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**POSITIVE BEHAVIOR SUPPORT: A COMPARISON BETWEEN  
STUDENT BODY, ACADEMIC ACHIEVEMENT, AND  
DISCIPLINE REFERRALS**

by  
Meredith L. Greenfield

A Thesis

Submitted to the  
Department of Psychology  
College of Liberal Arts and Sciences  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts  
at  
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Thesis Chair: Dr. Roberta Dihoff, Ph.D.



**Dedication**

*I would like to dedicate this manuscript to my mother, Maryann Greenfield*

## **Acknowledgments**

I would like to express my appreciation to Professor Roberta Dihoff and Professor Terri Allen for their guidance and help throughout this research.

## **Abstract**

Meredith L. Greenfield  
POSTIVE BEHAVIOR SUPPORT: A COMPARISON OF STUDENT BODY,  
ACADEMIC ACHIEVEMENT, AND DISCIPLINE REFERRALS

2011/2012

Roberta Dihoff, Ph.D.  
Master of Arts in School Psychology

The purposes of this current study was to (a) evaluate the effectiveness of a school-wide positive behavior support program in an elementary school based on the decrease of discipline referrals a earned by the students in grades 3-4 (n=43) and (b) find a relationship between discipline referrals and academic achievement on those students' scores on the NJ ASK. The total amount of discipline referrals earned by each student in the pre-intervention year and the total amount of discipline referrals earned by each student in the post-intervention year were the discipline variables. The scale math and language scores attained by each student for the pre-intervention year and the post-intervention year were the academic variables explored. A Pearson Correlation test revealed a significant relationship in the decrease of discipline referrals between the two years; yet did not find a significant correlation between the discipline variables and the academic variables regardless of the overall increase in academic scores. Implications for future research on school-wide positive behavior support and academics are discussed.

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## Chapter 1

### Introduction

#### Need

Disruptive behavior is a problematic occurrence in classrooms worldwide. It can adversely effect the surrounding students and teacher as well as the individual or individuals causing the behavior. The stress put on the teacher from dealing with these behaviors can decrease the quality of their lessons and sensitivity to the other students. Other students can begin to emulate these behaviors, especially younger and more impressionable students, in observing the attention received as a result of the behavior. These students in turn become off task and further disrupting the classroom environment (Lewis & Sugai, 1996).

School staff and administrators are responsible for dealing with the consequences and set backs of such a hamper on academic success and forming adaptive social skills. The use of punishment in form of suspension and expulsion has not proved to be effect means of dealing with this issue. These punishment-based responses only assume a temporary resolution of the issue and can also result in more antisocial behavior for the student (Sugai & Horner, 2002).

#### Purpose

Administration and staff are continuously looking to provide a healthy and positive school environment for students and staff. A positive behavior support system is one such method that can be used to reduce maladaptive behavior and promote a less

stressful classroom environment. There is always a need for a cooperative and conducive learning environment. Developing an effective school wide policy would be more advantageous to providing an academically encouraging atmosphere than an isolated classroom reward system would be.

This type of a motivating, reward system has been frequently researched in the area of special education, but there is also a need to promote appropriate behavior in regular education. Trouble behavior occurs in regular education classrooms and a positive approach to shaping behavior can be a valuable tool to teaching this population of students.

### **Hypothesis**

The implementation of the positive behavior system that use a point system that represents money to be traded in for a tangible reward as a reinforcement technique will hinder fewer discipline referrals than in the year prior to its implementation. The decrease in discipline referrals will also correlate with the increase in academic achievement due to less time committed to handling disciplinary issues and a motivation for students to earn points.

### **Operational Definitions**

“Wallet”- the accumulated points that correlate to monetary value

“Points”- a child can earn one point every day they do not change their card or if a member of the staff viewed them as going above and beyond and helped a fellow student or similar extraordinary acts but they can not lose points they have earned.

“School store”- the chance the students receive once a month to use their points to buy items presented and separated by value.

“Card colors”- each student starts the day being on white, can be asked to change their card for inappropriate behavior and goes through two color levels, yellow then red, and after red a call is made to the parent.

### **Assumptions**

Some assumptions regarding this study include: the different teachers use similar guidelines when distributing points and/or having students “change their card”; the discipline data has been recorded accurately by staff; the students are aware of the point system and school store; the students are taken once a month for their scheduled visit to the school store in order to use their points; and the NJ ASK tests were distributed and scored properly.

### **Limitations**

There are some limitations to this study. One is that the sample size will be small and only consisting of students residing in a low socio-economic status school district. Another is that the items able to be purchased with their earned points in the school store may not be highly desired by some students, therefore lacking incentive to promote appropriate behavior. Also, the program is newly enacted and still has wrinkles to be figured out in the system and procedures. Another limitation is that only the data for the 3<sup>rd</sup> through 4<sup>th</sup> grade levels to account for the years prior to the implementation of the

program could be utilized. As well as, the NJ ASK may not be the best representation for some students to show their academic abilities.

## **Chapter 2**

### **Literature Review**

The review of the literature will first highlight the consequences and difficulties with an unhealthy school climate and the need to produce a conducive learning environment. Second, the review of research will show the ineffectiveness and disadvantages of the use of reactive methods, such as suspension and expulsion, on problem behaviors and academics. Third, the literature on school wide positive behavior support will be discussed as well as a discussion on the limitations of the existing research.

#### **School Climate Effects**

There is no single definition determined by researchers that specify what elements make up a school's climate, but Cohen (2006) refers to the Comprehensive School Climate Inventory, which was created by the Center for Social and Emotional Education, as a comprehensive range of elements that are incorporates in a school climate. These elements include students', parents', and school staff's perceptions in safety, teaching and learning, relationships, and external environments. The effects of these factors have been studied in relation to the outcomes for students.

It has been shown that students from a school with a healthy learning environment attained higher scores on standardized tests (MacNeil, Prater, & Busch, 2009). Also, the overall health of a school climate has also been linked to the students' academic level of self-esteem (Hodge, Smit, & Hanson, 1990). The effectiveness of a school's ability to

support a child's academics is influenced by their social-behavioral climates (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005). This evidence suggests an importance that needs to be placed on the quality of the environment in which students are receiving their education.

With such an importance on a positive school atmosphere, it is crucial to understand the impact on classroom interaction. Cotton (1990) found that approximately one-half of all classroom time is being used for activities other than teacher instruction, and it is noted that a significant portion of this lost instructional time is due to discipline problems. The effect of one student's discipline hinders the amount of time the teacher is allotted to instruct the rest of the class (Cotton, 1990). It is estimated that between 2% and 16% of school age children engage in problem behaviors that pose a challenge to the educational system (Kauffman, 2001).

Not only does problem behavior take away from instructional time, but also peer social attention on off-task behaviors affects students' ability to complete academic work in the classroom (Lewis & Sugai, 1996). Through a functional assessment, Lewis and Sugai (1996) also found that when a teacher delivered high rates of attention and praise when students engage in appropriate behavior there were less recorded off-task behaviors. Thomas and Bierman (2006) found that the amount of exposure a student is faced with in a classroom can influence their own tendency to behave aggressively. The amount of exposure that impacted the child's behavioral development was found most crucial during the first three years of elementary school. Hamre and Pianta (2001) similarly found that students' early experiences in school affect their development of academic and social skills later in life. Appropriate teacher performance and non-

disruptive peer behavior can influence the quality of a classroom lesson, the academic achievement of the students, and the students' own behavioral development (Cotton, 1990; Lewis & Sugai 1996; Thomas & Bierman, 2006).

Aggressive and inappropriate behavior does not end in the classroom. There are more chances for an individual student to be the victim of an aggressive act from another student on the playground than in the classroom (Craig, Pepler, & Atlas, 2000). There is almost a 50% increase in the frequency of aggressive and maladaptive acts on the playground over the classroom (Craig et al., 2000). With recess providing a valuable social tool and aiding in students being less fidgety and more on-task in the classroom (Jarrett, Hoge, Davies, Maxwell, Yetley, & Dickerson, 1998), it should not be a time that is plagued by unwanted behavior.

There are also consequences for the students whom engage in these disruptive behaviors that aide in the negative impact of a school environment. Children who engage in maladaptive behaviors in the school setting, as early as first grade, have been shown to be at risk to continue to engage in a range of these behaviors, including drug use, later in life (Block, Block, & Keyes, 1988). A teacher is also more likely to interact negatively, i.e. respond with a reprimand rather than directing the student towards a more appropriate activity, with student who exhibits disruptive behavior more frequently (Nelson & Roberts, 2000).

The research points to a large importance on the ability and the responsibility of a school to maintain a healthy and an academically enriching environment to have the best outcomes for its students. The ability of a school to provide a positive social climate has been shown to act as a useful predictor of a student's academic and social security in

school (Baker, 1998). With the detrimental effects of not providing such an environment, it is essential to review the literature on the current methods employed by schools that respond to these behaviors that can lead to an unhealthy atmosphere.

### **Traditional Disciplinary Methods**

The majority of schools in the United States rely primarily upon punitive measures such as detention, suspension, expulsion, and other school security measures to address both major and minor school infractions in order to send a message to students that certain behaviors will not be allowed (Skiba & Peterson, 1999). With a review of over 1,000 schools comprising elementary, middle, and high school, it was found that detention was the chief outcome for administrative decisions for students in middle school and high school, followed by in-school suspension, and out-of-school suspension following after (Spaulding, Irvin, Horner, May, Emeldi, Tobin, & Sugai, 2010).

The high use of these disciplinary methods would suggest they were a successful reaction to maladaptive behaviors, but they typically fail to produce a reduction in student misbehavior (Atkins, McKay, Frazier, Jakobsons, Arvanitis, Cunningham, Brown, & Lambrecht, 2002; Tobin & Sugai, 1996; Way, 2001). In a review of middle school discipline records, it was found that students who were given a suspension early in their 6th grade year actually earned more discipline referrals in the future (Tobin & Sugai, 1996). They also looked at the reverse expectation, if a student were to receive a discipline referral and not assigned a suspension as a punishment, it would be expected that more office referrals would be assigned in the future if suspension is an effective punishment. Their data did not support this expectation and the opposite result was

found; those students actually received less discipline referrals in the future. Both of these outcomes do not support the idea that suspension is an effective method in reducing the amount of discipline referrals a student receives. Similarly, Way (2011) found that harsh discipline policies failed to dissuade student misconduct, and possibly resulted in a higher frequency of misbehavior.

The removal of a student from the classroom due to detention or suspension in 3rd through 8th grades in an inner-city public school did not decrease the rate of aggressions or maladaptive behaviors, but may have acted as reward as opposed to a punishment (Atkins et al., 2002). The suspension or detention gave the student the ability to avoid a non-preferred environment, school, and substitute it with a more rewarding environment, such as home. This outcome is not the intended impact that these consequences and procedures are in place to achieve.

Not only do these reactive measure fail to limit the amount of student misconduct that is creating a poor learning environment, but they also have been shown to disproportionately affect certain individuals (Morrison & D’Incau, 1997; Skiba, Peterson, & Williams, 1997). Skiba et al., (1997) extracted the disciplinary data from two, distinct areas in order to account for all possible school settings. One was data from an entire set of middle schools in one urban school district and the second collection was from one middle school in a rural area. Both results indicated an overrepresentation of low socioeconomic status students, males, and special education students in relation to the amount of suspensions and discipline referrals. The one important limitation that is noted is in dealing with such a large and diverse school pool, the administrators may vary in their definition of misbehaviors in turn producing a variation in the rate and type of

incidents reported. Spaulding et al. (2010) also discovered the types of consequences for elementary students were not distributed as disproportionately as were the middle and high school consequences.

Morrison and D’Incau (1997) found that the use of expulsion as a product of a zero tolerance policy has a high frequency of targeting wrong behaviors and consequently punishing the wrong student. They also found a regularity for students who had been previously, were currently, or would later be identified as having some disability that would cause them to be eligible for special education services to be expelled from school due to the zero tolerance policy. This group of students accounted for about 25% of the population sample.

Costenbader and Markson (1998) decided to ask the students who were on the receiving end of these reactive discipline procedures, more specifically suspension, their feelings and opinions on the topic. They surveyed over 600 middle and high school students from an urban and rural school districts to account for a fair representation of individuals. They found, after a suspension occurred, most students stated that they felt “angry” or they felt “happy to get out of the situation.” This finding also supports Atkins et al., (2002) implications of students using suspension as a reward to escape an unwanted environment. Costenbader and Markson also discovered that about 32% of these students stated they found suspension not at all helpful and felt that they would more than likely be suspended again. Also, 37% felt it was of little use to be suspended.

It has also been found that suspension procedures can have a negative effect on the ability of a student to complete high school (Lee, Cornell, Gregory, & Fan, 2011). Controlling for school demographic variables, Lee et al., (2011) compared the suspension

rate and drop out rate for over 200 Virginia public high schools to discover the differences for student outcomes in schools with a high suspension rate versus ones with a low rate. Their results indicated that schools with a higher rate of suspension also had a higher rate of students who dropped out. Schools that typically suspended approximately 22% of their students over the course of a school year had a dropout rate that was 56% greater than the dropout rate for schools that suspended only 9% of their students in that year. The higher rate of suspension may not be directly the cause of the higher student dropout rate, but similar factors may have been involved.

With a wide variety of research questioning the efficacy of the traditional disciplinary methods enforced by schools, ie suspension and expulsion, it is vital to discover the other possible methods to reducing disruptive behavior in our schools. Colvin & Sugai (1988) found evidence in the usefulness of proactive strategies that are non-aversive and seek to control the precursor to the disruptive behavior rather than reacting to the resultant event.

### **Proactive Methods: Positive Behavior Support**

The National Association of School Psychologists defines Positive Behavioral Support (PBS) as an “empirically validated, function-based approach to eliminate challenging behaviors and replace them with pro-social skills” (Cohn, 2001). The “use of PBS decreases the need for more intrusive or aversive interventions (i.e., punishment or suspension) and can lead to both systemic as well as individualized change” (Cohn, 2001). Positive Behavior Support at the school wide level, in accordance with Sugai & Horner (2002), is to include the entire student population, an emphasis on academic and

social competence, stress positive reinforcement, have a focus on prevention, incorporate a full cooperation of school administrators and staff, and be evaluated through data based monitoring.

These aspects of a school wide positive behavior support system are to be applied in a three-tier approach for the support of proactive behavior (Sugai & Horner, 2002). The first tier is concerned with the primary prevention of maladaptive behavior that is applied to all students, staff and settings. The second tier is aimed at secondary prevention for those students who exhibit more intense, at risk behavior. The last tier is the tertiary prevention, which incorporates individualized systems for students who exhibit high-risk behavior.

The effectiveness of the implementation of a school-wide positive behavior support intervention has been shown to be properly measured by interpreting the office discipline referrals (ODRS) of a school (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004; Sugai, Sprague, Horner, & Walker, 2000). Using a guideline developed by Messick (1988), that has been demonstrated to be relevant for evaluating the validity of procedures employed in an educational environment, Irvin et al., (2004) determined a large foundation for using office discipline referrals as an appropriate means for measuring the effects of interventions and school wide behavioral climate.

Scott & Barrett (2004) evaluated the impact of a school wide behavior support intervention on the time gained to the student due to dealing with less disciplinary procedures. They averaged the instructional time lost to the student due to an office discipline referral was 20 minutes. Scott and Barrett (2004) found that the total student instructional minutes lost because of an office discipline referral decreased from 12,160

minutes during the year prior the intervention to 2,160 minutes during the first year after implementations and down to 920 in the second year. In a 6-hour school day, that accounts for a gain of 27 days of instructional time for the first year after implementation and a gain of 31 days in the second year. They found similar results when they considered the amount of time lost due to an out of school suspension.

It is a logical deduction to think that the increased amount of instructional time in the classroom as a result of less time spent on addressing behavior problems and misconduct there would be an increased level of academic performance school-wide. There is little research that has explored the connection between the effectiveness of positive behavior support and the impact on academics, but one study found a link between academic improvement and school wide positive behavior support (Luiselli, Putnam, Handler, & Feinberg, 2005). Looking at the data from an elementary school from the Midwest region of the United States, Luiselli et al., (2005) interpreted the office discipline referrals and suspension rates for the entire school as well as and the academic performance of the third, fourth, and fifth grade classes after a school wide positive behavior intervention was put into effect. Consistent with previous findings, there was an overall decrease in the rate of office discipline referrals given and rate of students suspended in the first year after the intervention (Scott & Barret, 2004).

Luiselli et al. (2005) also found that the results for the academic performance were also improved .The average student percentile ranks measured by standardized tests for reading comprehension improved 18% in the post-intervention year and mathematics increased by 25% (Luiselli et al., 2005). There is a limit to attributing this increase in academic performance to the decrease in the overall student misconduct. The entire

school, K-5, taken into account when collecting data for the office discipline referrals and suspension rates, but only third through fifth grade was measured for the academic performance. It could be possible that the majority of office discipline referrals and suspensions were decreased primarily from grades K-2 and the improvement in grades 3-5 academics were due to some other variable. However, in a similar study evaluating the school-wide behavior support implemented in certain Hawaii and Illinois elementary schools, there was an increase in the proportion of third graders meeting or exceeding the state reading assessment standards (Horner, Sugai, Smolkowski, Eber, Nakasato, Todd, & Esperanza, 2009).

There is also evidence for the successful application of a school wide positive behavior support in changing the behaviors of students in non-classroom settings (Lewis, Powers, Kelk, & Newcomer, 2002; Oswald, Safran, & Johanson, 2005). The extension of the school's positive behavior support into other areas of the school, more specifically the playground, resulted in a reduction in the frequency of observed problems behaviors by staff that are consistently plagued on the playground during recess (Lewis et al., 2002). There is a noticeable reduction in the problematic behaviors that middle school students exhibit in the hallway when changing classes (Oswald et al., 2005).

It has been illustrated that the overall school climate can impede the learning and development of the students involved (Gottfredson et al., 2005; MacNeil et al., 2009; Lewis & Sugai, 1996). Most importantly is the occurrence of inappropriate behaviors exhibited by students, which can affect the perceived safety of a school (Cotton, 1990; Kauffman, 2001). These behaviors span the different settings in a school, not just the classroom (Craig et al., 2000). If these behaviors continue without being efficiently dealt

with, there are negative consequences that follow including drug use and aggression (Block et al., 1988; Hamre & Pianta, 2001; Nelson & Roberts, 2000; Thomas & Bierman, 2006).

The critical need for a solution to these problems has caused many schools to react to problem behaviors in a harsh manner without much success (Atkins et al., 2002; Tobin & Sugai, 1996; Way, 2001). The research presented on the use of suspensions and expulsions as zero tolerance for misbehavior policies have also shown to affect certain individuals disproportionately (Morrison & D’Incau, 1997; Skiba et al., 1997; Spaulding et al., 2010). There is also evidence to suggest that these policies increase the amount of student misconduct and can lead to students dropping out of school, the opposite of the intention of these practices (Lee et al., 2011; Tobin & Sugai, 1996; Way, 2001).

With the ineffectiveness of the traditional, reactive methods of discipline, the idea of establishing a positive behavior support intervention at the school wide level has been researched. There has been undeniable evidence of the effectiveness of the proactive method of changing behavior in the school system as a whole (Colvin & Sugai, 1988). The reduction of the rate of office discipline referrals and suspensions given in a school that has a school wide behavior support policy in effect is a strong indicator to the positive effect it has on behavior (Lewis, Sugai, & Colvin, 1998; Luiselli et al., 2005; Scott et al., 2004).

Although the reduction of inappropriate behavior is one of the goals of school administrators and staff, the relationship to students’ academic achievements is also required. It is plausible to think that lower rates of behaviors will correspond with higher academic achievements due to less students losing instruction time and less class time

being allocated to responding to behavioral problems (Scott & Barrett, 2004). There is little research that has examined this relationship. In order for the justification of using a school-wide positive behavior support system, more specific research observing the link between improved academics and positive behavior support systems is needed.

## **Chapter 3**

### **Methods**

In order to find a relationship between discipline referrals earned in the two school years and a relationship between discipline referrals and academic scores between the two school years, the following measures were chosen.

#### **Participants**

Archival data from an elementary school in an urban district of New Jersey was used regarding all of third grade and fourth grade students who received discipline referrals in the school year of 2009-2010; and used the archival data on these same students for the following school year, 2010-2011. Data excluded any students who receive special education services and any student who was not enrolled for both of the years examined. Data included both genders and all races of the students. The total amount of students involved was 43.

#### **Materials**

Discipline referrals received from any third and fourth grade students were used in the school year of 2009-2010, the year before the PBS program was implemented. The same student's discipline records for the following year, 2010-2011, the year after the program was implemented, were used. The seriousness of the discipline referral was separated based on the resulting action of the referral. Anything resulting in a warning letter sent home or counseling was rated 1, anything resulting in a lunch detention or

parent conference received was rated 2, and anything resulting in a suspension received a rating of 3. Each of those same student's NJ ASK scale scores for language and math they received for the 2009-2010 school year and the 2010-2011 school year were also used.

### **Design**

The study was conducted using a test of correlation among all variables to find significance between the amount of discipline referrals between each year; and between discipline referrals and academic scores between each student. There was then a paired t-test conducted to find any significant change in the mean of the scale math and language NJ ASK scores between the pre-intervention year and the post-intervention year.

### **Procedure**

All discipline data collected included all discipline records for the 43 students in the third and fourth grade classes in the 2009-2010 school year who received discipline referrals and the discipline records for those same students from the 2010-2011 school year, the post-intervention year. All discipline data was added up by using each student's number of discipline referrals from each year and had the two years, the pre-intervention and post-interventions, totals for each student. Next set of data collected was the NJ ASK data for those same 43 students for the both years, the pre-intervention school year and the post-interventions school year. The scale scores for both language and math were recorded for each student and listed them with their discipline data. For each of the 43 students there was a pre-intervention column including each student's pre-intervention

discipline referral total and pre-intervention math and language scale NJ ASK scores.

After that, each student had a post-intervention column including their individual post-intervention discipline referral total and post-intervention math and language scale NJ ASK scores.

## Chapter 4

### Results

The two main hypothesis in this study were 1) The introduction of a school-wide positive behavior support (PBS) system in an elementary school would decrease the amount of discipline referrals among the participants, and 2) The decrease in discipline referrals would increase the academic scores of the participants on the New Jersey Assessment of Skills and Knowledge (NJ ASK) standardized tests.

Hypothesis 1: The introduction of a school-wide positive behavior support (PBS) system in an elementary school would decrease the amount of discipline referrals among the participants.

The total number of discipline referrals for each of the 43 students who received them in the pre-intervention year was compared to their total number of discipline referrals received in the post-intervention year. A Pearson Correlation was conducted to find a significant relationship between the two variables. With 43 people, there was a significant correlation ( $r=.523 \geq 000$ ) found among the two variables.

Figure 1 represents the decrease between the mean of discipline referrals for the pre-intervention school year and the post-intervention school year received by each of the 43 participants. The mean of the total amount of discipline referrals for the pre-intervention year was 3.16, and subsequently decreased to 2.27 in the post-intervention year. This is an average of 0.89 drop, higher for some students and lower for others, in discipline referrals after the intervention was implemented.

With finding a significant relationship between the amounted discipline referrals for the two years, there is cause to attribute this change in behavior to the implemented school-wide PBS. The effects of the intervention are apparent through the significant decrease in the average number of discipline referrals for each of the student when compared to the number accumulated in the pre-intervention year.

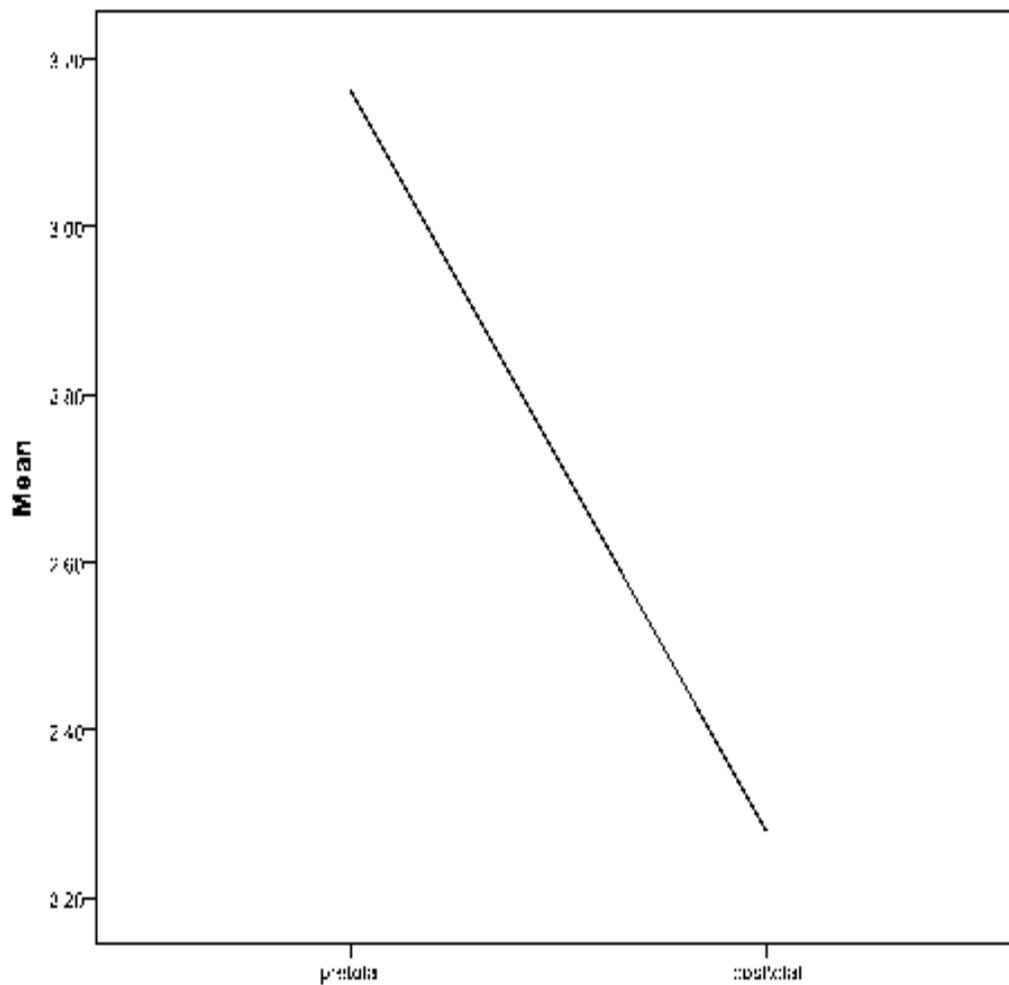


Figure 1 Decrease in discipline referrals

Hypothesis 2: The decrease in discipline referrals due to the school-wide PBS intervention will increase the academic math and language scale scores on the NJ ASK.

The scale scores for the math and language sections of the NJ ASK in the pre-intervention year for the 43 students receiving discipline referrals in the pre-intervention year were compared to the scale scores for math and language sections of the NJ ASK in the post-intervention year for those same students. These variables were compared to the pre-intervention and post-intervention discipline totals to find a relationship. A Pearson Correlation test was used to find any significance between these variables. With the 43 students, there was no significant relationship found between the academic scores and the discipline totals.

Although there was not a significant relationship found between discipline and academics, there was an overall significant increase in the language section of the NJ ASK scores between the two years not related to discipline. Using a Paired T-test, the comparison between the pre-intervention language scores and post-intervention language scores was found significant ( $t_{42} = -2.617 \geq .012$ ). Figure 2 represents the mean language NJ ASK scale scores for the pre-intervention year and post-intervention year. The mean of the scale scores increased from 182.55 in the pre-intervention year to 189.55 in the post-intervention year. That is an average of a 7-point increase for the language scores among the 43 students between the two years.

Without a significant relationship found between the discipline totals and academic scores, the hypothesis that the decrease in discipline referrals due to the school-wide PBS intervention will increase academic performance cannot be supported.

Meanwhile, there is a significant relationship found in the overall increase in the language scores for the included students not attributable to the decrease in discipline.

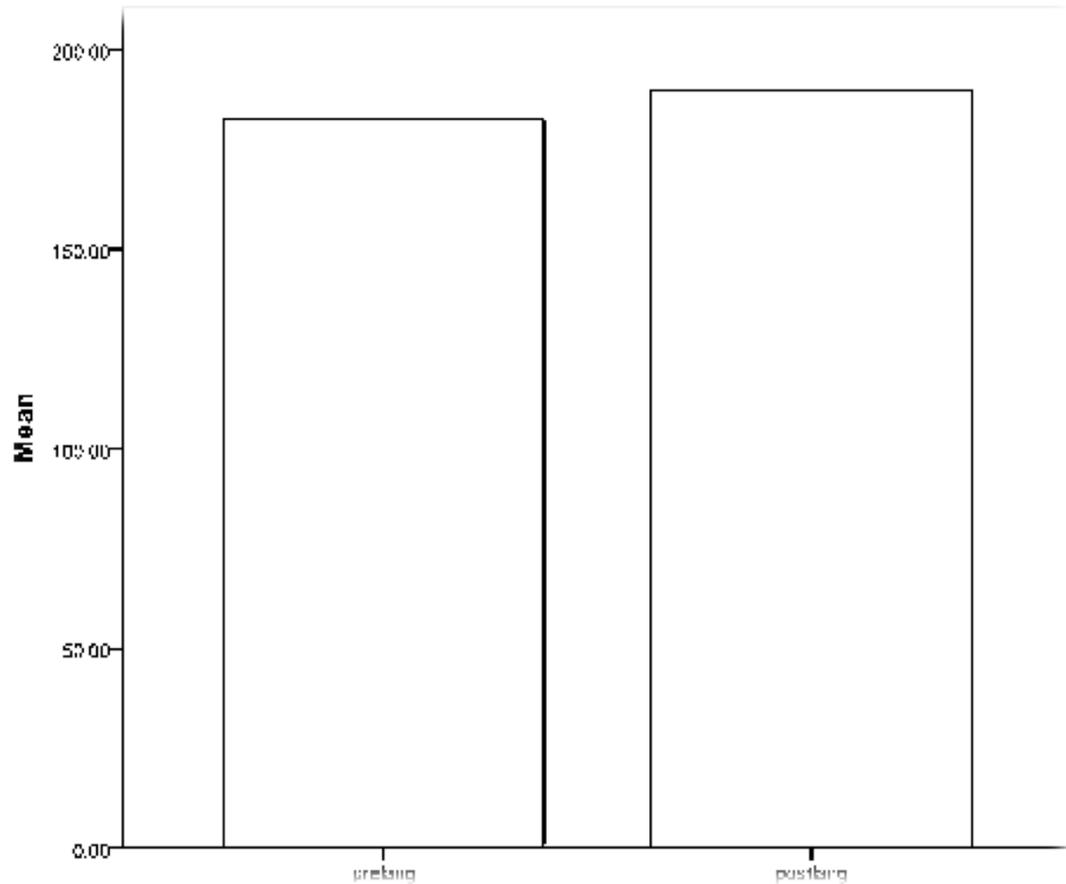


Figure 2 Increase in NJ ASK language scores

## Chapter 5

### Discussion

#### Summary

This current study sought to evaluate the effectiveness on academics and discipline of a school-wide positive behavior support program implemented in an elementary school using the discipline records and language and math scores on the NJ ASK for 43 students. There was a significant relationship found between the school year prior to the program implementation and school year after implementation on the student's discipline records; there was a significant decrease among the total number of discipline referrals earned each year per student involved in the study. Although there was a significant relationship found for the discipline data, there was no significant relationship found related to the academic scores. There was, however, a significant relationship found between pre-intervention year and the post-intervention year for the language scores as part of the academic data; this relationship only showed an overall increase in the scores among the students involved, not found to be correlated with the decrease in discipline.

The significant relationship found for the discipline records indicates that there was a significant decrease found for the 43 students involved individually. Although a few students deviated from this trend and earned more discipline referrals in the post-intervention year, the impact of those students who had a decrease in the post-intervention year was overwhelmingly more significant. This was the predicted relationship to be found in accordance with evaluating this intervention. The

implemented school-wide positive behavior support can, therefore, be a likely factor in creating this decrease in problem behavior among the students.

With an established decrease in problem behavior, this study predicted, yet did not show, an increase in academics through a significant relationship with the discipline totals. Neither the increase in language or increase in math variables were found to be correlated to the decrease in the discipline referrals. There was too great of variance found for each student, between his or her behavioral actions and academic accomplishments. While some students did have a decrease in discipline as well as an increase in academics, the overall trend was not consistent enough to show a significant relationship among the variables in order to propose a correlation.

Without supporting a correlation among discipline and academics, there was an overall significant increase in the language variables for the NJ ASK scores across the separate school years. Although it was not found to be a large enough increase in order to be considered significant, there was also an overall increase in the math variables for the NJ ASK scores. While this increase does not support the predicted relationship between discipline and academics, it is important to note the increase of the average scores earned on both sections of the NJ ASK over the two school years taken into account. These differences may indicate that there was some other factor, other than the school-wide PBS program that this study set out to assess, that attributed to the increase in academic performance.

This failure to show a relationship among discipline decrease and academic increase could be due to the small sample size used to extract data. This sample consisted of only the available participants in the third and fourth grades who received discipline

referrals in the pre-intervention year due to the need to show a development over a period of two years; and to be able to use a statistical representation of the academic performance from the NJ ASK, in which only the third, fourth, and fifth grades participate in. It may have been more beneficial, and more representative of the school-wide PBS program, to be able to use alternative academic variables in order to represent the remainder of the grades, K-2. These grades do not participate in NJ ASK standardized testing, therefore other academic variables would need to be manipulated across all grade levels to have a uniform representation of academic performance of the participants.

As expected, the significance found in the decrease of problem behavior after the school-wide PBS was implemented is consistent with and contributes to the previous research on the topic of changing behavior through a proactive method rather than a reactive method of dealing with disciplinary issues (Colvin & Sugai, 1988; Luiselli et al., 2005; Scott & Barret, 2004). Employing the previously established method of using office discipline referrals as an appropriate means for evaluating the effects of school-wide interventions (Irvin et al., 2004), the current program as a positive behavior support approach has added to the body of research that supports such school-wide efforts.

This current study's findings of a non-significant relationship between the discipline and academic performance from the school-wide PBS program does not agree with the limited, previously mentioned body of research linking academic improvement to a school-wide PBS program (Horner et al., 2009; Luiselli et al., 2005). However, certain parameters were taken in this current study in order to avoid certain limitations in previous work. In Luiselli et al. (2005), the participants involved in the discipline referral rates included the entire school as an overall reduction, while the participants in the

academic performance only involved the scores from the 3-5 grades on standardized tests. In order to account for all grade levels in both years involved in the study, Luiselli et al., (2005) did not follow each student's progress throughout the years; rather they evaluated the progress of the grade levels throughout the years. Similarly, in Horner et al. (2009), only the third grades' reading comprehension scores were evaluated before and after the school-wide PBS program was implemented among a few elementary schools; this did not measure the same student's progress through the program but the grade level's progress between the separate school years.

This current study only involved and measured those same students in which both discipline records and academic performance could be evaluated for both years concerned. In an attempt to enhance earlier research to find a more considerable relationship between a student and his/her decrease in problem behaviors linked with an increase in academic achievement as a result of a school-wide PBS program, this study failed at showing such significant results. Although these results failed to prove such a relationship exists, it highlights the importance of not overlooking certain limitations involved in previous research that could overstress the relationship between two variables, such as academic achievement and discipline rate reduction.

### **Limitations**

While this study sought to correct some limitations of previous research, it was not void of other limitations that occurred along the way. One limitation is the use of standardized tests as a viable representation of the academic abilities and achievement of students. In a national survey, provided by the Bill & Melinda Gates Foundation, Rebor

(2012) states that, out of a pool of over 10,000 public school teachers, “only 28 percent of educators see state-required standardized tests as an essential or very important gauge of student achievement”. This survey also found that only “45 percent of teachers think their students take standardized tests seriously or perform to the best of their ability on them” (Rebora, 2012, p. 14). With such a perceived unimportance placed on the test by students as well as a questionable validity of gauging achievement, standardized tests may not be the best way to capture student academic achievement.

Another limitation previously noted was the use of a small sample size in the study. The 43 students out of over 300 students enrolled in the school may not be the best representation of the effectiveness of the school-wide PBS program. In addition the size of the sample, there is also a limitation in generalizing this sample’s results to other populations considering the low socio-economic status of the school district. This sample represents only one particular level of an economical situation among the students in the school.

Another limitation of particular importance is the lack of time allotted for the PBS program to be enacted before gathering results. There was only one school year, the first year of implementation, accounted for when including the discipline and academic data for the post-intervention year. This does not allow for the possible, full effect of the PBS program on academics and discipline. If allotted more time for the program to become concrete in the school’s system, there may have been a significant relationship found between the academic and discipline variables.

## Implications for Future Research

Taken everything into account, these findings support the use of a school-wide positive behavior support system at decreasing problem behavior (Colvin & Sugai, 1988; Lewis et al., 1998; Luiselli et al., 2005; Scott & Barret, 2004) as opposed to reactive, traditional methods (Atkins et al., 2002; Lee et al., 2011; Tobin & Sugai, 1996; Way, 2001). The implications of a significantly decreased rate of office discipline referrals allow for attributing a change in behavior to the intervention of the PBS program. The results indicating no significant relationship between the decrease in discipline referrals and increase in academic achievements cause further research needed concerning the impact of a school-wide PBS system on student's academic performance.

Given these findings, in future research, certain variables warrant better control in order to produce results that can be generalized to other populations and a genuine representation of student's academic performance. Such variables should include a more inclusive and more representative gauge of students' academic performance. A variable being able to include all grade levels and a validated measure of academic achievement would improve the design measurements and reliability of the study. The sample should encompass a wider range of economical situations across different schools with the same, implemented school-wide PBS program. The reliability of using office discipline referrals as a proper measure of a school wide intervention has already been established (Irvin et al., 2004) and can, therefore, still be used in future research. In sum, these findings provide more support for the use of school-wide PBS at decreasing unwanted behavior,

but call for more research linking these effects with the academic achievement of students.

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