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THE EFFECTS OF POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS ON
MIDDLE SCHOOL STUDENT ACHIEVEMENT AND MIDDLE SCHOOL
STUDENT OUTCOMES

by

Torrance A. Brooks, B.S., M.Ed.

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ABSTRACT

THE EFFECTS OF POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS ON
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University of Houston-Clear Lake, 2023

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The purpose of this mixed method study was to examine whether or not Positive Behavior Interventions and Supports (PBIS) influence middle school academic student achievement and middle school disruptive behaviors. The population of this study was a participating school district located in eastern Harris County outside of Houston, Texas. The sample consisted of seventh and eighth grade teachers from four different middle schools that used PBIS or did not use PBIS that had STAAR scores assigned to their name. A total of 103 middle school teachers met the criteria. Individual teacher STAAR scores and individual student PEIMS data for office referrals were collected by the researcher for the middle school teachers within the participating school district.

Independent *t*-tests and a Mann-Whitney U test were used to analyze the quantitative data, while an inductive and deductive coding process was used to analyze and transcribe the collected qualitative data for ten participating teachers. The quantitative findings indicated that there was a statistically significant mean difference in student achievement between classroom teachers that implemented a PBIS model compared to classroom teachers that did not, but there was not a statistically significant mean difference in disruptive behaviors for classroom teachers who used PBIS compared to classroom teachers who did not. The qualitative data revealed five emerging themes: building positive relationships, improved student achievement, changing negative behaviors associated with the benefits of PBIS that address challenging behaviors, increased instructional time, and decreased office referrals. Based on the qualitative findings, middle school teachers trust that PBIS is effective in increasing student achievement and decreases challenging behaviors of middle school students. The research concludes with implications and recommendations for future research based on the findings.

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CHAPTER I:

INTRODUCTION

All students deserve to have access to schools that are safe, well run, and protective of their well-being. These schools have specific rules and procedures with high expectations for their students and productive classrooms that are conducive to learning. Creating and sustaining this type of learning environment may be difficult, but it is worth the investment and time by the school district for student success (Hannigan & Hannigan, 2020). With the intentions of classrooms being safe and nurturing environments, significant increases in students' challenging behaviors have become one of the most prevalent issues negatively impacting learning, interactions, and retention of teachers (Walters & Frei, 2007; Waschbusch et al., 2014). These negative issues have resulted in an increased need for effective approaches to a systematic school-wide discipline framework (Chitiyo & May, 2018).

During the school year of 2017-2018, according to the United States Department of Education, Office of Civil Rights (2021), 2.5 million students across America were suspended at least one time and 2.6 million students across America were in in-school suspension at least one time. During the 2017-2018, male students received 69.5% of in-school suspensions and 70.5% of out-of-school suspension, while female students received 30.5% of in-school suspensions and 29.5% of out-of-school suspensions (United States Department of Education, Office of Civil Rights, 2021). Last, African American students received 31.4% of in-school suspensions and 38.2% of out-of-school suspensions while only making up 15.1% of the student population in America (United States Department of Education, Office of Civil Rights, 2021). In 2017-2018, 11,205,797 total school days were missed due to out-of-school suspensions in America, which is loss

of instructional time (United States Department of Education, Office of Civil Rights, 2021).

Frequently, school personnel respond to disruptive behavior infractions using punitive strategies, such as suspensions, expulsions, and seclusion (Chitiyo & May, 2018). These punitive strategies remove the student from the classroom setting while disrupting and discontinuing the student's learning and negatively affecting student achievement (Lee et al., 2021). Research has suggested that students who experience exclusionary discipline at high rates demonstrate lower academic achievement and have higher potential to be a drop out from school (Kupchik & Catlaw, 2014). Multiple research studies indicated these strategies have not been effective in reducing the number of behavior infractions in the school setting (Lee et al., 2021; Losen & Martin, 2018; Mendez & Knoff, 2003; Rosenbaum, 2020; Ryan & Peterson, 2004; Ryan et al., 2007; Sugai & Horner, 2002). Also, exclusionary strategies are ineffective because when early interventions are not provided, misbehaviors become more frequent and increases in the intensity level of the infractions and amplifies the risk of negative outcomes for students individually (Noltemeyer et al., 2015) which leads to more incidents of disciplinary exclusions and greater chances of involving the juvenile justice system (Noltemeyer et al., 2015).

As a result of this philosophical shift, increases in forms and functions of challenging behaviors, and an extensive body of research that supports alternative approaches, school administrators have turned to behavior intervention strategies that support more effective framework of addressing disruptive behaviors (Gage, Grasley-Boy, Peshak George et al., 2018; 2019). Specifically, administrators and educators are commonly embracing behavioral models that encompasses school-wide and classroom-level strategies aimed at creating a culture of expectations that reinforce desirable

behaviors and build a positive school climate leading to school improvement and student success (Gage, Whitford, & Katsiyannis, 2018; Horner et al., 2010). Many such models include behavior intervention strategies that specifically support teachers in establishing expectations, data-based decision making, measurable outcomes, offer specific examples of incentives use, and suggest a realm of strategies for addressing and managing discipline infractions (Sugai & Horner, 2020).

Positive Behavioral Interventions and Supports (PBIS) is a prevention-oriented approach for organizing evidence-based behavioral strategies within a tiered continuum to facilitate the academic and behavioral performance of all students (Lewis & Sugai, 2017; Sugai & Horner, 2020). PBIS was first recognized in public school settings in 1996 by the United States Department of Education (Ryan et al., 2007). As of August 2020, over 29,000 schools across America have implemented this system for the management and correction of student behavior (McIntosh et al., 2018). PBIS continues to expand implementation globally as it is now implemented in all 50 states and 29 countries (George et al., 2018).

The USDE stated that PBIS is not a specific program or curriculum, but instead a multitiered framework for organizing and achieving capacity to implement effective academic and behavioral practices (Sugai & Horner, 2020). Educators feel that when students behave appropriately, there are positive academic and performance outcomes (Algozzine et al., 2010). With students having significant challenging behaviors, which result in discipline infractions being a top priority of school concerns, and with teachers consistently ranking student misconduct as a major barrier to teaching, students' consistent discipline infractions must be addressed (Bushaw & Lopez, 2010; Gray & Lewis, 2015; Harrison & Watson, 2012; Simonsen et al., 2020).

Dealing with hostile, disruptive, and rude students make it difficult for teachers to complete an entire lesson cycle and teach the standards (Briesch et al., 2014; Postholm, 2013; Sun & Shek, 2012). Given the strong correlation between student behavior and student achievement, disruptive and off-task behaviors must be addressed effectively and immediately. Researchers see a connection and encouraging results of improved academics and decreased behavioral patterns when schools implement PBIS with fidelity (Kelm et al., 2014; Madigan et al., 2016; Muscott et al., 2008).

Research Problem

School personnel, parents, and stakeholders rate school safety and discipline as top priorities in education (Gray & Lewis, 2015). Suspensions and expulsions from school, which cause a decrease in instructional time, continue to be a concern for policy makers and school districts (Losen & Martin, 2018). Current national priorities are focused on improving school climate, safety, and discipline practices while maintaining high levels of academic achievement for all students including those who may be at risk for poor school outcomes (Brouwers & Tomic, 2000; Reinke et al., 2018). Research shows that out of school suspensions and no-tolerance approaches are aligned with lower student achievement and fail to reduce or prevent future student discipline infractions (Irvin et al., 2004; Losen, 2013; Mayer et al., 1995; Skiba & Peterson, 2000; Skiba & Rausch, 2006).

For effective instruction to occur, and for students to be academically successful, teachers must take full advantage of every instructional minute. It is critical for students to remain in the classroom, for more instructional time, to be successful in their academic learning (Keane, 2012). Research has indicated that students who are regularly suspended or expelled are more likely to be retained or drop out of school compared to students who are disciplined without being suspended or expelled (Balfanz et al., 2007). Recent

findings have suggested that these punitive approaches have led to increases in disciplinary actions, such as suspension, and have promulgated the “school to prison pipeline” while exacerbating racial disparities in the delivery of punishing consequences (Mallett, 2015).

The majority of research studies on PBIS have been conducted on the elementary school level, but middle school and high school data indicate the numbers are increasing (Freeman et al., 2019). A gap in literature exists with PBIS and middle schools and high schools (Flannery et al., 2016; Freeman et al., 2019). More research is needed in this area to determine the effectiveness of PBIS on the middle school and high school level. Research has indicated that even though PBIS is rising on the high school level, only approximately 13% of high schools in the United States implement PBIS (Freeman et al., 2019).

In summary, there is a need for effective and timely discipline measures to be implemented to ensure that academic time is not lost due to student behavioral issues. Research has demonstrated that teachers can promote a positive classroom environment through the use of effective universal classroom management strategies (Curby et al., 2013; Ialongo et al. 2001; Simonsen et al. 2020). In classes that have poor classroom management, students tend to be off task more often and engage in higher rates of disruptive behaviors. Research has suggested that improvements in student behavior in the classroom setting improves academic outcomes and student success (Algozzine et al., 2010).

In addition to PBIS increasing academic outcomes, PBIS is also associated with increasing attendance of students, time spent inside the classroom on direct instruction by the classroom teacher, and student engagement during instruction (Horner et al., 2019; Scott & Barrett, 2004). Data show that there is a direct relationship between academic

performance and PBIS when implemented with fidelity (Lassen et al., 2006). In conclusion, with discipline being a top priority in education (Gray & Lewis, 2015), my research examined if PBIS increased student achievement, increased instructional time, and decreased student disruptive behaviors in the classroom setting on the middle school level.

Significance of the Study

There is evidence that indicates that a multitiered system of support is a mechanism for efficient delivery of a core curriculum and evidence-based practices designed to meet the needs of all students (Adamson et al., 2019). Research indicated that reactive instead of proactive responses by the classroom teacher to student misbehaviors results in hundreds of lost instructional hours each school year (Muscott et al., 2008). Data revealed that an average of 20 minutes, per office referral, of instructional time is lost due to the teacher's lessons being interrupted from student misbehaviors (Scott & Barrett, 2004). Consequently, if in-school suspension (ISS) and out-of-school-suspension (OSS) are regularly used, students receive less instruction from their teacher, which results in gaps in the student's learning (Losen & Martinez, 2013). Simonsen et al. (2020) stated that when students have behavioral issues, the student is more likely to experience exclusionary discipline actions, which results in lost instructional time (Simonsen et al., 2020), but McIntosh et al. (2018) stated that the implementation of PBIS increases student engagement and increased instructional time.

With these challenges being faced in education, there is a critical need for a multitiered behavioral support program. PBIS is a prevention-oriented approach for organizing evidence-based behavioral strategies within a tiered continuum to facilitate the academic and behavioral performance of all students (Lewis & Sugai, 2017; Sugai & Horner, 2020). When implemented with fidelity, school-wide PBIS will enhance the

learning environment of a school, which will result in higher student achievement (Kelm et al., 2014; Madigan et al., 2016; Muscott et al., 2008). Decreased exclusionary discipline procedures, increased student attendance, positive school culture and climate, and improved academic performance are all linked to the implementation of PBIS in schools (Freeman et al., 2019; Gage, Grasley-Boy, Peshak George et al., 2018; Mitchell et al., 2018).

Overall, the majority of experimental research on PBIS for student achievement has been conducted at the elementary level. Students displaying elevated levels of behavioral challenges in the classroom require teachers to be more sensitive toward the students' behavior, which results in negative perceptions and expectations from the teachers. There are several articles of research from pre-K to elementary classrooms that suggested students who display negative behaviors have more conflicts and lower expectations from their teachers (Birch & Ladd, 1997). However, there is less research on the impact of negative student behaviors resulting in more student-teacher conflicts and lowered teacher expectations of students on the secondary level (Wentzel, 2002). Therefore, the significance of this study is examination of whether PBIS decreases challenging behaviors and increases student achievement on the secondary level. This study examined the effectiveness of PBIS on the secondary level. This research will thereby potentially contribute to the larger body of research examining variables that impact or influence the implementation and effectiveness of PBIS with older students.

Research Purpose and Questions

The purpose of this study was to examine whether or not PBIS influences middle school academic student achievement and middle school disruptive behaviors. The following questions guided this study:

1. Is there a statistically significant mean difference in student achievement between classroom teachers that implement a PBIS model compared to classroom teachers that do not?

Ha: There is a statistically significant mean difference in student achievement between classroom teachers that implement a PBIS model compared to classroom teachers that do not.

2. Is there a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not?

Ha: There is a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not.

3. What are teachers' perceptions of the benefits when PBIS classroom management strategies are used to address challenging behaviors?
4. What are teachers' perceptions of the implications on instructional quality and student engagement when there are decreased disruptive behaviors associated with implementing PBIS?

Definitions of Key Terms

CHAMPS: Conversation, Help, Activity, Movement, Participation, Success—a specifically structured approach for implementing positive behavior interventions and supports in a classroom. The intent was to have teachers create an environment where expectations for learning are explicitly understood and reinforce positive behaviors first and foremost, and then correct misbehavior.

Disciplinary Exclusions: consequences for school-based problem behaviors that remove students from instructional settings.

Disruptive Behavior: a behavior which is undesirable in a school environment and takes the teacher's attention away from the main task of teaching (Oxley & Holden, 2021).

Expulsion: a disciplinary removal of a student from a school district and assignment to a Juvenile Justice AEP or other program for engaging in the most serious offenses of a school system.

Group Contingencies: effective strategies used to manage student classroom behavior (Simonsen et al., 2020).

In-School Suspension (ISS): the removal of a student from a regular classroom as a disciplinary consequence and placement in a closely supervised and isolated placement within the school.

Instructional Time: time students are exposed to content.

Met Standard: students who have met or performed slightly higher than state passing standards requirements on a specific content assessment.

Multi-tiered System: a mechanism for efficient delivery of a core curriculum and evidence-based practices designed to meet the needs of all students. It is a comprehensive framework that includes both academic and behavioral instruction and strategies that can be intensified according to student need (Freeman et al., 2019; Fuchs et al., 2014).

Office Discipline Referral: an event in which (a) a student engaged in a behavior that violated a rule in the school, (b) the problem behavior was observed by a member of the school staff, and (c) the event resulted in a consequence delivered by an administrative staff member who produced a written product defining the event. This term refers to the student being removed from the classroom environment and sent to an administrator for the discipline infraction (Sugai et al., 2000).

Operant Conditioning: changing behaviors by the use of reinforcements and consequences for a desired response (Skinner, 1991).

Out-of-School Suspension: “a disciplinary sanction that requires the student to be excluded from the school building for a specified period of time” (Christle et al., 2004, p. 509)

PBIS (Positive Behavior Interventions and Supports): a prevention-oriented approach for organizing evidence-based behavioral strategies within a tiered continuum to facilitate the academic and behavioral performance of all students (Lewis & Sugai, 2017; Sugai & Horner, 2020).

PBIS (Positive Behavior Interventions and Supports) Continuum: a continuum of school-wide instructional and positive Tier I, II, and III behavior supports (Simonsen et al., 2020).

Public Education Information Management System (PEIMS): a data tracking network used by the Texas Education Agency (TEA) for all reported and requested data concerning student information, school performance, financial, personnel, and other confidential information (Texas Education Agency, 2008c).

Punishment: a response to undesirable behavior which is intended to be unpleasant in some way and aims to deter repetition of the same behavior (Oxley & Holden, 2021).

RP (Restorative Practices): an alternative proactive approach to addressing such behaviors while simultaneously improving interpersonal relationships and social-emotional behavior competencies. Restorative practice provides a whole school framework that promotes the building of a positive community, building relationships, responds to challenging behaviors, promoting healing, and repairs relationships that have been harmed.

School Climate: a mutual commitment between students and teachers to work together toward common goals such as improved academic outcomes or the creation of a more engaging learning environment.

Social Learning Theory: relies on learning through observations or personal experiences (Bandura, 1977).

Student Achievement: a measure of growth of knowledge in a specific content area, which can be measured through standardized or non-standardized measures.

SWPBIS (School-wide Positive Behavior Interventions and Supports): a system-level framework designed to improve school climates, reduce discriminatory discipline practices, and improve student outcomes using data-driven decisions (Simonsen et al., 2020; Sugai & Horner, 2020).

Tier I: designed to support all students and staff across all settings in the school, approximately 80% of students (Simonsen et al., 2020; Spaulding et al., 2008; Walker et al., 2005).

Tier II: individualized level of support is provided to students with identified needs and considered to be at risk for developing more significant behavioral or academic problems, approximately 15% (Simonsen et al., 2020; Swain-Bradway et al., 2015; Walker et al., 2005).

Tier III: students who have persistent behavior problems; students who have significant, well-established needs that require comprehensive, individualized supports, approximately 1%-5% (Walker et al., 2005).

Zero Tolerance: a policy mandating predetermined consequences for specified behaviors.

Conclusion

This chapter discussed the significance of Positive Behavior Interventions and Supports and the importance that it had on student learning outcomes. Research problems and questions were presented to guide this study. I deeply analyzed elementary as well as middle and high school data for PBIS. The next chapter presents a review of literature related to the study.

CHAPTER II:

REVIEW OF THE LITERATURE

In recent years, states have been under extreme pressure to encourage low performing schools to use best practice strategies that are proven to increase student achievement (Every Student Succeeds Act ESSA, 2015). States have also begun to use other tools to measure student success, such as student attendance, school climate, and student discipline. As a result, schools are now using research-based strategies, such as Positive Behavior Interventions and Supports (PBIS), to increase positive learning environments, communicate expectations for behavior, and to create a positive culture and climate in schools. The PBIS strategies are designed to increase student learning and decrease student significant behavior challenges in the classroom (Lewis et al., 2010). Studies show that schools with positive school climate ratings have safer schools, more successful academic and behavior outcomes, positive responses on the reduction of disciplinary exclusions, and increased levels of engagement of students during instruction (Espelage et al., 2014; Gage, Grasley-Boy, Peshak George et al., 2018; Gage, Rose et al., 2019; Gase et al., 2016; Thapa et al., 2013).

Research has found that there is a strong correlation between student behavioral challenges and low academic achievement (Gest & Gest, 2005; Landrum et al., 2003). Students with high intensity levels of behavior issues display lower levels of academic achievement due to lack of engagement in the teacher's instruction compared to students that are highly engaged and showing fewer behavior difficulties (Payne & Welch, 2013). Students with behavioral issues are inclined to have more OSS and expulsions, which lead to lost instructional time directly affecting student achievement (Simonsen et al., 2020). Teachers cannot force students to learn or to follow the rules; however, they can expose students to structured environments in the classroom, which in most cases will

improve student behavior. Students that are engaged in the instruction, with good classroom behaviors, tend to be more successful in school (Sutherland et al., 2008).

Researchers have found that PBIS has been associated with increased student attendance, time learning, and student engagement (Horner et al., 2019; Scott & Barrett, 2004). Given the relationship between problem behaviors and poor academic achievement, it is prudent to bridge the gap between both the academic and social-behavioral needs of students (Sutherland et al., 2008). By bridging the gap between social and emotional needs and behavioral needs, students will have the skills to problem solve and manage their emotions to have successful outcomes in school (Cambourne, 2002). Studies have shown a direct correlation between time in class and academic achievement (Gregory et al., 2010), meaning the best opportunity for students to be successful is in the classroom.

Theoretical Framework

In research, the theoretical framework is the foundation of the dissertation through which the researcher is constructing their knowledge for the study and it supports the rationale of the study (Grant & Osanloo, 2014). The theoretical framework is also viewed as a guide or blueprint that supports the study, which certifies how the researcher will philosophically, epistemologically, methodologically, and analytically write the dissertation. The theoretical framework for this study was a combination of Albert Bandura's social learning theory and B.F. Skinner's operant conditioning. The interaction of environmental, behavioral, and cognitive effects explains behaviors in the theory of social learning (Bandura, 1977), and desired responses are given after the presented reinforcement, which in return changes behaviors (Skinner, 1991). Both of these concepts fall under the theory of Behaviorism, which states that positive and negative consequences have a direct effect on behavior (Skinner, 1991).

Research has suggested that there was a correlation between PBIS and the social learning theory (Bradshaw et al., 2009). During the 20th century, psychologists realized that it was impossible to measure emotions and desires, therefore behavioral psychologists introduced a scientific way to study behavior by linking actions to external influences (Logue, 2013). The social learning theory is structured around observations, expected modeled behavior, attitudes, and emotions (Bandura, 1977), while operant conditioning is an association between behavior and consequences (Golden & Earp, 2012). Through PBIS, students are taught what appropriate behaviors are (Bradshaw et al., 2009), as well as learning by observing expected behaviors for appropriate classroom expectations (Ross, 2012). With the combination of Behaviorism and the social learning theory, PBIS provides students with opportunities to attain successful academic and behavioral outcomes.

Bandura's (1977) social learning theory highlights the significance of examination learning and modeling that affects the thinking process and actions of a person; therefore, when a person observes the behaviors of another person, there is a possibility that the behaviors will be reinforced based on the outcome being positive or negative. This theory is aligned with operational conditioning due to both philosophies recommending that consequences for an action control the regular occurrence or lessen the likelihood that the action to occur. This theory can also have a reverse reaction because if students glorify negative behaviors and negative consequences, then those students will begin to behave in a negative way. It is vital that students view positive PBIS reinforcements in the classroom. When students witness positive reinforcements, it causes other students in the classroom to want to obtain similar positive reinforcements for achievements, such as good grades and good behaviors, and avoid negative attention.

B.F. Skinner's operant conditioning, which is how a person responds after the behavior occurs, links our behaviors to what is going to happen resulting from the behavior. Operant conditioning states that our behaviors are routine in a person's everyday life; therefore, a person's behavior acts upon their surroundings to satisfy their basic needs (Keller & Schoenfeld, 1950). B.F. Skinner stated that behaviors are functions of an organism that consists of the interactions with its environment and circumstances (Moore, 2011). There is a functional relation between the behavior of a person and the variables of the environment. The environmental variables are significant actions that have happened during the lifetime of the person, which formulates the person's experiences. This theory, in return, can also create a negative environment as well. A person's negative experiences in life can cause a person to respond negatively to all circumstances. As B.F. Skinner (1991) stated, direct experiences are more valuable than verbal communication; therefore, PBIS must be modeled for the students and practiced by the students rather than PBIS only being verbally being explained.

An Overview of Positive Behavior Interventions and Supports

During the reauthorization of the Individuals with Disabilities Act of 1997, the legislature established a grant to fund and provide support to schools with best research-based practices for improving behavior challenges of students (Sugai & Simonsen, 2012). At this time, a national Center on Positive Behavioral Interventions and Supports was created to provide this assistance. PBIS is a three-tiered behavioral framework that is linked to improving student behavior while increasing student outcomes and academic achievement (Bradshaw et al., 2015; Freeman et al., 2019; Horner et al., 2019). During the reauthorization of the Individuals with Disabilities Act of 1997, the legislature established a grant to fund and provide support to schools with best practices for improving behavior challenges of students (Sugai & Simonsen, 2012). Previous studies

have shown that PBIS has significant positive impacts on students bullying each other, the culture and climate of a school, and decreasing disciplinary problems in classrooms when used with fidelity (Bradshaw et al., 2009; Horner et al., 2019, 2010; Waasdorp, 2012).

PBIS is a school-wide framework of strategies and intervention techniques for establishing the social culture, expected classroom behaviors, individual behavior supports, and organizational systems needed to achieve academic, behavioral, and social success for all students. The five elements of PBIS are interrelated and include systems, equity, data, practices, and outcomes. Of the five elements, systems support staff behavior, practices support student behavior, outcomes are social competence and academic achievement, and data support decision making (Center on PBIS, 2023). The following sections will present an overview along with applicable research supporting these topics.

Student Equity

The issue of racial disparities amongst students of color for discipline outcomes continues to be a debate of how to close the gap of different racial groups. For several years, the national, state, district, and building level discipline data have been overly represented by students of color for discipline infractions and disciplinary consequences (Brown & Tillio, 2013; Greflund et al., 2014; Mendez & Knoff, 2003), with African American males making up the largest population of students receiving exclusionary discipline (Girvan et al., 2017; Losen & Martin, 2018). Research has stated that African American males are two to three times more likely to receive suspensions and office referrals than other racial groups (Bradshaw et al., 2009; U.S. Department of Education Office for Civil Rights, 2021). The disproportion of suspensions of African American males has indicated detrimental factors to the quality of life for these African American

males (Grace, 2020). As a result of these numbers, reducing inequalities in African American students' discipline is important for school improvement targets (McIntosh, Girvan, Falcon et al., 2021).

Not only does PBIS show positive effects on overall school discipline outcomes, PBIS has also been effective on reducing racial inequalities in schools (McIntosh, Girvan, Falcon et al., 2021). In three separate studies, PBIS has shown that implementation with fidelity lowers racial disproportionality in exclusionary discipline (McIntosh et al., 2018; Swain-Bradway et al., 2015; Vincent & Tobin, 2010). In these particular studies, PBIS did reduce racial inequities, but they were not completely eliminated and to achieve even more equity, technical assistance providers implemented specific equity strategies that focused on PBIS systems (Cregor et al., 2010). In the study, a quasi-experimental design was used to determine the success rate of PBIS professional development on persistently low-performing schools that were majority African American. This intervention lasted for 1 school year. The participants were 95 leadership teams of schools in the southeastern U.S. that were labeled low-performing for the 2017-2018 school year.

In these 95 low-performing schools, the year-long intervention consisted of four full-day professional development workshops based on Project ReAct. Project ReAct is a multicomponent strategy used to improve student equity in school discipline through data looking for patterns, systematically adapting PBIS to be culturally responsive, and eliminating school biases in educators (McIntosh, Girvan, Falcon et al., 2014). The intervention workshops focused on school teams working together to improve student outcomes based on student's specific and behavioral needs. All three outcomes, school effectiveness rating, exclusionary discipline, and school climate index, yielded an increase in performance for the intervention schools. As previously stated, the school's

population in the study was majority African American, which historically and currently have the highest rates of exclusionary discipline amongst all races (Girvan et al., 2017).

School-Wide Systems

Positive Behavioral Interventions and Support (PBIS) is a multitiered, evidence-based, behavioral support system for students that produces positive academic and behavioral outcomes (Sugai & Horner, 2020; Sugai & Simonsen, 2012). Each tier increases in intensity and frequency depending on the needs of the student. School-Wide Positive Behavior Interventions and Support (SWPBIS) has been associated with improved social skills among students (Bradshaw et al., 2015; Horner et al., 2019), better functioning schools (Bradshaw et al., 2009), positive relationships among staff members (Algozzine & Algozzine, 2009; Bradshaw et al., 2009; Horner et al., 2010), fewer out of school suspensions (OSS) and expulsions, and fewer behavior office referrals (Bradshaw et al., 2009; Lee & Gage, 2020). Evidence showed that student classroom behaviors predict future academic outcomes (Lassen et al., 2006). Research has provided evidence that supports student success when PBIS is implemented, which includes fewer office referrals (Bohanon et al., 2018; Bradshaw et al., 2009) and a positive effect on student academic outcomes (Bradshaw et al., 2009; Luiselli et al., 2005). Multiple reports have been produced of improvements in culture and climate (Horner et al., 2019; McIntosh Girvan, McDaniel et al., 2021), teacher self-efficacy (Kelm et al., 2014), and improved academic achievement (Bradshaw et al., 2015; Horner et al., 2019; McIntosh, Girvan, McDaniel et al., 2021).

School-wide system implementation of PBIS can decrease problem behaviors and increase positive behaviors (Elrod et al., 2022). Systems should be in place school-wide that promote strategies such as establishing clear student behavior expectations, recognizing positive social interactions, maintaining positive learning environments,

building positive relationships, and redirecting negative behaviors to improve student behavior (Alter & Haydon, 2017; Skiba et al., 2016; Tyler et al., 2009). With systems of preventative strategies instead of reactive strategies being in place, schools that have implemented PBIS reinforce appropriate behaviors and provide multiple strategies for preventing the escalation of behavioral issues in classrooms (Nese et al., 2020).

The school-wide approach is a three-tiered preventative system that is used to manage school-wide behaviors (Sugai & Horner, 2020). Tier I is the primary prevention of disciplinary actions of students. Tier I emphasizes modeling for students, teaching students correct behaviors, and acknowledging positive social, emotional, and behavioral skills (Center on PBIS, 2023). Eighty percent or more of students receive Tier I interventions in the classroom from the classroom teacher (Spaulding et al., 2008). Tier I support is robust, designed for everyone, and enables 80% or more of the students that receive Tier I interventions to experience success (Center on PBIS, 2023). Tier I is a universal support that focuses on providing the majority of students with behavior interventions (Nese et al., 2020). Implementing Tier I with fidelity has been associated with school-wide behavior improvements (Grasley-Boy et al., 2021). Tier I interventions includes collaborating with students, designing classroom expectations for students to follow, the teacher responding to unwanted behaviors in a respectful manner, and encouraging positive behaviors among students (Center of PBIS, 2022).

Tier II, which is the secondary prevention of disciplinary actions of students, consists of approximately 15% of the student population (Walker et al., 2005). Tier II is in place for students that continue to engage in negative behaviors, despite Tier I strategies being implemented. Tier II provides students modeling and intervention strategies that includes social skills, self-management, and academic support (Center on PBIS, 2023). Tier II focuses on providing more structure for daily routines, precise

positive feedback, specific behavioral expectations, withholding rewards for negative behaviors, and collection of data to monitor the successes or areas of growth (Sugai & Horner, 2020).

Tier III, which is the most intensive tier, consists of tertiary prevention and needs more individualized support for the students (Walker et al., 2005). Tier III builds on Tier I and Tier II as the interventions are now intensified and more individualized. Tier III interventions consist of individual assessments, comprehensive and specific plans, continued collection of student data, and regularly responding and adapting interventions for specific student behaviors (Sugai & Horner, 2020). During Tier III, the students' functions of the behaviors are closely monitored and strengths and weaknesses are observed to understand the purpose of the negative behaviors of the student (Center of PBIS, 2022). When combined and implemented with fidelity, Tiers I, II, and III can have a positive effect on behavioral and successful academic outcomes (Horner et al., 2010).

Student Outcomes

In successful schools, academic intervention by itself does not improve classroom behaviors, but addressing both academic and behavioral needs does improve both outcomes in the classroom setting (Sinclair et al., 2019). The goal of PBIS is to improve student academic and behavior outcomes (Center on PBIS, 2023). Research has shown that when teachers use PBIS strategies, such as peer tutoring, positive feedback, and have a structured environment, student engagement and student behavior improves in the classroom (Bowman-Perrott et al., 2022; Kaya et al., 2010; Wehby et al., 2003). Teachers who use PBIS strategies tend to have students who exhibit higher academic achievement in response to higher levels of student engagement in instruction (Gage, Whitford, & Katsiyannis, 2018).

Research has found that improvements in behavior are associated with improved academic outcomes, attendance, time receiving instruction, and student engagement during instruction, suggesting that there is a direct relationship between academic performance and PBIS strategies (Algozzine et al., 2010; Horner et al., 2019; Lassen et al., 2006; Scott & Barrett, 2004). Students and teachers both benefit from the implementation of PBIS. Research has shown that PBIS improves student outcomes by improving academic performance (Center on PBIS, 2023; Horner et al., 2019), improving social-emotional competence (Bradshaw et al., 2015; Center on PBIS, 2023), and reducing bullying behaviors to provide students with a safe environment (Center on PBIS, 2023; Waasdorp, 2012). Research has also shown that PBIS has positive outcomes by reducing exclusionary discipline by decreasing office discipline referrals, reduction of suspensions, and the reduction of students being secluded from their regular classroom environment (Bradshaw et al., 2012; Center on PBIS, 2023). Research has shown that teachers benefit and have positive outcomes from PBIS by having a positive culture and climate in the school from students having few behavior issues (Bradshaw et al., 2009; Center on PBIS, 2023) and teachers feeling safe inside of the school (Center on PBIS, 2023; Horner et al., 2019).

Positive Behavior Interventions and Supports Models

The implementation of School-Wide Positive Behavior and Interventions and Supports is related to reductions in negative behaviors and improved academic achievement (Bradshaw et al., 2009, 2015; Freeman et al., 2019; Lassen et al., 2006). When there are school-wide and classroom clear expectations of rules and procedures, students perform better academically and engage in fewer negative behaviors in the school setting (Flannery et al., 2011). The following section will provide an overview of School-Wide Positive Behavior Intervention and Supports systems as well as classroom

PBIS systems. This section will also provide distinguishing factors along with research that has examined components of each.

School-Wide Positive Behavior Interventions and Supports

As introduced in the previous section, School-Wide Positive Behavior Interventions and Supports (SWPBIS) is a strategic framework used as a preventative tool for students demonstrating challenging behaviors (Gage et al., 2020). When implemented school-wide, the SWPBIS multitiered continuum of support provides a proactive system for promoting student success in schools. During this school-wide approach, the entire school works together to improve the school culture and climate by being a cohesive entity that provides a consistent, implemented, consequence system to reduce negative discipline behaviors in the school (McDaniel et al., 2017).

Several studies have been conducted to determine the impact of SWPBIS as it relates to disciplinary suspensions and expulsions. One particular study conducted by Gage, Whitford, and Katsiyannis (2018) was a meta-analysis of studies that consisted of a group quasi-experimental design, with the school being the analysis and reported suspensions and expulsions for schools in a treatment and a control group. The purpose of this study was to determine the effects of SWPBIS with fidelity on OSS, the effects of SWPBIS with fidelity on expulsions, and whether there were differential effects by implementation on OSS and expulsions. The researchers hypothesized that there would be a substantial decrease in suspensions between schools that implement SWPBIS with fidelity to schools that did not.

During the meta-analysis by Gage, Whitford, and Katsiyannis (2018), to create the sample, the researchers collected demographic and discipline data from public schools in California for the school year of 2016-2017. The data consisted of 10,473 schools and 1,026 districts throughout the state of California. Of the 10,473 total schools,

the researchers determined which schools were recognized by the California PBIS Coalition for using SWPBIS with fidelity. Once separating the schools that used SWPBIS with fidelity from the schools that did not, the sample size was reduced to 7,251 schools that were available to use. To ensure that the data would be comparable using the expectation of implementing with fidelity, the researchers removed all schools that did not score a Platinum rating from the California PBIS Coalition (CPC). Once schools not scoring a rating of Platinum were removed, the final sample size was 98 treatment schools.

To measure the fidelity of SWPBIS implemented, the study used the SWPBIS Tiered Fidelity Inventory (TFI) which measured how school personnel applied the main strategies of SWPBIS (Algozzine et al., 2014). For this study, each of the 98 schools' SWPBIS teams rated themselves by completing the TFI. Schools were rated implementing with fidelity if they received a score of 70% or higher on the TFI. McIntosh and colleagues (2017) tested the instrument to ensure reliability and the scores came back as .99 interrater reliability, .99 for test-retest reliability, and a combined score of .96 for internal consistency.

To answer the research questions of this study, the researchers conducted a quasi-experimental design (QED) comparing schools that implemented SWPBIS with fidelity to schools that did not implement SWPBIS with fidelity. From this study, the researchers found that schools in the treatment group had less OSS than schools not using SWPBIS with fidelity. These data came from researcher relying on multiple linear regressions to estimate treatment effects using 13 school-level covariates.

SWPBIS has a positive effect on school and student outcomes (Gage, Grasley-Boy, George et al., 2019). Schools that implemented SWPBIS with fidelity had fewer tardies, absences, office referrals, suspensions, and expulsions. The goal of PBIS is to

foster student learning and grow positive nurturing school environments for all students to keep more students in school and fewer students suspended or expelled. Students receiving quality instruction and having success in school is the force that drives PBIS.

In another recent study (Grasley-Boy et al. (2021), the authors evaluated the impact of SWPBIS being implemented on discipline exclusions in California. This study was replicated from Gage, Grasley-Boy, George et al. (2019) and only included schools implementing Tier I strategies. The study matched 544 schools that implement SWPBIS to 544 schools that never used SWPBIS and the study revealed that schools that used SWPBIS had fewer out-of-school suspensions ($g = -0.25$). In another study by Sinclair et al., (2019), the researchers focused on a single classroom in an urban middle school. The study consisted of 600 students from fifth to eighth grade. Students who had significant behavior issues and low scores on benchmark exams were selected. The A-B-A-B design was used to assess the effects of Peer-Assisted Learning Strategies (PALS) on disruptive behavior and student engagement. The disruptive behavior results yielded a decrease in levels and variability, ranging from three to 37 instances of disruptive behavior. For academic engagement, student engagement remained high during the implementation of PALS, ranging from 83%-93%. The study concluded that there was a functional relationship between PALS and academic engagement.

In summary, SWPBIS is an multitiered effective approach of creating a predictable and caring school-wide environment for students to be successful in the classroom (Horner et al., 2010; McIntosh et al., 2018). Studies have shown a correlation between SWPBIS and increased student achievement, fewer behavior challenges, and higher student attendance (Flannery et al., 2011; Freeman et al., 2019). The most important principle of SWPBIS is having preventative measures in place to support all

students school-wide that promotes a positive and nurturing culture (Fuchs et al., 2003; Walker et al., 2005).

Classroom Positive Behavior Interventions and Supports

Students spend most of their instructional time at school in the classroom interacting with their teacher and peers (Center on PBIS, 2023). Therefore, classroom level PBIS involves building a safe learning environment with sound classroom management, preventions, and function-based use of consequences (Nese et al, 2020). The responsibility of teachers in the classroom when providing strategies of PBIS is to provide students with effective environments for learning and systems that support positive behaviors (Herman et al., 2018; McIntosh et al., 2018; Sugai & Horner, 2006). With students spending the majority of their school day inside of the classroom with their teacher and peers, it is important that the teacher establishes common behavioral expectations that encourage a positive, safe, and predictable learning environment (Center of PBIS, 2022). Teachers teach, prompt, and provide positive feedback to achieve improved student outcomes, which are established by the teacher from the beginning of the school year (Alter & Haydon, 2017; Cook et al., 2018; Faul et al., 2012; Simonsen et al., 2020).

The classroom strategies of the multitiered system of PBIS strongly suggests that all students are being supported on every level in the classroom. With disciplinary exclusion being a constant concern for students, school personnel, parents, and policy-makers, research has suggested that students lose valuable instructional time when they are suspended or expelled and not in the classroom with their teacher (Losen & Martin, 2018). For effective instruction to occur, and for students to be academically successful in the classroom, teachers must take full advantage of every instructional minute. It is critical for students to remain in the classroom to gain more instructional time and to be

successful in their academic learning (Keane, 2012). Research has indicated that students who are regularly suspended or expelled are more likely to be retained or drop out of school compared to students who are disciplined without being suspended or expelled (Balfanz et al., 2007). Recent findings have suggested that these punitive approaches have led to increases in disciplinary actions, such as suspension, and have promulgated the “school to prison pipeline” while exacerbating racial disparities in the delivery of punishing consequences (Mallett, 2015). Therefore, using PBIS classroom strategies strengthens consistency, establishes routines and procedures, and provides desired behavioral expectations for students to experience a positive and effective learning environment (Center on PBIS, 2023). When implementing School-Wide Positive Behavior Interventions and Supports and classroom PBIS with fidelity, schools experience healthy school culture and climates, increased student engagement and instructional time, reduced racial inequities, and reduced teacher burnout (Center on PBIS, 2023).

The accountability of teachers implementing PBIS with fidelity and the improvement of student success and positive outcomes depends on the extent that the individual teachers implement the PBIS classroom strategies with fidelity. Research suggested schools that implement PBIS with higher fidelity have higher benefits, such as decreased student behavior challenges, increased academic time, and positive perceptions of school safety (Bradshaw et al., 2009; Swain-Bradway et al., 2015).

In a quasi-experimental design, Freeman et al. (2016) compared school outcomes before implementation of PBIS to school outcomes after PBIS was implemented with fidelity. This research reported that there was a statistically significant decrease in office discipline referrals for schools that implemented PBIS with either approaching fidelity or implementation fidelity of PBIS strategies. Also reported from this study was that there

was not a statistically significant difference in academic outcomes and there was a statistically significant difference in attendance. Tools that are used to measure implementation fidelity includes the Benchmark of Quality, Tiered Fidelity Inventory (Algozzine et al., 2014), and the School-wide Evaluation Tool (Sugai et al., 2000).

In another research of the implementation of PBIS with fidelity, researchers used multiple sources of data, such as the Benchmark of Quality (BOQ) and the Tiered Fidelity Inventory (TFI). The researchers used office discipline referral and out-of-school suspension data as indicators of challenging behaviors (Irvin et al., 2004). The data were collected from two different school districts and the state department of education collected these data as statistics of school safety and school quality for a period of 4 years. The results indicated that in the 1st year of research, only five schools reported a score of implementations of PBIS with fidelity, but by the 3rd year, 19 schools reported a score of implementations of PBIS with fidelity. The results revealed that there was a statistically significant difference in implementation of PBIS with fidelity over time. The research also indicated that there was not a statistically significant difference in office discipline referrals rates for the 4-year period. There was a statistically significant difference in out-of-school events in the 4-year period, with out-of-school rates increasing each year. For reading achievement, there was not a statistically significant difference in the means for reading achievement during the 4-year study. Last, for mathematics achievement, there was no statistically significant difference in the means for mathematics achievement during the 4-year period.

Best Practices of Positive Behavior Interventions and Supports

Over the past years in education, educators have begun to move away from punitive disciplinary consequences to more strategic interventions to deal with student misbehaviors due to research providing evidence that exclusionary discipline results in

lower academic achievement and higher drop-out rates (Noltemeyer et al., 2015). Since punitive interventions, such as suspensions and expulsions, cause students to lose valuable instructional time (Losen & Martin, 2018), interventions are now being put into place to keep students at school. For example, it has been stated that when Police Officers intervene into school discipline issues, it is the beginning of a “school-to-prison” pipeline (Mallett, 2015). Research shows that PBIS is an approach that is preventative compared to being reactive, which results in decreased office referrals, suspensions, and expulsions (Horner et al., 2010).

One best practice of PBIS is to involve multiple staff members in the discipline process. For example, school counselors, teachers, administrators, support staff, and activists can all assist in disciplining as well as nurturing the student. When more people are involved in the student’s discipline, the student has the opportunity to build positive relationships with more people. With SWPBIS being a discipline practice of an entire campus, it is suggested that staff and students be a part of creating the school’s expectations and consequences (Mayer et al., 1995). This is also a part of involving multiple people in the discipline process.

Another best practice is interventions for individualized students. Students with increased behavior concerns require more attention than students with minimal behavior issues. Discipline procedures for students with high discipline referrals should be proactive and preventative instead of reactive, which in return can improve the school climate. A proactive measure that can be taken is a practice called “check-in’s”/“check-outs.” In this strategy, staff members check in daily on students with behavior issues to prevent discipline issues from occurring and opening a line of communication between the student and the staff member. Incentives are put in place for students who have productive days and no discipline referrals, which students can receive in their daily

“check-out.” This strategy has been proven to reduce negative behaviors and discipline infractions.

Student support groups are also a preventative measure to support students with chronic behavior issues. This support group allows students to meet after school once a month to discuss decision-making strategies and ways to cope with daily functions of school. This support group also helps students understand how to connect social thinking with behavior to change their way of thinking from negative behaviors to positive behaviors. The meeting is conducted by an adult, but students play a major role in the success of the session. Real world discussions, games, scripts, reading of passages dealing with behavior, and cognitive processes help students understand and realize how to make better choices, which in turn teaches students self-control.

Another strategy is conflict resolution. Conflict resolution trains students with behavior issues to resolve and make good choices through trying situations, by using dialogue, negotiations, and, most importantly, avoiding violence. It is said that students with behavior issues do not always have to have behavior issues. The issues come when the challenge outweighs their thinking skills to solve the problem. Students using conflict resolution have seen positive results, such as decreased use of violence and decreased suspensions and expulsions.

A democratic, student-driven school discipline model is a strategy where students share power with adults in the decision-making process of issuing consequences for negative discipline behaviors. Students actually create and enforce the rules of the school and the student body. This practice allows students to write the school’s by-laws and have a student-led discipline committee. In order for this practice to work, school administrators, teachers, and parents must buy in to this new way of thinking and adults must be willing to give students more power than usually given.

Restorative practice is a process that involves others that have an interest in the situation and are willing to listen and help resolve the problem. When a student is given punitive consequences, at times students will miss out on the lesson that needed to be learned and the damage that was done. When students are quickly removed from the situation without having time to process their wrongdoing, it promotes isolation, but when students have an opportunity to repair relationships and correct their behaviors, students can learn from their mistakes. Restorative practices allow the student to fix their mistake and become a better person. Whether the restorative practice is preventative or responsive, both have shown to be effective. Preventative is when students discuss social skills, conflict resolution, and discuss the everyday life of schools, while responsive is when the victim and the offender sit in the same room with others to discuss what happened, how can it be fixed, and what consequences are necessary.

BEST in CLASS-Elementary (BEST in CLASS-E) is a Tier 2 intervention that teachers perform in their classroom to build positive student-teacher interactions. This strategy is specifically designed for Kindergarten through third grade students with emotional/behavior disorders. BEST in CLASS-E has five components which teachers learn. The five components consist of supportive relationships, rules, precorrection, opportunities to respond, and praise. Teachers that use BEST in CLASS-E focus on students with constant behavior issues and use a high frequency of teaching the rules to these specific students. By the teacher focusing on the students with behavior issues and constantly reiterating the rules, the students with emotional/behavior disorders have fewer discipline infractions and increased instructional time.

The design of the BEST in CLASS-E is in 96% federally funded schools and 4% privately funded schools in the United States. Classrooms were located in urban, suburban, and rural parts of town and 78 schools participated. Several teachers were

recruited to participate in this study. The teachers that were recruited had to identify five students who displayed major discipline issues. Once these students' parents signed the consent form, a screening of these students was performed to see if they had emotional/behavior disorders (EBD) using the Early Screening Project (ESP) stages 1 and 2 and the Battelle Developmental Inventory, Second Edition Screener (BDI II Screener). Once the screening was completed, a total of 45 students participated; 25 in the BEST in CLASS-E intervention group and 20 students in the business as usual group. Of the 45 total students that qualified, only one to two students per class were selected.

For the study, BEST in CLASS-E teachers were trained to use specific practices which included rules, precorrection, opportunities to respond, behavior-specific praise, corrective feedback, and instructive feedback. The teachers were observed for 14 weeks during which trained coaches gave them feedback on their delivery practices. Several instruments were used to measure specific outcomes. The SSIS-RS was used to measure the social skills and problem behaviors of young students. The Woodcock-Johnson-III (WJ-III) measured academic achievement (Letter-Word Identification and Math Applied Problems). The STRS measured teachers' perception of their relationship with their students. The Problems Preparing Children for Academic Success (PPCAS) prompted teachers to answer "How much of a problem are the factors below in preparing your children to succeed academically?" This measure had 17 different factors to answer. The Treatment Integrity Instrument for Elementary School Classrooms (TIES; Sutherland et al., 2018) measured the teacher's extensiveness, delivery, and responsiveness to students.

To analyze the data from this study and to determine the effectiveness of the BEST in CLASS-E strategies, pretest and posttest outcomes were compared. Pretest scores were regressed on posttest scores. Analysis of the data was conducted using the

Stata, version 15.1. To make predictions of student outcomes, a multilevel approach using the mixed command and a linear regression was used.

Results of this study suggested extremely minimal change in student behavior and relationship building, even though results suggested that teacher professional development and coaching are significantly promising and effective for early elementary aged students. Results concluded a minimal increase in teacher-reported conflict and other class measures. Most of the findings of the BEST in CLASS-E were consistent with the BEST in CLASS-E in early childhood classrooms, which is extremely promising. More research was suggested to determine long-term effects of student and teacher behaviors for this specific study.

Another form of PBIS is Conversation, Help, Activity, Movement, Participation, and Success (CHAMPS) which was created by Randall Sprick in 2009. This intervention was created to give teachers a blueprint of how to implement and reinforce expected behaviors in the classroom. When behavior issues consistently arise in classrooms, some teachers begin to second guess their ability to deliver instruction effectively (Landrum & Kauffman, 2006; Marks, 2010). In 2006, 52% of 1st year teachers, 28% for 2-5 years of experience, and 26% of 6-10 years of experience stated that classroom management was their number one choice for professional development. Teachers have reported that behavior issues are on the rise.

CHAMPS is divided into five categories: structuring your classroom for success, teaching students your expectations, observing student behavior, positive interactions in the classroom, and correcting negative actions fluently. When implemented effectively, teachers stated that CHAMPS helped them to organize their classrooms into a positive learning environment and helped them put strategies in place to increase instructional time. Teachers responded that when PBIS has clear expectations, done with fidelity, and

it is school-wide, misbehaviors are corrected with minimal wasted instructional time. CHAMPS allows teachers to create a positive learning environment where expectations for learning are completely understood by all students, while reinforcing positive behaviors, then correcting negative misbehaviors.

The Impact of Positive Behavior Interventions and Supports on Teaching and Learning

Educators know that misbehavior happens in all classrooms, but the way teachers view misbehavior and how teachers react to misbehavior allows them room for growth. Researchers have defined misbehavior as actions that are disruptive and cause trouble in the classroom for teachers (Sun & Shek, 2012). Examples of misbehavior are roaming around the classroom, constantly sharpening pencils, aggression, hyperactivity, arguing with the teacher, making noises, talking out of turn, and being off task. In another similar study, 130 1st year Kindergarten teachers were surveyed and the results revealed that the more the teacher worried about behavior, the less confident they felt in being an effective teacher of managing classroom behaviors. These teachers wanted more information as to how to encourage positive students to continue their positive actions which would encourage the students behaving negatively to correct their behaviors. Teachers wanted in-school support to assist in managing classroom behaviors.

In another study, the interactions of 588 students and 34 teachers were observed for classroom management. Data showed that teachers who were rated as “strong” interacted frequently with students, had an active learning environment, and an engaging classroom environment, while teachers that were rated “need improvement” were the opposite. Misbehaviors occurred more often in the classrooms of teachers labeled “need improvement.” A cycle of interactions between a teacher needing improvement in classroom management was observed as follows: student misbehaves, the teacher tries to

correct the misbehavior, the student continues to misbehave, the teacher gets frustrated, the student continues to misbehave. Instructional time is lost due to managing classroom behaviors in this cycle.

Continuing in the observation of teachers, the researchers noticed that “need improvement” teachers used normative control methods often in class. Normative control methods were actions by the teacher such as stop talking, sit down, do your work, put your head down. Once these teachers saw that these actions did not work, these teachers resorted to putting the student out of class, giving check marks on behavior charts, taking away recess, and pleading with the student. On the contrary, “strong” teachers used normative control approximately 11% of the time. “Strong” teachers used a reward system and praise to encourage students that were behaving correctly to continue their actions.

PBIS is described as a systematic process of research-based practices, interventions, and skilled decision-making that build students on social skills, which creates a positive learning environment, while taking the preventative approach compared to the reactive approach. More teachers are now moving to a problem-solving approach to correct negative behaviors as compared to punitive approach to correct behaviors. Rewarding positive behaviors instead of punishing negative behaviors is an example of the problem-solving approach.

In this specific study, one school used CHAMPS as their framework and blueprint to identify and correct student behavior. In this research, teachers received professional development on CHAMPS, they selected one of their biggest challenges in the classroom and made an intervention for it, and teachers also came up with a system to track negative behaviors in the classroom. The questions from this research that were to be answered were what misbehaviors did teachers want to focus on, how did teachers define

misbehavior, and how did teachers feel about the outcomes of implementing PBIS? The data collected from the research came from peer, teacher, and administrative classroom observations and feedback.

Researchers set up this study by first having teachers use an observation protocol to track the frequency and location of students misbehaving. From here, teachers and administrators created action plans to prevent these negative behaviors from occurring. Teachers gave themselves a timeline of how long these negative actions of students would take to stop by using PBIS. After using PBIS for a specific amount of time, teachers reevaluated themselves as a posttreatment evaluation to see if the PBIS strategies that were chosen were effective or not. Teachers tracked their progress and the effectiveness of their PBIS strategies that were chosen.

The participants of this study included 25 teachers ranging from kindergarten to eighth grade, with experience ranging from 2 to 35 years of experience. There were 19 female teachers and six male teachers, who were predominately White and middle class. The specific school of study was located in midwestern United States, in a mid-sized district, in a suburban area. The school's population was 500 students, with Whites being the dominant race. The administration supported this study, therefore PBIS was a school-wide effort.

The findings from this study allowed researchers to narrow down the conceptual thinking to five categories: targeted behavior, teaching and learning design, language of behavior, time, and perceptions of improvement. Data suggested that the top three targeted behaviors, based on a consensus from teachers, were disruptive behavior, talking during instruction, and students being off-task. Teachers felt a lack of control during instruction when these three misbehaviors happened. Teachers stated that using PBIS to correct these targeted behaviors was successful. By using PBIS, teachers understood that

the teaching design of the lesson played a major role in student behaviors. For example, instead of whole group instruction, teachers utilized a PBIS strategy of small group instruction and centers. Students' negative behaviors decreased from this change of teaching and learning design. Teachers used the language of behavior consistently across the entire school. By using the PBIS strategies of positive reinforcement, a lot of positive feedback, and clear expectations, teachers experienced fewer discipline issues in class. With this PBIS strategy, teachers ensured that they used positive behaviors as they corrected students' negative behaviors.

Teachers also focused on their words of judgment. Teachers changed their mindset of using negative words such as *offender* and *repeat offender* when speaking about the student because it gave a criminal context. If teachers did not change their word usage, it forced them to utilize punitive approaches for classroom management (Bambera et al., 2012). Data disclosed that when teachers used negative approaches that did not follow PBIS strategies, they exhibited coercive punishments because they lacked the skills to correct in a positive way (Montano & Kasprzyk, 2008). Time, as related to PBIS, directly impacted how teachers adjusted their instruction. When teachers were prepared, had materials ready, and had systems in place to make the best use of time, negative behaviors decreased. The last category was perception of improvement. Teachers overwhelmingly perceived PBIS as being successful when implemented with fidelity. Twenty-one of the 25 teachers noted that student behaviors improved and were much better. Researchers perceived teacher improvements along with teacher's self-efficacy when using PBIS with fidelity (Montano & Kasprzyk, 2008).

By the end of this study, teachers had a positive attitude toward PBIS and felt comfortable using PBIS strategies. This study suggested that when PBIS is school-wide and teachers have a positive attitude toward normative classroom functions and the

expected behaviors are clear, success will happen. Teachers had to not only understand their feelings toward negative behaviors, they also needed to have the knowledge and skills to use PBIS strategies with fidelity and make them habits (Montano & Kasprzyk, 2008). It was stated that when teachers feel that students can control their negative actions, teachers become angry with students for misbehaving, but when teachers do not feel that students are intentionally misbehaving, the teacher feels sympathetic toward the student (Chang & Davis, 2009). The teacher's attitude toward the negative behavior influences whether the teacher is going to react in a positive or negative manner.

At times, teachers do not receive the proper training or lack the knowledge to implement effective classroom management strategies, such as PBIS with fidelity, to see a decrease in challenging behaviors from students (Moore et al., 2011). It is essential to the success of PBIS in the classroom that the implementation and the delivery of PBIS strategies from the teacher is important. In one particular study, researchers observed group contingency interventions and their effectiveness of decreasing challenging behaviors, using Class-Wide Function-related Intervention Teams (CW-FIT). Group contingencies is defined as effective strategies used to manage student classroom behavior (Simonsen et al., 2020). The group contingencies consisted of three types: (a) dependent, (b) independent, and (c) interdependent. Dependent group contingencies happen when the whole classroom access to the reward is contingent on the behavior of one or more selected individuals within the group. Independent group contingencies happen when individual access to the reward is contingent on the behavior of the individual. For interdependent group contingencies, the whole classroom access to the reward is contingent on behavior of the entire classroom.

In another study of CW-FIT, researchers conducted a study in a high school in the southern US. The study consisted of 14 students (58%) of a ninth-grade English

Language Arts class. Of the students participating, three students (21%) were English Language Learners, five students (36%) were ethnically diverse, five students received special education services (36%), and two students (14%) received free or reduced lunch. Two teachers volunteered to participate in the study, one teacher being a 1st-year special education teacher with a bachelor's degree and the other teacher being a 4-year general education teacher with a master's degree.

The CW-FIT implementation was integrated into three phases: teacher training, student training, and the token system to ensure teacher quality of delivery. With proper delivery of the PBIS strategies on whole-class on-task behavior, whole class on-task group behavior increased by using CW-FIT. For student on-task behavior, three students were targeted. All three targeted on-task behaviors increased from the implementation of CW-FIT. For the impact of teacher behavior and delivery, Teacher 1 showed an increase in teacher praise statements, while Teacher 2 showed a decrease in teacher praise statements. For teacher reprimand statements, Teacher 1 and 2 reprimand statements increased. The utilization of CW-FIT has been prevalent in the elementary school setting (Caldarella et al., 2021; Kamps et al., 2015; Wills et al., 2018), while indication of the utilization of the CW-FIT is emerging for behavior interventions in the middle school classroom setting (Caldarella et al., 2021; Speight et al., 2020; Wills et al., 2019).

The Effects of Positive Behavior Interventions and Supports on Student Achievement

There is much research that has shown evidence that PBIS is effective in reducing exclusionary discipline, decreasing suspensions, as well as improving academic achievement (Kim et al., 2018; Lee & Gage, 2020; Sugai & Horner, 2020). When schools have a positive school climate and behavior issues are low, generally students have higher academic outcomes (Algozzine et al., 2010). When students are in school, students

have the opportunity to learn, which is the reason why OSS and expulsions continue to be a highly discussed topic for students, parents, district staff members, and policy makers as well as ways to implement a plan to decrease the number of OSS and expulsions of students from school (Losen & Martin, 2018).

According to the U.S. Department of Education, Office of Civil Rights (2021), 2.5 million students in the US were suspended from school at least one time during the 2017-2018 school year and 2.6 million students were in in-school suspension at least one time during the 2017-2018 school year. High rates of suspensions are a concern in the educational system, but students of color being suspended at even higher rates are more of a concern. Students of color received a higher percentage of exclusionary discipline compared to White students, with African American students being the highest race being suspended. Research shows that schools with majority African American students have the highest rates of exclusionary discipline (Girvan et al., 2017). Even through the percentages of students being suspended from school, studies still remain to show whether when schools use Tier I School-Wide Positive Behavior Interventions and Support (SWPBIS) with fidelity, more students perform at or above grade level on state benchmarks and proficiency exams.

The research of Lee et al. (2021) looked at several studies of student outcomes and student achievement; they found that there is a direct correlation of PBIS and a range of student outcomes. In one study, the researcher examined how the implementation of PBIS affected 1,222 elementary schools in Florida for 4 years. Using a growth model for measurement, it was concluded that schools implementing PBIS with fidelity had fewer instances of teachers sending students to the office as well as fewer suspensions.

In another study, Simonsen et al. (2020) studied the effect of PBIS in 428 schools in Illinois that implemented school-wide strategies in a span of 7 years. The focus was on

student academics and behavioral outcomes. The study used a hierarchical linear model to determine that few suspensions ($d = 0.31$) and fewer office referrals ($d = 0.32$) resulted from higher levels of fidelity, which directly correlated to higher math scores ($d = 0.43$). In another study from Kim et al. (2018), a longitudinal study of linear growth model was conducted to determine the implementation of PBIS and student outcomes. The study looked at 477 schools across 10 different states that implemented PBIS with fidelity. The authors found that the average number of office referrals and suspensions decreased over a period of time and student math scores drastically increased.

The Effects of Positive Behavior Interventions and Supports on Student Achievement for Older Students

The majority of studies of PBIS have been in elementary and middle schools, but reports show that numbers in high school are growing. It is reported that PBIS usage in high school covers 35 states, which is approximately 13% of all United States schools (Freeman et al., 2019). In this particular study of high schools (Freeman et al., 2019), researchers examined PBIS and student outcomes as it related to office discipline referrals (ODR). Data were collected from over 12,000 students from 15 different high schools in a state in the midwestern United States. The research was specifically looking for the relationship between PBIS and ODR in high schools, the relationship between PBIS and student absences and tardies, and the relationship between PBIS and student GPA.

To get a vast amount of schools to participate, researchers recruited schools through organizations within the Office of Special Education Programs National PBIS Technical Assistance Center by distributing recruiting flyers. Participating schools provided researchers with an Excel spreadsheet to report deidentified extant school data, which was uploaded to a Qualtrics online survey program. Parent and student consent

were not needed because all of the data were deidentified. The participating schools submitted the Benchmark of Quality (BoQ), which is self-report measure, as the PBIS accuracy and fidelity measure.

To gather the information on the relationship between PBIS done with fidelity and student outcomes, researchers used a Stata 15 software. Also used were restricted maximum likelihood (REML) estimation with the Kenward-Roger correction. This model reduced the errors and biases since there were fewer than 30 clusters. In the first level, demographic variables were included to serve as the control group, while in the second level, the PBIS fidelity score (BoQ) was included as a predictor.

To find the results of this research, researchers looked at a linear regression coefficient relationship between the fidelity score from each mode. Significant relationships were found from both behavioral outcome variables which stated that schools that used PBIS with fidelity saw a decrease in ODR, suspensions, expulsions, and student attendance. The data from this research support and strengthen research done previously that stated that PBIS done with fidelity does have a direct correlation of reduction in ODR and suspensions (Bohanon et al., 2018; Flannery et al., 2011; Freeman et al., 2019; Muscott et al., 2008). Also, data revealed that PBIS practiced with fidelity improved attendance for the entire school (e.g., Caldarella et al., 2021; Horner et al., 2019).

The Effects of Positive Behavior Interventions and Supports on Student Expulsions and Outcomes

PBIS research-based evidence has encouraging results on reducing disciplinary exclusions (Gage, Whitford et al., 2018; Gage, Rose et al., 2019). Structured learning environments reduce behavior issues in class, which results in students with good classroom behaviors being more successful in school (Sutherland et al., 2008). When a

student is suspended or expelled from school at high rates, this leads to poor academic performance (Losen & Martin, 2018). For example, a study was performed in California (Losen & Martin, 2018) that yielded students losing more than 760,000 days of instruction because of disciplinary OSS and expulsions. SWPBIS was implemented, in which loss of instructional time decreased 50% from the 2011-2012 to 2016-2017 school year (Losen & Martin, 2018).

Research has revealed that when students are not in school due to OSS and expulsions, this negatively impacts student outcomes. A meta-analysis was conducted by Noltemeyer and colleagues (2015), which found that OSS and expulsions have a negative impact on student academic achievement by ($r = -.24$). Another study found that students in California who received at least one OSS or expulsion were 6.5% less likely to receive their high school diploma. Additionally, researchers found that students in California that received OSS or expulsions regularly made \$2.7 billion less in a lifetime than students who did not receive OSS or expulsions per single graduating class. Similar studies were performed in Arkansas which also found that students with OSS or expulsions yielded lower academic achievement, which included lower test scores and higher retention rates. With student retention being a risk factor for students dropping out of school, OSS and expulsions doubles the risk of students dropping out of school. Overall, the authors concluded that students who receive out-of-school suspensions have significantly lower achievement scores and increased rates of being retained.

The Effects of Positive Behavior Interventions and Supports on Instruction

During the 2017-2018 school year, 2.6 million students in the United States lost instructional time by receiving in-school suspension (ISS) and 2.5 million students lost instructional time by receiving out-of-school (OSS) suspension (U.S Department of Education Office for Civil Rights, 2021). Studies have found that consistent disciplinary

actions for students results in poor student outcomes. By removing students due to ISS and OSS, students lose out on academic engagement and academic achievement (Noltemeyer et al., 2015), which can lead to students dropping out of school (Noltemeyer et al., 2015). Knowing these negative outcomes come from punitive consequences, studies show that there is a need for teachers to reinforce and praise appropriate behaviors, such as school-wide positive behavior interventions and supports (SWPBIS).

The purpose of this study was to determine the effects of SWPBIS on discipline outcomes by using a quasi-experimental design in Florida schools. Among all schools in the United States, Florida suspends the most students, which was nearly 5.1% of elementary students and 19% of all secondary students. Florida also has statewide technical assistance support team for implementing SWPBIS in all of their schools. This makes Florida an ideal state for studying the effects of SWPBIS due to high suspension rates and a state-wide PBIS protocol. The two main questions answered in this research were, are there significant differences in frequency of suspensions between schools that implement SWPBIS with schools that do not and do schools implementing SWPBIS with fidelity have fewer expulsions? Both of these questions directly affect students losing instruction due to being out of the classroom.

Data were collected for all Florida schools from the U.S. Department of Education's (USDOE) Civil Rights Data Collection (CRDC) website for the 2011-2012 and 2013-2014 school years to conduct this study. Also, school demographic data were collected from the U.S Department of Education's National Center for Educational Statistics Common Core of Data and SWPBIS implementation data were collected from the FLPBIS: MTSS Project for the 2013-2014 school year. Schools that did not report data, alternative schools, and schools that did not use SWPBIS with fidelity were removed which left the sample size of 593 schools. From the data pulled, the overall

average number of ISS was 131 incidents per school, with an overall average of 101 incidents of OSS per school. The results found that there were fewer OSS incidents in schools that used SWPBIS with fidelity.

Examples of effective instruction and classroom management are when teachers have routines and expectations (Alter & Haydon, 2017), cue expected and appropriate behaviors (Faul et al., 2012), give students ample opportunities to respond and turn and talk (OTR), a lot of praise, and positive corrective feedback (Cook et al., 2018) when PBIS is implemented with fidelity. These best practices produce increased desired outcomes, which includes increased time students are on-task, enriched academic engagement time, and decreased disruptive behavior. Effective professional development that targets PBIS strategies for classroom management skills increases the chances that teachers will have success in these areas (Simonsen et al., 2020).

Teacher Professional Development

Effective professional development, also known as targeted professional development (TPD), gives teachers necessary tools to implement PBIS with fidelity. In this specific study, researchers tested the effects of TPD and the effects that it has on PBIS and classroom management. This study was conducted in a large school district in the northeastern United States in two separate kindergarten through fifth grade schools. Each school consisted of 330 to 380 students. The researchers chose to use an experimental group crossover design to explore the effectiveness of TPD of teachers use of given classroom management skills. Teachers were randomly assigned a group of specific classroom management skills for TPD, but Cohort 1 had a different order of categories than Cohort 2. All TPD training was provided by one of three trainers to ensure that the message was consistent with both groups. The focus of the TPD was to build skills and strategies of PBIS, such as praising and prompting students.

The results of the study proved that PBIS done with fidelity and the proper training is successful. Throughout the study, student engagement in the class activity was high, while student misbehaviors decreased. Teachers praised more students which in return caused more students to be actively engaged and participate more. Teachers saw the biggest gains in the PBIS strategies of praising and prompting students.

In another research, Palmer and Noltemeyer (2019) focused on professional development and predictors of effective implementation of PBIS. In this study, it suggested that professional development in schools is designed to increase knowledge of a subject, which leads to positive changes in schools. In professional development trainings, a specific concept should be thoroughly taught to teachers for understanding before the concept can be applied. Also, this research discussed that effective professional development requires administrator support to be effective. Active learning, which allows the participants to be actively engaged in the training, is also a key component of effective professional development. Last, time in the year and duration of the training, being spread out throughout the entire school year, also determined the effectiveness of the professional development.

In this study, a sample of 2,855 attendees completed a survey after attending a professional development session on PBIS. The attendees consisted of 1,601 teachers, 641 administrators, 533 related professionals, and 10 parent or community members. The remaining attendees were not affiliated with a group. Each attendee received a voluntary survey to complete, in which the results were sent to be evaluated for the effectiveness of the professional development provided. The results were as follows: the chi-square test was used to determine any differences in effectiveness between attendees who reported an increase in knowledge to those that did not. The relationship was significant for attendees stating that the increased knowledge will lead to them using the information

within the next 4 weeks. Also, a chi-square test was used to determine any differences in effectiveness between attendees who reported receiving feedback and those that did not. The relationship was significant; attendees reported a greater enthusiasm in using the information. The researcher also found that the correlation between the duration of the training and the likelihood of the attendees using the information was positive, but not significant. Also using a chi-square test to determine if attendees' likelihood of using the information was related to their schools' level of implementation yielded a significant relationship. Lastly, a Kruskal Wallis H test was conducted to determine if the month that the professional development was offered had a difference of the training's effectiveness. The results showed that professional development was more effective when offered at the beginning of the academic school year. As predicted, the efficiency of the professional development was dependent upon feedback, school structure of implementation, increased level of knowledge of participants, and administrator support.

Barriers of Implementing Positive Behavior Interventions and Supports

Even though there several recent studies that show PBIS being effective and the importance implementing the strategies, many school teachers are still reporting that they are struggling with behavior issues in the classroom (Reinke et al., 2018). Schools that continue to struggle with challenging behaviors must have buy-in from the staff. Successful implementation and sustainability of PBIS will not be successful unless district leadership buys in and supports the PBIS model (McDaniel et al., 2017). High levels of administrators must support and believe in the implementation of PBIS. Leaders of schools must support the implementation of school-wide PBIS, provide necessary resources, provide training, and ensure that consistent practices are a priority of the school (McIntosh et al., 2018).

Another barrier is that PBIS has lower rates of implementation and sustainability in underserved and high poverty or rural settings (McDaniel et al., 2017). Only a small sample size of research shows that socioeconomic status is not a factor associated with the implementation and success of PBIS. McDaniel et al. (2017) reported that years of experience and teacher perceptions of high-needs student behaviors serve as barriers for successful implementation and sustainability of PBIS. Also, barriers that can affect the implementation of PBIS are the quality of resources, training and activities, lack of parental support and shared values, and that school-wide expectations can lower the success rate of the implementation of PBIS (McDaniel et al., 2017). Another barrier that schools face when implementing PBIS is that teacher's perception of using PBIS on the middle and high school levels is more challenging than using PBIS strategies on the elementary level (Flannery et al., 2011; McIntosh et al., 2017).

Also, barriers to the implementation of PBIS in schools across America are deficiencies in school-wide systems, consistent policies of PBIS, and constant teacher expectations of student behaviors (Bohanon et al., 2018). This leads to another barrier of students of color having challenges adjusting to cultural discontinuity, disparities between home culture and school culture, which includes values and expectations which causes the student of color to underachieve. There have been multiple researchers who have made society aware of cultural mismatches that are present between the school and the home lives of students of color. These cultural mismatches often lead to miscommunications of student actions (Tyler et al., 2009), which can lead to discipline office referrals for the student. Barriers also include a correlation of lower student achievement and teacher biases, especially with African American and Latino students. Research has suggested that a Zero Tolerance approach, especially amongst students of color, has decreased the need for PBIS strategies due to teacher biases and lack of

cultural competencies (Grace, 2020). Another barrier includes teachers having gender biases based on socialization patterns and stereotyping of different students. Research has also suggested that teachers react more optimistically to students of the same background and culture as them, which makes a difference in student's lives and creates the culture of the school, depending on the lens of the student, which is race, gender, and socioeconomic and social class.

A recent study assessed the impact of SW-PBIS for students identified for Tier II interventions on reading and mathematics achievement and observed the teachers' perceptions of the program in a suburban elementary school. Tier II PBIS was implemented for students who consistently had negative behaviors and could not meet the school-wide behavior expectations. The study consisted of 142 first through fifth grade students who were predominately male and students of color, between the years of 2011-2013. A Pearson correlation and two sample *t*-tests were utilized to determine the relationship between the student participation in the PBIS Tier II intervention strategies and the student's reading and mathematics scale scores on the STAAR assessment. The results yielded that there was not a statistically significant difference between students participating in PBIS Tier II interventions for student achievement compared to students who did not participate in PBIS Tier II interventions. Also, from the two *t*-tests conducted, there was not a statistically significant difference in student growth in reading and mathematics for students in PBIS Tier II interventions compared to students who did not participate in PBIS Tier II interventions.

Conclusion

The implementation of PBIS with fidelity in schools has shown to be successful and has had a positive impact on the reduction of discipline incidents (Sugai & Horner, 2020). Buy-in by the administration and staff and also effective communication is a

major factor in the success of PBIS (Netzel & Eber, 2003). Professional perception plays a factor in teacher buy-in and the implementation with fidelity of PBIS (Feuerborn & Chinn, 2012; Feuerborn & Tyre, 2016; Feuerborn et al., 2018). The majority of staff must buy in to implementation of PBIS with fidelity for the systems to be successful.

Research has consistently demonstrated the relationship between students with behavior issues and academic failure (Simonsen et al., 2020) compared to students who consistently have appropriate behaviors in school and their academic success (Sugai & Horner, 2020). While a majority of existing literature focused on implementation of school-wide and classroom PBIS models and strategies in elementary schools, limited research has focused on middle and high schools (Sugai & Horner, 2020). The purpose of this study was to examine if PBIS influences academic student achievement and disruptive behaviors. Chapter III presents the methodology of the study: an overview of the research, theoretical constructs, the research purpose and questions, the research design, the population and sample size, the instrumentation, data collection procedures, the data analysis, privacy and ethical considerations, and the limitations of the study.

CHAPTER III: METHODOLOGY

The purpose of this study was to examine whether or not PBIS influences middle school academic student achievement and middle school disruptive behaviors. This mixed methods study collected data from a purposeful sample of teachers (interviews) and their respective students (archived behavior and achievement data) from a medium sized suburban school district. Additionally, archived student data were collected from a matched sample of non-PBIS teachers for comparison. Quantitative data were analyzed using an independent *t*-test and a Mann-Whitney U test, while inductive and deductive coding was used to analyze qualitative data. This chapter presents an overview of the research problem, operationalization of theoretical constructs, research purpose and questions, research design, population and sampling selection, instrumentation to be used, data collection procedures, data analysis, privacy and ethical considerations, and the research design limitations of the study.

Overview of the Research Problem

Discipline problems, such as disruption of class, being disrespectful to the teacher, off-task behaviors, and not adhering to classroom rules, have always impeded instructional time (Sugai et al., 2000; Walker et al., 2005). These types of behaviors take away valuable minutes from instruction and learning time, which results in low student achievement and poor student outcomes (Walker et al., 2005). With the number of growing instructional minutes being lost daily and student achievement being a major component that weighs heavily on administrators and teachers, schools have turned to a proactive, multi-tiered support system called PBIS to support student behaviors in class. When implemented with fidelity, PBIS has had a positive impact on school culture and climate, as well as positive student outcomes on achievement (Bradshaw et al., 2015).

Research has also shown positive effects on implementing PBIS with fidelity on student social emotional well-being, decreased in-school and out-of-school suspensions, and an increase in revenue in schools because of increased student attendance due to students not being suspended (Bradshaw et al., 2015; McIntosh et al., 2018; Swain-Bradway et al., 2015). With standards and expectations of student success being a major component of school ratings, schools must find ways to ensure that all instructional minutes are used wisely.

Operationalization of Theoretical Constructs

This study consisted of two constructs: (a) disruptive behavior and (b) student achievement. Disruptive behavior is defined as students exhibiting undesirable behaviors in the classroom that takes the teacher's attention away from delivering their instruction (Oxley & Holden, 2021). The number of office referrals was used to measure disruptive behaviors in individual teacher's classrooms. This infraction of disruptive behavior by a student results in an office referral, which is a staff member documenting the incident and causing an administrative staff member to give the student consequences for his or her actions (Sugai et al., 2000). Student achievement is defined as a measure of growth of knowledge in a specific content area, which can be measured through standardized or non-standardized measures. Student achievement was measured by using seventh and eighth grade students' Reading, Math, Science, and Social Studies scores on the STAAR assessment.

Research Purpose, Questions, and Hypothesis

The purpose of this study was to examine whether or not PBIS influenced middle school academic student achievement and middle school disruptive behaviors. The following questions guided the study:

1. Is there a statistically significant mean difference in student achievement between classroom teachers that implement a PBIS model compared to classroom teachers that do not?

Ha: There is a statistically significant mean difference in student achievement between classroom teachers that implement a PBIS model compared to classroom teachers that do not.

2. Is there a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not?

Ha: There is a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not.

3. What are teachers' perceptions of the benefits when PBIS classroom management strategies are used to address challenging behaviors?
4. What are teachers' perceptions of the implications on instructional quality and student engagement when there are decreased disruptive behaviors associated with implementing PBIS?

Research Design

For the purpose of this study, a mixed methods research design was used (QUAN-qual). This design consisted of two phases: first, a quantitative phase and second, a qualitative phase that will add depth to the quantitative findings. Middle school teachers that use PBIS strategies in their classroom were selected and individually matched to middle school teachers who did not use PBIS strategies in their classroom. Archived student STAAR scores and PEIMS office referral reports were collected, along with teacher interviews. Quantitative data were analyzed using an independent *t*-test and

Mann-Whitney U test, while qualitative data were analyzed using an inductive and deductive coding process.

Population and Sample

The population of this study was a participating school district located in eastern Harris County outside of Houston, Texas. The school district had a total of 23 campuses consisting of 15 elementary schools, one sixth grade school, two sixth through eighth grade schools, two seventh through eighth grade schools, two high schools, one alternative school, and one early college campus, with a combined total of 21,918 students. Of the 21,918 students, 15.0% were African American, 79.6% were Hispanic, 3.8% were White, 0.3% were American Indian, 0.6% were Asian, and 0.6% were two or more races. Of the entire school district, 86.9% were Economically Disadvantaged, 37.2% were Emergent Bilinguals, and 10.4% were Special Education.

The sample consisted of seventh and eighth grade teachers from four different middle schools that used PBIS compared to teachers that did not use PBIS in one participating school district. From an initial analysis of the four schools' teacher demographics, a purposeful sample of teachers was selected to participate in the interview portion for qualitative data. Table 3.1 illustrates School A teacher data. Table 3.2 illustrates School A student data. School A had 977 total students. Table 3.3 illustrates School B teacher data. Table 3.4 illustrates School B student data. School B had 1,081 total students. Table 3.5 illustrates School C teacher data. Table 3.6 illustrates School C student data. School C had 1,379 total students. Table 3.7 illustrates School D teacher data. Table 3.8 illustrates School D student data. School D had 569 total students.

Table 3.1*Middle School A Teacher Data*

	Frequency (n)	Percentage (%)
Total Teachers	66	100.0%
Female	39	59.0%
Male	27	40.9%
Special Education	3	4.6%
Over 30 years	1	1.5%
20-30 years	8	12.1%
10-20 years	15	22.7%
6-10 years	18	22.3%
1-5 years	21	31.8%
1 st year	3	4.6%

Table 3.2*Middle School A Student Data*

	Frequency (n)	Percentage (%)
Total Enrollment	977	100.0%
African American (AA)	320	32.8%
Hispanic (H)	600	61.4%
White (W)	37	3.8%
American Indian (AI)	2	0.2%
Asian (A)	2	0.2%
Two or More Races (ToM)	16	1.6%
Special Education (Sp.Ed.)	101	10.3%
Emergent Bilinguals (EB)	263	26.9%
Economic Disadvantage (ED)	847	86.7%

Table 3.3*Middle School B Teacher Data*

	Frequency (n)	Percentage (%)
Total Teachers	65	100.0%
Female	40	61.4%
Male	25	38.6%
Special Education	10	15.4%
Over 30 years	2	3.0%
20-30 years	9	13.6%
10-20 years	19	28.6%
6-10 years	9	14.4%
1-5 years	22	33.4%
1 st year	5	7.0%

Table 3.4*Middle School B Student Data*

	Frequency (n)	Percentage (%)
Total Enrollment	1,081	100.0%
African American (AA)	43	4.0%
Hispanic (H)	917	84.8%
White (W)	116	10.7%
American Indian (AI)	3	0.3%
Asian (A)	0	0.0%
Two or More Races (ToM)	2	0.2%
Special Education (Sp.Ed.)	100	9.3%
Emergent Bilinguals (EB)	407	37.7%
Economic Disadvantage (ED)	945	87.4%

Table 3.5*Middle School C Teacher Data*

	Frequency (n)	Percentage (%)
Total Teachers	85	100.0%
Female	63	73.9%
Male	22	26.1%
Special Education	6	7.1%
Over 30 years	4	4.7%
20-30 years	6	7.4%
10-20 years	15	17.7%
6-10 years	12	14.1%
1-5 years	42	49.2%
1 st year	6	7.0%

Table 3.6*Middle School C Student Data*

	Frequency (n)	Percentage (%)
Total Enrollment	1,379	100.0%
African American (AA)	150	10.9%
Hispanic (H)	1,121	81.3%
White (W)	85	6.2%
American Indian (AI)	5	0.4%
Asian (A)	16	1.2%
Two or More Races (ToM)	2	0.2%
Special Education (Sp.Ed.)	144	10.4%
Emergent Bilinguals (EB)	592	42.9%
Economic Disadvantage (ED)	1,169	84.8%

Table 3.7*Middle School D Teacher Data*

	Frequency (n)	Percentage (%)
Total Teachers	41	100.0%
Female	22	53.7%
Male	19	46.3%
Special Education	3	7.3%
Over 30 years	0	0.0%
20-30 years	4	9.8%
10-20 years	7	17.6%
6-10 years	8	19.5%
1-5 years	20	47.6%
1 st year	2	5.6%

Table 3.8*Middle School D Student Data 2021-2022*

	Frequency (n)	Percentage (%)
Total Enrollment	569	100.0%
African American (AA)	14	2.5%
Hispanic (H)	534	93.9%
White (W)	14	2.5%
American Indian (AI)	1	0.2%
Asian (A)	1	0.2%
Two or More Races (ToM)	4	0.7%
Special Education (Sp.Ed.)	70	12.3%
Emergent Bilinguals (EB)	259	45.5%
Economic Disadvantage (ED)	473	83.1%

The participating school district had 1,400 total classroom teachers. Of the 1,400 classroom teachers, 435 (31%) were African American, 541 (39%) were Hispanic, 336 (24%) were White, 60 (.04%) were Asian, and 28 (.02%) were Two or More Races. Of the 1,400 classroom teachers, 115 (.08%) were seventh grade teachers and 108 (.08%) were eighth grade teachers. Middle school teachers who used PBIS strategies in their classroom were selected and individually matched to middle school teachers who did not use PBIS strategies in their classroom. The criteria for matching teacher selection was based on gender, race/ethnicity, years of teaching experience, number of office referrals, STAAR passing percentage, subject area taught, and years of experience using PBIS.

Participant Selection

A sample of seventh and eighth grade teachers located in eastern Harris County outside of Houston, Texas was recruited to participate in an interview discussing PBIS. A sample of teachers from all four participating middle schools was selected to ask a series of questions about their philosophical beliefs of PBIS strategies. The participants who were interviewed were selected by race/ethnicity, years of teaching experience, years of experience using PBIS, the number of office referrals that they had for the school year, and gender. The participants who were selected answered perception questions about classroom management strategies of classrooms that implemented PBIS to address challenging behaviors and the implications of disruptive behaviors on student learning and engagement.

Instrumentation

Each year, the state of Texas administers an academic achievement test to measure the knowledge and skills of all students. Each year a standard is set for the *State of Texas Assessments of Academic Readiness* (STAAR) test to determine if a student approached passing, met standards, or mastered the standards. A scale is used across the state of Texas to ensure equity of scoring for all students. Standards are based on the Texas Essential Knowledge and Skills (TEKS), which is the state of Texas' curriculum standards. Students begin taking the STAAR test in the third grade and continue to take the test until the 11th grade. In elementary, tested subjects are Reading, Math, and Science. In middle school, tested subjects are Reading, Math, Science, and Social Studies. In high school, tested subjects are English I, English II, Algebra I, Biology, and US History.

To ensure that the STAAR test is valid and reliable, the Texas Education Agency (TEA) partnered with the Human Resources Research Organization (HumRRO), which

provided an outside evaluation of the validity and reliability of STAAR scores and results. HumRRO reviewed how well the content aligned with the thought process intended by TEA. From the reviews, each HumRRO reviewer assigned a rating of “fully aligned,” “partially aligned,” or “not aligned” to each item. Fully aligned required that the item fully fit within the expectation. Partially aligned was assigned if some of the item content fell within the expectation, but some of the content fell outside of the expectation. Not aligned was assigned if the item content fell outside the content included in the expectation. The results of the HumRRO reviewers for the average percentage of items rated fully aligned for middle school students were as follows: Math - sixth grade – 97.4%, seventh grade – 98.8%, and eighth grade – 97.8%; Reading – sixth grade – 95.8%, seventh grade – 90.5%, and eighth grade – 96.6%; Science – eighth grade – 97.7%; Social Studies – eighth grade – 89.9%; and Writing – seventh grade – 88.7% (HumRRO, 2016).

Data Collection Procedures

Quantitative

The researcher received permission from the participating school district’s Institutional Review Board (IRB) to have this study completed within the participating school district. The researcher then received approval from the University of Houston Clear Lake’s (UHCL) Committee for Protection of Human Subjects (CPHS) before collecting data from the participating teachers in the school district. Individual teacher STAAR scores and individual student PEIMS data for office referrals were collected by the researcher for middle school teachers within the participating school district. The STAAR scores and office referrals data from individual teachers were entered into a quantitative research software, IBM Statistical Package for the Social Sciences (SPSS), for further analysis. All data were kept in a secure location by the researcher. Only the

researcher had access to the data and passwords. The researcher only used this information for the purpose of the study. The researcher will keep all information confidential and under a secure location for a minimum of 5 years, which is required by CPHS. Once the CPHS requirements have been fulfilled, the researcher will delete and destroy all confidential information about the teachers and students.

Qualitative

Teacher perceptions of classroom management strategies in classrooms and teacher perceptions of the implications of disruptive behaviors on student learning and engagement was further examined using probing questions to measure the effects of PBIS on student achievement. The purpose of the study, voluntary participation, a timeline of completion, as well as ethical and confidentiality considerations, were communicated to the participating teachers through informed consent. Teacher participants were recruited to participate in an interview based on specific criteria from each teacher group. The criteria for participant groups were the subject area taught, years of experience in education, years of experience using PBIS, race/ethnicity, and gender for matching purposes. Prior to administering the interviews, the questions were piloted and vetted to support the validity of the study. The researcher conducted face-to-face interviews with the participants, using 11 questions located in Appendix A. Using a face-to-face technique for the interviews is commonly used as an effective technique for qualitative questioning to gather further knowledge from those who have experienced or will experience the topic of discussion. The researcher assigned pseudonyms to participant's responses to protect the teacher's identity.

The teachers participating in the study were selected from any of the four participating middle schools. Teachers were selected based on their subject area taught, years of experience in education, years of experience using PBIS, race/ethnicity, and

gender for matching purposes. The interviews took place on each of the four campuses in their conference room. The participants consisted of teachers who used PBIS. The interviews lasted approximately 50-60 minutes apiece. Each interview was recorded for accuracy and transcribed. All data will be kept securely in the possession of the researcher on a flash drive for a period of 5 years. After the 5 years have expired, the flash drive will be destroyed.

Data Analysis

Quantitative

Data were collected and entered into IBM SPSS statistics database for further analysis. To answer Research Question 1, an independent *t*-test was used to determine if there was a statistically significant mean difference in student achievement between classroom teachers who implemented a PBIS model compared to classroom teachers who did not. To answer Research Question 2, a Mann-Whitney U test was used to determine if there was a statistically significant mean difference in disruptive behaviors for classroom teachers who used PBIS compared to classroom teachers who did not. The independent variable, PBIS was categorical. The dependent variable, student achievement (STAAR scores) was continuous in nature. To determine the effect size, Cohen's *d* and the coefficient of determination (r^2) were used. A significance value of 0.05 was used.

Qualitative

To answer Research Question 3, what are teacher's perceptions of the benefits when PBIS classroom management strategies are used to address challenging behaviors, and Research Question 4, what are teachers' perception of the implications on instructional quality and student engagement when there are decreased disruptive behaviors associated with implementing PBIS, participating teachers were interviewed to gather additional knowledge. The qualitative questions were asked to allow the researcher

to investigate the participants' subjective experiences, opinions, and beliefs that cannot be measured with statistical data. The interviews were recorded and transcribed. A thematic analysis was completed to code and to find themes from the interviews. The codes were based on patterns from current literature that related to the participant's response. During the thematic analysis process, related topics were color coded to make individual themes that were then used for analyzing results. The results from the interviews were used along with the results from the quantitative data to provide a detailed view of the data. Recorded data were confirmed through triangulation of the results and recorded data were validated through member checking with the participants to ensure accuracy.

Qualitative Validity

The qualitative analysis process included validation by using triangulation of individual teacher responses by referring to literature from literature reviews. To ensure validity of the interviews, data obtained were cross-checked amongst teachers by the process of member checking. Member checking included teachers reviewing the preliminary transcripts to enhance the accuracy of the responses given to the researcher. The questions and results were peer reviewed by experienced teachers and administrators to ensure that the questions were valid and that the data were transcribed accurately. The peer review served the purpose of receiving feedback associated with the questions presented to teachers and their perception of classroom management strategies in classrooms that implemented PBIS and teachers' perceptions of the implications of disruptive behaviors on student learning and engagement.

Privacy and Ethical Considerations

Before collecting any data for this research, the researcher received approval from the school district of participating participants, UHCL's CPHS, and consent forms issued

and completed by the participants in the interview portion of the study. The researcher asked for permission to use archived STAAR data, archived office referrals, and teacher interviews from the participating school district. The participants of the study were given an informed consent for the study, the reason for the study, and how the study would be performed. The researcher protected the participants being interviewed by using pseudonyms to report the findings. The researcher will ensure that the data collected will be secure and kept confidential for the required 5-year time frame. Once the 5-year period has expired, the researcher will destroy the data and any confidential information associated with the research.

Research Design Limitations

The research design consisted of several limitations. First, the study focused on middle school teachers and their classroom management strategies. It is a possibility that elementary and high school teachers may have used different PBIS strategies in their classrooms. There is a possibility that PBIS is used mostly on elementary campuses. Secondly, another limitation is that some teachers may not have implemented PBIS with fidelity, which may have had a direct effect on the data. In order for the research to be valid and reliable, teachers must implement PBIS with fidelity and whole-heartedly to ensure the success of the practices. Teachers must also ensure that students respond to PBIS strategies to fully understand if the strategies are effective or not. A third limitation, which is an external validity, is proving that PBIS will work in school districts other than the school district that the researcher is using. Due to the researcher only using participants in one school district, the data may be skewed because of the policies and procedures of this particular school district that other school districts may not have. School districts have different ethnicity, socioeconomic, and mobility rates, which can affect the data. Lastly, due to Covid-19, the STAAR assessment was not given in 2019-

2020 and students have not been in school regularly since 2019. Due to students missing face-to-face instruction for up to 2 years, students may have developed gaps in their learning. With school districts teaching students virtually for up to 2 years, academic gaps may have been attained by some students. With the loss of instructional time caused by Covid-19, middle school academic achievement may have been affected.

Conclusion

In Chapter III, the research purpose, research questions, and research design methods were discussed. The purpose of this study was to examine whether or not PBIS influenced middle school academic student achievement and middle school disruptive behaviors. This chapter collected STAAR data and office referrals for quantitative data and teacher interviews provided qualitative data. The participating schools were middle schools on the east side of Houston, Texas. In Chapter IV, surveys, achievement data, PEIMS data, and PBIS strategies are analyzed and discussed in further detail.

CHAPTER IV:

RESULTS

The purpose of this study was to examine whether or not PBIS influenced middle school academic student achievement and middle school disruptive behaviors. This chapter presents the results of the quantitative and qualitative data analysis of this study. The quantitative data were illustrated in Research Questions 1 and 2. The qualitative data were illustrated in research Questions 3 and 4. This chapter begins with a detailed description of the demographic characteristics of the participants followed by the findings illustrated for each of the four research questions. This chapter concludes with a summary of the study's findings.

Archived Data

Participants for this study consisted of seventh and eighth grade teachers in the participating school district. Of the 1,400 classroom teachers in the entire participating school district, 115 (.08%) were seventh grade teachers and 108 (.08%) were eighth grade teachers. Of the 223 seventh and eighth grade teachers, 103 of the teachers had STAAR scores. Table 4.1 displays participant demographics from the participating school district regarding race/ethnicity, gender, and years of experience. The teachers participating in the quantitative portion of this study consisted of 35.9% male ($n = 37$) and 64.0% female ($n = 66$). The race/ethnicity consisted of 43.6% African American ($n = 45$), 25.2% Hispanic ($n = 26$), 20.3% White ($n = 21$), 6.7% Asian ($n = 7$), and 3.8% Two or more ($n = 4$). The individual teacher's years of experience consisted of 0-5 years (51.4%, $n = 53$), 6-10 years of experience (18.4%, $n = 19$), 11-15 years of experience (6.7%, $n = 7$), 16-20 years of experience (9.7%, $n = 10$), and 21 or more years of experience (13.5%, $n = 14$). Of the individual teachers, 71.8% ($n = 74$) of the teachers used PBIS in their classrooms, while 28.1% ($n = 29$) of the teachers did not use PBIS in their classrooms. Table 4.1

indicates the participating school district's middle school teachers who participated in the study. The table is disaggregated by gender, race/ethnicity, years of teaching experience, and total number of middle school teachers using PBIS.

Table 4.1

Teacher Participation Demographics: Gender, Race/Ethnicity, Teaching Years of Experience

Demographics	Frequency (n)	Percentage (%)
Gender		
Male	37	35.9
Female	66	64.0
Race/Ethnicity		
African American	45	43.6
Hispanic	26	25.2
White	21	20.3
Asian	7	6.7
Two or more	4	3.8
Teacher Years of Experience		
0-5	53	51.4
6-10	19	18.4
11-15	7	6.7
16-20	10	9.7
21 or more	14	13.5
Number of Teachers Using PBIS		
Yes	74	71.8
No	29	28.1

Table 4.2

Teacher Participation Demographics That Used PBIS: Gender, Race/Ethnicity, Teaching Years of Experience

Demographics	Frequency (n)	Percentage (%)
Total Teachers Using PBIS	74	100.0
Gender		
Male	28	37.8
Female	46	62.1
Race/Ethnicity		
African American	30	40.5
Hispanic	19	25.6
White	16	21.6
Asian	5	6.7
Two or more	4	5.4
Teacher Years of Experience		
0-5	36	48.6
6-10	14	18.9
11-15	7	9.4
16-20	7	9.4
21 or more	10	13.5

Table 4.3

Teacher Participation Demographics That Did Not Use PBIS: Gender, Race/Ethnicity, Teaching Years of Experience

Demographics	Frequency (n)	Percentage (%)
Total Teachers Not Using PBIS	29	100.0
Gender		
Male	9	31.0
Female	20	68.9
Race/Ethnicity		
African American	14	48.2
Hispanic	8	27.5
White	5	17.2
Asian	2	6.8
Two or more	0	0.0
Teacher Years of Experience		
0-5	16	55.1
6-10	5	17.2
11-15	2	6.8
16-20	3	10.3
21 or more	3	10.3

Tables 4.4-4.7 indicate the participating school district's four middle schools' demographic data. Each of the four middle school's data were disaggregated by middle schools on Tables A, B, C, and D. Middle schools A, B, C, and D each represents one of the four middle schools in the participating school district. Tables 4.4–4.7 disaggregates

the total enrollment, race/ethnicity, and special populations for each individual middle school. Of all four middle schools, Middle School C had the largest student population, with 1,379 students, while Middle School D had the smallest student population with 569 students.

Table 4.4

Middle School A Student Data

Student Data	Frequency (n)	Percentage (%)
Total Enrollment	977	100.0
African American (AA)	320	32.8
Hispanic (H)	600	61.4
White (W)	37	3.8
American Indian (AI)	2	0.2
Asian (A)	2	0.2
Two or More Races (ToM)	16	1.6
Special Education (Sp.Ed.)	101	10.3
Emergent Bilinguals (EB)	263	26.9
Economic Disadvantage (ED)	847	86.7

Table 4.5*Middle School B Student Data*

Student Data	Frequency (n)	Percentage (%)
Total Enrollment	1,081	100.0
African American (AA)	43	4.0
Hispanic (H)	917	84.8
White (W)	116	10.7
American Indian (AI)	3	0.3
Asian (A)	0	0.0
Two or More Races (ToM)	2	0.2
Special Education (Sp.Ed.)	100	9.3
Emergent Bilinguals (EB)	407	37.7
Economic Disadvantage (ED)	945	87.4

Table 4.6*Middle School C Student Data*

Student Data	Frequency (n)	Percentage (%)
Total Enrollment	1,379	100.0
African American (AA)	150	10.9
Hispanic (H)	1,121	81.3
White (W)	85	6.2
American Indian (AI)	5	0.4
Asian (A)	16	1.2
Two or More Races (ToM)	2	0.2
Special Education (Sp.Ed.)	144	10.4
Emergent Bilinguals (EB)	592	42.9
Economic Disadvantage (ED)	1,169	84.8

Table 4.7*Middle School D Student Data*

Student Data	Frequency (n)	Percentage (%)
Total Enrollment	569	100.0
African American (AA)	14	2.5
Hispanic (H)	534	93.9
White (W)	14	2.5
American Indian (AI)	1	0.2
Asian (A)	1	0.2
Two or More Races (ToM)	4	0.7
Special Education (Sp.Ed.)	70	12.3
Emergent Bilinguals (EB)	259	45.5
Economic Disadvantage (ED)	473	83.1

Tables 4.8-4.11 indicate the participating school district's four middle schools' passing percentages for STAAR results. Each of the four-middle school's STAAR results (percentages) are disaggregated by middle school. The STAAR results are disaggregated by total school passing percentage by content, total school passing percentage by race/ethnicity, and total school passing percentage by special populations. Middle schools A, B, C, and D each represents the four middle schools in the participating school district.

Table 4.8*Middle School A STAAR Results (Passing Percentages)*

2021-2022 STAAR Results (Passing Percentage %)				
	Reading	Math	Science	Social Studies
Total % Passing	77	67	65	41
African American	75	63	59	34
Hispanic	78	69	68	43
White	81	63	67	53
American Indian	----	----	----	----
Asian	----	----	----	----
Pacific Islanders	----	----	----	----
Two or More	88	88	60	60
Sp.Ed. (Current)	43	33	33	20
Emergent Bilinguals	75	65	64	40
Economic Disadvantaged	77	66	65	40

Table 4.9*Middle School B STAAR Results (Passing Percentages)*

2021-2022 STAAR Results (Passing Percentage %)				
	Reading	Math	Science	Social Studies
Total % Passing	77	76	82	59
African American	66	69	89	33
Hispanic	78	76	82	59
White	80	84	82	73
American Indian	----	----	----	----
Asian	----	----	----	----
Pacific Islanders	----	----	----	----
Two or More	----	----	----	----
Sp.Ed. (Current)	53	53	44	38
Emergent Bilinguals	77	77	80	54
Economic Disadvantaged	74	74	81	56

Table 4.10*Middle School C STAAR Results (Passing Percentages)*

2021-2022 STAAR Results (Passing Percentage %)				
	Reading	Math	Science	Social Studies
Total % Passing	82	72	78	58
African American	90	77	84	66
Hispanic	81	72	77	57
White	71	71	79	50
American Indian	----	----	----	----
Asian	92	85	100	89
Pacific Islanders----	----	----	----	
Two or More	----	----	----	----
Sp.Ed. (Current)	45	41	45	26
Emergent Bilinguals	77	71	74	51
Economic Disadvantaged	80	71	76	56

Table 4.11*Middle School D STAAR Results (Passing Percentages)*

2021-2022 STAAR Results (Passing Percentage %)				
	Reading	Math	Science	Social Studies
Total % Passing	77	69	78	66
African American	72	44	----	----
Hispanic	76	70	78	66
White	83	67	----	----
American Indian	----	----	----	----
Asian	----	----	----	----
Pacific Islanders	----	----	----	----
Two or More	----	----	----	----
Sp.Ed. (Current)	39	28	35	35
Emergent Bilinguals	76	70	79	65
Economic Disadvantaged	76	68	77	64

Table 4.12 indicates the participating school district's four middle schools' demographic data combined. Middle schools' A, B, C, and D demographics are combined to represent the data in Table 4.12. The four middle schools have a combined student population of 4,006 students.

Table 4.12*District Combined Middle School Student Data*

Student Data	Frequency (n)	Percentage (%)
Total Enrollment	4,006	100.0
African American (AA)	527	13.2
Hispanic (H)	3,172	79.2
White (W)	252	6.3
American Indian (AI)	11	0.3
Asian (A)	19	0.5
Two or More Races (ToM)	24	0.6
Special Education (Sp.Ed.)	415	10.4
Emergent Bilinguals (EB)	1,521	38.0
Economic Disadvantage (ED)	3,434	85.7

Table 4.13 indicates the participating school district's four middle schools' STAAR passing percentages combined. The STAAR scores are disaggregated by race/ethnicity, content, and subpopulations. The STAAR results are disaggregated by total passing percentage by content, total passing percentage by race/ethnicity, and total passing percentage by special populations.

Table 4.13*District Combined Middle School STAAR Results (Passing Percentages)*

2021-2022 STAAR Results (Passing Percentage %)				
	Reading	Math	Science	Social Studies
Total % Passing	78.2	71.0	75.8	56.0
African American	75.8	63.3	77.3	44.3
Hispanic	78.3	71.8	76.3	56.3
White	78.8	71.3	76.0	58.7
American Indian	----	----	----	----
Asian	92.0	85.0	100.0	89.0
Pacific Islanders	----	----	----	----
Two or More	88.0	88.0	60.0	60.0
Sp.Ed. (Current)	45.0	38.8	39.3	29.8
Emergent Bilinguals	76.3	70.8	74.3	52.5
Economic Disadvantaged	76.8	69.8	74.8	54.0

Interview Participants

Participants for this study consisted of seventh and eighth grade teachers located in eastern Harris County outside of Houston, Texas. The middle school teachers were recruited to participate in an interview discussing PBIS. A purposeful sample of teachers from all four participating middle schools was selected to answer a series of questions about their philosophical thinking regarding PBIS strategies. The interview participants were selected by race/ethnicity, years of experience teaching, years of experience using

PBIS, the number of office referrals that they had for the school year, and gender. The participants who were selected answered perception questions about classroom management strategies of classrooms that implement PBIS to address challenging behaviors and the implications of disruptive behaviors on student learning and engagement.

Ten teachers participated in structured interviews to collect qualitative data for this study. Interview participants were selected based on their willingness to participate and their use of PBIS in their classrooms. A summary of the participating teachers' descriptive factors, including gender, race/ethnicity, years of experience teaching, number of office referrals, STAAR passing percentage, subject area taught, and years using PBIS are included in Table 4.14.

Table 4.14*Teacher Interview Participants*

Teachers	Gender	Race/ Ethnicity	Years of Experience	# of Office Referrals	STAAR Passing %	Years Using	
						Content	PBIS
A	Female	AA	4	7	100	ELA	2
B	Female	AA	7	5	73	Math	5
C	Female	AA	3	11	94	Science	2
D	Female	AA	2	13	77	ELA	2
E	Female	AA	8	19	100	ELA	7
F	Male	AA	19	13	63	Math	15
G	Female	H	4	3	00	ELA	2
H	Male	H	15	2	97	Math	11
I	Male	W	26	12	70	Math	15
J	Male	W	17	0	94	Math	10

Research Question One

To answer Research Question 1, *Is there a statistically significant mean difference in student achievement between classroom teachers that implement a PBIS model and classroom teachers that do not?*, an independent *t*-test was conducted. The independent variable, PBIS, was categorical (Yes or No). The dependent variable, student achievement (STAAR scores), was continuous in nature. Results of the independent *t*-test indicated that there was a statistically significant mean difference in student achievement between classroom teachers who implemented a PBIS model compared to classroom

teachers that did not, $t(97) = 4.247$, $p < .001$, $d = 0.919$ (large effect size), $r^2 = .174$. Teachers who implemented a PBIS model in the classroom ($M = 71.9$) had a higher mean average than teachers who did not implement a PBIS model in the classroom ($M = 47.8$). These data indicate that teachers who implemented a PBIS model had higher student achievement than teachers who did not implement a PBIS model. Findings indicated a 17.4% variation in student achievement between classrooms teachers who implement a PBIS model compared to classroom teachers who do not.

Table 4.15

Independent t-Test: The Implementation of Classroom Teachers That Implements a PBIS Model vs Teachers That do not Implement a PBIS Model on Student Achievement

Student Achievement	N	M	SD	t-value	df	p-value	d	r^2
PBIS Model	72	71.9	23.8	4.247	97	.001*	.919	.417
No PBIS Model	27	47.8	28.3					

*Statistically Significant ($p < .05$)

Research Question Two

To answer Research Question 2, *Is there a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not?*, a Mann-Whitney U test was conducted. The implementation of PBIS did not have a statistically significant mean difference on disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not. The results of the Mann-Whitney U test indicated that there was not a statistically significant mean difference in disruptive behaviors for classroom teachers who used PBIS compared to classroom teachers who did not, $z = -.942$, $p = .346$. Teachers who implemented PBIS had a mean rank of 48.34, while teachers who did not implement PBIS had a mean rank

of 54.43. The results of the Mann-Whitney U test indicated teachers who implement PBIS in their classroom had fewer disruptive behaviors than teachers who did not implement PBIS in their classroom.

Table 4.16

Mann-Whitney U Test: The Effects of the Implementation of PBIS on Student Disruptive Behaviors

Disruptive Behaviors	N	Mean Rank	Sum of Ranks	Z	p-value
PBIS Model	72	48.34	3480.50	-.942	.346
No PBIS Model	27	54.43	1469.50		

*Statistically Significant ($p < .05$)

Research Question Three

Research Question 3, *What are teachers' perceptions of the benefits when PBIS classroom management strategies are used to address challenging behaviors?*, was answered using constant comparison coding of 10 structured interviews with middle school teachers within the participating school district. A summary of the participating participants' descriptive factors, including gender, race/ethnicity, teaching years of experience, number of office referrals, STAAR passing percentage, subject area taught, and years using PBIS are included in Table 4.14. From the interviews, responses were assigned to three common themes: (a) building positive relationships, (b) improved student achievement, and (c) changing negative behaviors associated with the benefits of PBIS that address challenging behaviors. These themes are described in detail in following sections of this chapter.

Building Positive Relationships

During the interviews with teachers, when asked about classroom management strategies by teachers in classrooms that implement PBIS, all participating teachers mentioned that PBIS helped build positive relationships with students. While the strategies the participants described varied, a resonating theme focused on the benefit to building and sustaining positive relationships. Six of the 10 teachers interviewed felt that students respected themselves, their classmates, and their teachers more when PBIS classroom management strategies were used. For example, Mr. Gonzalez mentioned that instead of addressing students in front of the entire class, he pulled the student to a private area to discuss the behavior issue. Mr. Gonzalez stated,

You try every day, but every day the kid decides to continue doing the same thing. So, what I do most of the time is pull them to the side and I speak to them one on one about the situation. Most of the time the behavior then changes.

This relationship building strategy shows the students that the teacher cares and that the teacher does not want to embarrass the students. This strategy brings down the barrier that the students are surrounding themselves with and allows the teacher to reach the students personally as well as academically.

Teachers mentioned that PBIS allowed for teachers and students to respond in a positive way when communicating with each other. Mrs. Jackson explained how “I am the model of respect in my classroom” for my students. Mrs. Willis responded, “We talk a lot about respect.” Mr. Young stated, “I show all of my students that I care and that they are welcome in my classroom.” Mr. Richards, mentioned, “I don’t do a lot of raising my voice in class, students don’t like that.” Teachers also believed that students appreciated when teachers showed them respect and not embarrassed them. Mrs. Jackson stated, “Respect is a big deal in my class.” Mrs. Willis stated, “My students respond to my

directives because I have built a positive relationship with them.” Mrs. Brown stated, “I start building my relationships on the first day of school because that’s important.” Mrs. Rivers stated, “My students love when I give them attention.” Mrs. Willis stated, “My students respect me because I handle my own discipline behaviors, I don’t like sending students to the office.” Mrs. Felix stated, “I give respect; therefore, I get respect.” Mr. Gonzalez stated, “I don’t embarrass my students.” Lastly, Mr. Young stated, “Respect has to be both ways.”

Mrs. Jackson further elaborated,

PBIS helps you make a relationship with your students. Sometimes students are surprised that teachers’ demeanor could be quite positive a lot. Some students are used to being fussed at and redirected in negative ways. So, it surprises a lot of students that I always try to respond back to them positively, even if their behavior doesn’t represent that.

What Mrs. Jackson is referring to is that students respond better and give more effort in the classroom when teachers interact in a positive way. Keeping a positive learning environment gives better results than negative interactions. Mrs. Rivers’ response mentioned how her relationship with the students was different and not as strong when she was a student teacher compared to now being the students’ full-time teacher.

Yes, I think if I compare it to whenever I was student teaching, I knew the kids but I didn’t really know the kids because I was not there every single day. I could not just rattle off their names all the time. So, I did not praise the kids probably as much as I could have and we did not have a strong relationship. We had a relationship, but it was a little bit more difficult to get them to do what you wanted them to do. Again, I was not there every day of the week. I wouldn’t say my first year because I was still trying to figure out what works for me, but in my

second year to now, I had an idea of what worked for me and what didn't work for me. I think my relationship with my kids have gotten better as I've continued to teach. You start to figure out that these things may work or these phrases might work, or these actions might work and these actions may not work. Building relationships has been the change. I have had a couple of challenging classes, but I've never had kids that were completely just out of their minds. I never had kids that did not want a positive relationship with me. Even my most challenging classes, those kids still want to be under you all the time and want to talk to me. So, I think I have a good relationship with them even though behavior wise, they still get distracted, but I can always get those students back on track because my relationship with them has gotten much better.

Mrs. Rivers understood that by her being her students' assigned teacher and not the student teacher, she had the opportunity to establish a relationship with her students and set the tone for the expectations in her classroom. Even students that have behavior challenges want a positive relationship with their teacher.

Eight out of the 10 teachers also mentioned that students liked to know that they cared about them and their classwork. When students saw that their teacher cared, they would care for them back. Mrs. Riley mentioned, "It is very positive to show students that you care about the scores that they're making and that you care about their answers. They also then know that you want to see them do well." Mr. Davis mentioned, "I set high expectations because I care and I do not accept students not doing their best." Mrs. Felix mentioned, "I reward good grades because I want them to know that I care what their grades are." Teachers felt that students performed better when they had a positive relationship with their teacher and when their teacher discussed their grades with them.

Not allowing for students to perform lower than their capability was important to teachers.

Improved Student Achievement

Student achievement was a topic that was discussed in every interview. Student achievement was defined in Chapter 1 as a measure of growth of knowledge in a specific content area, which can be measured through standardized or non-standardized measures. From all of the interviewees' points of view, student achievement was the most important reason why they implemented PBIS in their classrooms. The entire group of teachers interviewed felt as though students did better academically in class once PBIS strategies were implemented and systems were in place. Mrs. Brown commented,

Even though we teach middle school students, they like the praise. I don't buy a lot of incentives because it gets expensive. So, I rely a lot on praise. Students want to be praised, so to get my praise, they complete my work correctly. So, I give a lot of praise, they complete their work correctly, and their scores go up.

Mrs. Brown's meaning through this statement was that students responded positively to praise. As Mrs. Brown mentioned, giving students praise, when deserved, is free. Students will do their best and do extra when they know when they do well, their teacher will praise them.

Five out of the 10 teachers also felt that student achievement benefited from PBIS because students gave more effort. Teachers felt that students tried harder when they were praised and rewarded for their best efforts. Mrs. Felix mentioned,

I feel that students just go the extra mile whenever I use PBIS strategies in class. Like I said before, it helps me not to have behavior issues and it helps the class and my teaching when students want to try more. Just by students trying harder, scores will go up.

Mrs. Felix is referring to how implementing PBIS strategies increases scores because if students apply their best effort, then they will improve. When students are giving their best effort in the classroom and teachers show that they care about the academic outcome of the student, scores tend to increase. Mr. Davis explained that PBIS strategies, such as giving consistent praise or consistent incentives, encouraged more effort from students. When students saw their classmates receiving praise from their teacher, they wanted to get praised as well. Mr. Gonzalez and Mr. Richards stated, "This makes them try harder." Mrs. Willis also stated,

Um, yes. So, I will say like I was saying earlier, me giving those strategies whether it's the student staying close to me in class, or me hovering over the student a little bit normally changes behavior. Also, when I praise you or you just knowing those things, you know, the student reverts back and says, I need to do what I'm supposed to be doing. Like the students who's sitting close to me, they're probably going to you know, start doing their work a little more because they don't want to sit there by me and they do want to move back to where the other students are sitting. Or if I'm praising other students, they do want to keep getting those awards, and they do want to keep getting that praise, you know, so I do feel like that it does increase student performance. Just by praising of students or students just knowing that you care about them, you know, they want to do well for themselves. Especially like for tests and stuff like that. Last year. I got like pizza for some of my students who got "Masters" on their test or like chips for people that got "Meets" on their test and they look forward to this.

Praises and incentives were common strategies teachers reportedly utilized and attributed to improving student achievement. Very similar to Mr. Davis' response, Mrs. Felix responded,

I did. I noticed that because, for instance, if anybody gets a 100 on anything, quizzes or you know the multiple-choice answers attached to a story, they get a treat. I have candy and treats in my cabinets and students are aware of this. I have hot chips and Rice Krispie treats so they're motivated to get that 100. If none of my students get 100, but I get some A's and I give those students the treat because they still made the highest grade. Also, give treats to students make who made a B, but who normally make an F, because you know that was really good for them. So, you think they continue to strive for that B because they know I don't just give treats for the perfect grades, but I give treats for the increase of effort. So, I do see that incentives motivate them, and they try a little bit harder, which increases their scores.

Mrs. Felix's response is aligned with the theoretical framework of operant conditioning, which states that behavior is associated with positive or negative consequences. In this case, students perform well on assignments because they know that a reward is given for quality work.

All teachers felt very strongly about positive reinforcements for students. Incentives and praise were the top two PBIS strategies that all teachers used to encourage their students to give their best efforts in class. Every teacher interviewed felt that student success started with the student being intrinsically motivated by some type of stimulus. Every teacher mentioned how all students wanted to be successful, but at times it took praise and incentives to motivate them, each teacher wording this statement differently. Mr. Gonzales stated,

I think every kid wants to be successful. The student just has to have a chance to be successful. If the student is always getting bad grades and not progressing at all, then nothing is going to change. So as the teacher, when I see the student

making small strides and I continue to give the student positive reinforcements, it then comes all together. The student usually starts doing better in my class. Teachers increase the chances of students being successful by using PBIS strategies, such as routines, procedures, and positive relationships. As stated by Mr. Gonzalez, students want to be successful, but at times they do not know how. PBIS strategies are used to ensure that students are in a position to be successful.

Changing Behaviors

Changing behaviors was a major component of PBIS. Disruptive behavior was defined in Chapter 1 as a behavior which is undesirable in a school environment and takes the teacher's attention away from the main task of teaching. Seven teachers stated the reason that they implemented PBIS strategies was to change disruptive behaviors to positive actions by students. Mrs. Riley stated, "By using my PBIS strategies, students want to spend extra time in my classroom for tutorials. They don't start out that way, but after a few weeks of PBIS, it changes their thinking of wanting to do better." Mrs. Willis stated, "My students are engaged because of my PBIS strategies, instead of hiding behind their computer screens not working." A consensus of all teachers felt that changing disruptive behaviors was important to ensure that students were successful in class.

All teachers commented that disruptive behaviors during instruction took away from teaching and learning during class time. Mrs. Felix commented, "My students put in more effort because they know that incentives are attached. At first, they were slacking, but now they give me 100%." When implemented with fidelity, PBIS allowed students to self-correct or be corrected with minimal distractions, which enhanced student success. Mrs. Felix mentioned,

Yes, my students are intrinsically motivated and because that's the case, I keep treats for them. The PBIS strategies that I use is [*sic*] a behavior motivator as well

as a motivator for their grades. I noticed that when they find out that there's something attached, then they put in a little more effort. Students put in more effort when they know a treat is attached, then eventually the students will give more efforts naturally whether a treat is attached or not.

By receiving incentives, students are more motivated to learn, as discussed by Mr. Felix. The motivation changes the student's mindset from needing an incentive to the student applying self-motivation because the student wants to do well on their own. The PBIS strategy of rewards and incentives changes the student's behavior from needing an incentive to being motivated on their own.

Seven teachers also mentioned that exposing students to PBIS on a regular basis was important. The more students were exposed to PBIS, the more they cared about their actions and accepted responsibility for their negative actions. Mr. Gonzalez explained,

To be specific, this happens to me a lot. I struggled with the same kid to get my work done. The student seems to struggle to be in dress code. He comes to me last period a day, and I told him yesterday, that I was proud of him because he had been doing my work. So, he loves to wear a black jacket. So, when he came in yesterday with the black jacket on, I was like okay. You get to keep that on black jacket on today, but if you don't do my work tomorrow, you are going to have to take that black jacket off in my class. So today I saw him and he wasn't even my class, but he had on the black jacket. The student said, "I'm not in your class." I said, "Well you are still out of dress code." Well, the kid walked around and came back to me. I asked the student why did he come back to me? His response was because I am going to change my behavior. So that really opened my eyes. I then knew that my behavior strategies were working.

Mr. Gonzalez's consistency using PBIS strategies changed this student's behaviors by the student finally realizing that I do not want to get in trouble anymore and that he wanted to do the right thing. By Mr. Gonzalez not giving up on the student and being consistent with using PBIS with the student, the student decided on his own to follow the rules and stay in the classroom.

PBIS also changed disruptive behaviors even if the students did not enjoy the content. Students wanted to make their teachers proud and not disappoint them. Three teachers mentioned that they could have high expectations in their classroom because students were going to meet their expectations. Mrs. Jackson informed me,

Yes, I don't have many issues with my students' behavior or their work ethics.

They do a lot for me, compared to some other teachers. They have a good relationship with me. A lot of them are always willing to do extra in math, even if they don't like the subject just because of the support and the relationship that I have with them.

Mrs. Jackson feels that PBIS has helped her to create an environment of students wanting to learn. As stated in Mrs. Jackson's class, students are willing to do extra to ensure their success in class. From the relationship built, Mrs. Jackson's students want to make her proud.

Research Question Four

Research Question 4, *What are teachers' perception of the implications on instructional quality and student engagement when there are decreased disruptive behaviors associated with implementing PBIS?*, was answered using constant comparison coding of 10 structured interviews with middle school teachers within the participating school district. The interview participants also shared their perceptions of their implications of disruptive behaviors on student learning and engagement. From the

interviews, responses were assigned to two common themes: (a) increased instructional time, and (b) decreased office referrals. These themes are described in detail in following sections of this chapter.

Increased Instructional Time

All teachers self-reported being extremely protective of their instructional time and felt that their instructional time with students was important to their success as a teacher. Also, every teacher felt that the minutes that were designated for their instruction were a top priority for student's learning. Instructional time was defined in Chapter 1 as the time that students are exposed to content. Mrs. Riley mentioned, "I have more time to teach because I don't have many behavior issues." Mrs. Riley acknowledged PBIS with the reason for having minimal behavior issues.

Eight out of 10 teachers felt that they did not have to spend as much time redirecting disruptive behaviors and could focus on the delivery of instruction. Students had more time engaged with the teacher compared to having to listen to the teacher redirect students, which caused an increase in student achievement. Mrs. Brown mentioned,

I do think PBIS does help with instruction. Like, during instructional time, I do get a little more time to teach you know. I don't spend a lot of time having to redirect. I don't do a lot of redirecting. Um, I think the only time that I probably would do a little redirecting is probably the last class period of the day. It's that last class period, they're ready to go home, and then of course, the class size and the dynamics of the students in there. So, but other than that, I just tell them let's get back on track, or snapping of my fingers as a non-verbal cue. The students normally get back focused rather quickly.

Also, Mrs. Jackson, Mr. Gonzalez, and Mr. Richards mentioned that by incorporating PBIS in their classroom, positive actions became routine for students and the classroom became self-sufficient for the students. Mrs. Jackson stated, “Students like structure and routines.” Mr. Gonzalez included, “My students know what to expect every day because the routine does not change.” Mr. Richards followed by saying, “Classroom routines keep me prepared as well. It works well for me and the students.” During an interview, Mrs. Jackson stated,

It has. A lot of times when I'm not here, if I'm absent, my students are able to run the classroom as if I was here. So, the substitute is just the adult in the room but the students know the routines and the expectations. The students are always pushing and encouraging academic success within their class.

Routines, systems, and procedures are a major part of PBIS. Students respond well when they know what to expect and systems are in place. Classroom routines and procedures allow for student success in the classroom.

Three teachers mentioned that with minimal disruptive behaviors, the teacher was able to move more freely about the classroom. These three teachers felt that they did not have to stand in one area of the classroom due to specific students having behavior issues. With the teacher being able to move around the classroom, deliver an effective lesson, and not have to stop to address multiple students, more instructional time was available. Mrs. Willis was quoted,

Yes, because when you sit down to work with a student, if I'm back here, then I'll have those students that may distract class back here with me; but if I'm up there, then I'm like, okay, you all will need to move up here with me. So, it's kind of like, instead of having those distractions everywhere, maybe you will just have maybe three distractions in one area. I feel like that's better than having them

scattered around your room because then it's like four groups talking at one time. I can kind of get them together and use my close proximity to keep them near me, or you know, in a certain area, and that usually keeps the distractions down. By doing this, it gives me more time to teach.

As Mrs. Willis stated, PBIS allows for teachers to have classroom management systems in place to where students do not distract from instruction with negative behaviors. PBIS helps teachers spend more time teaching and less correcting behaviors. Also, teachers are more effective in class when they are able to move around the entire classroom and help students when needed, instead of having to stay in one area because a certain group of students have behavior issues.

Nine out of 10 teachers also mentioned that PBIS motivated students to be attentive during the lesson because incentives were given for good behavior, being engaged, and completing the instruction. When students knew that they would receive an incentive at the end of the lesson if they did well on the assignment, it allowed the teacher to complete the lesson, which allowed the teacher to give practice time. Mrs. Felix stated,

I think so because they're motivated, you know, and they know they have something to look forward to and they know that we got to get through this in order for them to get whatever the reward is, right? Sometimes it might be, you know, hey, if everybody finishes their work, and we finish early, we all step outside and have a 5-minute brain break. This keeps them motivated to stay focused and complete all of their work.

Mr. Gonzalez similarly mentioned,

When I was growing up, after school I had to sit at the kitchen table to do my homework. A lot of kids don't do that anymore. So, by me implementing PBIS strategies and I don't have behavior issues, I have time to complete my lesson and

give practice time to students in class. This way, I can catch the mistake as they make them. I can correct the mistakes on the spot, and I can ensure that they are practicing. By students having more practice time, it has definitely helped to increase my STAAR scores.

Student outcomes increase from the implementation of PBIS because fewer classroom distractions give the teacher more instructional time and students more independent practice time. It is important to teachers that they have the opportunity to provide students with independent practice time to practice the new skill that was just taught. This increases the level of understanding for the students in the classroom.

Decreased Office Discipline Referrals

During the interviews with each one of the teachers, they emphasized the topic of students being in class during instruction was important to them. The ensemble of teachers felt that it was very important for the students to be in class to receive the instruction from the teacher and not in the office with an office discipline referral, in-school suspension, or out-of-school suspension. Mr. Davis stated, “I need my students in class as much as possible, me sending students to the office is my last resort.” Mrs. Riley commented, “Some students purposely try to get in trouble to be sent to the office, I don’t give them what they want. I handle the behavior issues in my classroom using my PBIS strategies.” Office discipline referrals were defined as events in which a student engaged in a behavior that violated a rule in the school, the problem behavior was observed by a member of the school staff, and the event resulted in a consequence delivered by an administrative staff who produced a written product defining the event.

Every teacher interviewed recommended that in order for teachers to have successful outcomes, the student must be in class with their teacher receiving instruction.

Four teachers mentioned that setting expectations using PBIS strategies from the beginning of the school year was really successful. Mrs. Brown went on to say,

Um, classroom routines procedures are set, they are set from the first day of school. We do it every single day, so you know the expectation. So, I think I don't have a lot of office referrals because of that. I set my room up the very first day that you come in and your expectations are clear. You know what they are, you know, you know what you're doing, and whenever we're doing anything, I give you the expectation of the assignment. So, I honestly think, you know, that helps with the decrease in referrals. They know what the expectations are. They know when I'm cueing them to get to work. So, I don't have to stop class to keep students back on focused on the assignment.

When expectations are set by the teacher, students do not have to wonder what or how they are supposed to do a task. PBIS allows for teachers to set clear routines and expectations with the entire classroom which allows for less chance of confusion or misunderstandings.

Mrs. Jackson discussed how they worked really hard at making their classroom a community and that everyone had to respect each other. Mrs. Jackson also stated that using PBIS strategies of respect for one another helped keep order in the classroom. Mrs. Jackson went on to say,

I do. A lot of my students do stay on task. Not saying that they don't get off tasks, but when they do get off task, they quickly get back to what they need to do to be successful in class. They really work hard in building our classroom community. I tell them all the time, we're a community. So, they really keep each other in check to make sure that the behaviors are right and the academics are right before I even have to intervene.

Having a community type classroom environment allows for students to hold themselves, the teacher, each other accountable in the classroom setting. As Mrs. Jackson mentioned, having a community environment supports the fact that students want their own community to be a comfortable place for them to learn. Therefore, wanting the comfort encourages students to have good behavior and respect one another.

Six teachers also brought up the use of restorative practices being used in their classroom. Examples of restorative practices that were mentioned were (a) Community Circles: students discuss a topic amongst the entire class to get to know one another on a personal level, (b) Apology Letters: a student that is exhibiting disruptive behaviors has to write an apology letter to the teacher and his or her classmates, and (c) Goal Setting: students take ownership of their areas of opportunity for growth, set goals to improve, and make actionable steps to attain their individual goals. Six teachers felt that by building positive relationships with their students and having a community type atmosphere in their classroom, disruptive behaviors could be handled inside of their classroom and the student did not have to receive a discipline office referral. Mrs. Riley stated, “Community circles have worked really well for my class. When there is a problem, we take a few minutes to discuss and resolve the issue.” Mr. Young commented, “Every student in the classroom set personal goals for themselves and as a class, we set classroom goals. We revisit our goals frequently to ensure that we are on track to reach our goals.” Restorative practice was defined as an alternative proactive approach to addressing such behaviors while simultaneously improving interpersonal relationships and social-emotional behavior competencies. Mrs. Rivers stated,

Whenever I was in my educational program, they were always sort of teaching us to handle things in house as much as you can. So, I guess maybe I have that mindset and I knew once I started teaching, I knew from the jump I did not want

to constantly call an assistant principal or principal to my room, because in my mind that gives my authority away. I'm not saying that they don't have authority in your room for this, but it's like you're telling the kids that you can't run your own room. Right. I just refuse to have to call an assistant principal to my classroom all of the time. I talk to parents or whatever we have to do that we can here and if it gets to the point where I have to and I have no choice, then of course, I will send the student to the office. Sending a student to the office is my last resort. I've tried to handle as much as I can in my classroom.

By implementing PBIS strategies in the classroom, teachers have the tools to resolve negative behaviors in their classroom. Teachers who implement PBIS have a strong belief that a majority of the behavior issues will be resolved in their classroom by the teacher and student working together. Sending a student to the office with an office discipline referral is the last resort.

Similarly, Mrs. Willis stated,

I think, for me, yes. Like, I feel like office referrals for me is something like either it was out of line, it was disrespectful to me, to another student, or to another teacher. It has to be blatantly out of line. For me, office referrals are like, okay, like, you're going to be in In-School Suspension. So, you're not going to be in here learning. You're not going to be getting instructional time. Maybe it's something that I could just talk to you about, and you won't do it again, and most of the time, that's what happens. It's not something that they just keep continuing to do. They don't continue to disrupt every day. Most of the time, they just don't do it again, at least in my class. So, I guess that's why I don't have a lot of office referrals for the most part. I mean, I think students think if you just keep sending them to the office for the same stuff, they're just going to keep doing it. So, PBIS

allows me to handle the discipline behaviors in class and not have to send the student to the office and miss instructional time.

Mrs. Willis was referring to using PBIS strategies to hold students accountable and not allowing students an opportunity to get out of completing an assignment. Teachers who implement PBIS in their classrooms understand that when students are sent to the office for an office discipline referral, the student is losing instructional time. As Mrs. Willis mentioned, teachers who use PBIS prefer to speak to their students about the negative behaviors, reset expectations, and keep the student in the classroom for instruction.

Summary of Findings

The findings of this study yielded an analysis of both quantitative and qualitative data collected that addressed four research questions. Two of the questions were quantitative and two questions were qualitative. The purpose of this study was to examine whether or not PBIS influenced middle school academic student achievement and middle school disruptive behaviors. The data were collected from four middle schools in the participating school district. The four middle schools had 103 teacher participants, due to having 2021-2022 STAAR data and discipline data. Of the middle school teachers, 10 teachers voluntarily participated in a structured interview. The interview data were analyzed using thematic coding, and themes were created to answer Questions 3 and 4.

Analysis of Research Question 1, *Is there a statistically significant mean difference in student achievement between classroom teachers who implement a PBIS model compared to classroom teachers who do not?*, was answered using an independent *t*-test. The independent variable was PBIS, which is categorical, while the dependent variable, middle school student achievement (STAAR scores), was continuous. Based on the data, there was a statistically significant mean difference in student achievement between classroom teachers who implemented PBIS compared to classroom teachers who

did not. The data revealed that teachers who used PBIS had higher student achievement than teachers who did not implement PBIS.

Analysis of Research Question 2, *Is there a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not?*, was answered using a Mann-Whitney U test. Based on the data, there was not a statistically significant mean difference in disruptive behaviors for classroom teachers who implemented PBIS compared to classroom teachers who did not implement PBIS. The results of the Mann-Whitney U test indicated that teachers who implement PBIS in their classroom had fewer disruptive behaviors than teachers who did not implement PBIS in their classroom. Disruptive behaviors were defined as a behavior which is undesirable in a school environment and takes the teacher's attentions away from the main task of teaching.

Analysis of Research Question 3, *What are teachers' perceptions of the benefits when PBIS classroom management strategies are used to address challenging behaviors?*, was answered using constant comparison coding of 10 structured interviews with middle school teachers within the participating school district. The results of the qualitative analysis indicated that teachers' perception of teachers using classroom management strategies of PBIS was effective when used in the classroom. From the interviews, eight teachers consistently mentioned three themes: (a) building positive relationships, (b) improved student achievement, and (c) changing negative behaviors associated with the benefits of PBIS that address challenging behaviors.

While the sum of all teachers knew that there were benefits when PBIS strategies were used for classroom management, building relationships with students was a popular theme. All participating teachers revealed that PBIS helped build positive relationships with students in their classroom. By implementing PBIS, the learning environment

remained positive and students held each other accountable for ensuring that the environment stayed positive on a consistent basis. Also mentioned, with the learning environment being positive and conducive to learning, student-to-student and teacher-to-student responses and communication with each was always positive and encouraging.

Six teachers mentioned that a positive learning environment was an important ingredient to students' success in the classroom, and all participating teachers made it evident that treating students with respect helped build positive relationships with all students. Eight teachers felt when students saw that the teacher cared for them personally, the student cared for the teacher in return.

Another consistent topic of discussion during the interviews was how PBIS contributed to improved student achievement. Student achievement was defined as a measure of growth of knowledge in a specific content area, which can be measured through standardized and non-standardized measures. Each of the interviewees stated that student achievement was the most important reason why they implemented PBIS in their classrooms, and all of the teachers interviewed felt as though students performed higher academically once PBIS strategies were implemented with fidelity and systems were in place. Having daily routines that students were familiar with and expected helped decrease discipline behaviors, which increased academic achievement due to time on task.

Another benefit from PBIS was that each individual teacher explained that PBIS strategies, such as giving consistent praise or consistent incentives, encouraged more effort from students. Not only was effort of students in the classroom a benefit of implementing PBIS, students valued their work and had pride in doing well on assignments. Incentives and praise were the top two PBIS strategies that the entire group of teachers used to encourage their students to give their best efforts in class. Every

teacher felt that student success started with the student being intrinsically motivated by some type of stimulus because all students wanted to be successful, but occasionally, students needed praise and incentives to motivate the student to reach their goals.

Changing negative behaviors was also a key component from implementing PBIS. Changing behaviors is a major component of PBIS. Disruptive behavior was defined in Chapter 1 as a behavior which is undesirable in a school environment and takes the teacher's attention away from the main task of teaching. Seven teachers stated the reason that they implemented PBIS strategies was to change disruptive behaviors to positive actions by students. Each teacher saw a decrease in student negative behaviors after implementing PBIS. All teachers felt that changing disruptive behaviors and actions was important to ensure that students were successful in class because disruptive behaviors during instructional time took away from teaching and learning in the class. As behaviors of students continued to change, students were able to self-correct or be corrected with minimal distractions, which enhanced student success. The complete group of teachers also mentioned that exposing students to PBIS consistently was important. The more students were exposed to PBIS, the more they cared about their actions and accepted responsibility for their negative behaviors.

Analysis of Research Question 4, *What are teachers' perception of the implications on instructional quality and student engagement when there are decreased disruptive behaviors associated with implementing PBIS?*, was answered using constant comparison coding of 10 structured interviews with middle school teachers within the participating school district. From the interviews, the majority of the responses were assigned to two common themes: (a) increased instructional time, and (b) decreased office referrals. Instructional time was defined as the time that students are exposed to

content. The totality of teachers who were interviewed regarded instructional time as being valuable and important, because they could not get lost time back.

Collectively, all teachers were vastly protective of their instructional time and felt that their instructional time with students was important to their success as a teacher. One hundred percent of teachers felt that the minutes that were designated for their instruction were of high priority and important to student's academic achievement and successful academic outcomes. Also, three teachers mentioned that by incorporating PBIS in their classroom, positive actions became routine for students and the classroom became self-sufficient for the students. Students were able to have a student-led instruction while the teacher became a facilitator of the instruction. With the teacher being able to help all of the students when needed, deliver an effective lesson with quality, and not have to stop to address multiple disruptive behavior issues, more instructional time was available and students were more successful.

During the interview with the 10 teachers, each teacher elaborated on the necessity of students being in class during instructional time. The total group of teachers felt that it was very important for the students to be in class to receive instruction from the teacher and to maximize their learning time. Collectively, all teachers agreed that students were successful when they were in class and not in the office with an office discipline referral, in in-school suspension, or out-of-school suspension. Office discipline referrals were defined as events in which a student engaged in a behavior that violated a rule in the school, the problem behavior was observed by a member of the school staff, and the event resulted in a consequence delivered by an administrative staff who produced a written product defining the event.

Every teacher interviewed recommended that for teachers to have successful student outcomes, the student must be in class with their teacher to receive instruction

and to have time for independent practice on the material that was taught. It was important to all of the teachers that the student was an active part of the classroom's community. Mrs. Jackson discussed how they worked really hard at making their classroom a community where everyone had to respect each other while in the classroom or the community. Along with building classroom communities, six teachers revealed the strategy of restorative practices being implemented in the classroom. Six teachers believed that resolving behavior issues in the classroom was important to maintaining a respectful classroom community. Restorative practice was defined as an alternative proactive approach to addressing such behaviors while simultaneously improving interpersonal relationships and social-emotional behavior competencies. The same six teachers stated that having a community-type atmosphere allowed students to talk through the disruptive issue and resolve it while still being in the classroom.

Conclusion

This chapter presented the results of the qualitative data analysis of the effects of PBIS on middle school student achievement and middle school student outcomes. Overall, middle school teachers feel that PBIS is effective in increasing student achievement. In Chapter V, this study's findings are compared and contrasted to prior studies in research literature. In addition, the findings are compared and contrasted to literature in Chapter II. Additionally, the implications of this study's results were discussed with considerations toward recommendations for future research studies. This information assisted with shaping what actions should be taken next to better improve PBIS in teacher's classrooms.

CHAPTER V:

SUMMARY, IMPLICATIONS, RECOMMENDATIONS

Suspensions and expulsions within school districts, which causes a decrease of instructional time for students, continues to be a concern for policy makers and school district leaders (Losen & Martin, 2018). Research consistently indicated that out-of-school suspensions and zero-tolerance approaches to discipline are aligned with lower student achievement, lower student outcomes, and a failure to prevent future infractions for changing negative behaviors to positive behaviors (Irvin et al., 2004; Losen, 2013; Mayer et al., 1995; Skiba & Peterson, 2000; Skiba & Rausch, 2006). Recent data from the U.S. Department of Education, Office of Civil Rights (2021) revealed that 2.7 million, which is nearly 6%, of all K-12, students were given one or more out-of-school suspensions during the 2015-2016 school year. Along with these alarming numbers, data suggest that there are damaging outcomes directly linked to out-of-school suspensions, such as poor academic performance and increased risk of the student getting involved with the juvenile justice system (Noltemeyer et al., 2015).

The purpose of this study was to examine if PBIS influences academic student achievement and disruptive behaviors. This study examined middle school teachers in a participating school district on two constructs: (a) student achievement and (b) disruptive behaviors. To gain more knowledge about PBIS, a study was conducted that included middle school STAAR scores and input from middle school teachers in a participating school district. This mixed method study used quantitative and qualitative data to produce its results.

Quantitative data were analyzed using archived data from all of the middle school teachers in the participating school district that had STAAR scores for the 2021-2022 school year. The quantitative data were analyzed using an independent *t*-test and a Mann-

Whitney U test. The sample consisted of seventh and eighth grade teachers in the participating school district. Of the 1,400 classroom teachers in the entire participating school district, 115 (.08%) were seventh grade teachers and 108 (.08%) were eighth grade teachers. Of the 223 seventh and eighth grade teachers, 103 of the teachers had STAAR scores from the 2021-2022 school year. All 103 of the teachers who had 2021-2022 STAAR scores had 2021-2022 discipline data attached to their name as well. The teachers participating in the quantitative portion of this study consisted of 35.9% male (n = 37) and 64.0% female (n = 66). The race/ethnicity consisted of 43.6% African American (n = 45), 25.2% Hispanic (n = 26), 20.3% White (n = 21), 6.7% Asian (n = 7), and 3.8% Two or more (n = 4). The individual teacher's years of experience consisted of 0-5 years (51.4%, n = 53), 6-10 years of experience comprised 18.4% (n = 19), 11-15 years of experience comprised 6.7% (n = 7), 16-20 years of experience comprised 9.7% (n = 10), and 21 or more years of experience comprised of 13.5% (n = 14). Of the individual teachers, 71.8% (n = 74) of the teachers used PBIS in their classrooms, while 28.1% (n = 29) of the teachers did not use PBIS in their classrooms.

Qualitative participants for this study consisted of 10 middle school teachers from all four of the participating school district's middle schools. Interview participants were selected based on their willingness to participate in the interview, STAAR scores, and their use of PBIS in their classroom. The demographic information for the teachers participating in the interview consisted of 40% (n = 4) males and 60% (n = 6) females, 60% African American (n = 6), 20% Hispanic (n = 2), and 20% White (n = 2). The participating teacher's years of experience ranged from 2 years of experience to 26 years of experience. The qualitative data were analyzed using inductive and deductive coding, which created themes. From the qualitative data collected, five themes were found: (a) building positive relationships, (b) improved student achievement, (c) changing negative

behaviors, (d) increased instructional time, and (e) decreased office referrals. This chapter presents a detailed discussion of the summary of the findings, implications based on the results, and recommendations for future research.

Summary of Findings

The purpose of this study was to examine if PBIS influences academic student achievement and disruptive behaviors. The findings were concluded from two quantitative questions and two qualitative questions. Research Question 1 (quantitative) focused on student achievement in the classroom of teachers who implemented PBIS compared to teachers who did not. Research Question 2 (quantitative) focused on the amount of disruptive behaviors in classrooms of teachers who implemented PBIS compared to teachers who did not. Research Question 3 (qualitative) focused on perceptions of teachers who implemented PBIS in their classrooms compared to those teachers who did not. Research Question 4 (qualitative) focused on the teachers' perceptions of decreased disruptive behaviors on student learning.

Research Question 1

To answer Research Question 1, *Is there a statistically significant mean difference in student achievement between classroom teachers who implement a PBIS model compared to classroom teachers who do not?*, an independent *t*-test was conducted. The independent variable, PBIS, was categorical (Yes or No), while the dependent variable, student achievement (STAAR scores), was continuous. The results indicated that there was a statistically significant mean difference in student achievement between teachers who implemented PBIS compared to teachers who did not implement PBIS. Therefore, the data indicated that teachers who implemented a PBIS model had higher student achievement than teachers that did not implement a PBIS model.

PBIS relies on four critical implementation elements to increase academic achievement and student outcomes in classrooms. The four elements are outcomes, which consists of clearly defined academic and behavioral goals that are set from the beginning of school. The second element is data, which focuses on data-based decision making by the teacher for the entire class. The third element is systems, which are routines and procedures that students can expect daily. Last, the fourth element is practices, which is a consistent continuum of evidence-based strategies that support the students (Simonsen et al., 2020). As teachers implemented PBIS in their classroom, the four elements were critical pieces of implementation for successful student outcomes and increased student achievement. Research suggested that these four elements help build the culture and climate of the classroom and the environment impacts the success of these elements and the likelihood that these elements will be successful (Sugai et al., 2000).

PBIS also helped increase student achievement because studies showed that the implementation of PBIS reduces disciplinary violations in class, lowers aggressive behaviors, decreases bullying, while showing an increase in positive social behaviors, promoting a positive culture and climate, and increasing student attendance, which ultimately increased student outcomes (Bradshaw et al., 2015; Horner et al., 2019; Lindstrom et al., 2015). Teachers in the participating school district also supported that PBIS increases student achievement. The study was consistent with research in that PBIS is linked to reductions in negative classroom behaviors and enhanced student achievement (Bradshaw et al., 2009, 2015; Freeman et al., 2019; Lassen et al., 2006). As noted and discussed with greater detail of Research Questions 3 and 4, teachers who implemented PBIS in the participating school district mentioned that because PBIS strategies are consistently used in class, slight off-task talking occasionally happens, but students quickly get back on tasks when redirected by the teacher. These data are aligned

to research recommending that there is a connection of improved academics and decreased behavioral patterns when schools and classrooms implement PBIS with fidelity (Kelm et al., 2014; Madigan et al., 2016; Muscott et al., 2008). As previously mentioned, most research of PBIS has been conducted in elementary schools, but these data are consistent with research of middle schools as well.

Additionally, for effective instruction in the classroom to consistently occur, teachers must be able to efficiently use the instructional minutes that are allotted. Research has revealed that it is critical for students to remain in the classroom, for the allotted instructional time, to have success in their learning (Keane, 2012). Research indicated that when students are removed from the classroom setting for disciplinary reasons, students lose out on academic time, academic engagement, and academic achievement (Noltemeyer et al., 2015), but when students are engaged in the classroom and the classroom has a positive culture, climate, and behavior issues are low, generally students have higher academic outcomes (Algozzine et al., 2010).

Research Question 2

To answer Research Question 2, *Is there a statistically significant mean difference in disruptive behaviors for classroom teachers who use PBIS compared to classroom teachers who do not?*, a Mann-Whitney U test was conducted. The results indicated there was not a statistically significant mean difference in disruptive behaviors for classroom teachers who used PBIS compared to classroom teachers who did not. Therefore, the data indicated that teachers who implemented PBIS in their classroom had fewer disruptive behaviors than teachers who did not, but there was not a statistically significant difference between the two. Consequently, other research samples have not shown a statistically significant mean difference. The study conducted by a collection of researchers found that there was not a statistically significant difference in GPA of two

different middle schools, one that implemented PBIS with fidelity and one that did not (Caldarella et al., 2021). Another group of researchers did not find a statistically significant difference in the relationship between implementation of PBIS with fidelity and academic achievement measured by statewide testing in reading, math, and writing. Even though the results indicated that there was not a statistically significant mean difference in disruptive behaviors, students were still academically successful on the STAAR exam according to the participating school district's middle school teachers.

Due to the high numbers of disruptive behaviors in schools across America, one of the most widely implemented multi-tiered systems of support is PBIS. PBIS has been adopted, within the past 15 years, by over 29,000 schools and 500 school districts (Kittleman et al., 2019) as a support system to decrease disruptive discipline issues in classrooms. The motive behind PBIS is to provide teachers with strategies to improve preventative practices of student disruptive behaviors and classroom support for a positive learning environment to impact meaningful student outcomes (Nese et al., 2020). The ultimate goal of PBIS is to decrease in-school and out-of-school suspensions and increase students' time in the classroom, which increases students' instructional time. Simonsen et al. (2020) stated that when students have behavioral issues, they are more likely to experience exclusionary discipline actions, which results in lost instructional time (Simonsen et al., 2020), but McIntosh et al. (2017) stated that the implementation of PBIS increases student engagement and increased instructional time.

The implementation of PBIS in classrooms has been related to the reduction of exclusionary student practices, which leads to suspensions, expulsions, poor attendance, and high drop-out rates (Flannery et al., 2011; Freeman et al., 2019; Kim et al., 2018). Each teacher knew the importance of having their students in the teacher's classroom was a necessity for student success. It was a consensus amongst all teachers that they knew if

PBIS was not in place, students would spend more time excluded from the class. This philosophy was directly linked to research stating that students with negative discipline behaviors are inclined to have more in-school suspensions, out-of-school suspensions, and expulsions, which lead to lost instructional time directly affecting student achievement (Simonsen et al., 2020). Teachers reported feeling that teachers cannot force students to learn or to follow the classroom rules; however, they can expose students to a structured learning environment in the classroom (Office of Special Education Programs, 2015), which in most cases improves student behavior. Research suggested that students that are engaged in the instruction, with good classroom behaviors, tend to be more successful in school (Sutherland et al., 2018).

Ironically, there was not a statistically significant mean difference in disruptive behaviors for teachers who implemented PBIS compared to teachers who did not. Teachers mentioned in the interviews that they do experience minor discipline offenses in the classroom, such as students being off-task or students talking while they were supposed to complete an assignment, but as research suggested, there are statistically significant decreases in suspensions despite discipline office referral numbers not showing a decrease (Scott et al., 2019). These data show that with or without reductions in discipline office referrals, schools that implement PBIS are often successful in reducing disciplinary exclusions in the form of In-School and out-of-school suspensions (Scott et al., 2019).

Also, teachers in the participating school district explained that teachers felt the majority of students with disruptive behavior issues responded to PBIS Tier I Interventions. Tier I Interventions are universal for all students and are the lowest level of interventions in the continuum. Tier I emphasize modeling for students, teaching students correct behaviors, and acknowledging positive social, emotional, and behavioral skills

(Center on PBIS, 2023). Tier I strategies teach the students the expected behaviors of the classroom and build positive student-to-student and student-to-teacher relationships. Tier I support is robust, designed for everyone, and enables 80% or more of the students that receive Tier I interventions to experience success (Center on PBIS, 2023). Teachers who implemented PBIS in their classroom felt that disruptive behaviors students did have in class were low-level disruptions and were handled with Tier I interventions or few discipline office referrals for the student. Teachers who implemented PBIS stated that the students with low-level disruptions quickly learned from their mistakes and stopped their negative behaviors after minimal interventions or minimal discipline office referrals because Tier I interventions included the teacher collaborating with students, the teacher designing classroom expectations for students to follow, the teacher responding to unwanted behaviors in a respectful manner, and encouragement of positive behaviors of students (Center on PBIS, 2023).

Teachers in the participating school district also mentioned that classroom incentives for good behavior often changed students' negative behaviors rather quickly. As stated in the theoretical framework, the interaction of environmental, behavioral, and cognitive effects explains behaviors of the theory of social learning (Bandura, 1977) and desired responses are given after the presented reinforcement, which in return changes behaviors (Skinner, 1991). Teachers stated that students with negative discipline behaviors often changed their behaviors due to incentives being given for positive behaviors and completion of academic assignments. Therefore, while students may have started the school year with negative behaviors, the negative behaviors quickly decreased because the students with behavior issues wanted to earn incentives as well.

This is in correlation to operant conditioning, which states that operant conditioning is an association between behavior and consequences (Golden & Earp,

2012). Due to students wanting to earn the incentive, it stopped the negative behavior. Aligned with the theoretical framework, the combination of behaviorism and social learning theory, PBIS provides students with opportunities to attain successful academic and behavioral outcomes through incentives. This classroom behavior system is often referred to a class-wide token system, in which students could earn incentives for doing what is expected in the classroom.

Research Question 3

Research Question 3, *What are teachers' perceptions of the benefits when PBIS classroom management strategies are used to address challenging behaviors?*, was answered using constant comparison coding of 10 structured interviews with middle school teachers within the participating school district. The 10 interviews consisted of 11 structured questions that were answered by the participating school district's middle school teachers. The responses generated three common themes from the teachers that used PBIS, for addressing topics of classroom management. The three common themes were (a) building positive relationships, (b) improved student achievement, and (c) changing behaviors.

Research supports that building high-quality teacher-student positive relationships are associated with positive student outcomes, including increased academic achievement and student engagement, while reducing student in-school and out-of-school suspensions, student disruptive behaviors, and risks of students dropping out of school. The teachers interviewed mentioned that building positive student relationships was important to maintaining classroom management and a positive learning environment in the classroom. Research suggests that having positive relationships leads to a reduction in disruptive behavior during the middle school years.

While each teacher knew that there were multiple strategies for classroom management, building relationships with students was a popular theme. Every participating teacher mentioned that PBIS helped build positive relationships with students. As research states, peer-to-peer relationships are important in school but teacher-student relationships are of equal or greater importance. Six teachers stated that students respected themselves, their classmates, and their teachers more when PBIS classroom management strategies were used. Positive teacher-student relationships have been linked to being an essential part of the educational process, which leads to increased student engagement and decreased risks of discipline behavior issues and students dropping out of school. The learning environment was positive and students held each other accountable for keeping the environment positive. Characterization of building positive relationships in the classroom increased students feeling of respect, support, and feeling valued.

The implementation of PBIS strategies allowed for teachers and students to respond in a positive way when communicating with each other. Six teachers mentioned that a positive learning environment was an important ingredient to student success in the classroom. Teacher-student relationships are a core element of an effective classroom. Each teacher that implemented PBIS made it evident that showing respect to students helped build positive relationships. Six teachers mentioned that students appreciated when teachers showed them respect and did not embarrass them. Eight teachers also mentioned that students liked to know that teachers cared about them and about their grades. Basic Need Theory states that the relationship between a teacher and a student helps fulfill the basic needs of students that leads to success in the classroom. The same eight teachers mentioned that when students saw that the teacher cared for them, the student cared for the teacher in return. Students find a sense of belonging and relatedness

when their teacher cares for the student, makes time to check on the student, and have positive interactions with the student.

Another consistent theme during the interviews was PBIS contributing to improved student achievement. Student achievement was defined as a measure of growth of knowledge in a specific content area, which can be measured through standardized and non-standardized measures. The entire group of interviewees stated that student achievement was the most important reason why they implemented PBIS in their classrooms. As the research suggested, PBIS increases positive learning environments in the classroom, gives clear communication of the expectations for behavior, and creates a positive culture centered around learning, which increase student achievement (Connolly et al., 2018; Lewis et al., 2010; Wei & Johnson, 2020). There was a consensus of all the teachers interviewed with a belief that students did better academically once PBIS strategies were implemented and systems were in place, which is congruent with studies indicating that schools with positive school climate ratings have safer schools, more successful academic and behavior outcomes, positive responses on the reduction of disciplinary exclusions, and increased levels of engagement of students during instruction (Espelage et al., 2014; Gage, Whitford, & Katsiyannis, 2018; Gage, Rose, & Krammer, 2019; Gase et al., 2016; Thapa et al., 2013). Also, teachers specified that having routines that students knew and could expect helped decrease discipline behaviors, which increased academic achievement. This is aligned with research stating that when classroom procedures and expectations of rules are clear, students perform higher academically and with fewer negative behaviors (Flannery et al., 2011).

Five teachers mentioned that student achievement benefited from PBIS because students gave more effort in the class, as stated in research that positive teacher-student relationships are related to higher student motivation. The entire group of teachers stated

that students tried harder when they were praised and rewarded for their best efforts, whether they showed mastery of the skill or not. As long as students gave their best effort, teachers were satisfied because they felt that students would be more accepting of correction because they wanted to do well, which is linked to studies revealing that higher motivation increases student engagement, effort, and academic achievement. Collectively, all teachers explained that PBIS strategies, such as giving consistent praise or consistent incentives, encouraged more effort from students. An accumulation of all teachers felt strongly that positive reinforcements encouraged students to apply their best efforts. Incentives and praise were the top two PBIS strategies that all teachers used to encourage their students to give their best efforts in class. These declarations from teachers are equivalent to research stating that increased praise leads to improvement in student behavior, and the entire group of teachers reported that student success started with the student being intrinsically motivated by some type of stimulus or praise, which resulted in lower discipline behaviors and increased academic engagement (Cook et al., 2018). The entire group of teachers verbalized that all students wanted to be successful, but at times it took praise and incentives to motivate them to reach their goals.

Changing negative behaviors was also a key component in implementing PBIS. Disruptive behavior was defined in Chapter 1 as a behavior which is undesirable in a school environment and takes the teacher's attention away from the main task of teaching. Seven teachers stated the reason that they implemented PBIS strategies was to change disruptive behaviors to positive actions by students, in which PBIS strategies are designed to increase student learning and decrease student significant behavior challenges in the classroom (Connolly et al., 2018; Lewis et al., 2010; Wei & Johnson, 2020). A total of all teachers saw a decrease in student negative behaviors after implementing PBIS, as previous studies have shown that PBIS has significant positive impacts on

students bullying each other, the culture and climate of a school, and decreasing disciplinary problems in classrooms when used with fidelity (Bradshaw, 2013; Bradshaw et al., 2009; Horner et al., 2010, 2019; Waasdorp, 2012). There was a consensus amongst participants who believed changing disruptive behaviors was important to ensure that students were successful in class.

Consistent with the literature (Simonsen et al., 2020), all participants in this study commented that disruptive behaviors during instructional time took away from teaching and learning during class time. Teachers stated being structured and proactive helped decrease negative discipline behaviors as aligned with research stating that structured learning environments reduce behavior issues in class, which result in students with good classroom behaviors being more successful in school (Sutherland et al., 2018). The fewer times that students had disruptive behaviors, the more time teachers had to deliver instruction and time to give independent practice to students during class. PBIS has been associated with increases in time spent on instruction, increased student engagement on instruction, and student attendance (Horner et al., 2019; Scott & Barrett, 2004).

PBIS allowed students to self-correct or be corrected with minimal distractions, which enhanced student success. The entire group of teachers also mentioned that exposing students to PBIS consistently was important. The more students were exposed to PBIS, the more they cared about their actions and accepted responsibility for their negative behaviors. Teachers are now moving more to a problem-solving approach to correct negative behaviors as compared to a punitive approach to correct behaviors, which allows the student to accept responsibility. PBIS also changed disruptive behaviors even when the students did not enjoy the content. Studies reveal that the teacher's ability to shape the learning environment is the principle means to influencing the student's engagement (Shernoff et al., 2016). Students wanted to make their teachers proud and not

disappoint their teacher because of the nurturing culture that the teachers have created (Fuchs et al., 2003; Walker et al., 2005). Three teachers felt that they could have high goals and expectations in their classroom because students were going to meet their expectations, since students did not want to disappoint their teacher. It is the teacher who creates positive conditions in the classroom, shapes the student's learning and motivation in the classroom, and generates a caring and stimulating educational environment (Collie et al., 2016; Shernoff et al., 2016; Van Uden et al., 2013).

Research Question 4

Research Question 4, *What are teachers' perceptions of the implications on instructional quality and student engagement when there are decreased disruptive behaviors associated with implementing PBIS?*, was answered using constant comparison coding of 10 structured interviews with middle school teachers within the participating school district. The 10 interviews consisted of 11 structured questions that were answered by the participating school district's middle school teachers. The responses generated two common themes for addressing the implications on instructional quality and student engagement when there are decreased disruptive behaviors. The two common themes were (a) increased instructional time, and (b) decreased office referrals.

Each one of the teachers was extremely protective of their instructional time and felt that their instructional time with students was important to their success as a teacher. For effective instruction to occur, teachers must take advantage of every instructional minute of the class time because lost instructional time directly affects student achievement (Simonsen et al., 2020). It is critical for students to remain in the classroom for more instructional time to be successful in their academic learning (Keane, 2012). There was a consensus amongst all teachers that the minutes that were designated for their instruction was a top priority and important to student's academic achievement and

academic outcomes. Students with behavioral issues are inclined to have more out-of-school suspensions and expulsions, which lead to lost instructional time directly affecting student achievement (Simonsen et al., 2020). Eight teachers described that they did not have to spend as much time redirecting disruptive behaviors and could focus on the delivery of instruction, which gave them more time for instruction.

Data revealed that an average of 20 minutes, per office referral, of instructional time is lost due to the teacher's lessons being interrupted from students' negative misbehaviors (Scott & Barrett, 2004). Students had more time engaged with the teacher compared to having to listen to the teacher redirect students, which also caused an increase in student achievement (Algozzine et al., 2010). Teachers being more proactive than reactive, is aligned with research stating that reactive instead of proactive responses by the classroom teacher to student misbehaviors results in hundreds of lost instructional hours each school year (Muscott et al., 2008).

Also, three teachers mentioned that by incorporating PBIS in their classroom, positive actions became routine for students and the classroom became self-sufficient for the students. Students were able to create a student-led environment while the teacher became a facilitator of the instruction. PBIS is a school-wide framework of strategies and intervention techniques for establishing the social culture, expected classroom behaviors, individual behavior supports, and organizational systems needed to achieve academic, behavioral, and social success for all students (Office of Special Education Programs, 2015). These characteristics of the school-wide framework correlate with teachers being a facilitator of the learning environment.

Three teachers also felt that with minimal disruptive behaviors the teacher was more freely to move about the classroom and assist more students who needed help. The same three teachers discussed how they did not have to stand in one area of the classroom

due to specific students having disruptive behavior issues. By allowing the teacher to move freely to help students in need, the learning environment was conducive to learning, which is aligned to multiple reports stating enhancements in the culture and climate of the classroom (Horner et al., 2019; McIntosh, Girvan, Falcon et al., 2021), teacher self-efficacy (Kelm et al., 2014), and improved academic achievement (Bradshaw et al., 2009; Horner et al., 2019; McIntosh et al., 2018). With teachers being able to support all of their students, the teacher's ability to deliver an effective lesson, and the teacher not having to stop to address multiple students with disruptive behavior issues, more instructional time was available and students were more successful. Educators felt that when students behave appropriately, there are positive academic and performance outcomes (Algozzine et al., 2010).

Every teacher interviewed recommended that for teachers to have successful student outcomes, the student must be in class with their teacher to receive instruction and time to have independent practice on the material that was taught. Four teachers mentioned that setting expectations using PBIS strategies from the beginning of the school year was really successful. Examples of effective instruction and classroom management are when teachers have routines and expectations (Alter & Haydon, 2017), cue expected and appropriate behaviors (Faul et al., 2012), give students ample opportunities to respond and turn and talk (OTR; MacSuga-Gage & Simonsen, 2015), a lot of praise (Floress et al., 2017), and positive corrective feedback (Cook et al., 2018). Mrs. Jackson discussed how they worked really hard at making their classroom a community and that everyone had to respect each other while in the classroom or the community. A strategy of conflict resolution was used, which trains students with challenging behaviors how to resolve issues and make good choices by using dialogue, negotiating, and avoiding violence.

Six teachers also revealed the strategy of restorative practices being implemented in their classroom. Restorative practice involves other students having an interest in the situation and being willing to actively participate in resolving the problem. Restorative practice was defined as an alternative proactive approach to addressing such behaviors while simultaneously improving interpersonal relationships and social-emotional behavior competencies, such as repairing harm, developing relationships, and promoting healing (Gerkin, 2009; Gavrielides & Artinopoulou, 2014; Kurki, 2000). The same six teachers stated that having a community type atmosphere allowed for students to talk through the disruptive issue and resolve it while still being in the classroom. Students using conflict resolution has decreased violence in classrooms, which decreased suspensions and expulsions. Six teachers believed that by building positive relationships with their students and having a community type atmosphere in the classroom, disruptive behaviors could be resolved in the classroom and the teacher did not have to resort to sending the student to the office with an office discipline referral.

Implications

Based on the results of this mixed method study of the effects of Positive Behavior Interventions and Supports on middle school student achievement and middle school student outcomes, implications developed for various stakeholders including district-level leaders, campus leaders, teachers, and students. These implications suggest that school districts should adopt a district-wide PBIS model that will support school districts, campus administrators, teachers, and students in a school environment. District-level leaders are advised to create a district-wide strategic plan of implementation and sustainability that will provide a prevention-oriented approach for organizing proactive evidence-based behavior strategies that will support academic and behavior strategies for all students (Lewis & Sugai, 2017; Sugai & Horner, 2020). While historically, much

literature focuses on elementary school implementation, this study revealed implications for middle schools. The following recommendations address two district-level considerations which include a strategic plan for incorporating PBIS in middle and high schools along with emphasizing appropriate professional learning and support for teachers to implement PBIS with fidelity.

District-level Leaders

Currently, there is a philosophical shift of disciplining students with significant negative behaviors in the school setting, therefore, discipline must be addressed with a district-wide behavior system, such as PBIS, to increase student learning and decrease challenging behaviors (Connolly et al., 2018; Lewis et al., 2010; Wei & Johnson, 2020). These models must be comprised of behavioral exemplars that encompass district-wide, school-wide, and classroom level strategies aimed at creating a culture of expectations that reinforce desirable behaviors. These desirable behaviors will build a positive district-wide climate, which will lead to district and school improvements, while creating student success in the entire school district (Gage, Whitford, & Katsiyannis, 2018; Horner et al., 2010). The strategic plan will consist of district-level leaders creating district-wide systems of how to budget, implement, monitor, and make modifications to the PBIS model for all stakeholders.

Along with the philosophical shift in discipline, another recommendation for district-level leaders is to ensure that PBIS is incorporated at all middle school and high school campuses. The majority of research on PBIS has been on elementary campuses, with middle school implementation growing, but little on high school campuses (Freeman et al., 2019). This philosophy has to change in school districts. It will be important for district-level leaders to ensure training, observations, and feedback are being done on secondary campuses to certify that all middle and high schools in the school district are

using PBIS with fidelity. Data from the research support that PBIS done with fidelity has a direct correlation of decreased office discipline referrals and student suspensions (Bohanon et al., 2018; Flannery et al., 2011; Freeman et al., 2019; Muscott et al., 2008). This new way of preventative and proactive behavior strategies must be a priority district-wide.

The implementation of district-wide PBIS must be a priority of district leaders to ensure that every campus in the school district is implementing PBIS with fidelity, especially middle and high schools. Research has suggested that district-wide and school-wide PBIS can decrease negative behaviors and increase positive behaviors (Elrod et al., 2022). A long-term investment from district leaders must be communicated with all stakeholders, so that everyone involved knows the expectation of PBIS being a practice on each campus in the school district. Resources and funding must be allocated to ensure success of the district-wide PBIS model. The financial and time investment will be significant for the school district, but the responsibility of ensuring success, with focus on the middle and high schools, with decreased disruptive behaviors district-wide will be worth the investment.

Professional Development

Effective professional development or targeted professional development will give teachers the necessary tools to implement PBIS with fidelity. Effective professional development that targets PBIS strategies for classroom management skills increases the likelihood that teachers will have success in these areas (Simonsen et al., 2020). District leaders confirming that all staff are trained annually and district-wide will ensure consistency and success district wide for application of PBIS strategies. Successful implementation of PBIS will not show great accomplishments unless district-level leaders

show complete buy-in and provide support through district-wide professional development (McDaniel et al., 2017).

To be able to see a difference in student behaviors from elementary to middle school to high school, PBIS must be done with fidelity on every level. District-level leaders should mandate a PBIS model in every school to alleviate the barrier of teachers' perception that using PBIS strategies on middle school and high school campuses is more challenging than using PBIS strategies on elementary campuses (Flannery et al., 2011). The school district will not be able to collect proper data for success if PBIS is not done consistently for pre-K to 12th grade. Staff members will use the behavior strategies that are learned in the targeted professional development in their classroom and inside of the campus to have school-wide success with behavior and academics.

District leaders must also ensure that all staff members are being properly and adequately trained with PBIS behavior strategies because the training will improve social skills (Bradshaw et al., 2015; Horner et al., 2019), create better functioning schools (Bradshaw et al., 2009), assist staff members in creating positive relationships with students (Algozinne & Algozinne, 2009; Bradshaw et al., 2009; Horner et al., 2010), have fewer out-of-school suspensions and expulsions, and fewer behavior office referrals (Bradshaw et al., 2015; Lee & Gage, 2020). Also, by teachers receiving suitable professional development, racial disparities amongst students of color in exclusionary discipline will decrease. By reducing inequalities in discipline, especially in African American males, schools will have a better chance of meeting improvement targets (McIntosh, Girvan, McDaniel et al., 2021).

Recommendations for Future Research

Given that PBIS appears to have a positive effect on student achievement and student behavior, future research should continue on middle and high school

implementation. Even though more middle and high schools are using PBIS across the country, more research is needed for validity. Studies tend to stop research of PBIS at middle school, but more data are needed for validity and consistency of the effectiveness of PBIS. Being able to track data of school districts that use PBIS from pre-Kindergarten to a student's senior year will provide a researcher with accurate data of the effectiveness of PBIS. This future research could be done to close the gap of the number of elementary, middle, and high schools that implement PBIS with fidelity.

Also, despite the limited sample size included in this study, the results yielded insights into the positive effects of PBIS on middle school student achievement and middle school student outcomes. Future research of this study could also be done on a larger scale than just one school district to provide additional data. Future research is recommended in various school districts, numerous grade levels, and multiple student socioeconomic statuses. This research could be performed in different parts of a large city to see if PBIS has the same positive effect across a sizable city. This will give the researcher a broader view of multiple demographics and multiple school districts for all types of students. A study of greater magnitude would provide a researcher with significant details of the effectiveness of PBIS in a school setting.

During this study, the focus was on the effects of PBIS on Tier I classroom disruptive behaviors. Further exploration in the effects of PBIS on Tier II and Tier III classroom disruptive behaviors should be completed to add additional data. These added data will give researchers a clear idea of the effects of PBIS on all types of classroom disruptive behaviors. Furthermore, these additional data will provide information on how students with minor to severe negative behaviors will respond to PBIS. Separate data should be kept on the effects of PBIS on Tier I, Tier II, and Tier III infractions using teachers' discipline office referrals, PEIMS data, and STAAR scores.

Last, further research should be done on teacher buy-in to PBIS that is implemented school-wide and in their classroom. If teachers do not believe in PBIS, then the teachers will not implement PBIS with fidelity. This further research will test the effectiveness of PBIS compared to the buy-in of a specific teacher. A survey would be given to allow for a teacher to explain their feelings toward PBIS and if they believe it is an effective strategy or not. These data would provide a researcher with particulars of whether teacher buy-in plays a factor in the success of the students. Also, research should be done in multiple school districts compared to one school district to understand how different areas combined with teacher buy-in effects student outcomes.

Conclusion

Challenging behaviors have become one of the most prevalent issues negatively impacting learning, interactions, and retention of teachers in our educational system of today (Walters & Frei, 2007; Waschbusch et al., 2015), causing 2.5 million students across America to be excluded from instruction (U.S. Department of Education, Office of Civil Rights, 2021). These negative issues have resulted in an increased need for effective approaches to a systematic school-wide discipline framework (Chitiyo & May, 2018), such as PBIS, that will allow students to spend more time in the classroom for instruction compared to having in-school or out-of-school suspensions. Research supports for effective instruction to occur, and for students to be academically successful and have successful academic outcomes, teachers must take advantage of their instructional time allotted. It is critical for students to remain in the classroom, for more instructional time, to be successful in their academic learning (Keane, 2012). In efforts to decrease discipline behaviors in schools, it is a critical need for a multitiered behavioral support program for teachers and students to follow. PBIS is a prevention-oriented approach for organizing evidence-based behavioral strategies within a tiered continuum to facilitate the

academic and behavioral performance of all students (Lewis & Sugai, 2017; Sugai & Horner, 2020). By implementing a district-wide behavior system, such a PBIS, negative behaviors will decrease and academic success will increase.

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APPENDIX A:
SURVEY COVER LETTER

January 11, 2023

Dear Teacher:

Hello! I am a doctoral student at the University of Houston Clear Lake and I am conducting a research study to determine the Effects of Positive Behavior Interventions and Supports on Middle School Student Achievement and Middle School Student Outcomes. By you being a middle school teacher, I am asking that you participate in my interview and provide me with valuable information to complete my research. The purpose of this interview is to examine whether Positive Behavior Intervention and Supports influence middle school student achievement and middle school disruptive behaviors. The data obtained from this study will not only allow UHCL's Educational Leadership Department to track the effects of PBIS on student achievement and student outcomes, but will also provide feedback on research-based techniques and strategies to effectively serve middle school students.

The interview will take approximately 50-60 minutes in its entirety. All of your responses will be kept completely confidential. No obvious undue risks will be endured and you may stop your participation at any time. In addition, there are no direct benefits from your participation in the interview.

Your cooperation is greatly appreciated and your willingness to participate in this study is implied if you proceed with participating in the interview. Your completion of the interview is not only greatly appreciated, but invaluable. If you have any further questions, please feel free to contact me anytime. Thank you!

Sincerely,

Torrance A. Brooks
Doctoral Candidate
Educational Leadership
(832) 545-9324
Brookst8871@uhcl.edu

APPENDIX B:
INFORMED CONSENT

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may otherwise be entitled. You are being asked to read the information below carefully and ask questions about anything you don't understand before deciding whether or not to participate.

Title: The Effects of Positive Behavior Interventions and Supports on Middle School Student Achievement and Middle School Student Outcomes

Principal Investigator(s): Torrance A. Brooks

Student Investigator(s): Torrance A. Brooks

Faculty Sponsor: Dr. Elizabeth Beavers

Purpose of the Study: The purpose of this study is to examine whether or not Positive Behavior Interventions and Supports positively influence student achievement and disruptive behaviors for middle school students.

Procedures: You will be asked to participate in a focus group with the researcher in which you will answer questions about your perceptions of Positive Behavior Interventions and Supports on middle school student achievement.

Expected Duration: Total approximate time to complete the interview is one hour.

Risks of Participation: There are no risks associated with this interview.

Benefits to the Subject

There is no direct benefit received from your participation in this study, but your participation will help the investigator to better understand the relationship between Positive Behavior Interventions and Supports and middle school student achievement.

Confidentiality of Records

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, however, you will not be identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the Principal Investigator or Faculty Sponsor for a minimum of three years after completion of the study. After that time, the participant's documentation may be destroyed.

Compensation

There is no financial compensation to be offered for participation in the study.

Investigator's Right to Withdraw Participant

The investigator has the right to withdraw you from this study at any time.

Contact Information for Questions or Problems

The investigator has offered to answer all of your questions. If you have additional questions during the course of this study about the research or any related problem, you may contact the Principal Investigator, Torrance A. Brooks by telephone at 832-545-9324 or by email at brookst8871@uhcl.edu

Signatures

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time by contacting the Principal Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name: _____

Signature of Subject: _____

Date: _____

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.

Printed name and title: _____

Signature of Person Obtaining Consent: _____

Date: _____

THE UNIVERSITY OF HOUSTON-CLEAR LAKE (UHCL) COMMITTEE FOR PROTECTION OF HUMAN SUBJECTS HAS REVIEWED AND APPROVED THIS PROJECT. ANY QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH

SUBJECT MAY BE ADDRESSED TO THE UHCL COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (281.283.3015). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT UHCL ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.

(FEDERALWIDE ASSURANCE #FWA00004068

APPENDIX C:
TEACHER INTERVIEW PROTOCOL

Positive Behavior Interventions and Supports (PBIS) is a prevention-oriented approach for organizing evidence-based behavioral strategies within a tiered continuum to facilitate the academic and behavioral performance of all students. Examples of PBIS are classroom routines and procedures, close proximity, effective praise, incentives, non-verbal hand signals, and respectful redirection.

1. Have you ever been at a school that used PBIS? Have you specifically used PBIS?
2. What were the strengths of using PBIS? What were the barriers to using PBIS?
3. Did you notice a change in behavior once PBIS was implemented, if so, what changes did you notice?
4. Did you receive adequate training of PBIS before implementing, if so, what training did you receive?
5. Have you had on-going training for learning new strategies, if so what on-going training have you had?
6. Did you notice a increase in student performance and student outcomes after implementing PBIS?
7. Do you use behavior strategies as well as incentives to improve behavior, if so which strategies do you most commonly use?
8. Have you had an increase in instructional time due to implementing PBIS?
9. Have your office referrals decreased due to implementing PBIS?

10. What type of behaviors do you perceive happen with the greatest frequency in your classroom?
11. What type of behaviors do you perceive to be most disruptive in your classroom?