

1 **Cultivating positive teacher-student relationships:**  
2 **Effects of tailored positive behavior support interventions**  
3 **on classroom discipline**  
4

5 This research study examined the effect of positive behavioral interventions and  
6 supports (PBIS) on the nature of student-teacher relationships, emphasizing  
7 classroom behavior dynamics. The study evaluated the connections between  
8 students in grades preK-12 and their teachers in a southeastern state in the USA,  
9 focusing on the implementation of positive behavior support strategies. The  
10 research utilized a methodology involving pre- and post-surveys along with a  
11 two-week application of chosen positive behavior interventions, particularly  
12 targeting students with prior discipline referrals. The central research question  
13 investigated the influence of a short-term positive behavioral support  
14 intervention on student-teacher relationships, specifically among students with a  
15 history of discipline referrals.

16  
17 *Keywords:* school discipline, teacher-student relationships, students' behavior,  
18 PBIS, teacher preparation.  
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21 **Introduction**  
22

23 In recent years, fostering positive student-teacher relationships in a K-12  
24 environment has become increasingly recognized as a crucial element in creating a  
25 supportive and conducive learning environment. Positive Behavioral Interventions  
26 and Supports (PBIS) have emerged as a promising framework to enhance these  
27 relationships by providing strategies to address behavioral challenges and promote  
28 positive interactions. This research paper examines the effectiveness of PBIS in  
29 improving student-teacher relationships through quantitative analyses on closeness  
30 and conflict and explores the impact of different PBIS methods. By investigating  
31 the outcomes of PBIS interventions, this study aims to provide insights for  
32 educators and school leaders to optimize behavior support strategies and to  
33 cultivate harmonious student-teacher relationships in classroom settings. The study  
34 builds on a line of research by the authors (Martinez, R. and Wighting, M.J. 2022,  
35 2021), and its focus is on students who have received referrals for discipline  
36 infractions.  
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39 **Review of the Literature**  
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41 **Teacher-Student Relationships**  
42

43 Existing research underscores the crucial role of positive teacher-student  
44 relationships in academic achievement and student well-being. Studies have  
45 highlighted increased student engagement, motivation, and self-esteem as  
46 outcomes of supportive relationships with teachers. Notably, the quality of these  
47 relationships is linked to positive behavior and a conducive learning environment

1 (Roorda et al., 2011; Hamre & Pianta, 2001). Students' interactions and subsequent  
2 relationships with teachers are paramount for their emotional regulation, attention,  
3 problem solving, and subsequently their academic achievement (Pianta, 2006). A  
4 study conducted in the two different curriculum areas of math and physical  
5 education (Jowett et al., 2023) found that teacher-student relationships have a  
6 strong impact on academic engagement and progress and that students whose  
7 relationships with their teachers are of high quality are more likely to experience  
8 positive affect, enjoyment, and intrinsic motivation, as well as higher levels of  
9 physical self-concept and perceived competence. Conversely, a study conducted  
10 on the effects of the Covid-19 pandemic on teacher-student relationships (Farris et  
11 al., 2023), reported that the rapid change from in-person to remote learning led to  
12 turbulence and turmoil in relationships leading to a negative effect on the  
13 promotion of academic goals. In a synthesis of the relevant literature, Dai (2024)  
14 concluded that a positive teacher-student relationship can not only improve  
15 students' classroom participation and act as an intermediary to regulate students'  
16 emotions, but also cultivate students' learning skills and help students to achieve  
17 their learning goals and achievements.

### 18 **Impact of PBIS on Student Behavior**

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20  
21 Several research studies have reported on the impact of PBIS on student  
22 behavior. A study by Wienen et al. (2019) was conducted to determine how  
23 teachers perceive the impact of PBIS on student behavior and concluded that  
24 teachers found PBIS to be more effective in managing girls' behavior than  
25 behavior by boys. It also found that PBIS had greater impact in general  
26 educational settings compared to classrooms with special needs children.  
27 Lawrence et al. (2022) conducted a study to obtain perspectives from teachers who  
28 had implemented PBIS. The teachers reported that PBIS had a positive impact on  
29 student behavior, and reported also that PBIS helped them to use more effective  
30 classroom management strategies. Noltemeyer et al. (2019) investigated the  
31 impact PBIS had on student achievement and behavior in classroom settings in  
32 elementary and middle schools. The purpose of the study was to determine if the  
33 implementation of PBIS had a positive impact on the way students behave in class  
34 as well as the academic performance of students. The researchers concluded that  
35 there was a positive connection between the implementation of PBIS and student  
36 behavior, revealing a significant decline in student misbehavior, office referrals,  
37 and school suspensions. Pas et al. (2019) also conducted a study to investigate the  
38 impact that PBIS had on student behavior and academic performance. The  
39 participants in this study were students from elementary, middle, and high school.  
40 The study's results indicated that PBIS positively impacted student behavior as  
41 evidenced by decreased office referrals and suspensions. Additionally, the research  
42 revealed that PBIS had a positive impact on student achievement. Elrod et al.  
43 (2020) conducted a mixed methods research study to investigate the impact that  
44 PBIS had on school climate and student discipline. To gather qualitative data, the  
45 24 researchers interviewed over 2,000 middle and high school students. The  
46 researchers reviewed quantitative data from office referrals compared to data

1 collected before PBIS was implemented and collected qualitative data by  
2 interviewing students. The results of this study indicate that PBIS positively  
3 impacted both the school climate and the rate of student misbehavior.

4 The studies reviewed above examined the effects of PBIS on behavior  
5 exhibited by a broad spectrum of students. Fortune-Williams (2023) studied the  
6 effects of PBIS on students who were already identified as having behavior issues  
7 and had been placed on a Behavior Intervention Plan by their school. The results  
8 of this study were that most of the teachers interviewed felt that PBIS is effective  
9 for children with behavior issues because the intervention acts as a motivational  
10 tool, gives students something to work towards, decreases negative behaviors, and  
11 increases positive behaviors. Additionally, the study indicates that teachers believe  
12 PBIS effectively reduces behavior infractions in the classroom.

13 This current research also investigates the impact of PBIS on teacher-student  
14 relations by studying children who have been identified as having behavior  
15 challenges as evidenced by office referrals.

### 18 **Research Question**

19  
20 How does the implementation of a positive behavioral support intervention  
21 for two weeks affect student-teacher relationships, particularly with students who  
22 have had discipline referrals?

### 25 **Method**

26  
27 The study employed a quantitative approach involving 44 classroom teachers  
28 to evaluate the impact of positive behavioral interventions and supports (PBIS) on  
29 student-teacher relationships, focusing on 195 students in grades preK-12.  
30 Utilizing the Student-Teacher Relationship Scale (Pianta, 2001), participants in the  
31 study were tasked with selecting a suitable PBIS strategy from an array of options  
32 - individual conversations, written feedback, verbal praise, immediate rewards, or  
33 granting material privileges for a two-week intervention.

### 35 **Participants**

36  
37 All participating teachers are employed teaching children in grades preK-12.  
38 The largest percentage of teachers teach in middle school, 63% (grades 6-8); 21%  
39 of the teachers teach pre-K through grade 2; 11% of the teachers teach in grades 3-  
40 5; and 6% of the teachers teach in high school (grades 9-12). When teachers  
41 completed the survey, they purposefully selected three to five students in their  
42 class to take part in the study. The students chosen are students with behavioral  
43 concerns; whether they had a written office referral or if the teacher had to address  
44 a concern beyond gentle reminders in class. Data were collected on a total of 195  
45 students. After implementing a two-week positive behavioral support intervention,

1 teachers completed a post-survey with the same students. All participants were  
2 teaching in the same state within the USA.

### 3 4 **Instrument**

5  
6 The teachers' perceptions of the quality of their relationships with the students  
7 they teach were assessed using the short form of the Student-Teacher Relationship  
8 Scale (STRS), developed by Pianta in 2001. This 15-question survey is a reliable  
9 and valid teacher-reported standardized instrument designed to measure the quality  
10 of relationships between teachers and students. An example of this instrument can  
11 be found in Appendix A of the study.

12 During the survey, teachers were asked to respond to all items using a 5-point  
13 Likert-type scale, where 1 indicated "definitely does not apply" and 5 indicated  
14 "definitely applies." Following the completion of the initial survey, teachers  
15 selected a positive behavior support intervention to implement for a two-week  
16 period. At the end of that period, teachers filled out a post-survey using the same  
17 instrument to evaluate any changes in their perceptions of the quality of  
18 relationships with their students after implementing the PBIS.

19 Upon selection, the participants implemented their chosen PBIS strategies  
20 over a two-week period. The choices made available to the teachers were:

- 21  
22 1. Daily 2-Minute Conversations: Teachers conversed with students for 2  
23 minutes each day.  
24 2. Written Feedback: Teachers provided written feedback in individual  
25 student daily journals.  
26 3. Verbal Praise: Teachers offered verbal praise for good behavior.  
27 4. Immediate Rewards: Teachers provided immediate rewards (e.g., food,  
28 candy).

29  
30 To measure the changes in the relationships between students and teachers,  
31 pre- and post-intervention surveys were administered using the STRS and focusing  
32 specifically on the Closeness and Conflict subscales of the STRS which are listed  
33 in Appendix A.

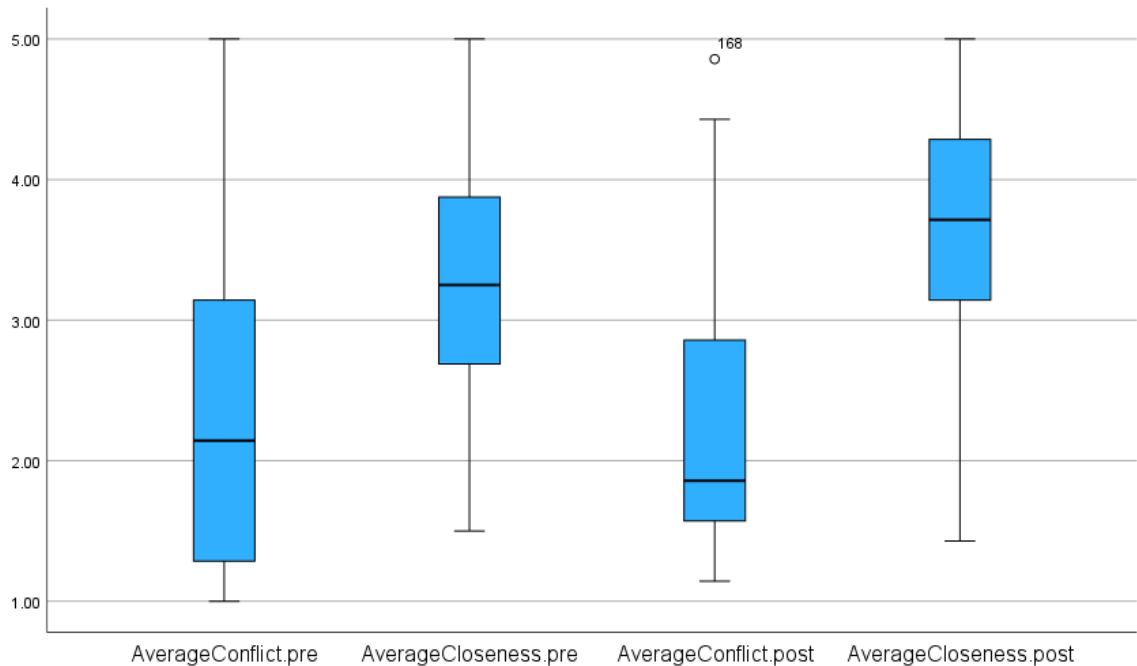
## 34 35 36 **Results**

### 37 38 **Analysis 1: Closeness versus Conflict (from the STRS)**

39  
40 This analysis examined how a two-week positive behavior intervention  
41 strategy impacted student-teacher relationships, especially for students with a  
42 history of discipline referrals. A paired samples t-test was used to compare scores  
43 from before and after the intervention on the Closeness and Conflict subscales of  
44 the STRS. Key Findings are shown in Figure 1 below.

45

1 **Figure 1. Boxplots Depicting Pre- and Post-test Results for Closeness and Conflict**  
 2 **Items**



3  
 4  
 5 Figure 1 shows the three key aspects of student-teacher relationships  
 6 following an intervention:

- 7
- 8 1. Improvement in Closeness: Before the intervention, the average pre-test  
 9 closeness score was 3.24, which increased to 3.59 in the post-test. This  
 10 increase in closeness was statistically significant ( $p < .001$ ) with an effect  
 11 size of 0.50, suggesting a meaningful enhancement in students' perceived  
 12 closeness to their teachers post-intervention.
- 13 2. Reduction in Conflict: Initially, the average pre-test conflict score was  
 14 2.37, which decreased to 2.20 in the post-test. This reduction in conflict  
 15 was statistically significant, with an effect size of 0.23, indicating a  
 16 noticeable decrease in conflicts between students and teachers following  
 17 the intervention.
- 18 3. Consistency in Ratings: The study found a consistent pattern in the  
 19 distribution of 5-point Likert ratings for both closeness and conflict before  
 20 and after the intervention. This overlap in ratings suggests that students  
 21 provided similar assessments of closeness and conflict levels, indicating  
 22 stability in their perceptions throughout the study.

23  
 24 These results indicate that the PBIS significantly improved student-teacher  
 25 relationships by increasing closeness and reducing conflict. This was particularly  
 26 beneficial for students with a history of discipline referrals.

27  
 28

## 1 Analysis 2: Results by PBIS Method

2  
3 In this analysis, a one-way between-subjects multivariate analysis of variance  
4 (MANOVA) was used to study the impact of different PBIS methods on student-  
5 teacher relationships with on students with a history of discipline issues. The four  
6 PBIS methods available to participants were examined. A fifth method, granting  
7 material privileges (e.g., cell phone use), was considered but was excluded from  
8 the analysis due to extreme outliers and a small sample size. Table 1 contains the  
9 means and standard deviations on the dependent variables for the four groups.

10  
11 **Table 1.** *Descriptive Statistics with the Means and Standard Deviations on the*  
12 *Dependent Variables for the Four PBIS Method Groups*

Student-Teacher Relationships	PBIS Method	Mean	Std. Deviation	N
Closeness	Converse with Student Daily	3.7233	.66824	79
	Written Feedback in Daily Journals	3.0000	.76931	9
	Verbal Praise for Good Behavior	3.5044	.79384	49
	Provide Immediate Reward	3.5758	.73755	33
Conflict	Total	3.5954	.72472	170
	Converse with Student Daily	2.1917	.86242	79
	Written Feedback in Daily Journals	1.9683	.86242	9
	Verbal Praise for Good Behavior	2.1983	.94303	49
	Provide Immediate Reward	2.2381	.94130	33
	Total	2.2027	.88890	170

### 13 Key Findings:

- 14  
15
- 16 • Descriptive Statistics: We presented (see Table 1) means and standard  
17 deviations for each PBIS method group concerning closeness and conflict  
18 ratings between students and teachers.
  - 19 • MANOVA Results: The results showed no statistically significant effect of  
20 the PBIS methods on student-teacher relationships. The Pillai's trace value  
21 was 0.07, indicating a small effect size and non-significant impact across  
22 the four groups.
  - 23 • ANOVAs and Post Hoc Analyses: Although the overall MANOVA was not  
24 significant, follow-up ANOVAs revealed significant differences among the  
25 PBIS methods:
    - 26 ○ Method 2 (Written Feedback): This group had notably lower scores  
27 on closeness compared to other groups.
    - 28 ○ Method 1 (Daily Conversations): This method was particularly  
29 effective, showing a statistically significant improvement in  
30 student-teacher relationships compared to Method 2 ( $M_{diff} = .72$ ,  
31  $p = .03$ ).

32  
33 The analysis highlighted the importance of choosing the appropriate PBIS  
34 strategies to enhance student-teacher relationships. Specifically, daily

1 conversations (Method 1) were found to be most effective, underscoring the need  
2 for tailored approaches by teachers to improve these relationships.

### 3 4 **Implications of Results**

#### 5 6 Implications for Administrators:

- 7  
8 1. Support and Encourage PBIS Implementation: Principals can use the  
9 research findings to support and encourage the implementation of PBIS in  
10 their schools, highlighting the importance of tailored strategies for different  
11 student populations.
- 12 2. Professional Development Opportunities: Principals should provide  
13 professional development opportunities for teachers to enhance their  
14 understanding and implementation of effective PBIS methods.
- 15 3. Advocate for Resources: Principals can use the data to advocate for  
16 resources and support systems that promote positive student-teacher  
17 relationships and address behavioral challenges effectively.

#### 18 19 Implications for Teachers:

- 20  
21 1. Impactful Interventions: The two-week positive behavior intervention  
22 strategy was effective in improving student-teacher relationships,  
23 particularly for students with past discipline issues. This suggests that  
24 short-term, targeted interventions can lead to significant positive changes.
- 25 2. Tailored PBIS Methods: Among the PBIS methods analyzed, daily  
26 conversations were found to be the most effective in enhancing student-  
27 teacher relationships. This indicates that personal, consistent interaction is  
28 crucial for building strong relationships.
- 29 3. Collaborate and Share Best Practices: Teachers can collaborate with  
30 colleagues to share best practices and insights in implementing PBIS  
31 methods that enhance student behavior and engagement.

#### 32 33 Implications for Students:

- 34  
35 1. Benefit from Improved Relationships: Students can benefit from improved  
36 student-teacher relationships and a positive classroom environment  
37 resulting from effective PBIS strategies.
- 38 2. Active Participation in Behavior Support: Students can actively participate  
39 in the development and implementation of behavior support methods to  
40 enhance their engagement and cooperation in the learning process.
- 41 3. Learn Self-Regulation Skills: Students can learn valuable self-regulation  
42 skills and behaviors that promote positive interactions with teachers and  
43 peers, contributing to a conducive and supportive learning environment.

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## Recommendations

- Implement Short-Term Interventions: Consider incorporating short-term positive behavior interventions to improve student-teacher relationships, especially for students who have had discipline referrals.
- Prioritize Personal Interactions: Focus on methods that involve personal interaction, such as daily conversations, to foster closeness and reduce conflict with students.
- Evaluate and Adapt PBIS Strategies: Regularly assess the effectiveness of different PBIS strategies and adapt them based on student needs and responses to ensure optimal outcomes.

By applying these insights, teachers can enhance their relationships with students, create a more positive classroom environment, and better support students with behavioral challenges.

## Conclusion

This research underscores the significant impact of Positive Behavioral Interventions and Supports (PBIS) on student-teacher relationships. The analysis demonstrated a notable improvement in relationships following the intervention, particularly in terms of increased closeness and reduced conflict, validating the effectiveness of PBIS in fostering positive interactions. The evaluation of various PBIS methods revealed diverse impacts, highlighting the necessity for tailored strategies to meet the unique needs of different student populations.

The study highlights the importance of personalized PBIS strategies in enhancing student-teacher relationships and stresses the need for ongoing refinement of these methods. By implementing these findings, educators can create more positive classroom environments that support student success and well-being.

## Recommendations for Future Research

- Longitudinal Study: Conduct a long-term study to track the sustained effects of PBIS on student-teacher relationships over an extended period, assessing long-term outcomes and effectiveness.
- Comparative Analysis: Compare the effectiveness of PBIS methods across different school settings or educational levels to identify the most impactful strategies for enhancing student-teacher relationships.
- Qualitative Exploration: Conduct mixed-method research incorporating qualitative sections, e.g. interviews or focus groups, to gain a deeper understanding of the experiences and perceptions of teachers, students, and parents regarding PBIS strategies and their impact on relationships.



- 1 • Intervention Tailoring: Investigate the process of tailoring PBIS  
2 interventions to individual student needs and characteristics to determine  
3 the most effective and personalized approaches for behavior support.
- 4 • Teacher Preparation: Examine the influence of specific teacher preparation  
5 programs related to PBIS on the implementation of behavior support  
6 strategies and their impact on student-teacher relationships.
- 7 • Behavioral Outcomes: Explore additional behavioral outcomes beyond  
8 closeness and conflict in student-teacher relationships, such as academic  
9 performance, attendance, and overall well-being, to provide a  
10 comprehensive assessment of PBIS effectiveness.

11  
12 By exploring these avenues of research, educators and administrators can  
13 better understand and optimize PBIS strategies to foster stronger, more supportive  
14 student-teacher relationships, ultimately enhancing the educational experience and  
15 outcomes for all students.

## 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

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Appendix A. Student-Teacher Relationship Scale (STRS)

Subscale (Conflict or Closeness)	Question
closeness	1. I share an affectionate, warm relationship with this child.
conflict	2. This child and I always seem to be struggling with each other.
closeness	3. If upset, this child will seek comfort from me.
closeness	4. This child is uncomfortable with physical affection or touch from me.
closeness	5. This child values his/her relationship with me.
closeness	6. When I praise this child, he/she beams with pride.
closeness	7. This child spontaneously shares information about himself/herself.
conflict	8. This child easily becomes angry with me.
closeness	9. It is easy to be in tune with what this child is feeling.
conflict	10. This child remains angry or is resistant after being disciplined.
conflict	11. Dealing with this child drains my energy.
conflict	12. When this child is in a bad mood, I know we’re in for a long and difficult day.
conflict	13. This child’s feelings toward me can be unpredictable or can change suddenly.
conflict	14. This child is sneaky or manipulative with me.
closeness	15. This child openly shares his/her feelings and experiences with me.

18