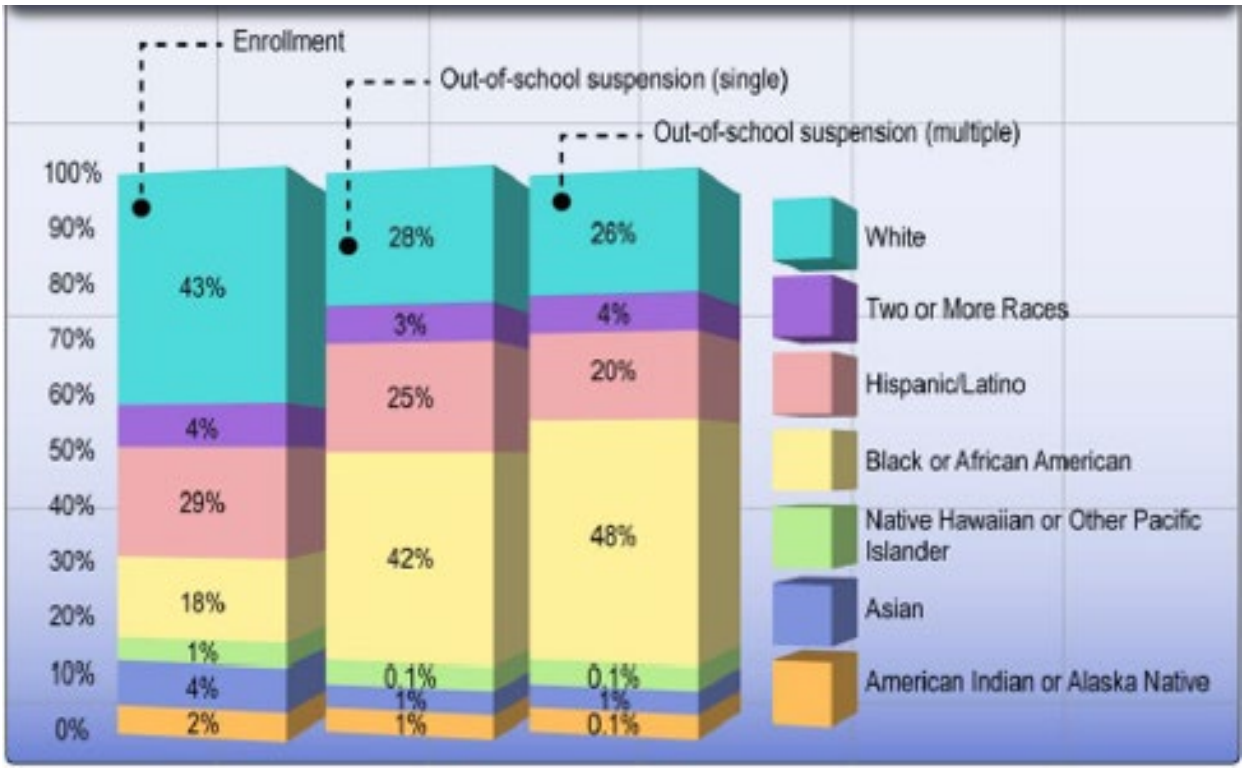

Figure 2. *Preschool students receiving suspensions, by race and ethnicity, (See Appendix B) (US ED, 2014b).*

Disproportionate disciplinary practices for Black students has been documented among several researchers. Skiba et al. (2014) asserted that Black students were overrepresented in the number of disciplinary consequences. Hilberth and Slate (2014) contended that for the school year 2008-2009 there was a lack of equity in the disciplinary assignments between Black and White middle school students in Texas. Black middle school students in Texas were assigned disciplinary infractions twice the percentage of White students. This study also found that Black students were assigned to alternative schools for noncriminal offenses at a rate more than twice of their percentage of school enrollment.

Alternative Education

The U.S. Department of Education (2002) defines an alternative education school as:

> A public elementary/secondary school that: 1) addresses needs of students which typically cannot be met in a regular school, 2) provides nontraditional education, 3) serves as an adjunct to a regular school, or 4) falls outside the categories of regular, special education, or vocational education. (p. 55-56)

Alternative education settings (AES) are found in many states and school districts to serve the needs of students who cannot continue their education in a traditional school setting. Carswell, Hanlon, Watts, and O'Grady (2014) found that AESs fell into three different types of programs. Firstly, Type I programs are attended by choice and offer an educational curriculum that differs from traditional schools. Secondly, Type II programs provide educational services to students who are mandated to attend because of their disruptive behavior in the traditional school setting. Finally, Type III programs can be attended by choice or mandated and offer educational services for students with various emotional and social issues.

Van Acker (2010) identified six diverse delivery models of alternative educational settings (AES). The different models of alternative schools identified by Van Acker have been created to provide educational programs for "(a) students with special educational needs, (b) at-risk students, (c) disruptive students, (d) advanced-placement students, (e) charter schools, and (f) home-schooled children and youths" (p. 6). Many of these programs do not usually classify themselves as alternative school programs, but rather refer to themselves as non-traditional school settings.

History of alternative education programs. While there are several models of alternative education programs, alternative schools are programs designed to help at-risk students who have been unsuccessful in the traditional school setting are the most common (Kim & Taylor, 2008). Lehr, Tan, and Ysseldyke (2009) calculated that approximately 2% of students

have been served in alternative education school programs which are created to provide the academic, social, and emotional needs of students who were unable to find success in traditional schools (Wilkerson et al., 2016). The most common alternative schools are disciplinary schools, which have a goal of providing students with individualized academic support to prevent school dropouts and increased academic success (Moger, 2010). Students attend alternative education schools for various reasons, the most common being numerous course failures, frequent suspensions or chronic disciplinary referrals, chronic absences or excessive tardies (Genao, 2014). Students can even transition from juvenile facilities to an alternative school before returning to a traditional school setting. These schools can range from 6-12th grade and some may even have a program that serves students from K-5th grade with the emphasis on education and behavior interventions.

An alternative school can provide at-risk students who have struggled in the traditional school with a pathway to academic success by meeting the student's educational needs and improving student behavior so that they may return to the traditional school with success (D'Angelo & Zemanick, 2009; Simonsen, Jeffery-Pearsall, Sugai, & McCurdy, 2011). The goal of alternative schools is to provide opportunities to at-risk students who are in danger of school failure (Wilkerson et al., 2016). Effective school leadership has been shown to be a key factor in helping students meet their educational goals (Green & Cypress, 2009). School leaders need to establish specific elements to ensure success for their students. Per Green and Cypress (2009) an alternative school must develop and implement a comprehensive plan for student misbehavior, small class sizes must be adhered to, and highly motivated teachers are required to teach at-risk students. At-risk students are typically not highly motivated or academically focused, which makes them a high risk to drop out of school (Beken, Williams, Combs, & Slate, 2009).

Teachers in an alternative school environment need to be provided with the appropriate resources and professional development that focuses on instructional and behavioral needs of these at-risk students so that they will be able to create a positive classroom environment that will foster a positive relationship to reach students.

Effectiveness of alternative schools. There is limited research on the effectiveness of alternative schools compared to traditional schools; however, there are studies that indicate that alternative schools have greater success educating at-risk students than traditional school (Beken et al., 2009; Kist, 2005; Moger, 2010). Schwab et al. (2016) reported that a disproportionate number of students whom attend alternative schools "(a) live in poverty, (b) have a disability, (c) experience language barriers, (d) earn poor grades, (e) have poor school attendance, and (f) frequently engage in disruptive behaviors" (p. 194). Students who attend alternative schools find themselves more successful academically than when they attended traditional schools and are more likely to overcome obstacles that impeded their learning. In a study of the academic outcomes of at-risk students who attend AES, Carver, Lewis, and Tice (2010) found that 68% of students graduated with a high school diploma. At-risk students who attend an AES that combines a behavior intervention program with academic instructional strategies can find greater success in course outcomes. Per Schwab et al. (2016), more studies need to specifically focus on the needs of at-risk students in AES, because the research on this topic is limited.

Alternative education programs in Georgia. In Georgia, alternative education programming originated in 1994 as a state-funded program for students who needed a unique, innovative, structured environment that was different from the traditional education setting. This educational program was known as the Crossroads Alternative Education program and was eliminated in 2000 with the passage of the A+ Education Reform Act (Georgia Department of

Education, 2016). The two main types of alternative/non-traditional education found in Georgia are categorized as a) alternative/non-traditional education program that do not report Full-Time Equivalent (FTE) and b) alternative/non-traditional education school with an official school code and is considered the home school for students enrolled. Alternative schools with an official school code will have state standardized assessment scores reported from their schools to the state's school report card. Students can be assigned to an alternative school in their district when they are under a long-term suspension from their home school. These schools provide an opportunity for students to remain in school and continue academic progress in a smaller learning environment maintaining focus on developing academic, behavioral and social skills

Positive Behavior Interventions and Supports

Positive Behavior Interventions and Supports (PBIS) was introduced in the reauthorization of the Individuals with Disabilities Act (1997). PBIS is defined as a framework designed to enhance the adoption and implementation of a continuum of evidence-based interventions to achieve academically and behaviorally important outcomes for students (Sugai, Horner et al., 2000). It is specifically designed to improve social behavior and academic outcomes for student of all ages. PBIS utilizes data for implementation and progress monitoring of behavioral practices, and then organizing and employing resources to improve its implementation.

The PBIS framework places emphasis on a proactive approach. Research indicates that greater attention should be directed toward prevention, research-based practices, databased decision-making, explicit social skills instruction, and student outcomes (Horner, Sugai, & Anderson, 2010; Sugai & Horner, 2002). The continuum notion emphasizes organization of evidence or research based behavioral practices within a multi-tiered system of support, also

called response to intervention (Sugai & Horner, 2009). Within the practice, a mutually beneficial relationship between academic and social behavior success of students is highlighted; thus, a supportive relationship between school culture and individual student success is established (Horner & Sugai, 2015; Simonsen & Sugai, 2013).

Implementation of PBIS. In 1987, the U.S. Department of Education determined that due to an increase in negative student behavior and a concurrent decline in academic achievement, a behavior management system needed to be implemented into schools to improve the current school climate (Barrett, Bradshaw, & Lewis-Palmer, 2008; Cressey, Whitcomb, McGilvray-Rivet, Morrison, & Shander-Reynolds, 2014; Reinke et al., 2013; Swain-Bradway, Swoszowski, Boden, & Sprague, 2013). Positive Behavior Interventions and Supports (PBIS) has been implemented in many school districts across the nation to improve student behavior and academic achievement. When implemented correctly, some PBIS schools reported improvements in attendance, academic achievement and school atmosphere as well as decreases in dropout rates, referrals to special education and delinquency. Per Frey et al. (2008) before a school-wide behavior management system like PBIS can be implemented; a PBIS leadership team must be established. PBIS leadership teams must consist of individuals who are respected by their peers, stakeholders whom they represent, and who can communicate regularly with the entire faculty and staff. Frey et al. also stated that principals should be on the PBIS team because of their decision-making authority. The PBIS leadership team should meet once a month to analyze data and make proactive decisions regarding the implementation of PBIS at their schools. The authors also suggest that there should be at least an 80% “buy-in” from faculty and staff for PBIS implementation to successful and that teachers and stakeholders need to understand this is a long-term goal. To realize the benefits of the PBIS framework it is necessary

to commit to at least three years of implementing and demonstrating the positive behavior interventions and supports with fidelity. Schools need to be data driven as this collection of data can provide a plethora of information that teachers and the PBIS team can use to improve student and classroom behavior. Teachers should be informed about PBIS, its implementations and the expectations so that they will be well versed on the matters relating to improving student behavior.

As previously stated, PBIS is not a program; rather, it is a framework based on the theory of applied behavior analysis to improve classroom behavior management. Bohanon, Flannery, Malloy, and Fenning (2009) stated that PBIS was designed as a "proactive, antecedent-based approach to school-wide discipline that involves: 1) clarifying teacher expectations, 2) teaching these expectations to the student body, and 3) reinforcing students who meet the expectations" (p. 31). While this was the goal that Horner and Sugai (2000) had in mind when they designed PBIS, it is also important to note that the three-tier system of interventions must be implemented for the desired benefit to be achieved school-wide (Algozzine et al., 2012). The primary tier intervention takes place at the classroom/school-wide level. The secondary tier interventions target students whose behavior continues to be problematic (i.e., they do not respond to the primary tier intervention). The tertiary tier intervention is reserved for students who do not respond to the secondary tier intervention or students who need individualized intensive support (Fairbanks, Simonsen, & Sugai, 2008; Simonsen, Sugai, & Negron, 2008; Trussell, 2008).

McCurdy, Kunsch, and Reibstein (2007) studied the implementation of the behavior education program (BEP) in one urban school. BEP is a teacher-student check-in, check-out procedure that provides students with feedback about their behavior throughout the day. The authors chose to study one elementary school in a large urban area, with a diverse ethnicity

makeup. The case study followed eight students from about midway through the end of the 2003-2004 school year. The results of the study showed successful outcomes for 50% of the students, moderately successful outcomes for 25% of the students and unsuccessful outcomes for the remaining 25% of students. McCurdy et al. concluded that the BEP could be an efficient method of intervention for students at risk of antisocial behavior, and found that unintended positive results, such as competition between students for point earnings, which enhanced their overall performance.

Trussell (2008) focused on the creation of classroom environments that would assist in the implementation of positive behavior support (PBS) by preventing the occurrence of problem behaviors. The author describes the features of PBS classrooms should incorporate to decrease problem behaviors and increase student academic achievement; this is referred to as classroom universals. The article specifically outlines procedures that should be performed in classrooms universally throughout the school to maintain continuity and ensure success. Sugai and Horner (2006) concluded that even though school-wide positive behavior support can be a valid tool to use to implement behavioral intervention plans, however, schools that do not provide adequate staff training will find that the use of positive and preventative strategies will decline and the recommencing of punitive consequences and strategies will begin to be observed.

Effectiveness of PBIS. Per Algozzine et al. (2011) there is a consensus that achievement and behavior are inversely related and that various programs have been effectively implemented to improve behavior and achievement. Based on these findings, Algozzine et al. (2011) conducted a 5-year longitudinal study researching the relationship between social behavior and academic achievement for students who were at risk for academic failure and developing emotional and behavior disorders. The results of their study were consistent with previous

research. This suggests that behavior and achievement are related, equally important, and in need of attention if changes are to be made.

Bohanon et al. (2009) found that positive behavior support (PBS) was effective in decreasing the dropout rate in high schools. In their study, the researchers reviewed the results of PBS implemented in two New Hampshire high schools with high dropout rates with assistance from the New Hampshire-Center for Effective Behavioral Interventions and Supports. The researchers found that in one high school the annual dropout rate was reduced from 17% in years 2000-2001 to less than 3% in 2005-2006 with the implementation of PBS. The research also showed that "office discipline referrals were reduced by more than 60%" (Bohanon et al., 2009, p. 36). The goal of the New Hampshire dropout prevention project is to expose students to transition services so that they will be more likely to complete high school and possibly look towards post-secondary schooling. This study alone can serve as empirical evidence that behavior intervention programs are necessary and can be effective if used appropriately.

Horner et al. (2010) extended upon the notion that school-wide positive behavior intervention support can be a welcoming option for schools that have seen a decline student achievement and that have not addressed problematic student behaviors. Since the inception NCLB (2001), school leaders are under pressure for their student performance on achievement tests. This increased accountability has led leaders to look at academic data as well as behavior data and report student outcomes. School leaders can identify the connections between the two factors and then work towards a way to successfully address the unique challenges each factor presents. By implementing proactive strategies within the learning environment, schools can successful produce the desired behavior and academic outcome for students with challenging behavior (Horner et al., 2010).

Summary

In 2010-2011 school year, more than 3.1 million students were suspended from U.S. public schools, and this number has increased to more than 3.8 million students during the 2013-2014 school year (Owen et al., 2015). Students are being suspended from school for disruptive behavior that can prohibit student safety and negatively affect academic outcomes. Schools need to explore alternative intervention programs that fit the needs of their schools to decrease problem behaviors and increase or maintain school safety and support academic achievement.

Luiselli, Putnam, Handler, and Feinberg (2005) found that the effectiveness of evidence-based strategies in school interventions had the largest effect sizes for "1) social skills training, 2) system-wide behavioral interventions, and 3) academic curricula modifications" (p. 184). In their research, the authors determined that when the whole school incorporated a behavioral intervention, student discipline problems decreased and academic performance and school climate improved. Gage, Sugai, Lewis, and Brzozowy (2015) concurred that a school-wide positive behavior support can improve low-performing schools by addressing the "academic, social and behavioral needs of all students" (p. 199). Positive behavior support has been shown to increase positive school climate and teacher self-efficacy, decrease problem behaviors and potentially, increase student academic achievement (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010; Kelm & McIntosh, 2012). There are many alternatives to school-wide discipline and PBIS is one approach that schools have found successful. For PBIS to be successful, schools need to look at specific needs by analyzing data and deciding what areas to focus on to make their school a more positive learning environment. In the alternative school setting, the need for behavior intervention is critical because many students are lacking proficiency in areas that are vital to school success. Implementing PBIS framework could help students to improve behavior while

decreasing ODRs and promote a positive learning environment. PBIS is not a quick fix and schools need to be willing to invest the time and effort it will take before its impact is meaningful and realized.

CHAPTER THREE: METHODS

Overview

Classroom management is an issue that can impede the learning environment for the teacher and students (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010; Gregory, Skiba, & Noguera, 2010; Milner & Tenore, 2010; Skiba et al., 2014). Teachers need to be able to teach their students in an environment that supports learning, and this can be challenging when there are continuous classroom disruptions. Traditionally, schools have addressed disruptive student behavior through a punitive disciplinary procedure that could lead to expelling or suspending students or being placed in an alternative school setting (Lassen, Steele, & Sailor, 2006). Algozzine, Wang, and Violette (2011) agreed that an inverse relationship between student behavior and academic achievement could significantly affect students who are at-risk for academic failure; therefore, behavior management systems like Positive Behavior Interventions and Support have been implemented in many schools to address the needs of the schools through proactive and preventative procedures. This chapter will identify the research design chosen to execute this study, along with the research questions and corresponding hypotheses formulated from disciplinary issues and their effect on the academic success of at-risk, eighth-grade, Black male students in an alternative school setting. This chapter will also explain the instrumentation used to measure the dependent variable, provide a clear description of the procedure, and describe the data analysis to be used in the study.

Design

A quantitative causal-comparative research design was used in this study to compare the mean test scores of the 2014 CRCT Grade 8 Reading and Mathematics tests between at-risk Black male students who attend an alternative middle school that implements PBIS and at-risk

Black male students who attend an alternative middle school that does not implement PBIS. This causal-comparative study is a non-experimental, ex-post facto approach to determine the differences between groups based on the differences in their experiences or treatment (McMillan, 2008). In this type of research design, a researcher examines the conditions that have already occurred, collects, and analyzes the data to determine if there is a relationship between the conditions and the outcomes (Leedy & Ormrod, 2001). A causal-comparative research design is the appropriate choice for this study because it allows the researcher to study two groups with similar populations but flex the variable on which they are being compared (Lodico, Spaulding, & Voegtle, 2010). In this research study, the two groups being examined are at-risk eighth-grade, Black male students in two different alternative schools and their performance on the 2014 CRCT Grade 8 Reading and Mathematics. The treatment group is the alternative middle school that implements PBIS and the control group is the alternative school that does not implement PBIS, these groups are the independent variables in this study. This causal-comparative study is concerned with establishing the cause of existing differences between the two groups with measures collected from archival data. The quantitative dependent variable used in this study is the mean test scores collected from the 2014 CRCT Grade 8 Reading and Mathematics to measure the level of student achievement among the treatment and control group. The data collected will be analyzed and a test of statistical significance will be performed to evaluate the effectiveness of PBIS on academic achievement of at-risk, eighth-grade, Black male students in an alternative educational setting (Gall, Gall, & Borg, 2007).

Research Questions

The research questions for the study are:

RQ1: Do at-risk, eighth-grade, Black male students who attend an alternative middle

school that implements PBIS have a higher mean score on the 2014 CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

RQ2: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements in PBIS have a higher mean score on the 2014 CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

RQ3: Is there a significant difference between the frequencies of office discipline referrals for at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS compared to at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

Null Hypotheses

The following null hypotheses for the study are:

$H_0$1: At-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the 2014 CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle that does not implement PBIS.

$H_0$2: At-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the 2014 CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle that does not implement PBIS.

$H_0$3: At-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS does not have a statistically significant difference in the frequencies of

office disciplinary referrals compared to at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS.

Participants and Setting

The participants used for this ex-post facto, causal-comparative study were selected from a convenience sample of the 2013-2014 archival data of at-risk, eighth-grade, Black male students from XYZ Alternative Middle School in a northeastern, metropolitan Georgia County Schools and ABC Alternative Middle School in a metropolitan Georgia county school district. Choosing convenience sampling of participants in this study was the most appropriate method because this allowed the researcher to "select a sample that suits the purpose of the study" (Gall et al., 2007, p. 175). For this study, at-risk, eighth-grade, Black male students who attended XYZ Alternative Middle School and ABC Alternative Middle School for a Full Academic Year (FAY) and participated in the 2014 Spring CRCT Grade 8 Reading and Mathematics tests were selected.

In the 2013-2014 school year, there were 131 schools in this northeastern Georgia County school district with 169,154 students enrolled who identified as 31% Black, 10% Asian, 27% Hispanic, 4% Multiracial and 28% White (Governor's Office of Student Achievement [GOSA], 2017). XYZ Alternative Middle School is a Title I school that served a population that comprised of 20% Hispanic, 4% Multiracial and 17% White students, and 57% Black students in the 2013-2014 school year, with 74% of students on free and reduced lunch (GOSA, 2017). This school served as the treatment group because it was using the PBIS framework for behavior management during the 2013-2014 school year. ABC Alternative Middle School, an urban Georgia district that served 99,121 students in 133 schools in the 2013-14 school year served as the control group because it did not use the PBIS framework for behavior management. In the

same school year, this district was comprised of 67% Black, 11% White, 15% Hispanic, 2% Multiracial, and 6% Asian students (GOSA, 2017). In the 2013-2014 school year ABC Alternative Middle was a Title I school with 99% of students eligible for free and reduced lunch and had a population of 89% Black, 9 % Hispanic and 1% White and Asian students respectively (GOSA, 2016).

For this study, the participants were selected from archival data of the 2014 CRCT Grade 8 Reading and Mathematics test scores. The participants sampled for this study were at-risk, eighth-grade, Black male students who attended an alternative middle school. These participants attended XYZ and ABC Alternative Middle School for at least 65% of the school year and tested at their respective middle schools through the end of the state testing window. A statistical power analysis was determined before beginning research to establish the minimum sample size needed to increase the probability of rejecting the null hypothesis (Gall et. al, 2007). Per Gall et al. (2007), the researcher determined that the minimum sample number needed for an independent samples or unpaired t test at the"5 alpha level, with a large effect size and a statistical power of .7 is 40" (p. 145). These sample sizes were extracted from the data that included all grade 8 students who were administered the 2014 CRCT Grade 8 Reading and Mathematics tests.

Samples from the 2014 CRCT Grade 8 Reading and Mathematics test scores of XYZ and ABC Alternative Middle School were obtained from each school district. In order to obtain data from XYZ Alternative Middle School, a local school research request form was submitted to the principal for approval. Once approval was granted, the researcher was sent the CRCT Grade 8 Reading and Mathematics test scores and the number of ODRs of 24 participants. The scores and discipline information of these participants was used in this study as the treatment group.

The researcher also submitted an electronic research request to ABC Alternative Middle School Office of Accountability, Research, Data and Evaluations for approval. Once approval was granted the school district provided the researcher with the 2014 CRCT Grade 8 Reading and Mathematics test scores and the number of ODRs received of 30 participants who were used as the control group. The participants from both sample groups were at-risk, eighth-grade, Black male students, with Full-time Academic Year (FAY) status. The number of participants from each alternative middle school are found in Table 1.

Table 1

Participants and Setting

Participants and Setting	n
ABC Alternative Middle School: Control Group	30
XYZ Alternative Middle School: Treatment Group	24

Instrumentation

The researcher used the 2014 CRCT Grade 8 Reading and Mathematics tests as the instrument to measure the impact of PBIS on student academic performance. The Georgia CRCT is an instrument that has been used in several recent research studies and articles (Darnell, 2012; Galloway, 2016; Mayer, Wiley, Wiley, Dees, & Raiford, 2016; McNeal, 2016; Seckinger, 2015). Darnell (2012) used the CRCT to predict student achievement on the Georgia end of course test (EOCT). Galloway (2016) used the CRCT to determine if there was causal relationship between administering benchmarks and student performance. Mayer et al. (2016) used the CRCT to predict teacher and school characteristics. McNeal (2016) used the CRCT to correlate the Georgia Assessing Comprehension and Communication in English State to State (ACCESS) test scores of English Language Learning with the scores on the CRCT. Seckinger

(2015) used the CRCT to investigate the relationship between in-school-suspension and academic achievement of middle school African American males.

The CRCT was an end of year standardized state assessment that was implemented in 2000 because of the A+ Education Reform of Act of Georgia, in response to the requirements of No Child Left Behind (NCLB) (Georgia Department of Education, 2013a). The CRCT assessment was created to measure how good students have acquired the learning objectives as described in the Georgia Performance Standards (GPS) in reading, English/Language arts, mathematics, science and social studies. Georgia chose to use a criterion-referenced test which differed from a norm-referenced test because criterion-referenced assessments measure how good students have gained the knowledge and skills from a specific content area by comparing their scores to an established standard of performance levels (Gall et al., 2007; McMillan, 2008). Norm-referenced test measures the individual scores of students and compares it to a well-defined norm or reference group of other students with similar characteristics that have taken the same assessment (McMillan, 2008).

The 2014 CRCT Grade 8 Reading and Mathematics tests consisted of approximately 50 - 70 items that assessed the students acquired learning of the Georgia Performance standards. The Grade 8 Reading test was divided into three domains:

1. Literacy Comprehension-40%
2. Information & Media Literacy-45%
3. Reading Skills & Vocabulary Acquisition-15% (Georgia Department of Education, 2013b).

The Grade 8 Mathematics test was divided into four domains:

1. Number and Operations-20%

2. Geometry-27%
3. Algebra-41%
4. Data Analysis & Probability-12% (Georgia Department Education, 2013b).

For the 2014 CRCT Grade 8 Reading and Mathematics tests, the test scores were presented in scale scores which indicated performance levels. Students who scored below 800 did not meet (DNM) expectation, scores from 800 to 849 qualified as meeting expectations and a student who scored 850 or higher exceeded expectations (Georgia Department of Education, 2014a). The test score range remained the same for each grade level, which could allow scores to be compared from year to year, however the scale may different from grade level to grade level, therefore comparing scores in the same content area but at different grade levels would not be appropriate. The three performance level ranges for both tests are found in the Table 2.

Table 2

2014 Spring CRCT Performance Levels

2014 Spring CRCT Performance Levels			
Test	Does Not Meet Expectations	Meet Expectations	Exceeds Expectations
Reading	Below 800	800 to 849	850 or above
Mathematics	Below 800	800 to 849	850 or above

The reliability and validity of the CRCT as an instrument of measure has been described in several research studies (Darnell, 2012; Galloway, 2016; McNeal, 2016; Seckinger, 2015). McMillan (2008) described reliability as the consistency of scores or the extent that the scores are free from error. Two indicators used to measure the reliability of the CRCT were Cronbach's alpha and the standard error of measure (SEM). Cronbach's alpha coefficient measured the

internal consistency of the CRCT and the standard error of measure determined the likely range that an individuals' test score can fall within (Gall et al., 2007). The reliability coefficient for Cronbach's alpha ranges from 0 to 1 and the reliability indicators for the 2014 CRCT Reading and Mathematics test scores were .88 and .92 respectively, these coefficients indicated that the test scores reported were well estimated and reliable. Per Gall et al. validity is defined as "the appropriateness, meaningfulness, and usefulness of specific inferences made from test scores" (p. 657). To demonstrate validity of the interpretation of the test scores, Gall et al. stated the five keys of evidence must be present the instrument:

1. Test content
2. Response process
3. Internal structure
4. Relationship to other variables
5. Consequences of testing (p. 195)

The 2014 Spring CRCT was a valid instrument for this study because it contained the following five keys of evidence as indicated by Gall et al.:

1. Test content -aligned to the GPS standards.
2. The response process -consistent in scoring the CRCT.
3. The internal structure- based on the relationship between the items on the subtests.
4. The relationship between the variables- relationship between the scale scores of the CRCT and the performance levels of Does Not Meet, Meet and Exceeds.
5. The consequence of the test -per the 2014 Spring CRCT Score Interpretation Guide, the CRCT was "designed to measure student acquisition and understanding of the knowledge, concepts and skills set forth in the state-mandated content standards"

(Georgia Department of Education, 2014b, p. 1).

While the CRCT has been retired since 2015 because the Georgia Performance Standards (GPS) have changed, it is still a valid and reliable instrument to use for this study.

Procedures

Upon completion of the literature review, the research consultant granted permission to move forward with the study and defend the proposal. After the researcher successfully defended the proposal to the dissertation committee, the researcher sent a Local School Research Form to the principal of XYZ Alternative Middle School requesting to conduct research using archival data from the 2014 Spring CRCT Grade 8 Reading and Mathematics test scores of at-risk, eighth-grade, Black male students as well as the number of discipline referrals from the 2013-2014 school year for the same participants (Appendix C). When permission to collect data was granted from XYZ Alternative Middle School, the researcher prepared and applied to Liberty University IRB to conduct data collection. After making several minor revisions and submissions of the Liberty University IRB application, the researcher obtained a letter of approval to proceed with collecting data from XYZ Alternative Middle School for the study (Appendix D). After obtaining IRB approval, the researcher contacted the student data management clerk from XYZ Alternative Middle School to request the data needed for the study. This data was sent to the researcher in an email in an Excel 2016 file from the school's student data management clerk and accessed through a password protected server. Once the researcher noted that this data was stripped of all identifiable information except for grade, gender, race, CRCT Reading and Math scores and number of discipline referrals, the file was saved on the researchers' hard drive on a password protected computer. The researcher then obtained permission to use archival data from ABC Alternative Middle school from the school district's

Research Review Board through an electronic application found on the website (Appendix E).

When the Research Review Board granted permission to the researcher, a Change in Protocol form was submitted to Liberty University's IRB as this participant was not on the revised IRB application. When the researcher received approval from Liberty University IRB for the Change in Protocol (Appendix F), the researcher could begin analyzing the data sent in an email in an Excel 2016 file from ABC Alternative Middle School. The researcher confirmed that this data was stripped of all identifiable information and contained only the information requested by the researcher. The researcher used GraphPad Prism 7.04 software to run statistical analysis of the data collected for this study from both participants. Descriptive statistics which included mean and standard deviation was obtained from the analysis of the data described in Chapter Four for each participant. The next analysis conducted by the researcher revealed the descriptive statistics for the 2014 Spring CRCT Grade 8 Reading test scores. The researcher repeated the computation of descriptive statistics for the 2014 CRCT Grade 8 Mathematics test scores and these results were described in Chapter 4. A test of statistical significance using an independent samples or unpaired t test to compare the mean scores of the CRCT Reading and Mathematics test between XYZ and ABC Alternative Middle Schools was conducted by the researcher and described in Chapter 4. Finally, the researcher also examined the frequency of referrals from both XYZ and ABC Alternative Middle School to determine if the use of PBIS effects the frequency of office disciplinary referrals which was documented in Chapter 4.

Data Analysis

This causal-comparative or ex post facto study determined the effect of PBIS on student academic performance of at-risk, eighth-grade, Black male students on the 2014 CRCT Grade 8 Reading and Mathematics mean test scores and frequency of office disciplinary referrals. A

causal-comparative design was used for this research study because it determined the cause of the existing differences among groups by comparing the data or dependent variable(s) based on the independent variable. This research design addressed research questions one and two to determine the effects of PBIS on the mean test scores of the 2014 Spring CRCT Grade 8 Reading and Mathematics tests. This research design also determined the effects of the PBIS framework as a behavior management system on the frequency of ODRs on at-risk, eighth-grade, Black male students during the 2013-2014 school year. For this study, the PBIS framework was the independent variable and the Reading and Mathematics mean test scores and frequency of ODRs were the dependent variables.

An independent samples or unpaired *t* test was the statistical procedure used to evaluate research questions one and two. This statistical procedure was the appropriate type of data analysis for this research study because it evaluated the difference between the means of two independent samples or groups (Green & Salkind, 2011). In this study, the two independent groups for research questions one and two are at-risk, eighth-grade, Black male students from XYZ Alternative Middle who took the CRCT Grade 8 Reading and Mathematics tests in 2014, three years after the implementation of PBIS and at-risk, eighth-grade, Black male students from ABC Alternative Middle School who took the CRCT Grade 8 Reading and Mathematics tests in 2014 which did not implement PBIS as a behavior management system. The frequencies of office disciplinary referrals from the same students was used to answer research question three using a chi-square test. The following three assumptions were met to yield reasonable results for this research. For the first assumption, Kolmogorov-Smirnov normality test was conducted to determine if the population distributions are normal for this study. The *p* value indicated that normality can be assumed. An F test was used to evaluate variances among the populations. A

significance level larger than .05 indicated that equal variances were normally distributed. The third assumption was tenable because the scores on the test variable were independent of each other. The assumptions were tested when the research study was approved by the Liberty University Institutional Review Board (IRB). Once the research was conducted, all descriptive statistics was identified in Chapter 4. Since all of the assumptions were tenable, the researcher was able to determine if the distributions of scores of the two groups were significantly different (Gall et al., 2007).

CHAPTER FOUR: FINDINGS

Overview

Black male students are disproportionately disciplined compared to White and Hispanic students which can have a negative effect on academic achievement. Many studies have corroborated the positive effects of PBIS on behavior, however, there is limited amount of research on the effects of PBIS on academic achievement of at-risk, eighth-grade, Black male students. Investigating the relationship between the implementation of PBIS and its impact on the academic progress of at-risk, eighth-grade, Black male students assisted the researcher in identifying the need for implementation of PBIS in alternative schools to improve academic achievement and decrease student discipline.

Research Questions

The research questions for the study were:

RQ1: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS have a higher mean score on the 2014 CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

RQ2: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements in PBIS have a higher mean score on the 2014 CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

RQ3: Is there a significant difference between the frequencies of office discipline referrals for at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS compared to at-risk, eighth-grade, Black male students who attend an

alternative middle school that does not implement PBIS?

Null Hypotheses

The following null hypotheses for the study are:

$H_0$1: At-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the 2014 CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle that does not implement PBIS.

$H_0$2: At-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the 2014 CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle that does not implement PBIS.

$H_0$3: At-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS does not have a statistically significant difference in the frequencies of office disciplinary referrals compared to at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS.

Descriptive Statistics

The archival data of 54 eighth grade Black male alternative middle school students were used to answer the research questions of this study. Approximately 44% of the participants attended XYZ Alternative Middle which has been using the PBIS framework since 2010 and the remaining 56% attended ABC Alternative Middle School which was not using the PBIS framework. The mean, range, and standard deviation for the 2014 CRCT Grade 8 Reading test scores for students from both XYZ Alternative Middle School and ABC Alternative Middle are as follows in Table 3.

Table 3

2014 CRCT Grade 8 Reading Test Scores Statistical Results

Variable	N	Mean	Range	SD
Reading Test	54	814.61	72	20.28

The histogram in Figure 3 shows the distribution of test scores for the 2014 CRCT Grade 8 Reading test of students who attended XYZ and ABC Alternative Middle School.

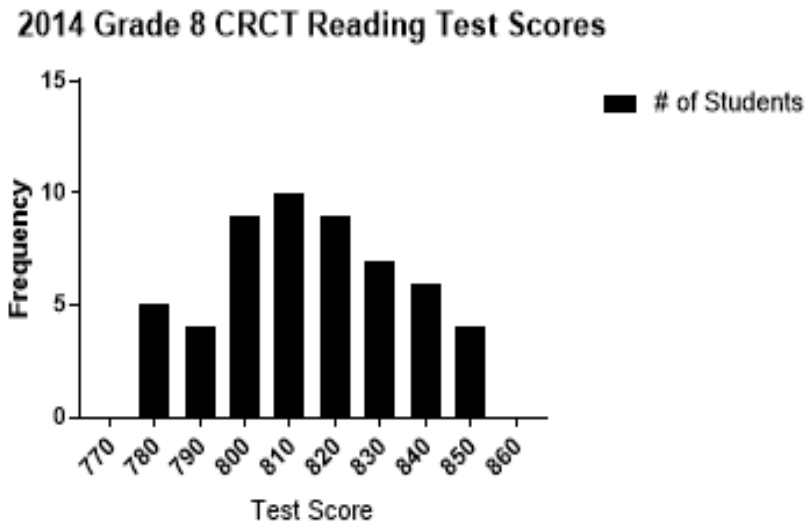

Figure 3. Distribution of 2014 CRCT grade 8 Reading test scores.

The mean, range, and standard deviation for the 2014 CRCT Grade 8 Mathematics test scores for students from both XYZ Alternative Middle School and ABC Alternative Middle are as follows in Table 4.

Table 4

2014 CRCT Grade 8 Mathematics Test Scores Statistical Results

Variable	N	Mean	Range	SD
Mathematics Test	54	786.07	101	25.77

The histogram in Figure 4 shows the distribution of test scores for the 2014 CRCT Grade 8 Mathematics test of students who attended XYZ and ABC Alternative Middle School.

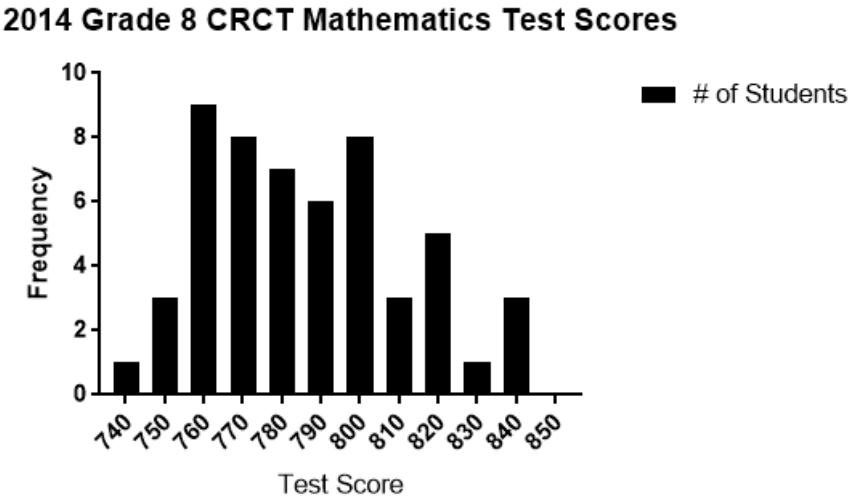

Figure 4. Distribution of 2014 CRCT grade 8 Mathematics test scores.

Results

Assumptions Tests

An independent or unpaired sample *t* test was conducted to determine if there was a relationship between the implementation of PBIS and academic performance in research questions one and two. Prior to carrying out the appropriate parametric statistical analysis of null hypotheses one and two, assumptions test were conducted to determine tenability. The following assumption tests were performed for this study: normality, equal variances and independent

observations. To check for normality, the Kolmogrov-Smirnov test was performed to determine if the population distributions are normal. The results of this test yielded a significance level of .207 indicating tenability of this assumption because it had a significance level more than .05. An F test was conducted to determine equal variances in the population distributions. This assumption was also met because the significance level of this test was .865, which was larger than the significance level of .05 to meet tenability. The last assumption was also tenable because the observations found within each test variables were independent and did not influence each other.

A chi-square test was used to determine if there was a relationship between PBIS and the frequency of ODRs in research question three. An assumption test was not necessary for this statistical analysis because chi-square is a nonparametric test.

Null Hypothesis One

The null hypothesis for the first research question in this study states that at-risk, eighth – grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the 2014 CRCT Grade 8 Reading test compared to at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS.

An independent samples or unpaired *t* test was used to compare the means of the CRCT Reading test scores of at-risk, eighth-grade, Black male students who attended an alternative middle school that implemented PBIS and at-risk, eighth-grade, Black male students who attended an alternative middle school that did not implement PBIS. Using GraphPad Prism 7.04, the unpaired *t* test calculated a two-tailed *p* value of .2474 and *t* equal to 1.17 with 52 degrees of freedom. These results indicated that there was no statistically significance difference on the

CRCT Reading mean test scores between XYZ Alternative Middle school (n=24, M=818.2, SD=19.22) and ABC Alternative Middle school (n=30, M=811.7, SD=20.96), thus the researcher failed to reject the null hypothesis. The 95% confidence interval for the difference of means was -4.631 to 17.58, with a mean difference of 6.475. The eta squared is .026, indicating that 2.6% of the variance of CRCT Reading test scores can be attributed to whether a student attended or did not attend a school that implements PBIS. Finally, Table 5 presents the statistical analysis of the 2014 CRCT Grade 8 Reading mean test scores of 24 eighth grade Black male students from XYZ Alternative Middle School and 30 eighth grade Black male students from ABC Alternative Middle School. The independent variable was the implementation of PBIS and the dependent variable is the Reading CRCT score.

Table 5

Independent t Test Statistical Analysis of 2014 CRCT Grade 8 Reading Test Scores

Group	N	M	SD	*t*	*p*
XYZ Alternative MS	24	818.2	25.87		
				1.17	.2474
ABC Alternative MS	30	811.7	25.09		

Null Hypothesis Two

The null hypothesis for the second research question in this study states that at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the 2014 CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS.

An independent samples or unpaired *t* test was used to compare the means of the CRCT

Mathematics test scores of at-risk, eighth-grade, Black male students who attended XYZ alternative middle school that implemented PBIS and at-risk, eighth-grade, Black male students who attended ABC alternative middle school that did not implement PBIS. Using GraphPad Prism 7.04, the unpaired *t* test calculated a two-tailed *p* value of .1266 and *t* equal to 1.553 with 52 degrees of freedom. These results indicated that there was no statistically significance difference on the CRCT Mathematics mean test scores between XYZ Alternative Middle school (n=24, M=792.1, SD=25.87) and ABC Alternative Middle school (n=30, M=781.3, SD=25.09), thus the researcher failed to reject the null hypothesis. The 95% confidence interval for the difference of means was -3.162 to 24.8, with a mean difference of 10.817. The eta squared is .044, indicating that 4.4% of the variance of CRCT Mathematics test scores can be attributed to whether a student attended or did not attend a school that implements PBIS. Finally, Table 6 presents the statistical analysis of the 2014 CRCT Mathematics mean test scores of 24 eighth grade Black male students from XYZ Alternative Middle School and 30 eighth grade Black male students from ABC Alternative Middle School.

Table 6

Independent t Test Statistical Analysis of 2014 CRCT Grade 8 Mathematics Test Scores

Group	N	M	SD	*t*	*p*
XYZ Alternative MS	24	792.1	25.87	1.553	.1266
ABC Alternative MS	30	781.3	25.09		

Null Hypothesis Three

The null hypothesis for the third research question in this study states that at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS do not have a statistically significant difference in the frequencies of office disciplinary referrals than

at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS. The chi-square test for independence was used to determine if there was a significant relationship between PBIS and frequency of office disciplinary referrals. The categorical variable was participation in PBIS (PBIS middle school and non-PBIS middles school) and receipt of office disciplinary referral (yes/no). Using GraphPad Prism 7.04, the Chi-squared test calculated x^2 to equal .6129, with 1 degree of freedom and two-tailed p value of .4337. These results indicated that there was no significant difference in frequency of ODRs between the groups, thus the researcher failed to reject the null hypothesis. Table 7 shows the number and percentage of students who received ODRs in each group. There was no significant difference in frequency of ODRs between the groups.

Table 7

Chi-squared Test for Independence Statistical Analysis of Frequency of ODRs

Group	**Office Disciplinary Referrals**			
	Yes (Referrals>=1)		**No (Referrals=0)**	
	N	**%**	**n**	**%**
XYZ Alternative MS	7	29.17	17	70.83
ABC Alternative MS	6	20	24	80

CHAPTER FIVE: CONCLUSIONS

Overview

The focus of this quantitative, causal-comparative study was to explore the influence that PBIS had on academic performance and frequency of Office Disciplinary Referrals (ODR) of at-risk, eighth-grade, Black male students at an alternative school. This chapter will examine how the literature review addressed the issue of Black male students who are at-risk for academic failure because of a disruptive learning environment, student behavior, teacher-student relationships, reading achievement, and disproportionate disciplinary practices. Additionally, this chapter will explain the results of the statistical analysis executed for each null hypothesis and discuss how it relates to the PBIS framework and student behavior. Finally, this chapter will describe the implications that arose from the study as well as limitations that may have impacted the study and recommendations for future research on student behavior management systems and academic achievement.

Discussion

The purpose of this causal-comparative research study was to investigate the impact of PBIS on the academic performance as well as the frequency of referrals of at-risk, eighth-grade, Black male students in alternative schools. This research study was chosen in response to the implementation of PBIS at an alternative school and its perceived influence on academic performance compared to a similar alternative middle school that did not implement PBIS. Students typically perform lower on standardized assessments at alternative schools compared to students at traditional schools for a variety reason, however, a common thread among the literature showed that students who experienced disproportionate disciplinary practices also experienced marginal academic successes at school (Rathvon, 2008; Shernoff et al., 2011).

Because of these practices, many students may experience instances of lost instructional time, academic failure, grade retention and increased dropout rates (Aloe, Shisler, Norris, Nickerson, & Rinker, 2014; Kulinna, 2007; Landrum, Scott, & Lingo, 2011; Reinke et al., 2014). This section of the chapter will discuss the study results in relationship to the research questions and their relationship to the theoretical framework and literature review used to guide this study for each research question.

The research questions that guided this study along with the null hypotheses are as follows:

RQ1: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS have a higher mean score on the 2014 CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

The first null hypothesis stated that at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the CRCT Grade 8 Reading test than at-risk, eighth-grade, Black male students who attend an alternative middle that does not implement PBIS. An independent or unpaired samples *t* test was selected to analyze the difference in the mean test scores on the CRCT Grade 8 Reading test between at-risk, eighth-grade, Black male students who attended XYZ Alternative Middle School that implemented PBIS and at-risk, eighth-grade, Black male students who attended ABC Alternative Middle School that did not implement PBIS in the 2013-2014 school year. After examining the results of the *t* test, there was no statistically significant difference between the two groups of at-risk, eighth-grade, Black male students, therefore, the researcher failed to reject the null hypothesis.

A small effect size of Cohen's *d*=.3 was detected for this research question indicating that there is .58 probability that a student from XYZ Alternative Middle School would have a higher test score than a student from ABC Alternative Middle School if both are chosen at random. The data analysis also determined the experiment had a 47% power, which means that if this experiment was conducted 100 times, 47% of those experiments would be considered statistically significant, while the remaining 53% of experiments would be considered not statistically significant. Therefore, there is a 53% likelihood that the researcher made a Type II error and failed to reject the hypothesis, thus these results need to be interpreted with caution.

Research question one focused on the influence that PBIS could have on academic achievement of at-risk, eighth-grade, Black male students in an alternative middle school. Student misbehavior and subsequent disciplinary measures have been an important field of study that has been growing over the years, with a considerable amount of literature on student misbehavior (Demirdag, 2015; Edgar-Smith & Baugher Palmer, 2015; Guest, 2011; Hurston, 2011; Landrum et al., 2011; McIntosh, Campbell, Carter, & Zumbo, 2010; Tsouloupas, Carson, & Matthews (2014). Several studies have indicated the correlation between student achievement and behavior management (Algozzine et al., 2011; Brandt, Chitiyo, & May, 2014; Glass, 2014; Owen, Wettach, & Hoffman, 2015). Brandt et al. (2014) indicated that there was a link between student achievement and implementation of PBIS. Glass (2014) corroborated the link between classroom misbehavior negatively affecting academic achievement due to missed instruction. In a recent review of this topic, Owen et al. authored a report for the North Carolina School Boards Association that confirmed the correlation between student misbehavior and suspensions leading to poor student outcomes, including, but not limited to student achievement.

Zimmermann, Schütte, Taskinen, and Köller (2013) also found a clear relationship

between students with aggressive behavior and low academic achievement. This study found that when controlling for other factors such as sex, ethnicity, school absences, family structure and IQ, students who had behavioral challenges performed academically lower compared to students who behaved in an acceptable manner. This study indicated the need for behavior management school wide systems such as PBIS to improve student behavior and increase student achievement.

The following section will discuss how PBIS and the theoretical framework of this study relates to research question one. The PBIS framework is a two-prong proactive approach to student behavior, which is described as follows: 1) decrease the development of problem behaviors and 2) teaching desired expectations and reinforcing appropriate behavior (Flannery, Frank, McGrath Kato, Doren, & Fenning, 2013). The foundation of PBIS aligns with the constructs of social cognitive theory and operant conditioning, the theoretical framework for this study (Horner et al., 2014; Miller, 2011; Reinke, Stormont, Herman, Wachsmuth, & Newcomer, 2015; Simonsen & Sugai, 2013; Thornton, 2015). Social cognitive theory provides a foundation for PBIS because it is based on the ways that people learn (Bandura, 1977). People learn from their own experiences, however, with social cognitive theory, people also learn from observing others. Through PBIS, teachers can put social cognitive theory and operant conditioning into practice because appropriate behaviors should be modeled and reinforced to students daily in a variety of formats for effective results. Appropriate behaviors can be taught, and students can learn these behaviors and choose to act appropriate if they so desired.

The foundation of operant conditioning theory is based on the use of rewards or punishments as extrinsic motivators to change behavior, which supports the PBIS approach to managing student behavior (Altman & Linton, 1971; Doll, McLaughlin, & Barretto, 2013;

Horner & Sugai, 2015). According to Miller (2011), Skinner believed that rewarding positive behavior with reinforcement that is also positive could foster positive behavior in students. Teachers have a powerful role in shaping student outcome through the relationships they establish within their classrooms. Several researchers agreed these relationships can positively impact student behavior, academic success and school engagement (Masten, 2001; Schwab, Johnson, Ansley, Houchins, & Varjas, 2016; Tsai & Cheney, 2012). Through PBIS, teachers can form positive connections with their students which could help students to increase their academic performance.

The literature review also examined at-risk students who struggled with reading and found that these students were more likely to have behavior issues (Cornwall & Bawden, 1992; Lane, Carter, Pierson, & Glasesar, 2006). Some researchers have suggested that by creating a positive learning environment, teachers can help to improve literacy skills (Oakes, Harris, & Barr, 2009; Wilkerson et al., 2016). However, other researchers did not find that student behavior improved under these circumstances in their studies (Nelson, Lane, Benner, & Kim, 2011; Wills, Kamps, Abbott, Bannister, & Kaufman, 2010). Polirstok and Gottlieb (2006) found that reading scores of third grade students whose teacher had one year of professional development for managing student behavior, improved by 8.3% on the California Test of Basic Skills. While other studies have not shown the benefits of PBIS increasing student academic success, the results of this study did show an overall increase in the mean test scores of students who attended a PBIS middle school compared to students who did not attend a PBIS middle school, however, this difference was not significant.

RQ2: Do at-risk, eighth-grade, Black male students who attend an alternative middle school that implements in PBIS have a higher mean score on the 2014 CRCT Grade 8

Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

The second null hypothesis stated that at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS will not have a statistically significant different mean test score on the CRCT Grade 8 Mathematics test than at-risk, eighth-grade, Black male students who attend an alternative middle that does not implement PBIS. An independent or unpaired samples *t* test was selected to analyze the difference in the mean test scores on the CRCT Grade 8 Mathematics test between at-risk, eighth-grade, Black male students who attended XYZ Alternative Middle School that implemented PBIS and at-risk, eighth-grade, Black male students who attended an alternative middle school that did not implement PBIS in the 2013-2014 school year. After examining the results of the *t* test, there was no statistically significant difference between the two groups of at-risk, eighth-grade, Black male students, therefore, the researcher failed to reject the null hypothesis.

A small effect size of Cohen's d=.4 was detected for this research question indicating a .61 probability that a student from XYZ Alternative Middle School would have a higher test score than a student from ABC Alternative Middle School if both are chosen at random. The data analysis also determined the experiment had a 58% power, which means that if this experiment was conducted 100 times, 58% of those experiments would be considered statistically significant, while the remaining 42% of experiments would be considered not statistically significant. Therefore, there is a 42% likelihood that the researcher made a Type II error and failed to reject the hypothesis.

The review of literature for this study revealed the challenges that student misbehavior can cause in the classroom and the negative influence that these behaviors exert in the learning

environment. Demirdag (2015) addressed how disruptive student behavior affects instructional time and undermines the ability for teachers to teach and for other students to learn. Students who continuously display behaviors that are detrimental to their learning are at-risk for academic failure which could lead to dropping out of high school (Berkeley et al., 2012; Melekoglu, 2011; Slaten, Ellison, Hughes, Yough, & Shemwell, 2015). If these destructive behaviors persist and students are suspended from school, they disrupting their own academic success. Landrum et al. (2011) found that if teachers can prevent student behaviors before they occur, they can identify antecedents and teach explicit expectations that would help students to understand appropriate behaviors. This approach to behavior management was also explored by Van Stone (2013) and Banks (2014).

As mentioned in the previous section, the use of PBIS as a vehicle to teach students appropriate behaviors and strengthen these skills through positive reinforcement has been regarded as an excellent tool that can alter the learning environment in a classroom in a positive direction. Algozzine et al. (2011) conducted a 5-year longitudinal study on the relationship between behavior and academic achievement for at-risk students, and they found that if implemented effectively, PBIS improved student behavior and increased academic achievement. The results of this study support the research by Horner, Sugai, and Anderson, (2010), which found that a school's implementation of PBIS resulted in an increase in positive student behavior and academic outcomes for students that previously had behavior issues.

In contrast to these findings, Thornton (2015) found that PBIS has evolved from a proactive approach to a reactive approach to student discipline. This researcher found that authentic proactive classroom management involved focusing on teachers developing relationships with their students so that they can foster a positive learning environment that

meets the needs of their students. Even though PBIS was implemented at XYZ Alternative Middle School and an improvement in the CRCT Grade 8 Mathematics mean test scores compared to ABC Alternative Middle was expected, the analysis of the experiment did not find a relationship. These results corroborate the study by Freeman et al. (2016) that was unable to find an effective relationship between academic outcomes and high schools that implemented PBIS.

RQ3: Is there a significant difference between the frequencies of office discipline referrals for at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS compared to at-risk ,eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS?

The third null hypothesis stated that at-risk, eighth-grade, Black male students who attend an alternative middle school that implements PBIS do not have a statistically significant difference in the frequencies of office disciplinary referrals when compared to at-risk, eighth-grade, Black male students who attend an alternative middle school that does not implement PBIS. A chi-squared test for independence was selected to analyze the difference in the frequency of office disciplinary referrals between at-risk, eighth-grade, Black male students who attended XYZ Alternative Middle school that implemented PBIS and at-risk, eighth-grade, Black male students who attended ABC Alternative Middle School that did not implement PBIS in the 2013-2014 school year. After examining the results of the chi-test test, there was no statistically significant difference between the two groups of at-risk, eighth-grade, Black male students, therefore, the researcher failed to reject the null hypothesis. A small effect size of Cramer's v=.07 was detected for this research question indicating the possibility of a Type II error.

This research question also examined at-risk, eighth-grade, Black male students who attended an alternative school. This population was chosen because of the growing body of

literature about disproportionate disciplinary incidences of Black male students compared to White and Hispanic male students (Cramer & Bennett, 2015; Kinsler, 2011; Monahan, VanDerhei, Bechtold, & Cauffman, 2014; Noltemeyer, Ward, & Mcloughlin, 2015; Sullivan, Klingbeil, & Van Norman, 2013; US ED, 2014a; Vincent, Tobin, Hawken, & Frank, 2012; Xie, Dawes, Wurster, & Shi, 2013). Disproportionate discipline practices, referred to as the Discipline Gap experienced by Black students, was addressed by several researchers cited in the literature review (Hilberth & Slate, 2014; Shah, 2013; Skiba et al., 2014; US ED, 2014a). In 2011, the CRDC found that Black students were disciplined at much higher rates than White and Hispanic, even though they made up a significant lower percentage of the total student population at that time (US ED, 2014a). More recent evidence of inequitable disciplinary consequences has been documented by many researchers in which they consistently concur that the increased risk of school failure among these students is a growing concern (Boneshefski & Runge, 2014; Hilberth & Slate, 2014; Losen, 2013; Skiba et al., 2014). Since these students are experiencing higher incidents of disciplinary referrals, they are also spending more time out of the classroom and more time in ISS or OSS (Kinsler, 2011; Noltemeyer et al., 2015; Shah, 2013). As Black male students are being suspended from school at higher rates than other students, many of them are being sent to alternative schools to continue their education when the traditional setting is no longer a suitable environment because of their disruptive behaviors.

Students who attend an alternative school are provided with an opportunity to achieve academic and behavior success because many of these schools provide a behavior management program with academic strategies to help teach students (Carver, Lewis, & Tice, 2010). Even though Schwab et al. (2016) reported that students enrolled in alternative school's experience higher academic success compared to the traditional school setting, they noted that more research

on this topic is needed to address the needs of at-risk students in alternative education schools. Hemphill and Hargreaves (2009) found that students who experienced higher incidents of discipline, suspension and poverty were at-risk of becoming high school dropouts. Students who attend alternative schools are already at a disadvantage because many have experienced multiple instances of disciplinary referrals and suspensions. It is the responsibility of the teachers and school leaders to ensure that they are using a variety of strategies such as PBIS to teach students the expectations and positively reinforce those expectations so that students can observe and model them from others and decrease the risk of dropping out of school (Cressey, Whitcomb, McGilvray-Rivet, Morrison, & Shander-Reynolds, 2014; Flannery et al., 2013; Reinke, Herman, & Stormont, 2013; Swain-Bradway, Swoszowski, Boden, & Sprague, 2013).

Implications

Examining the effectiveness of PBIS on student behavior and academic achievement has been the focus of many studies since its inception in 1997 (Barrett, Bradshaw, & Lewis-Palmer, 2008; Bohanon, Flannery, Malloy, & Fenning, 2009; Frey, Lingo, & Nelson, 2008; Horner et al., 2010; Sugai, Horner et al., 2000). The observations made from this study have shown that the implementation of PBIS did not yield a statistically significant difference in academic progress or discipline referrals. However, they did show an overall improvement in some areas compared to the alternative school that did not implement PBIS.

This study showed that although XYZ Alternative Middle School did have PBIS in place, the mean test scores on the CRCT Grade 8 Reading test were not statistically significantly different than the mean test scores from ABC Alternative Middle School. Research in this area has been limited. It should be noted, however, that mean test scores at XYZ Alternative Middle School were higher compared to those at ABC Alternative Middle School. Many studies have

indicated that a relationship between academic scores and PBIS was difficult to discern because there are other factors that can affect academic achievement (Freeman et al., 2016; Houchens et al., 2017). In fact, these results were consistent with the findings from Bradshaw, Mitchell, O'Brennan, and Leaf (2010), which found that there was no difference in reading or math achievement between students who were exposed to PBIS and students who were not.

This study also observed the results of the mean test scores on the CRCT Grade 8 Mathematics test and found that there was not a statistically significant difference in students who attended XYZ Alternative Middle School and ABC Alternative Middle School. However, the overall results on this test were higher at XYZ Alternative Middle School compared to ABC Alternative Middle School. While these results were consistent with many findings regarding PBIS and academic achievement, the study by Houchens et al. (2017) examined the different levels of a school's fidelity to implement PBIS to determine its impact on academic achievement and found that PBIS schools with high- or medium- fidelity and non-PBIS schools had significantly higher overall achievement than schools with low-fidelity. This study showed that for PBIS to effectively impact student achievement, it must be done with high- or medium-fidelity. It is possible that PBIS is being implemented with low-fidelity at XYZ Alternative Middle School, and that may be the reason why students did not score significantly higher on the CRCT Grade 8 Mathematics test compared to ABC Alternative Middle School that did not implement PBIS.

This study also examined the impact that PBIS has on student behavior, which found that there was no statically significant difference between the frequency of referrals at XYZ Alternative Middle School which implemented PBIS and ABC Alternative Middle School that did not implement PBIS. Interestingly, the results from this study were not consistent with the

results of many other researchers, which saw a decrease in student behavior issues leading to office disciplinary referrals once PBIS was implemented (Gage, Sugai, Lewis, & Brzozowy, 2015; Polirstok & Gottlieb, 2006; Tillery, Varjas, Meyers, & Collins, 2010).

Despite there being contradictions with the findings of the relationship between PBIS and academic achievement and student discipline compared to previous findings, these results can add to the body of research of the impact of PBIS on student discipline and academic achievement. This study could corroborate the findings of previous studies where no relationship between test scores and implementation of PBIS was found (Freeman et al., 2016; Houchens et al., 2017). However, it should be noted that this study used convenience sampling of at-risk, eighth-grade, Black male students at alternative middle schools, that these findings should be interpreted with caution, and that if repeated using a larger sample size, this study could yield a different result.

Limitations

This study only investigated the impact of PBIS on at-risk, eighth-grade, Black male students in an alternative middle school, therefore, there were several threats to both the internal and external validity of this study. The threats to internal and external validity for this research is as follows:

A) Maturation-the researcher requested that first time eighth grade students should be included in the convenience sample; however, this information was difficult to ascertain as students could have been retained at previous grades levels and could be older than students who did not repeat a grade level but were in the same grade.

B) Motivation/Competiveness-students who are highly motivated to perform well academically will do so regardless of which group they fall into, and this could affect

results.

C) Test Preparation-the researcher chose participants from two different school systems that may teach the eighth grade curriculum differently even though the state objectives are the same and this could threaten the results of the study if one school covered the state objectives differently.

D) Population validity-because this group was not selected randomly, the results should only be attributed to the participants and to all at-risk, eighth-grade, Black male students who attend an alternative middle school.

E) Classroom Misbehaviors-teachers are given discretion when writing disciplinary referrals for student misbehavior, and this may not be consistent within the two groups.

F) Office Discipline Referrals-because these groups were in two different school districts, disciplinary offenses may not be documented the same, therefore the difference in frequency could be due to reporting.

Recommendations for Future Research

As stated in the Introduction, the impact of disciplinary practices and academic success of Black male students is a concern because of the disproportionate rates of suspensions. When the disruptive behavior of these students results in disciplinary actions, they are losing their opportunity to learn when they are placed in ISS or OSS (Shah, 2013). Disruptive classroom behavior is a detriment to all involved because it takes the focus away from teaching and learning and puts it on the disruptive students. By implementing PBIS, schools can focus on teaching appropriate behaviors and reinforcing those behaviors through rewards. Many studies have focused on PBIS and its impact on student behavior, as well as student achievement, however, there are only a few studies that specifically look at PBIS and its impact on behavior

and academics at alternative schools (Algozzine et al., 2012; Carver et al., 2010; Gage et al., 2015; Horner et al., 2010; Kelm & McIntosh, 2012; Moger, 2010). This study aimed to address the limited research on the effectiveness of alternative schools by examining academic achievement and student behavior, which was addressed in each research question and this is one of the first research studies that specifically examined the influence of PBIS on the academic progress and frequency of disciplinary referrals for at-risk, eighth-grade, Black male students in an alternative school.

The researcher recommends the following future studies to support or dispute the findings from this study and add to the body of literature:

1. Further studies could examine a larger sample size of Black male students who attend alternative PBIS middle schools and alternative non-PBIS middle schools to ascertain if the results would be the same as this study (Bradshaw et al., 2010; Flower, McDaniel, & Jolivette, 2011; Swain-Bradway et al., 2013).
2. Further studies could examine a larger sample size of Black male students who attend traditional PBIS middle schools and traditional non-PBIS middle schools to address the concern of the effect of PBIS on academic achievement of Black students (Horner et al., 2014; Mergler, Vargas, & Caldwell, 2014; Noltemeyer et al., 2015; Skiba et al., 2011).
3. Further studies could investigate Black female, students who attend traditional PBIS middle schools and traditional non-PBIS schools to establish if there is a relationship between PBIS and academic achievement and frequency of disciplinary referrals (Lane, Oakes, Carter, & Messenger, 2015; Simonsen, Jeffery-Pearsall, Sugai, & McCurdy, 2011; Vincent et al., 2012).

4. Further studies could examine the relationship between disciplinary referral rates of Black students and White students in traditional PBIS middle schools and traditional non-PBIS middle schools (Cramer & Bennett, 2015; Kinsler, 2011).
5. Further studies could analyze the disciplinary referral rates of Hispanic or other minority students compared to White students in traditional PBIS schools and non-PBIS schools (US ED, 2014a).
6. Further studies could investigate the link between teacher perception of PBIS fidelity at their school and its impact on student behavior (Frey et al., 2008; Houchens et al., 2017; Kelm & McIntosh, 2012; Putnam & Knoster, 2016).
7. Further studies could examine the relationship between teacher perception of their culturally responsive approach to teaching (Cramer & Bennett, 2015; Lanier & Glasson, 2014; Welch & Payne, 2010).
8. Future research studies could investigate the different behavior management programs and compare student academic achievement at traditional schools by ethnicity and gender (Cramer & Bennett, 2015; Cressey et al., 2014; Demirdag, 2015; Henshaw, 2012).
9. Future research studies could explore the relationship between PBIS and Black male students in elementary schools (Henshaw, 2012).
10. Future research studies could explore the impact that teacher-student relationships have on student academic progress (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Murray & Zvoch, 2011; Schwab et al., 2016; Tsai & Cheney, 2012; Tsouloupas et al., 2014).
11. Further studies could examine a similar sample size of Black male students who

attend alternative PBIS middle schools at the distinguished, operational, emerging and installing PBIS levels (Bradshaw et al., 2010).

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APPENDICES

Appendix A

Figure 1. Suspended and expelled students by race and ethnicity, (US ED, 2014b) available at: https://www2.ed.gov/about/offices/list/ocr/docs/crdc-discipline-snapshot.pdf

Appendix B

Figure 2. Preschool students receiving suspensions, by race and ethnicity, (US ED, 2014b) available at: https://www2.ed.gov/about/offices/list/ocr/docs/crdc-discipline-snapshot.pdf

Appendix C

[redacted]

LOCAL SCHOOL RESEARCH REQUEST FORM

Name of School: [redacted]

Name of Researcher: Sandra Adomako Lefterlough

Position or Grade: Assistant Principal

A. Research Project

a. **Title:** Impact of Positive Behavior Interventions and Supports of At-Risk Black Male Students' Academic Performance

b. **Statement of Problem and research question:** Black male students are academically at-risk for failure because of disproportionate disciplinary practices. RQ: Do at-risk 8th grade Black male students who attend an alternative middle school that implements PBIS have a higher mean score on the 8th grade CRCT Reading and Mathematics than like students who attend an alternative middle school without PBIS?

c. **Subjects or population for the study:** 2014 CRCT Reading and Mathematics test scores and and office discipline referrals of 8th grade black males, stripped of all other identifiable information

d. **Reason for doing this research:**

- [x] Graduate Study at Liberty University University/College
- [ ] Publication/Presentation
- [ ] Other (please specify) _____

e. **Dates research will be conducted:** May 2016 to August 2018

B. All research and researchers must a) Protect the rights and welfare of all human subjects, b) Inform students and/or parents that they have the right not to participate in the study, c) Adhere to board policies and applicable laws which govern the privacy and confidentiality of students records.

C. This request applies to research conducted within and by local school personnel. All other research requests must be submitted by completing a [redacted] Research Application and submitting it electronically according to instructions. For complete details and instructions, please visit our Web Page at the following link: [redacted] or you can simply go to [redacted] When you open our webpage, click on "I want to" section.....Apply for Research Approval." This will take you to our webpage.

D. Principals ONLY need to approve Local School Research Requests. The copy sent to the Research & Evaluation Office is for filing purposes only. No further approval is necessary.

E. After approval by the principal, please forward a copy of this completed form to:

[redacted]

[redacted] 5/16/16

Principal's Signature Date of Approval

Appendix D

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

May 18, 2018

Sandra Adomako Letterlough
IRB Exemption 3186.051818: Impact of Positive Behavior Interventions and Supports of At-Risk Black Male Students' Academic Performance

Dear Sandra Adomako Letterlough,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(4), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

[redacted]

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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Appendix E

[redacted]

June 25, 2018
Ms. S. Letterlough
[redacted]

Reference: Impact of Positive Behavior Interventions and Supports of At-Risk Black Male Students' Academic Performance (File # 2018-011)

Dear Ms. S. Letterlough:

This letter is to inform you that your research proposal has been approved by the Department of Research, Data, and Evaluation for implementation in the [redacted]

When you begin your research, you must secure the approval of the principal/chief site administrator(s) for all schools named in the proposal. You should provide the application with all required attachments and this district approval letter to the principal(s) to inform their decision. **Please remember the principal/chief site administrator has the final right of approval or denial of the research proposal at that site. In addition, note that teachers and others may elect not to participate in your research study, even though the district has granted permission.**

The last day to collect data in schools in [redacted] for the 2018-2019 school year is Friday, March 29, 2019. The deadline is to protect instructional time during the assessment season and end of the year activities scheduled at individual schools. This approval is valid for one year from the date on this approval letter. Should there be any changes, addenda, design changes, or adverse events to the approved protocol, a request for those changes must also be submitted in writing/email to the [redacted] Department of Research, Data, and Evaluation during this one-year approval period. Changes should not be initiated until written approval is received. Further, should there be a need to extend the time requested for the project; the researcher must submit a written request for approval at least one month prior to the anniversary date of the most recent approval. If the time for which approval is given expires, it will be necessary to resubmit the proposal for another review by the [redacted] Research Review Board.

Completed results are **required** to be submitted to the Office of Accountability (Research, Data, and Evaluation).

Feel free to call [redacted] if you have any questions.

Sincerely,

[redacted]

Appendix F

[redacted] [redacted]

IRB Change in Protocol Approval: IRB Exemption 3186.051818: Impact of Positive Behavior Interventions and Supports of At-Risk Black Male Students' Academic Performance

IRB, IRB

Thu 6/28/2018 2:35 PM

[redacted]

[redacted]

Good Afternoon Sandra,

This email is to inform you that your request to utilize data for "a participant population of 25-30 at-risk 8th grade Black male students, between the ages of 12-14 attending [redacted] in the 2013-2014 school year that participated the 2014 Georgia Criterion-Referenced Competency Test (CRCT)" as the control group for your study has been approved. Thank you for submitting documentation of permission from [redacted] to use the data.

Thank you for complying with the IRB's requirements for making changes to your approved study. Please do not hesitate to contact us with any questions.

We wish you well as you continue with your research.

Best,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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