THE ASSOCIATION BETWEEN STUDENT-TEACHER RELATIONSHIP QUALITY AND

EXCLUSIONARY DISCIPLINE

BY

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A DISSERTATION SUBMITTED TO THE FACULTY OF

ALFRED UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PSYCHOLOGY

IN

SCHOOL PSYCHOLOGY

ALFRED, NEW YORK

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The Association Between Student-Teacher Relationships and Exclusionary Discipline

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Alfred University, 2022

Exclusionary discipline practices routinely exclude students from the academic environment through means such as office discipline referrals, suspension, and expulsion. These strategies, in turn, initiate student involvement in the School to Prison Pipeline (STPP). This form of discipline also affects minoritized students disproportionately. Potential points of intervention and prevention of the STPP such as Positive Behavior Interventions and Supports and Restorative Practice have been discussed by researchers, but student-teacher relationships have not. Student-teacher relationships may be significantly related to exclusionary discipline and thus be a possible point of intervention for educational professionals. The current study investigated the association between student-teacher relationship quality and exclusionary discipline in the form of office discipline referrals (ODR), as well as the role of student minoritized status. Elementary teachers from a suburban school district provided data regarding student-teacher relationship quality, ODRs, and special education classification. Results indicated that student-teacher relationship quality, especially student-teacher conflict, is significantly related to the risk of receiving an ODR. Special education classification was not a significant moderator of these variables. Implications for practice and limitations are discussed.

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Acknowledgements

First, I'd like to acknowledge the unending encouragement and support from my family. Without my husband Brandon's positive attitude, patience, and ability to supply me with chocolate exactly when needed, this dissertation would not have been possible. I also acknowledge the consistent encouragement of both my families, the Gochnauers and Mellerskis. Whether by blood or marriage, my family supported me, celebrated me, and encouraged me throughout this dissertation journey. Thank you.

I also acknowledge the guidance and patience of my dissertation chair, Dr. Brad Daly. His knowledge and guidance over the past four and a half years have been invaluable, while his sense of humor kept the writing process (and me) grounded and productive. An extra thank-you to Dr. Melissa Dudley, who was especially helpful with research design; and Dr. Erin Ostrum-Alongi, whose contributions and grounded perspective helped my research come to life during data collection.

Finally, I'd like to acknowledge Dr. Lynn O'Connell for welcoming me to Alfred University, fostering my ongoing passion for school psychology and encouraging my professional development throughout my graduate education. From you, I learned how to speak the language of school psychology, all while trusting myself and the process. Thank you.

Dedication

For Brandon, who knows me best of all.

CHAPTER I: INTRODUCTION

Statement of the Problem

Exclusionary discipline (ED) strategies are a set of classroom management strategies in which students are removed from the learning environment through methods such as office discipline referrals, suspension, and expulsion in response to a variety of behaviors, from being tardy to verbal and physical aggression (Girvan, et al., 2017). This approach to classroom discipline is ubiquitous in schools across the United States (Mallet, 2016). The Civil Rights Data Collection reported that during the 2017-2018 academic year, over two million students received an in-school suspension and over two and a half million received an out-of-school suspension (Office of Civil Rights, 2022). Despite exclusionary discipline's widespread use, many researchers argue it is associated with myriad negative consequences for students, including increased rates of drop-out and lower academic achievement (Morrison & Skiba, 2001; Noltemeyer et al., 2015; Skiba et al., 2014).

In addition to the short-term consequences of exclusionary discipline, such strategies are also associated with long-term consequences, including involvement in the School-to-Prison Pipeline, or STPP (Crawley & Hirschfield, 2020). The STPP is a theoretical model describing a series of circumstances that increase the likelihood of a student being involved in the criminal justice system (Crawley & Hirschfield, 2020). This model identifies risk factors that predict student encounters with negative school outcomes (i.e., discipline, academic failure, dropout), snowballing over time and drastically increasing risk of being arrested (Crawley & Hirschfield, 2018; Novak, 2018). Unfortunately, minoritized students are disproportionately represented in this pipeline, experiencing higher rates of discipline and dropout than their majority peers (Welsh & Little, 2018). The "first step" in involvement in the STPP is experiencing exclusionary discipline in school. Therefore, not only does exclusionary discipline prevent students from

participating in the learning environment, it increases the likelihood of significant future challenges (Bradshaw et al., 2020; Lee et al., 2011).

Given the significance of the exclusionary discipline problem, including its role as the "first step" in the STPP, it is critical to identify predictive factors and effective school-based intervention options. Previous research has established multiple predictive factors of ED, including race, SES, and gender (Martinez et al., 2016). School-based intervention programs such as Positive Behavior Intervention Systems (PBIS) and Restorative Practices (RP) are two alternatives to ED with research support, although they do not adequately reduce disproportionality rampant in discipline practices and by extension, the STPP (Shuster et al., 2017). This begs the question, what aspect of the school experience needs to be addressed in order to decrease both rates of ED and disproportionality?

While the answer to that question extends far beyond the scope of one research study, there is one promising opportunity for investigation. Student-teacher relationship quality, an integral aspect of the learning environment (Anyon et al., 2018; Pianta et al., 2003), has received little research focus in association with school discipline. Student-teacher relationship quality has been researched in positive association with other important student outcomes such as achievement, behavior, and engagement (Hosan & Hoglund, 2017; Jerome et al., 2009; Roorda & Koomen, 2021), but not discipline. There is ample evidence to support the importance of personal relationships in behavior and school engagement, so it is logical to propose that relationships between teachers and students may also play a role in discipline. These relationships will be the primary focus of this study.

Purpose of Current Research

Specifically, the purpose of the current study is to investigate student-teacher relationship quality as a potential point of prevention for exclusionary discipline. To do this, I will first clearly define student-teacher relationships and relationship quality, then explore its association with office discipline referrals, one form of exclusionary discipline. This research is important because it will provide new information to the discussion surrounding preventing negative student outcomes and promoting student success. While one study cannot provide a comprehensive solution to a complex problem, my hope is that it can provide insight for teachers and school-based mental health professionals regarding the importance of understanding student-teacher relationships, disciplinary strategies, and potentially, a point of intervention for disrupting the STPP. The following paragraphs delineate the questions guiding my research, accompanied by the hypotheses regarding the association between student-teacher relationship quality and exclusionary discipline, with consideration for other relevant variables.

Research Questions

1. What is the relationship between student-teacher relationship closeness and office discipline referrals?

2. What is the relationship between student-teacher relationship conflict and office discipline referrals?

3. Does special educational classification status moderate the association between student-teacher relationship closeness and office discipline referrals?

4. Does special educational classification status moderate the association between student-teacher relationship conflict and office discipline referrals?

Hypotheses

Regarding question 1, I hypothesize that relationships with high levels of closeness will be inversely related to rates of office discipline referrals, meaning that closer relationships will be associated with a lower probability of receiving discipline referrals.

Regarding question 2, I hypothesize that relationships with high levels of conflict will positively predict office discipline referrals, such that higher levels of conflict increase the likelihood of receiving a discipline referral. These hypotheses are based on background literature supporting similar associations between student-teacher relationships and other outcome variables (Hosan & Hoglund, 2017; Pianta et al., 2003; Jerome et al., 2009; Roorda & Koomen, 2021).

For question 3, I hypothesize that the association between student-teacher relationship closeness and office discipline referrals will be moderated by special education classification, such that having an IEP will weaken the association between student-teacher closeness and office discipline referrals. This hypothesis is based on the extensive research supporting the significant role of minoritized status, such as special education classification, in the School-to-Prison Pipeline, of which a large component is exclusionary discipline (Crawley & Hirschfield, 2018; Martinez et al., 2016; Sullivan et al., 2014).

Finally, for question 4, I hypothesize that the association between student-teacher relationship conflict and office discipline referrals will be moderated by special education classification, such that the influence of special education classification will increase the predictive strength of STR conflict on the probability of receiving an ODR. This hypothesis is based on the extensive research supporting the role of minoritized status, such as special education classification, in the School-to-Prison Pipeline, of which a large part is exclusionary discipline (Crawley & Hirschfield, 2018; Martinez et al., 2016; Sullivan et al., 2014).

Methodology

14 participating teachers, grades 3-5, from a suburban public school district in Western New York completed surveys for 10 of their students each, answering questions regarding student-teacher relationship quality, discipline practices, and student demographics. Teachers and students were primarily White, with a small minority of students listed as Black/African American, Asian, or Multi-racial. Logistic regression analyses were then calculated to test the research hypotheses outlined above.

Results

Analyses revealed that student-teacher relationship quality significantly predicted risk of receiving an office discipline referral, with student-teacher conflict being a particularly notable risk factor. Boys were also significantly more likely to receive an ODR than their female classmates. Minoritized status, as defined by special education classification, did not significantly moderate the associations between student-teacher relationship quality and discipline rates. These results align with research identifying the importance of fostering positive student-teacher relationships and minimizing conflict to improve student outcomes (Pianta, et al. 2003). However, it did not align with research highlighting the disproportionality in discipline practices for minoritized students, such as those classified with a disability (Losen & Gillespie, 2012; Vincent & Tobin, 2012).

Implications for School Psychologists

Part of the role of school psychologists is to consult with teachers and administrators to promote best practices within the school building (National Association of School Psychologists [NASP], 2020). This research underscores the importance of fostering positive relationships between teachers and students; therefore, when consulting with teachers and administrators,

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school psychologists should emphasize the need for relationship building strategies and minimizing conflict between students and teachers.

Contributions to the Literature

This study is one of the first to examine the direct association between student-teacher relationships and discipline practices. As such, it serves as a starting point for future research investigating the ongoing role of relationships in predicting risk for entry into the School-to-Prison Pipeline. Student-teacher closeness may be a protective factor against exclusionary discipline, while student-teacher conflict is likely a risk factor for increased exclusionary discipline. Both aspects of student-teacher relationship quality have meaningful implications for school psychologists' and teachers' efforts to mitigate student risk in school. This research underscores the importance of minimizing student-teacher conflict while boosting student-teacher closeness, while adding exclusionary discipline to the increasing list of negative outcomes associated with negative student-teacher relationships.

CHAPTER II: LITERATURE REVIEW

Student-Teacher Relationships

Teachers are a student's main point of contact; they are the adult authority figures with whom students interact the most throughout the school day. As such, teachers have a multifaceted impact on student experience. Previous studies have explored teacher influence on student outcomes including achievement, social-emotional well-being, and engagement in risky behaviors (Anyon et al., 2016; Banerjee, 2018; Evans et al., 2019; Garner & Mahatmya, 2015; Scott et al., 2018). Some have examined specific teacher behaviors, such as teacher collaboration and instructional management, on student outcomes (Martinez et al., 2016) while others have focused on the quality of student-teacher interactions and its relationship to the above-mentioned outcomes (i.e., Anyon et al., 2016; Banerjee, 2018). For the purposes of this paper, the quality of interaction between student and teacher will be referred to as student-teacher relationship, or STR.

Theoretical Model of Student-Teacher Relationships

Student-teacher relationship is broad term, having been utilized throughout the research literature to refer to several different aspects of student-teacher interactions. For example, Roorda et al. (2019) considered student-teacher relationships to consist primarily of the affective bond between students and teachers, whether positive or negative. Similarly, Yeager and colleagues (2017) considered trust to be the foundational component of student-teacher interactions, without which the quality of student-teacher interaction would suffer. Across various studies, affection, or positive feelings of safety and comfort, is considered the primary indicator of relationship quality (Pianta et al., 2003; Yeager et al., 2017).

The notion of an affective bond stems from attachment theory, which posits that the presence of a secure and safe attachment promotes healthy functioning in multiple dimensions over the lifetime (Furrer & Skinner, 2003). Children with secure attachments to adults view those adults as safe havens and secure bases (Roorda et al., 2019). Consequently, these children can then turn to the adult for comfort or feel free to explore an unknown surrounding environment, returning to the adult as needed for support and encouragement. In the classroom, teachers are the primary adult caregiver, and the classroom serves as an environment in which to explore new experiences and unfamiliar activities. The teacher therefore serves as the safe haven for learning and exploration while children are at school.

Pianta et al. (2003) proposed a model of student-teacher relationships based on attachment theory and developmental systems theory including four main components: 1) individual characteristics of teacher and student, 2) mental representations of the relationship, 3) interactions between teacher and student, and 4) external influences. In this model, each component interacts dynamically over time to produce the complex phenomenon that we recognize as "relationships". The model integrates principles of attachment and developmental systems to represent both individual and ecological factors within a holistic view of student-teacher relationships (Pianta et al., 2003).

First, characteristics of the teacher and student, independent of the other, include both psychological and explicit features (Pianta et al., 2003). Psychological features may include a teacher's teaching philosophy and previous experience building relationships, or a student's temperament and perception of school environment. Explicit features include observable characteristics such as race/ethnicity, biological sex, teaching experience, or academic skills.

These are all unique characteristics to the teacher and student which may impact the overall relationship quality (see Pianta et al., 2003, for a more detailed discussion).

The individual mental representations held by both teacher and student within the relationship also play an integral role in determining relationship quality (Pianta et al., 2003). Attachment theory heavily influences this perspective, which states that teacher and student perceptions are comprised of feelings and beliefs about the relationship, whether positive or negative (Pianta et al., 2003). Individuals form these mental representations based on their interpretations of their partner's (e.g., teacher or student) behaviors, which then create the schema within which he/she interprets subsequent conversations and behavior (Liu et al., 2018). Therefore, mental representations are built over time and through interpersonal exchanges, and may greatly inform behavioral and emotional reactions during interactions.

Interactions between student and teacher are the most noticeable manifestation of student-teacher relationships. They form a recursive relationship with each person's mental representations of the other and begin the moment a student enters the classroom (Pianta et al., 2003). Student-teacher interactions are both indicative of and influence the development of student-teacher relationships through observable features (i.e. frequency of contact, encouragement v. criticism) and quality of communication (i.e. tone of voice, volume, timing; Pianta et al., 2003). These patterns of behavior over time are, in this model, considered more important than each individual interaction.

External influences are the final, and most distally related, component of Pianta et al.'s (2003) model of student-teacher relationships. Structural variables (e.g., student-teacher ratio, class composition) and school climate (e.g., welcoming v. punitive) are two primary external influences on STR development (Pianta et al., 2003). Wider cultural practices may also be

ecologically relevant, determining norms for how "quality relationships" manifest. Here, Pianta and colleagues (2003) integrate developmental systems theory into their model, highlighting the importance of outside forces on the dyad themselves.

In sum, Pianta and colleague's (2003) theoretical model of student-teacher relationships is a dynamic integration of teacher and student internal features, behaviors, and environmental effects. They apply attachment theory and developmental systems theory to the classroom, highlighting the ways in which students and teachers form and maintain relationships, both positive and negative. This model provides a useful framework within which to view the potential impact of STRs on meaningful student outcomes, such as discipline. The following section reviews current research investigating associations between STR quality, as defined by Pianta and colleagues' (2003) model, and meaningful student outcomes, including achievement and behavior.

Impact of Student-Teacher Relationships

Given the definition of student-teacher relationships above, it is important to address the practicality of such a model: does it have meaningful implications for students and teachers? Several researchers have sought to answer this question, investigating posited links between student-teacher relationship quality and school-based outcomes such as achievement, engagement, and student behaviors. These researchers tend to emphasize different aspects of Pianta's model in their research. For example, Myers and Morris (2009) focused on the impact of relationship quality on behavior, while Pianta et al. (1999) investigated the impact of student characteristics on the student-teacher relationship itself (Zee et al., 2020). Pianta et al.'s (2003) model of student-teacher relationship would suggest student and teacher characteristics and behaviors are most likely to impact one another, but research findings supporting this model

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have been mixed (e.g., Jerome et al., 2009 v. Zee et al., 2020). Below are highlighted examples from the literature of the meaningful connections between student-teacher relationships and student outcomes.

Academic Achievement

Several researchers have described meaningful links between student-teacher relationship quality and academic achievement. Academic achievement can be measured in multiple ways, such as test scores in math and reading or teacher track recommendations. Generally, positive student-teacher relationships predict higher academic performance and teacher track recommendations for young students (Ansari et al., 2019; Jerome et al., 2009; Timmermans, et al., 2019; Zee et al., 2020), while negative student-teacher relationships predict lower academic success over time (Ansari et al., 2019; Portilla et al., 2014; Zee et al., 2020). Academic achievement is analyzed in psychological research by comparing student grades, such as test scores, examining which scores are significantly higher or lower than the others. However, data collection varies between studies. While Ansari et al. (2019) and Zee et al. (2020) used standardized numeric scores, Portilla et al. (2014) utilized Likert scales to measure academic success. Despite different approaches to measuring academic outcomes, the results are similar. Students maintaining positive relationships with their teachers are more likely to achieve higher grades, while those with negative relationships tend to score lower on standardized tests. Two primary components of student-teacher relationships, closeness and conflict, are each meaningfully related to academic achievement. Evidence supporting this statement follows, addressing closeness and conflict in turn.

Closeness. In their study regarding the transactional nature of student-teacher relationships, student motivation, and academic achievement, Zee et al. (2020) found that

students enjoying high quality relationships with their teachers in kindergarten had significantly higher grades at the end of elementary school (6th grade). Zee and colleagues' (2020) longitudinal design underscores the long-lasting impact of student-teacher relationships on student development; positive relationships not only influence immediate interactions and classroom performance but predict long-term success as well. Student motivation mediated the association between relationship quality and long-term academic achievement such that kindergarten students with close teacher relationships *and* higher motivation in 3rd grade predicted significantly higher achievement in 6th grade compared to their less motivated peers (Zee et al., 2020). Overall, Zee et al.'s (2020) study highlights the significance of relationships over time as well as its impact on academic performance.

Ansari et al. (2020) also found that higher student-teacher relationship quality predicted higher academic achievement over time. Their findings suggest that student-teacher closeness positively predicts academic success, including higher GPAs, higher level coursework, and greater math and English skills in the 9th grade. Anyon et al. (2020) also extended Zee et al.'s (2020) findings by three years, while controlling for student characteristics such as race, temperament, and parent characteristics.

Additionally, Timmermans et al. (2019) found that the quality of student-teacher relationships predicted teacher track recommendations for future academic foci, mediated by teacher expectations. Teacher expectations mediated the association between student-teacher relationship quality and achievement such that positive student-teacher relationships predicted higher teacher expectations, which then predicted higher track recommendations for those students in later grades (Timmermans et al., 2019). These findings correspond with the mediation identified in Zee et al.'s (2020) research.

Taken together, these results present compelling evidence for the positive impact of student-teacher closeness on academic achievement over time. Positive student-teacher relationships share moderate to high correlations with higher academic achievement in multiple subject areas (Timmermans et al., 2019). However, there is some contradictory evidence for the connection between relationship quality and achievement. Some studies did not find a significant correlation between relationship closeness and achievement (Jerome et al., 2009; Portilla et al., 2014), potentially because of the difference in measures used to describe student-teacher closeness. Without identical or very similar measurement tools to each other, researchers may measure separate constructs even while using similar verbiage. Even so, evidence for the impact of student-teacher closeness is only part of the story. Relationships characterized by conflict must also be taken into account. Indeed, some researchers suggest conflict is even more influential on long-term student academic development than closeness, as will be discussed below.

Conflict. A longitudinal study investigating the associations between student-teacher relationship quality found that negative student-teacher relationships characterized by high levels of conflict were significantly associated with lower academic achievement skill development, as measured by the Woodcock Johnson Tests of Achievement (Ansari & Pianta, 2019). This relationship was present throughout their study, from kindergarten to 6th grade, suggesting that student-teacher conflict is impactful on students from a very young age up to adolescence.

Using a short-term longitudinal model, Portilla and colleagues (2014) examined the interplay between student-teacher relationship quality, student engagement, and behaviors. They included academic achievement as a long-term outcome variable. Portilla et al. (2014) found that conflict between students and teachers at the beginning of kindergarten significantly predicted

lower student academic competence in first grade, while closeness was not a significant predictor of academic performance. However, the predictive value of relational conflict was mediated by student engagement throughout kindergarten, suggesting that conflict in student-teacher relationships may be mediated by additional variables particularly salient in schools (e.g., engagement).

More recently, Zee et al. (2020) expanded Portilla et al.'s (2014) findings regarding the indirect impact of student-teacher relationship quality on academic achievement. They found that students who had negative relationships with their teachers in kindergarten (having high levels of conflict and low levels of closeness) demonstrated lower motivational attitudes in 3rd grade, and subsequently lower academic achievement in math and reading comprehension in 6th grade.

Ansari et al. (2020) also found that student-teacher conflict negatively predicted academic achievement through 9th grade, including math, English, and literacy skills. Importantly, their results were indicative of both cross-sectional and cumulative effects of relationship quality on achievement (Ansari et al. 2020). Therefore, if conflict develops early between student and teacher, the student is likley at risk for lessened engagement and academic achievement within the year, and potentially into their secondary school years as well.

Summary. Current research evidence presents mixed findings regarding the direct and indirect nature of the association between student-teacher relationships and academic achievement. As described above, student motivation and teacher expectations mediate the impact of student-teacher relationship quality on academic achievement (Zee et al., 2020; Timmermans et al., 2019). However, there is also evidence of a more direct association between the two variables (Jerome et al., 2009; Ansari et al., 2020). These mixed findings highlight the challenge of parsing students' emotional and learning experiences to definitively investigate the

complex relationship between two variables. It seems likely that intangible variables, such as those identified by Zee et al., (2020) and Timmermans et al., (2019) partially mediate the association between student-teacher relationships and academic achievement. If these variables are not included in a research design, a more direct association would appear (e.g., Jerome et al., 2009).

In sum, student-teacher relationships play a notable role in student academic achievement. Positive relationships can encourage greater achievement, while conflicting or dependent relationships may negatively affect academic success. Not only can these connections be observed at a single point in time (i.e., Timmermans et al., 2019), they have also been observed longitudinally (Ansari et al., 2020; Jerome et al., 2009; Zee et al., 2020), indicating that student-teacher relationships continue to impact later student development. Student-teacher relationships are important not only in early elementary school (Portilla et al., 2014) but among older students as well, up to 9th grade (Ansari et al., 2020).

Student Engagement

The relationship between student-teacher relationships and academic success is often mediated by other individual and school-level factors (Timmermans et al., 2019; Zee et al., 2013). One notable mediator between relationships and achievement is *student engagement*, defined as a student's involvement with school, including academic activities, the school environment and personnel, and goals (Roorda et al., 2017; Portilla et al., 2014). Student engagement is also sometimes delineated into three broad categories: behavioral, emotional, and cognitive (Portilla et al., 2014). These categories help describe the various behaviors indicative of student engagement, such as attendance (behavioral), feelings toward teachers and peers

(emotional), or perseverance on challenging topics (cognitive) (Archambault et al., 2017; Portilla et al., 2014; Roorda et al., 2019; Rushton et al., 2020).

It is clear that student-teacher relationships have an effect on student engagement: there is widespread research support for the impact of closeness and conflict within student-teacher relationships on student engagement (Archambault et al., 2017; Portilla et al., 2014; Roorda et al., 2017; Roorda et al., 2019; Rushton et al., 2020). This relationship is notable both in isolation and within the larger context of student-teacher relationships, student engagement, and academic achievement. The following section will highlight research evidence of student-teacher relationships' significant association with student engagement.

Closeness. Generally, student-teacher relationships characterized by closeness are associated with higher levels of student engagement (Roorda et al., 2017). Additionally, student engagement mediates associations between student-teacher closeness and other meaningful outcomes, such as academic achievement (Roorda et al., 2017).

Roorda and colleagues' (2017) meta-analytic research found a statistically significant association between STR closeness and student engagement. They summarized several studies examining STR closeness and engagement, highlighting overall trends among the research available at the time regarding the association between both variables. First, student-teacher relational closeness shares a moderate, but statistically significant, positive correlation with student engagement (Roorda et al., 2017). Additionally, student engagement partially mediates the relationship between STR closeness and academic achievement at both the primary and secondary levels.

Subsequent research has corroborated these findings; elementary students with high degrees of perceived closeness were more behaviorally engaged in class than their peers

(Archambault et al., 2017). Additionally, 7th grade students who reported high levels of student-teacher relational closeness were likely to be more emotionally and behaviorally engaged than their peers (Roorda et al., 2019). The importance of student-teacher relationship quality is not limited to young children, it also impacts adolescents.

However, not all research supports the claim of a significant positive association between student-teacher closeness and student engagement. For example, Portilla et al., (2014) examined the associations between STRs and school engagement, academic competence, and behavioral outcomes using a longitudinal design. In this study, student-teacher relational closeness did *not* predict student engagement (Portilla et al., 2014). Additionally, Rushton et al. (2020) found no evidence over a three-year timeframe suggesting a significant association between STR closeness and engagement, either. Rushton et al. (2020) posits that student behaviors disrupts relationships consistently over time, while student-teacher closeness does not have the same consistent impact. This assertion could apply to the results described in Portilla et al.'s (2014) study as well.

Conflict. In contrast with the positive correlation between relational closeness and student engagement, higher levels of STR conflict tend to be associated with lower levels of engagement (Roorda et al., 2017). This association has been observed in both cross-sectional and longitudinal studies, suggesting that the association is established and maintained over time.

Similar to their findings regarding STR closeness and student engagement, Roorda et al. (2017) also found statistical support for a significant inverse association between student-teacher conflict and student engagement. The association between student-teacher conflict and academic achievement is also partially mediated by student engagement (Roorda et al., 2017).

At the elementary level, higher levels of student-teacher conflict predict lower school engagement over the span of an academic year (Portilla et al., 2014; Archambault et al., 2017). Notably, these were unidirectional relationships; Portilla and colleagues (2014) did not find evidence to suggest engagement impacts relationship quality. In contrast, other research has found that student-teacher relational conflict was negatively *and* reciprocally associated with student engagement (Hosan & Hoglund, 2017).

Roorda et al.'s (2019) research of adolescent (7th grade) student-teacher relationships supports the negative relationship between conflict and engagement; higher levels of student-teacher conflict were associated with lower behavioral and emotional engagement. This is true over time, as well. Student-teacher conflict negatively predicts long-term engagement for students with clinical levels of ADHD symptoms, suggesting that not only do STRs impact the student for one year, but many (Rushton et al., 2020).

Summary. Based on the research summarized above, there is variation among studies regarding the nature of the associations between student-teacher relationship quality and student engagement. Some researchers claim the association is unidirectional rather than transactional (Portilla et al., 2014), or that STR quality only impacts one aspect of engagement, such as behavior (Archambault et al., 2017). These variations may be the result of measuring two abstract constructs which likely represent several smaller, closely integrated factors. One overarching theme is clear: STR quality, whether characterized by closeness or conflict, is significantly connected to student engagement (Archambault et al., 2017; Portilla et al., 2014). Further, student engagement is important in that it often plays a mediating role between STR quality and other important outcomes, such as academic achievement (Roorda et al., 2017). As

such, it provides meaningful insight regarding the overarching influence of STR quality on short and long-term student success.

Student Behavior

Student-teacher relationship quality is also meaningfully linked to *student behavior*, or a student's observable actions in the classroom (e.g., talking out of turn, social withdrawal). Within the body of student-teacher relationship literature, there are several studies highlighting the association between relationship quality and student behaviors (de Jong, et al., 2018; Roorda et al., 2014; Roorda & Koomen, 2021; Myers & Morris, 2009). Each aspect of relationship quality – closeness, conflict, dependency – has been found to associate with internalizing and externalizing behaviors. As with student engagement, there is some evidence of a reciprocal relationship between student behaviors and relationships, which is discussed below.

Closeness. Positive student-teacher relationships are often predictive of fewer behavioral concerns. For example, in a study by Myers and Morris (2009), caregivers provided information on a diverse sample of young children's effortful control and relationships with their Head Start teachers. Children who had closer relationships with their teachers demonstrated fewer conduct problems, such as fewer instances of aggression or emotional outbursts. Interestingly, these positive relationships were not significantly related to prosocial behaviors. However, in a separate study, Roorda et al. (2014) *did* find a significant connection between close student-teacher relationships and prosocial behaviors. Notably, Roorda et al.'s (2014) study only included male preschoolers, whereas Myers and Morris (2009) included both male and female students.

Another important aspect of Roorda et al.'s (2014) study is the evidence of a transactional relationship between relationship quality and student behavior. Student-teacher

closeness at the first data collection significantly predicted higher prosocial behaviors at the second collection point, which then predicted higher levels of closeness at the end of the study (Roorda et al., 2014). This pattern of correlations suggests that student-teacher relationships and prosocial behaviors promote one another over time, creating a positive, ongoing cycle of influence.

More recent studies by de Jong et al. (2018) and Roorda and Koomen (2021) suggest that positive student-teacher relationships are *predicted by* externalizing behaviors, providing additional evidence that behavior and relationship quality are reciprocally linked, rather than sharing a unidirectional association. Additionally, these two studies used an older sample size, gathering data from 6th and 7th grade students rather than preschool or elementary children. It is possible that Myers and Morris (2009) and Roorda et al., (2014) did not find a significant connection between externalizing behavior and closeness due to developmental differences, and that externalizing behaviors become more salient for student-teacher relationship quality as children age. Therefore, student-teacher closeness may be a more significant predictor of student behavior in early ages compared to older ages. So, when considering the association between these two variables, it is important to consider the age of the participants.

In sum, close student-teacher relationships tend to promote prosocial behaviors (Roorda et al., 2014) and decrease the likelihood of conduct problems (Myers and Morris, 2009), but the student-teacher relationship itself can be negatively impacted by student externalizing behaviors (de Jong, et al., 2018; Roorda and Koomen, 2021). Overall, research results have supported a transactional model of influence between student-teacher relationship quality and student behavior (Myers and Morris, 2009; de Jong, et al., 2018; Roorda, et al., 2014; Roorda and

Koomen, 2021). However, relational closeness is only one aspect of student-teacher relationships.

Conflict. Student-teacher conflict is generally predictive of more detached student-teacher relationships (Myers & Morris, 2009; Roorda, et al., 2014; Roorda & Koomen, 2021). This is exemplified most clearly in studies measuring internalizing and externalizing student behaviors in association with student-teacher relationships. For example, Myers and Morris (2009) found that student-teacher conflict has the opposite effect on conduct problems than student-teacher closeness, predicting higher levels of conduct problems for young children. These children also demonstrated significantly lower levels of effortful control, or adult-rated self-regulation behaviors. Therefore, from a young age, conflict between caregivers and children is connected with behavioral concerns.

This negative trend is seen throughout early development. In Roorda et al.'s (2014) research with preschool aged children, higher levels of student-teacher conflict were significantly associated with higher levels of both internalizing and externalizing behaviors over time. Like the reciprocity seen between closeness and prosocial behaviors, these negative behaviors shared a bidirectional relationship with conflict. Not only is conflict correlated with higher behavioral concerns, it is also significantly associated with fewer prosocial behaviors (Roorda et al., 2014). Whereas closeness seems most predictive of positive behavior trends, student-teacher conflict impacts levels of both positive and negative behaviors.

De Jong et al. (2018) also found evidence supporting a transactional model of influence between student-teacher conflict and student behaviors, such that externalizing behaviors significantly predict increased conflict between students and teachers over time. Roorda and Koomen (2021) recently found similar effects between secondary students and their teacher, with

conflict and externalizing behaviors positively predicting each other over time. Similar to the effects described above regarding the impact of student behavior on student-teacher closeness, behavior and student-teacher conflict are also reciprocally related. This evidence makes sense, as one might expect a relationship characterized by conflict to trigger different forms of negative student behavior, which may then prompt increased dyadic conflict.

Dependency. Notably, there is also some evidence of a meaningful association between student dependency and behavioral outcomes. Students whose relationships reflect high degrees of dependency also tend to engage in more internalizing behaviors (de Jong et al., 2018; Roorda et al., 2014). This relationship also seems to be bidirectional in that student behaviors impact their relationship with teachers and vice versa. According to Roorda and colleagues (2014), students who demonstrate overreliance on their teachers tend to become withdrawn and less talkative which, in turn, reinforces teacher views that the student is helpless and needs additional support in the classroom. Dependency also negatively predicts prosocial behaviors (Roorda et al., 2014). This finding corroborates the opinion that dependency is typically seen as a negative aspect of student-teacher relationship and therefore might have harmful effects on student wellbeing.

Notably, de Jong and colleagues (2018) conducted a similar study investigating the predictive value of student-teacher relationship dependency on behavior but focused on a specific population: students of a minoritized ethnicity. According to Hamre and Pianta, (2001), student-teacher relationships may be especially important for students at risk for school maladjustment, such as those belonging to an ethnic or racial minority group. Therefore, de Jong et al., (2018) specifically investigated the relationship between student-teacher relationships and behavioral adjustment with this population. They found, using the Student-Teacher Relationship

Scale (Pianta, 2001), that student dependency predicted both internalizing and externalizing behavioral concerns (de Jong et al., 2018). Their research provides additional support for the important role of dependency within student-teacher relationships and its association with student behavior.

Summary. To summarize, student-teacher relationship quality is associated with student behaviors in intuitive ways. Positive relationships, most often characterized by closeness, are positively associated with prosocial behaviors, lower emotional symptoms and fewer peer problems (Myers & Morris, 2009; Roorda et al., 2014). Negative relationships, including both conflict and dependency, on the other hand, tend to be associated with conduct problems, externalizing behaviors, and internalizing problems (Myers and Morris, 2009; Roorda et al., 2014; Roorda & Koomen, 2021). However, these relationships are not entirely straightforward. As theorized by Pianta and colleagues (2003), student-teacher relationship quality seems to be reciprocally connected with student behavior, wherein both variables impact each other at given points in time (Myers and Morris, 2009) and over longer periods of time (Roorda & Koomen, 2021). Pianta et al. (2003) take a systems view of student-teacher relationships, meaning that the components of their relational model are not solely unidirectional. Instead, their theory, and current research, posits that student-teacher relationships both influence and are influenced by the observable behaviors of both teacher and student.

Student-Teacher Relationship Quality and Teacher Behavior

Student-teacher relationships are based on attachment and developmental systems theory, integrating individual perspective with dyadic interactions (Pianta et al., 2003). The quality of such relationships can be described through domains of closeness, conflict, and dependency. Based on the research above, STR quality is closely associated with multiple meaningful student

outcomes (Ansari & Pianta, 2019; Archambault et al., 2017; Zee,et al., 2013). There is clear evidence of either predictive or bidirectional connections between relationship quality and academic achievement, student engagement, and student behavior. Further, the predictive nature of STR quality provides insight regarding ways to promote student success in the above-mentioned areas. However, there are important aspects of student success missing from this discussion. For example, while there is evidence that student behavior is significantly associated with student-teacher relationships (e.g., Myers & Morris, 2009; Roorda et al. 2014), no one has investigated teacher behaviors in association with relationship quality.

While the current research literature highlights many of the ways in which student-teacher relationships have meaningful impacts on student success, very little, if any, of the research addresses how the relationship may affect teacher responses to student behaviors, specifically those related to disciplinary practices. For example, Roorda et al., (2014) and others examined student externalizing behaviors, but did not address teacher response. Practically speaking, whether students exhibit externalizing behaviors or not becomes important only in light of the teacher's response; does their response elicit conflict or resolve the situation? If conflict occurs, the situation may end with student removal, while resolving the situation may result with the student remaining in class. Therefore, classroom management is an integral feature of a student's learning environment and a useful framework for understanding the potential role of student-teacher relationships in disciplinary practices, thereby addressing one notable gap in current research.

Classroom Management

As previously established, student-teacher relationships are closely related to student outcomes and behavior (de Jong et al., 2018; Roorda et al., 2014). Classroom management

strategies, in turn, represent teacher behaviors and expectations within that same learning environment. Given that student-teacher interactions are an integral part of student-teacher relationships (Pianta et al., 2003), it is important to understand what classroom management is and how these practices may be related to the quality of any given student-teacher relationship. *Classroom management* is a broad term, encompassing several different teacher behaviors. The following section will define classroom management and discuss primary strategies utilized by teachers before focusing on one dominant, but highly problematic form of management frequently utilized by teachers.

Classroom Management Defined

Broadly speaking, classroom management is the way in which a teacher sets and maintains an orderly environment in his or her classroom (Kwok, 2019). Effective classroom management should maximize instruction time and student engagement with clear expectations, while minimizing distractions (Pas et al., 2017). Doing so encourages student learning and engagement, promoting positive academic and behavioral outcomes. Classroom management is not homogenous; there are many different styles and strategies teachers might implement in their classrooms. To help organize these styles, classroom management strategies can be categorized into two groups: proactive and reactive strategies (Kwok, 2019; Kranak et al., 2017). Proactive and reactive techniques can in turn include behavioral, academic, and relational strategies, all implemented to maintain a positive and productive classroom environment (Kwok, 2019).

Proactive Classroom Management

Generally speaking, proactive classroom management strategies are implemented prior to any potential learning disruptions. The overarching goal of proactive classroom management is to encourage positive classroom environments and decrease disruptions (Kwok, 2019). As such,

this type of classroom management is typically considered preventive (Kranak et al., 2017). These strategies can target behavioral goals, academic expectations, or even aim to boost relationships within the classroom (Kranak, et al., 2017; Kwok, 2019). Proactive, or preventive, classroom management is associated with positive student outcomes, making it an important part of the learning process (Kwok, 2019).

For example, proactive behavioral management encourages student compliance and engagement within the classroom. Behavioral management strategies include providing opportunities to respond to questions and giving positive recognition for student work (Pas et al., 2015). Classroom rules and routines are also considered preventive strategies, as they establish guidelines and expectations for students (Kwok, 2019). Teachers who use proactive management strategies such as the ones listed above tend to have more compliant students, with fewer disruptive behaviors (Pas et al., 2015). Additionally, classrooms including proactive behavioral management techniques are associated with higher student engagement and lower levels of teacher stress compared to classrooms without (Kwok, 2019).

Other examples of proactive classroom management strategies may focus more on encouraging academics or student relatedness. Academic management strategies are utilized to optimize academic engagement and progress while preventing misbehavior. Specific strategies listed by Kwok (2019) include planning focused learning activities, refocusing students to content, and asking content-based questions. In doing so, teachers preemptively set up their students for academic success instead of waiting for clear evidence of disengaged students.

Proactive relationship-based classroom management strategies are less clearly defined within current research studies. However, Kwok (2019) states that teachers utilize relational classroom management to establish a positive classroom environment and student interactions

(Kwok, 2019). Some examples include building positive relationships with each of their students and structuring their classrooms to foster positive individual and group-based interactions, and communicating in concrete terms (Banks, 2014; Kwok, 2019). A strong positive connection between students and teachers could also be considered a proactive strategy, as students who feel connected to and trust teacher authority tend to engage in fewer disruptive behaviors (Gregory & Ripski, 2008).

In sum, proactive classroom management strategies, whether focused on behavior, academic, or building relationships, can be effectively utilized by teachers to foster a positive and productive learning environment (Kwok, 2019; Pas et al., 2015). It would seem that the more teachers utilize proactive management strategies, the more likely it is their students will comply with behavioral expectations. But it is difficult to infer true causality between student behavior and teacher management strategies, as student behaviors may also influence teacher management styles (Williford & Vitiello, 2020).

Reactive Classroom Management

In contrast to proactive classroom management, Kwok (2019) describes reactive management as an "in the moment" strategy, occurring directly in response to student behaviors. Like the proactive strategies described above, reactive strategies can take many different forms. Verbal warnings, using student names, and administering consequences are examples of how teachers utilize reactive strategies to maintain order (Kwok, 2019). Teachers may also use nonverbal reactive strategies such as physical proximity (Kwok, 2019). Notably, reactive strategies include immediate redirection as well as secondary, more significant corrections, such as a timeout or office disciplinary referral (Kwok, 2019). Teachers who focus on balancing praise and corrective feedback also utilize reactive management strategies (Banks, 2014).

Compared to proactive management, teachers, especially new teachers, use reactive strategies the most often (Kwok, 2019; Reupert & Woodcock, 2010). It is important to acknowledge that these were self-reported data, suggesting they may have been subject to reporting bias by teachers themselves.

Despite the frequency of reactive behavior management strategy implementation, teachers consider them less effective than preventive strategies (Reupert & Woodcock, 2010). This lack of efficacy is supported by research describing the negative role of reactive strategies on student outcomes (Gagnon et al., 2017; Reupert & Woodcock, 2010). Gagnon et al. (2017) found that high rates of severe reactive strategies, such as suspension and detention, are associated with lower achievement and increased dropout rates. Suspension is just one example of a reactive strategy that is designed to be punitive; it utilizes punishment to manage behavior. While not all reactive strategies are punitive, the corrective nature of reactive management strategies frequently coincides with punitive actions. Additionally, classrooms with high levels of noncompliance tend to be taught by teachers who use high rates of reactive strategies, as much as three times as many as teachers with compliant students (Pas et al., 2015).

Based on these results, reactive behavior strategies are simultaneously less effective *and* more commonly implemented than proactive management strategies. Reactive management strategies are still widely accepted and implemented in schools across the United States, many of which are disciplinary and punitive in nature. Classroom disciplinary techniques have been widely discussed among researchers in recent years, highlighting some concerns with the usefulness and impact of discipline on student outcomes (Crawley & Hirschfield, 2018). These concerns will be discussed more below, differentiating exclusionary discipline from the broad umbrella of "discipline" and describing its association with various student outcomes.

Exclusionary Discipline

Using the framework of teacher management styles outlined above, student discipline would be considered a reactive behavior management strategy. Discipline is largely reactive rather than proactive because teachers utilize disciplinary methods in response to student behaviors, and not the other way around. Discipline is a method by which authority figures, including teachers and administrators, enforce school policy and classroom expectations while maintaining reasonable control of a student or group of students. Zero-tolerance policies are one way to approach school discipline, defined by the American Psychological Association as predetermined consequences for a range of undesirable behaviors (American Psychological Association [APA] Task Force, 2008). Students who engage in these behaviors, then, automatically receive the consequences, regardless of surrounding circumstances. Zero-tolerance policies are most often punitive in nature and communicate clear expectations for appropriate behavior and disciplinary action for teachers and students alike. Exclusionary discipline strategies are closely tied to zero-tolerance policies and are commonly used forms of discipline by teachers within the United States; over two million students received a suspension in the 2017-2018 academic year (Office of Civil Rights, 2022).

Exclusionary discipline refers to disciplinary measures that remove the student from the learning environment, such as in-school suspension (ISS), out-of-school suspension (OSS), expulsion, and office disciplinary referrals (ODRs; Gagnon et al., 2017). Some research also includes corporal punishment and changes in classroom placement as forms of exclusionary discipline, although these are not as commonly discussed (Gagnon et al., 2017). Exclusionary discipline strategies are implemented in response to a variety of student behaviors, including

defiance, verbal or physical aggression, and truancy (Bradshaw et al., 2010; Gagnon et al., 2017).

Excluding disruptive students from class seems like a logical way to simultaneously eliminate the disruptions while impressing upon students the importance of appropriate conduct. Zero tolerance policies, in line with this rationale, have been largely implemented in schools for over 20 years, especially after Congress passed the Gun-Free Schools Act of 1994. After that time, there were no fewer than 75% of schools with zero-tolerance policies related to violence, tobacco, alcohol, drugs, and weapons, with some estimates reaching 90% (Mallet, 2016). However, there is little data to support the effectiveness of such policies and practices since their implementation (APA Task Force, 2008). This approach to discipline is more problematic, particularly in light of recent research investigating associations between exclusionary discipline and important student outcomes. Some of these findings are discussed below, highlighting areas in which exclusionary discipline is linked with negative student outcomes.

Outcomes of Exclusionary Discipline

The cascade effect of exclusionary discipline leading to multiple and sometimes increasingly negative outcomes is attributed to the use of zero-tolerance discipline strategies, described above (Mallet, 2016; Novak, 2018; Skiba et al., 2014). Students who experience exclusionary discipline are more at risk for future involvement with the juvenile justice system (Skiba et al., 2014). The research about this so-called "cascade" is extensive as researchers investigate the associations between multiple student characteristics and behaviors, instances of exclusionary discipline, and future criminal involvement. The apparent association between exclusionary discipline, especially suspension and expulsion, and criminal activity is frequently

referred to as the "School-to-Prison Pipeline", or STPP (Mowen & Brent, 2016; Skiba et al., 2014).

The School-to-Prison Pipeline is a construct which describes the contribution of school policies and practice to youth involvement with the criminal justice system (Allen and White-Smith, 2014; Barnes and Motz, 2018; Mallet, 2016; Skiba et al., 2014). The term was first published at a conference in the United States in 2003 and has since gained much wider recognition across areas of study (Crawley & Hirschfield, 2020). Mallet (2016) describes it as a "partnership" between court and schools, evolving over the past 20-30 years. The establishment of the STPP is considered, in part, the unintended consequence of increased federal support for strict school policies against student misbehavior throughout the 1980s and 1990s (Mallet, 2016). For example, the Gun-Free Schools Act in 1994 was passed to decrease student violence and drug use (Mallet, 2016). Unfortunately, these efforts had a substantial side effect, increasing student exposure to exclusionary discipline in schools and parallel consequences within the justice system. The STPP model is further complicated by consideration of systemic bias against marginalized characteristics, such as student race and socioeconomic status (SES), as part of the pathway between initial discipline and criminal involvement. The result is a theoretical model representative of the long-term, negative effects of exclusionary discipline on student well-being.

Within the context of a larger discussion on student-teacher relationships, classroom management, and discipline, the school-to-prison pipeline is too large a construct to fully detail here. However, it is a useful framework for understanding the nature of the connection between exclusionary discipline and student outcomes. Discipline strategies are considered the catalyst for entry to the STPP, so the subsequent paragraphs serve as a closer look at that entry point, contradicting traditional thinking surrounding the usefulness of exclusionary practices in schools.

Exclusionary discipline strategies, while effectively removing disruptions in the short term, tend to have negative effects on the students receiving the discipline and rarely improves behavior over the long-term (Bradshaw et al., 2010; Gagnon et al. 2017; Lee et al., 2011). Exclusionary discipline increases the odds of certain negative outcomes, such as arrest, by over 100% (Mowen & Brent, 2016). Additionally, not all disciplinary strategies are equally associated with student outcomes. Generally, the more severe the consequence, the more detrimental it is for the student (Anderson et al., 2019).

Office Discipline Referrals (ODRs)

Office discipline referrals, or ODRs, are considered a less severe form of exclusionary discipline than suspension or expulsion. An ODR accomplishes the goal of removing the student from the classroom but does not necessarily result in formal discipline; sometimes, it acts as a "break" or "cool down" for the student. However, even removing a student from their class for 20 minutes has negative implications for his/her future. For example, office discipline referrals are related to an increased risk for truancy, suspension, and school failure (Morrison & Skiba, 2001; Skiba et al., 2014;). The more students are excluded from the classroom, the more likely they are to receive subsequent disciplinary action and be at risk for academic failure. ODRs are a less severe form of exclusionary discipline than other strategies but still meet the essential criterion: removing the student from the classroom for a period of time and thus removing an opportunity for learning.

Suspension

While ODRs are a commonly used and short-term form of exclusionary discipline, suspension is perhaps the most well-known exclusionary discipline strategy used in school. Suspension includes both in school suspension (ISS), wherein students attend the school building

but are isolated from their peers and the classroom and are expected to work independently, and out of school suspension (OSS), when students are barred from attending school for a set number of days.

Overall, students who experience suspension tend to have lower reading and math achievement, have lower school bonding, and are more likely to engage in substance abuse, all of which increase the risk of criminal involvement (Morgan et al., 2019; Yang et al., 2018). Meta-analyses by Noltemeyer et al. (2015) and Gerlinger et al. (2021) corroborate these findings. Results indicate that suspension predicts lower academic achievement, increased likelihood of grade retention, and school drop-out (Gerlinger et al., 2021; Noltemeyer et al., 2015). Noltemeyer and colleagues (2015) examined the results of 34 studies, specifically investigating the degree to which school suspension is associated with student academic outcomes and dropout. They found significant, inverse relationships between both ISS and OSS, and academic achievement (Noltemeyer et al., 2015). More recently, Gerlinger et al. (2021) examined results of 40 studies researching the association between exclusionary discipline and delinquent outcomes. Across these studies, students who experienced exclusionary discipline were significantly more likely to be involved in delinquent behaviors and criminal justice involvement (Gerlinger et al., 2021). Additionally, suspension has been seen to have a cumulative effect - for each additional suspension received over a three-year time period, students were significantly more likely to be arrested (Mowen & Brent, 2016).

However, ISS and OSS are not interchangeable; there are slight differences in how they relate to student outcomes. For example, both ISS and OSS are negatively related to student academic performance (Anderson et al., 2019; Noltemeyer et al., 2015). Regardless of infraction, if a student receives suspension, their academic performance is likely to drop (Noltemeyer et al.., 2015). However, the degree to which their performance declines varies between ISS and OSS

(Anderson et al., 2019). OSS tends to predict a greater decline in academic performance than ISS, perhaps because students attending ISS may complete schoolwork while those who are completely excluded from the school building may pursue other activities during their suspension.

Regarding achievement, student performance declines in multiple areas after being suspended, including math and ELA. (Lacoe & Steinberg, 2019). Performance on state-level exams also tends to suffer, regardless of infraction (Anderson et al., 2019). There are several important conclusions in response to such evidence. First, suspensions predict negative academic outcomes for students, regardless of infraction. So, whether a student engaged in dangerous behavior or the school utilizes a zero-tolerance policy for less egregious behaviors, their academic standing is likely to suffer. Second, state exam performance tends to be a benchmark of success for teachers and school administrators. Given the meaningful relationship between suspension and academic achievement, it is important that schools examine more closely why and how they assign this consequence.

Additionally, suspension significantly predicts not only academic decline but negative trends for other important aspects of school success, such as school bonding and attendance (Lacoe & Steinberg, 2019; Lee, et al., 2011; Morgan et al., 2019). Student attendance and engagement at school is an integral part of student development and success (Quin, 2019). That such a commonly utilized discipline strategy (suspension) not only inhibits a student from engaging in the learning material through mandated exclusion but also may damage the relationship he or she has with teachers and peers is a matter of significant concern. In short, suspension may remove perceived and real threats from the classroom for a short time but in turn increases the likelihood of overall school decline for the punished student instead of remediating behavior or reintegrating them into the learning environment.

Disproportionality in Discipline

Within the framework of the STPP, minoritized status plays a large role in predicting who is funneled into this trajectory from discipline to arrest. Notably, race is closely associated with the likelihood of experiencing exclusionary discipline, the first stop within the STPP. Not only do these exclusionary measures increase the probability of several negative outcomes, they affect students disproportionately. For example, racially minoritized students experience exclusionary discipline significantly more often and to a more extreme extent than their majority counterparts (Bradshaw et al., 2010; Gagnon et al., 2017; Girvan et al., 2017; Vincent et al., 2012). Most research identifies the disproportionate representation of African American students within disciplinary data, although other minoritized groups, such as Latino and Native American students, also tend to be over-represented (Anyon et al., 2014; Welsh & Little, 2018). Further, a smaller section of research literature regarding school discipline has found evidence that students belonging to other minoritized groups, such as the LGBTQ+ community, a non-dominant religion, or students with disabilities also experience disproportionate rates of disciplinary action (Welch & Payne, 2018; Whitford, 2017). So, not only do exclusionary discipline measures increase the likelihood of negative student outcomes, they do so in such a way as to further disenfranchise marginalized students.

This problem is not unique to one kind of disciplinary practice. For example, researchers Girvan and colleagues (2017) were especially interested in investigating the variables involved in disproportionate representation of African American students receiving office discipline referrals. Their research focused on determining if any racial disparities between White and non-White students were attributable to subjective ODRs, meaning referrals were made based on teacher discretion rather than school policy, or not. According to Girvan et al.'s (2017) findings,

racial disparities in office discipline referrals can be attributed more to subjective referrals (e.g., defiance), where the teacher makes a judgment call, than objective referrals (e.g., truancy). Their research highlights a vital consideration in discrepant discipline: teachers likely demonstrate implicit bias when enforcing discipline against minoritized groups, African Americans in particular (Girvan, 2017). However, it is important to emphasize again that minoritized groups, in general, receive disproportionate amounts of discipline compared to their majority counterparts.

Students with Disabilities

In addition to racially minoritized students, students classified with an educational disability are disciplined above and beyond their non-classified peers (Mendoza et al., 2020; Vincent & Tobin, 2012; Whitford, 2017). Students with disabilities are more likely to receive multiple forms of exclusionary discipline overall, including office discipline referrals, suspension, and being referred to alternative education (Vincent & Tobin, 2012). For example, Losen and Gillespie (2012) suggest that nationally, 15% of students with disabilities are suspended at least once, compared to an estimated 7% of non-classified students. This is concerning, especially given that students covered under the Individuals with Disabilities Education Act (IDEA) are provided additional protections from disciplinary action (Landrum et al., 2014). Not only are students with disabilities more often subjected to exclusionary discipline measures at school, they are more likely to come into contact with the juvenile justice system (Mendoza et al., 2020; Morris & Morris, 2006). Mendoza et al. (2020) assert that students with disabilities comprise 30% to 60% of youth involved with the justice system.

Additionally, not all students with disabilities experience discipline at the same rates (Sullivan et al., 2014). In some ways, this makes intuitive sense. Special education classifications

cover a diverse group of disabilities and learning challenges; some disabilities are more behaviorally based (e.g., Emotional Disturbance) while others indicate the result of an injury (e.g., Traumatic Brain Injury). However, the differences are stark. Sullivan et al. (2014) found that students classified with an Emotional Disturbance (ED) were nine times more likely to be suspended than students classified with a Speech/Language Impairment or a low incidence disability (e.g., Autism). Additionally, students classified with an Other Health Impairment also tend to be suspended more frequently than non-classified *and* other classified students (Sullivan et al., 2014).

Further evidence suggests slightly lower, but still concerning, rates of disproportionality between students with and without disabilities (Mendoza et al., 2020). According to Mendoza and colleagues (2020), students classified with an Emotional Disturbance are 2.7 times more likely to be suspended, while students with a Learning Disability (LD) are 1.4 times more likely to be suspended than their non-classified peers. The overall trend is clear. Students with special education classifications are significantly more likely to experience exclusionary discipline, such as suspension, than their non-classified peers, despite receiving additional protection through federal legislature (IDEA, 2004). Increased rates of discipline subsequently put these students at risk for involvement with the juvenile justice system (Landrum et al., 2014; Mendoza et al., 2020) and thus, the STPP.

Landrum et al. (2014) suggest that the most effective way to intervene with this problem is through preventive efforts. But, to successfully implement preventive efforts, school systems and personnel must identify meaningful points of intervention. Otherwise, schools risk wasting critical time and funds on interventions unlikely to succeed. The following section describes one

well-known option for school systems, highlighting strengths and weaknesses of the intervention.

Proposed Alternatives

While exclusionary discipline policies continue to be enacted within classrooms across the United States, their negative effects have not gone unnoticed over the past 10-20 years. Educators and psychologists have developed intervention strategies designed, in part, to reduce the use of punitive discipline in schools. One of these intervention programs is well known: Positive Behavioral Interventions and Supports, or PBIS. PBIS is a system of well-designed supports implemented to promote positive student behavior, improved academic achievement, and a more positive school climate (Noltemeyer et al., 2019). Additionally, PBIS can be implemented at varying levels of intensity, or tiers, allowing schools to provide school-wide support as well as individualized, intensive interventions.

Outcomes associated with PBIS are generally positive, including improved student prosocial behavior and teacher feelings of efficacy (Noltemeyer et al., 2019). Rather than utilize reactive measures in response to student misbehavior, PBIS focuses on changing elements of the environment to prevent misbehavior before it occurs (Ferrell & Crosby-Cooper, 2019). Compared to the reactive style of exclusionary discipline and the associated negative outcomes, PBIS appears to be a viable and effective alternative. Indeed, researchers have found that when implemented with fidelity, PBIS is associated with significant decreases in suspensions and disciplinary referrals and higher academic achievement (Noltemeyer et al., 2019). Furthermore, there is some evidence for a decrease in disproportionate discipline practice in schools implementing PBIS (Greflund et al., 2014). In Greflund and colleagues' (2014) study, aboriginal students were no more likely to receive an office discipline referral than their peers when the

school implemented PBIS. This is encouraging news for schools wishing to address both overall disciplinary action and the ethical dilemma of disproportionality.

However, PBIS is not without its pitfalls. Implementation fidelity is difficult, as it requires wholehearted dedication to substituting reactive punishment with proactive positive reinforcement or praise. This is in sharp contrast to more traditional methods of teaching and classroom management. Additionally, there is mixed evidence regarding some aspects of PBIS effectiveness. For one, there are mixed results regarding the positive impact of PBIS on academic achievement (Noltemeyer et al., 2019). More important to this discussion, however, is the continued presence of disproportionality in discipline. PBIS strongly encourages creating a school climate based on culturally accepted prosocial behaviors but may not fully acknowledge variations in prosocial behaviors found among cultures, abilities, and genders (Ferrell & Crosby-Cooper, 2019). Additionally, many studies lack the methodological rigor to examine both a decrease in suspension *and* a decrease in disproportionality within the same study.

Positive Behavioral Interventions and Supports are one encouraging avenue for schools' efforts to address the problem of exclusionary discipline and disproportionality. However, continued research and implementation improvements are needed. The continued presence of exclusionary, disproportionate discipline in schools also necessitates the ongoing investigation of related factors and potential points of intervention. Fortunately, student-teacher relationships may fit into both categories.

Gaps in the Literature

Current research emphasizes the importance of using proactive, relational strategies in classrooms to promote positive school climate (Kwok, 2019; Noltemeyer et al., 2019). Additionally, there is ample research supporting the impact of student-teacher relationship

qualities on student outcomes (Roorda et al., 2014; Timmermans et al., 2019; and more). However, there is a notable lack of research in keys areas of student success. First, while there is extensive research regarding proactive behavioral classroom management strategies (Kwok, 2019; Reupert & Woodcock, 2010), there is a notable absence of research about relational strategies, or methods dependent of student-teacher relationship quality.

Additionally, the extensive research identifying the negative effects of exclusionary discipline methods include both predictors of ED (e.g., race, gender identity) and outcomes (e.g., criminal involvement, truancy) does not include consideration of relationships between students and teachers. Given the importance of such relationships on myriad other student outcomes, this absence is puzzling. There are a select few studies, and only one to this writer's knowledge, that do bridge the gap between student-teacher relationships and discipline: that of Gallagher et al., (2019).

Gallagher et al. (2019) examined the associations between several factors already discussed in this paper, including behavioral/emotional problems, office disciplinary referrals (ODRs), and student-teacher relationships. Using a survey design to collect data from public school districts, Gallagher et al. (2019) analyzed the associations between the factors of interest using logistic regression. They found that behavioral/emotional problems and student-teacher relationships significantly predicted the likelihood of a student receiving an ODR, while controlling for race, grade, and gender. First, behavioral/emotional problems shared a significant positive relationship with ODRs, while positive student-teacher relationships were negatively related to ODRs (Gallagher et al., 2019). Of note, as the level of student-teacher relationships increased by one unit (more positive), the chances of a student receiving an ODR decreased by 20% (Gallagher et al., 2019).

Additionally, Gallagher et al. (2019) observed a significant interaction effect between behavioral/emotional problems and student-teacher relationships on ODRs. This effect indicated that positive student-teacher relationships shared a weaker association with ODRs for students with high levels of behavioral/emotional problems, compared to their peers with fewer behavioral concerns (Gallagher et al., 2019). This study best represents the logical conclusions and goal of the current study, as it integrates two separate fields of study, student-teacher relationships and exclusionary discipline, while accounting for additional variables important in both (student behavior).

Purpose of Study

Given the evidence that student-teacher relationship quality is integral to positive student outcomes in school combined with the importance of proactive teacher management strategies in lieu of exclusionary measures, opportunities for preventive relational interventions should be established. Existing solutions include PBIS, which shows promise for improving student connectedness to schools while decreasing rates of suspension and other negative outcomes. However, it is not directly focused on student-teacher relationships or addressing the disparities in discipline practices between minoritized and majority student groups. Student-teacher relationships could be a preliminary indicator for future ODRs. To address that need, there must be evidentiary support of a meaningful association between student-teacher relationships and disciplinary outcomes. This research will build on the findings of Gallagher et al., (2019) using Pianta et al.'s (2003) theoretical model of student-teacher relationships in association with exclusionary discipline data to further the pursuit of finding meaningful alternatives to reactionary management strategies and promote student success. This study will obtain teacher perspectives on student-teacher relationship quality and instances of exclusionary discipline to

assess whether a meaningful association exists between these two factors, with consideration for individual characteristics. In addition, this research will examine whether noted variables such as behavior and special education classification mediate any association between STR quality and ED.

Research Questions and Hypotheses

The focus of this study was to investigate the association between student-teacher relationship quality and instances of exclusionary discipline in elementary classrooms. This research integrated the literature regarding student-teacher relationships and disciplinary practices in a new way. It also presented an opportunity for new insight and future research directions. The following research questions and hypotheses guided this study, informing its research design and statistical analysis.

Research Questions

1. What is the relationship between student-teacher relationship closeness and office discipline referrals?

2. What is the relationship between student-teacher relationship conflict and office discipline referrals?

3. Does special educational classification status moderate the association between student-teacher relationship closeness and office discipline referrals?

4. Does special educational classification status moderate the association between student-teacher relationship conflict and office discipline referrals?

Hypotheses

Regarding question 1, I hypothesized that relationships with high levels of closeness would be inversely related to rates of office discipline referrals, meaning that closer relationships would be associated with a lower probability of receiving discipline referrals.

Regarding question 2, I hypothesized that relationships with high levels of conflict would positively predict office discipline referrals, such that higher levels of conflict increased the likelihood of receiving a discipline referral. These hypotheses were based on background literature supporting similar associations between student-teacher relationships and other outcome variables (Hosan & Hoglund, 2017; Jerome et al., 2009; Pianta et al., 2003; Roorda & Koomen, 2021).

For question 3, I hypothesized that the association between student-teacher relationship closeness and office discipline referrals would be moderated by special education classification, such that having an IEP would weaken the association between student-teacher closeness and office discipline referrals. This hypothesis was based on the extensive research supporting the significant role of minoritized status, such as special education classification, in the School-to-Prison Pipeline, of which a large part is exclusionary discipline (Crawley & Hirschfield, 2018; Martinez et al., 2016; Sullivan et al., 2014).

Finally, for question 4, I hypothesized that the association between student-teacher relationship conflict and office discipline referrals would be moderated by special education classification, such that the influence of special education classification would increase the predictive strength of STR conflict on the probability of receiving an ODR. This hypothesis was based on the extensive research supporting the role of minoritized status, such as special education classification, in the School-to-Prison Pipeline, of which a large part is exclusionary discipline (Crawley & Hirschfield, 2018; Martinez et al., 2016; Sullivan et al., 2014).

CHAPTER III: RESEARCH METHODS

To address the questions highlighted in the previous chapter, I utilized a cross-sectional survey design adapted from Gallagher et al.'s (2019) study. The design enabled me to gather information from teachers regarding the quality of their interactions with students and their use of exclusionary discipline in a streamlined manner while obtaining valuable information. Subsequently, I analyzed the data to describe the relationship between student-teacher relationship quality and discipline, as well as the potential influence of special education classification.

Participants

I recruited teachers teaching grades 3-5, from a public school district in Western New York. This district was primarily White (88%). Fourteen percent of the student population are considered economically disadvantaged and approximately 13% of students have disabilities (New York State Education Department [NYSED], 2022). Teachers provided data regarding 10 students in their class (approximately half the class). The study had a particular focus on the impact of exclusionary discipline on students with disabilities, necessitating an educationally diverse sample. The participating school district utilized an integrated co-teaching model, meaning that most students with disabilities were integrated in general education classrooms. Additionally, students in grades 3-5 represented a balance between maintaining the integrity of the measures utilized in the study and collecting meaningful data regarding discipline referrals.

The student sample for this study was primarily White (91.7%), with a small minority of non-White students (9.3%), and was evenly split between boys (49.3%) and girls (51.7%). 10.3% of students had a special education classification. This student sample was representative of the district as a whole, based on NYSED data.

Procedure

Recruitment

Participants were recruited using a non-random, convenience sampling procedure. The school district administrators were contacted to gauge interest and willingness to participate in my study. Once approval from the school district was obtained, I contacted 3rd-5th grade teachers in that district from two different schools with information regarding the study and its requirements. After identifying participating teachers and classrooms, teachers received three items - a letter of informed consent, an instruction page describing their participation in the survey with associated guidelines for completion, and the survey packets. The consent form outlined the purpose and estimated time required to complete the study (1-2 hours). Teachers willing to participate signed the consent form, completed the packet of surveys, and returned to the researcher in person. Teachers were asked to provide responses for 10 of their students, selected by last name from either the beginning or end of the alphabet.

Sample Size

To determine the necessary sample size for this study, I conducted an a priori sample calculator using the G*Power program to estimate how many participants are necessary for a multiple logistic regression analysis with a moderate effect size of .5. Previous research by Gallagher et al. (2019) did not report an effect size, so a moderate effect size was chosen to represent the minimally-sized result of theoretical interest. The results of the a priori calculation indicated a sample size of 58 participants would be necessary to achieve a power of 0.8 (alpha error probability = 0.05). Therefore, my goal was to obtain a sample size of at least 58 student participants between 3rd, 4th, and 5th-grade classrooms. After the study concluded, a total of 14 teachers provide data regarding 140 students, well above the minimum threshold.

Data Collection

After the student sample was identified, I provided participating teachers with a packet of questionnaires. Each questionnaire included the identification number coding each student's identity, student demographic items, the Student-Teacher Relationship Scale-Short Form, and questions regarding office discipline referrals. The survey was 22 total items. Student information was protected using a unique code for each individual, respectively, in lieu of their name. This allowed student and teacher identities to remain anonymous while providing meaningful information (e.g., age, race, grade, years of experience). Teachers were instructed to provide information regarding all participating students within three weeks of receiving the packet of questionnaires, with a reminder message sent out after one week. After two weeks, the researcher contacted teachers in person to answer any questions or concerns regarding completing the surveys. After teachers completed their questionnaire packet, their participation in the study was complete. Completed questionnaire packets were collected and entered into a spreadsheet for data analysis.

Measures

Demographic Information

Teachers. Teachers provided personal and student background information as part of the overall survey. Teachers provided background information for themselves regarding race, sex, and years of experience. They also provided student demographic information as recorded on a district-wide database. Demographic variables were coded as follows: Race was reported using standard terms (e.g., Asian, African American/Black, White) and was categorized using these terms. For data analysis purposes, race was coded as a dichotomous variable - White (0) and

Non-White (1). Sex was measured as a dichotomous variable - male (0) and female (1). Grade level was measured as a categorical variable.

Students. Students, while the subjects of this study, were not active participants in this study. Student data was collected via their teachers, who had access to all necessary information via a school-wide information system (e.g., PowerSchool) and the student's Individualized Education Plan (IEP), as necessary. Student information included race and sex, coded in the same way as teacher variables. Special education classification was reported using standard New York State Education Department terms (e.g., Other Health Impairment, Learning Disability, etc.) and subsequently coded using a dichotomous variable - non-classified student (0) and classified student (1).

Student-Teacher Relationship Quality

Student-teacher relationship quality was measured using a rating scale developed by Robert Pianta (2001) called the Student-Teacher Relationship Scale. This scale was chosen in lieu of the questions used by Gallagher et al. (2019) due to its well-established theoretical basis and psychometric strength. It is administered to teachers, who rate their interactions with a student based on a series of 5-point Likert scale items. These items load into three domains of relationship quality: Closeness, Conflict, and Dependency; and an overall score. The original scale was developed in 1991 by Pianta and Nimetz with three domains: Secure, Improved, and Dependent. This scale was later modified and updated, resulting in the current Student-Teacher Relationship Scale.

The STRS has adequate psychometric strength. Exploratory factor analysis revealed three primary domains, subsequently named Conflict, Closeness, and Dependency (Pianta, 2001). These domains account for 48.8% of the variance in responses. The internal consistency within

the three domains ranges from .64 - .92, using Cronbach's alpha (Pianta, 2001). Additionally, the overall test-retest reliability, using a four-week window, is .89 (Pianta, 2001). Subsequent statistical analysis of the STRS supports the psychometric properties of the three primary domains and overall scores (Koomen et al., 2012).

For the purposes of this study, I am using the short form of the STRS (STRS-SF), which consists of 15 items, with one reverse-scored question. Additionally, the STRS-SF eliminates items from the statistically weakest domain, Dependency (Pianta, 2001), while maintaining those which comprise Closeness and Conflict scales. These items are identical to those on the long-form and therefore maintain the same psychometric strength, described below.

Closeness. The Closeness subscale on the STRS has sufficient internal consistency and test-retest reliability, with a reported coefficient of .86 (Koomen et al., 2012; Pianta, 2001). Reliability statistics were similar between boys and girls in the sample, as well as between children of different races/ethnicities (Pianta, 2001). The Closeness scale also demonstrates good construct validity, explaining 12.9% of the total variance in scores (eigenvalue of 3.73; Pianta, 2001). Overall, the Closeness scale of the STRS has good reliability and validity.

Conflict. The Conflict subscale on the STRS has good internal consistency and test-retest reliability. It also accounts for the highest amount of variance (29.8%) among participant responses of the three subscales, with an eigenvalue of 8.63 (Pianta, 2001). The internal consistency of this subscale using Cronbach's alpha, is .86, while the four-week test-retest reliability is .92 (Pianta, 2001). Additional psychometric analysis of the Conflict subscale corroborates its statistical strength, revealing a good internal consistency coefficient of .90 (Koomen et al., 2012). Overall, the Conflict subscale of the STRS has good internal and test-retest reliability.

Office Discipline Referrals

Office discipline referral (ODR) data has been collected in multiple ways across various studies (Bradshaw et al., 2010; Girvan et al., 2017; Lindsay & Hart, 2017; Martinez et al., 2016). The two primary methods used to collect ODR are through a school-wide information system (SWIS) (Bradshaw et al., 2010; Girvan et al., 2017; Martinez et al., 2016) and teacher report (Bradshaw et al., 2010). Both methods provide information regarding the frequency with which individual students have received an ODR. School-wide data also provides the total number of ODRs administered throughout a specific school or district.

ODRs can also be coded in different ways. For example, some researchers code School-Wide Information System (SWIS) data into multiple categories of ODRs to examine the nature of each ODR (e.g., major incident versus minor incident) (Bradshaw et al., 2010; Martinez et al., 2016). In contrast, ODRs can be considered a continuous variable, based on the frequency with which a student receives an ODR (Girvan et al., 2017). SWIS data could also be coded dichotomously, such that 0 indicates never having received an ODR and 1 indicates receiving 1 or more ODRs.

Dichotomous coding has been used to represent ODRs reported by teachers and districts (Bradshaw et al., 2010; Gallagher et al., 2019). Doing so reduces the risk of teacher memory error, which may be more likely when asking for a numeric value or the nature of a given student's ODR. For the purpose of this study, ODR frequency will be obtained by teacher reports rather than district personnel (as in Gallagher et al., 2019) to decrease the number of informants. Teachers were asked whether a student has received an ODR. If the student did, the teacher was then prompted to provide two additional pieces of information: 1) how many ODRs the student received, and 2) what behaviors precipitated the disciplinary action, via multiple choice. The

second follow-up question included the following reasons, pulled from the literature surrounding why teachers discipline students: defiance, disruption, disrespect, verbal/physical aggression, dress code violation, or property misuse (Irvin et al., 2000; McIntosh et al., 2009; PBIS, 2015; Tobin et al., 2000).

The above-mentioned style of questioning accomplished a few goals. First, it allowed teachers who have not administered ODRs to move more quickly through the questionnaire. Second, it allowed teachers to quickly identify major reasons for the discipline, or include their own. Additionally, including the reason for the referral gives due consideration to the role of student behavior in discipline practices. Gallagher et al. (2019) found a significant, but practically small, association between student behavior and ODRs, justifying its inclusion without creating a cumbersome survey. For analysis purposes, ODRs will be coded as a dichotomous variable such that 0 represents no ODRs and 1 indicates receiving one or more ODRs, as in Gallagher et al. (2019). The behavioral reason for discipline referral will be included in general qualitative considerations, but excluded from statistical analyses.

Moderators

Special Education Classification. Given extensive research supporting the disproportionate role of disability status in predicting discipline (Mendoza et al., 2020; Sullivan et al., 2014; Vincent & Tobin, 2011; Welsh & Little, 2018), special education classification status was included as a potential moderating variable. It was coded according to the standard categories identified on standard demographic forms, listed above. Due to the research identifying disability status as a key predictive factor in exclusionary discipline, students with a special education classification will be treated as a potential moderating variable in this study.

Data Analysis

The purpose of this study was to examine the association between student-teacher relationship quality and office discipline referrals. To do so, I conducted preliminary analyses of demographic/control variables, utilized multiple logistic regression to analyze my primary research questions and investigate the potential moderating role of special education classification between STR quality and discipline strategies.

CHAPTER IV: RESULTS

The goal of this research was to determine the presence of a significant association between student-teacher relationship quality, both closeness and conflict, and office discipline referrals. Further, this research investigated whether students with IEPs experience significantly different rates of ODRs compared to their peers, and whether relationship quality impacted these rates. These research questions are listed below:

1. What is the relationship between student-teacher relationship closeness and office discipline referrals?

2. What is the relationship between student-teacher relationship conflict and office discipline referrals?

3. Does special educational classification status moderate the association between student-teacher relationship closeness and office discipline referrals?

4. Does special educational classification status moderate the association between student-teacher relationship conflict and office discipline referrals?

Further, I hypothesized that student-teacher relationship closeness would be inversely related to ODRs, while student-teacher conflict would predict higher rates of ODRs. Finally, I hypothesized that for students with an IEP, closeness would have a lesser effect and conflict would have a stronger one when predicting office discipline referrals. These hypotheses are in line with previous research highlighting the significant predictive impact of disability status on discipline.

Data Collection and Analysis

Data collection occurred in June 2022. The researcher recruited teachers via in-person conversations or emails during the month prior to data collection. Of the 21 teachers approached,

14 agreed to participate in the study. All 14 teachers (100%) participated in the survey between June 2nd and 24th.

As surveys were returned by participants, they were examined for missing data. If missing data occurred, the researcher asked the responsible teacher to indicate their response. Two of the 14 teachers returned packets with incomplete responses. The missing responses were provided within one week of the original response date. When the data set was complete, it was entered into an SPSS spreadsheet according to the coding methods detailed above. After all the data were entered, the spreadsheet was reviewed for errors in coding prior to conducting any analyses. No teachers' responses were excluded from the final data analysis.

Sample Characteristics

Demographic characteristics of the respondents were examined. Table 3.1 summarizes this information. Most teachers self-identified as white ($n = 14$; 100%), female ($n = 12$; 85.7%) and reported working an average of 19.14 years as a teacher ($SD = 11.28$). Most students were identified as White ($n = 127$; 90.7%), with 4.3% identified as Asian, 2.1% identified as Hispanic or Latino, 2.1% identified as Multi-Racial, and 0.7% identified as Black or African American. 49.3% of students were reported as female ($n = 69$) with the remaining 50.7% reported as male ($n = 71$). Students were split evenly between the third ($n = 50$), fourth ($n = 40$), and fifth ($n = 50$) grades.

Table 1

Descriptive Statistics: Demographic Variables

Variable			Teacher				Student
	n	%	*M*	*SD*	Range	*n*	%
Race							
White	14	100				127	90.7
Asian						6	4.3
Black or African American						1	0.7
Hispanic or Latino						3	2.1
Multi-Racial						3	2.1
Sex							
Male	2	14.3				71	50.7
Female	12	85.7				69	49.3
Grade							
1	5	35.7				50	35.7
2	4	28.6				40	28.6
3	5	35.7				50	35.7
Years of Experience			19.14	11.28	1-35		

Descriptive Characteristics of Variables of Interest

Descriptive characteristics of the primary independent and dependent variables are summarized in Table 3.2. Of note, the average STRS Conflict score was 10.60 ($SD = 5.94$), but exhibited a large positive skew (skew = 2.16). Likewise, the average number of ODRs reported was less than one per student ($M = 0.50$, $SD = 1.93$), but were also positively skewed (skew = 7.88), ranging from 0 to 20. After recoding ODRs into a dichotomous variable, 118 students (84.3%) were in the "No ODRs" category and 22 students (15.7%) were in the "One or more ODRs" category. Out of the responses, 124 students (88.6%) fell into the "No IEP" category, while 16 students (11.4%) were reported to have an IEP.

Table 2

Descriptive Statistics: Variables of Interest

Variable	*n*	%	*M*	*SD*	Range	Skew
IEP Classification						
NO	124	88.6				
YES	16	11.4				
Office Discipline Referral			.50	1.929	0-20	7.884
NO	118	84.3				
YES	22	15.7				
ST Closeness [a]	140	100	32.19	6.634	12-40	-.770
ST Conflict	140	100	10.60	5.937	7-33	2.159

[a] "ST" stands for "Student-Teacher", as in scores from the Student-Teacher Relationship Scale (Pianta, 2001).

Preliminary Analyses

Bivariate correlations among the variables of interest are presented in Table 3.3. Note that the raw number of ODRs was used in calculating these correlations, rather than the recoded dichotomous values. As expected, the number of ODRs exhibited a positive relationship with student-teacher conflict ($r = .58$) and a negative relationship with student-teacher closeness ($r = -.18$). Meanwhile, student-teacher closeness and conflict had an inverse relationship ($r = -.29$). IEP Classification status was positively associated with student-teacher conflict ($r = .18$).

Table 3

Study Variables: Descriptive Statistics and Correlations

Variable	*n*	*M*	*SD*	1	2	3	4
1. ST Closeness [a]	140	32.19	6.63	-			
2. ST Conflict	140	10.60	5.94	-.29**	-		
3. IEP Classification	140	0.11	0.319	-.12*	.18*	-	
4. Office Discipline Referral	140	0.50	1.93	-.27**	.52**	.27**	-

[a] "ST" stands for "Student-Teacher", as in scores from the Student-Teacher Relationship Scale (Pianta, 2001).

* $p < .05$

** $p < .01$

Of note, there were systematic differences between raters in their reporting of student-teacher relationship quality. Three teachers rated their closeness to students significantly lower than the two highest average ratings *(F*[13, 126]= 3.794, *p* < .001). The difference in average ratings ranged from 1.13 to 1.67 standard deviations. Additionally, there was one teacher who provided significantly higher average ratings regarding student-teacher conflict than other teachers (*F*[13, 126] = 3.348, *p* < .001). The difference in average ratings ranged up to 1.83 standard deviations. These systemic differences were noted and considered when interpreting the limitations of the results.

Logistic Regression

Sequential logistic regression analyses were conducted to test my hypotheses regarding STR quality, ODRs, and IEP classification while controlling for student and teacher demographic variables. The results of the logistic regression analyses are provided in Tables 3.4 – 3.7. Control variables (i.e., teacher and student sex, student race, grade, teacher experience) were entered in Block One of each analysis. The overall model for Block One significantly predicted the office discipline referrals (omnibus X^2 = 16.054, *df* = 5, *p* = .007). This model accounted for 10.8-18.6% of the variance in ODRs, with 82.9% of ODRs accurately predicted. Of the control variables entered into this block, student sex was a significant predictor of ODRs such that male students were 15.1% more likely to receive an ODR than their female counterparts (*p* = .002). No other control variables were statistically significant.

Hypothesis One: STR Closeness. Two separate regression analyses were conducted to examine the roles of STR Closeness and Conflict independently. First, STR Closeness was entered into Block Two of the regression analysis. Block Two of the analysis added student-teacher closeness after controlling for the control variables in the first block. Overall, this model

was a significant improvement from the first model in predicting office discipline referrals

(omnibus $X^2 = 20.240$, $df = 6$, $p = .003$). This model accounted for 13.5 – 23.2% of the variance

in ODRs and accurately predicted 85.7% of the ODR occurrences. This was a moderate

improvement from Block One (10.8 – 19.6%). In this model, student-teacher closeness was a

significant predictor of ODRs ($p = .041$). Student-teacher relationship closeness is a significant

predictor of ODRs, supporting hypothesis 1.

Table 4

Logistic Regression: Student-Teacher Closeness and Office Discipline Referrals

Variable	B	p	Exp(B)	R^2 (Nagelkerke)	chi-square
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex**	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	4.238	.101	69.280		
Teacher Sex	-2.133*	.016	.118		
Teacher Grade	-.309	.417	.734		
Teacher Years of Experience	.010	.669	1.010		
Student Race	-.127	.883	.881		
Student Sex	-1.655*	.007	.191		
Student-Teacher Closeness	-.082*	.041	.922		
				.232	5.889

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

Hypothesis 2: STR Conflict. The second regression analysis included STR Conflict in Block Two of the analysis. This model was considered a good fit for the data (omnibus $X^2 = 51.300$, $df = 6$, $p < .001$). The model explained 30.7-52.8% of the variance in ODRs, a notable improvement from Block One. Student-teacher Conflict was significant predictor of ODRs by a factor of 1.299, meaning that for every one unit increase on the STRS Conflict scale, risk of receiving one or more ODRs increased by 129.9%. Therefore, the second hypothesis that student-teacher conflict increases the risk of receiving an ODR was supported.

Table 5

Logistic Regression: Student-Teacher Conflict and Office Discipline Referrals

Variable	B	p	Exp(B)	R^2 (Nagelkerke)	chi-square
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	-5.66*	.045	.003		
Teacher Sex	-.932	.330	.394		
Teacher Grade	-.642	.204	1.900		
Teacher Years of Experience	-.031	.299	.970		
Student Race	-.602	.568	.548		
Student Sex	-1.548*	.033	.213		
Student-Teacher Conflict	.262*	< .001	1.299		
				.528	11.067

* $p < .05$
**Males were coded as "0", Females coded as "1"

Hypothesis 3: STR Closeness and IEP Classification. Next, I examined the interaction between STR Closeness and IEP Classification when predicting Office Discipline Referrals. For this analysis, Block One included the control variables, Block Two included both STR Closeness and STR Conflict, and Block Three included the interaction term (STR Closeness and IEP Classification). This was done to investigate whether the predictive strength of either Closeness or Conflict changed when examined together.

Block Two of this regression was not considered a good fit for the data (omnibus X^2 = 51.313, df = 7, p < .001). STR Conflict remained a significant predictor of ODRs when STR Closeness was included, increasing a student's chance of receiving an ODR by a factor of 1.30 (p < .001). STR Closeness, however, was not a significant predictor of ODRs (p = .907). STR Closeness had negligible influence after controlling for the other variables, including STR Conflict.

Block Three of the first logistic regression analysis examined the interaction effects of STR Closeness and IEP classification. The model was considered a good fit for the data, significantly predicting office discipline referrals (omnibus X^2 = 51.719, df = 8, p < .001). Block Three accounted for 30.9 - 53.2% of the variance in ODRs. The interaction between STR Closeness and IEP Classification was non-significant (p = .542). These results do not support Hypothesis Three, which suggested that the presence of an IEP would significantly increase the chance of receiving an ODR. Rather, the data suggests that students with IEPs have a similar chance of receiving an ODR to their non-classified peers with similar levels of STR Closeness.

Table 6

Logistic Regression: Student-Teacher Conflict and Office Discipline Referrals

Variable	B	p	Exp(B)	R^2 (Nagelkerke)	chi-square
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	-5.66*	.045	.003		
Teacher Sex	-.932	.330	.394		
Teacher Grade	-.642	.204	1.900		
Teacher Years of Experience	-.031	.299	.970		
Student Race	-.602	.568	.548		
Student Sex	-1.548*	.033	.213		
Student-Teacher Conflict	.262*	< .001	1.299		
				.528	11.067

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

Hypothesis 4: STR Conflict and IEP Classification. Finally, I examined the interaction between STR Conflict and IEP Classification when predicting Office Discipline Referrals. For this analysis, Block One included the control variables, Block Two included both STR Closeness and STR Conflict, and Block Three included the interaction term (STR Conflict and IEP Classification). This was done to investigate whether the predictive strength of either Closeness or Conflict changed when examined together.

Block Two of this regression was identical to the previous interaction regression. It was not a good fit for the data and Student-Teacher Conflict was a significant predictor of Office Discipline Referrals by a factor of 1.30. Student-Teacher Closeness was not.

Finally, Block Three of the second logistic regression analysis examined the interaction effects of STR Conflict and IEP classification. The model was still considered a good fit for the data (omnibus $X^2 = 51.424$, df = 8, $p < .001$). Block Three accounted for 30.7 – 52.9% of the variance in ODRs. The interaction between STR Conflict and IEP Classification was non-significant ($p = .739$). These results do not support hypothesis 4, which suggested that the presence of an IEP would significantly increase the chance of receiving an ODR. Instead, these results indicate that students with IEPs have no significantly different chance than their non-classified peers in receiving an ODR.

Table 7

Logistic Regression: Student-Teacher Conflict and IEP Classification Interaction

Variable	B	p	Exp(B)	R^2 (Nagelkerke)	chi-square
Block 1					
Constant	.647	.727	1.911		
Teacher Sex	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	-5.968	.122	.003		
Teacher Sex**	-.884	.397	.413		
Teacher Grade	.516	.205	1.924		
Teacher Years of Experience	-.031	.296	.969		

Student Race***	-.608	.566	.544		
Student Sex	-1.570*	.037	.208		
Student-Teacher Closeness	.007	.907	1.302		
Student-Teacher Conflict	.264*	< .001	1.007		
				.528	51.313

Block 3

Constant	-6.103	.117	.002		
Teacher Sex	-.896	.393	.408		
Teacher Grade	.657	.205	1.929		
Teacher Years of Experience	-.030	.322	.970		
Student Race	-.345	.783	.708		
Student Sex	-1.563*	.038	.210		
Student-Teacher Closeness	.008	.895	1.008		
Student-Teacher Conflict	.271*	< .001	1.312		
Student-Teacher Conflict*IEP Classification	-.022	.734	.978		
				.529	51.424

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

CHAPTER V: DISCUSSSION

Researchers have long highlighted the detrimental effects of exclusionary discipline, especially for students of minoritized status (Bradshaw et al., 2010; Gagnon et al., 2017). Students of color, student with disabilities, and students from a low SES have been at higher risk to experience exclusionary discipline in schools, suffer lower academic achievement, and encounter the criminal justice system than their peers (Crawley & Hirschfield, 2020; Vincent & Tobin, 2012; Welch & Payne, 2018). There are many risk factors associated with involvement in the School to Prison Pipeline, many of which have been extensively researched. However, up until this point, there have been very few studies investigating the potential role of student-teacher relationship quality in risk of exclusionary discipline.

Some researchers have examined the associations between student-teacher relationships, student behavior, and exclusionary discipline (e.g., Gallagher et al., 2019), but have not explored the possibility of a direct correlation between relationship quality and discipline. This study aimed to fill that gap, examining the direct association between student-teacher relationships and exclusionary discipline practices, while also accounting for relevant demographic variables. In doing so, teachers were asked to rate their relationships with multiple students as well as indicate which students had been referred to the office. Responses were examined in hopes of establishing if relational closeness and conflict predicted changes in discipline risk. Further analyses explored the potential role of IEP classification within the model considering the disparities highlighted in research regarding the STPP (Mendoza et al., 2020, Whitford, 2017).

Results were mixed; some findings were as expected, while others were not. These findings are explained more in detail below, in addition to considerations for the limitations of the study design and implications for future research.

Relationship Quality and Discipline

STR Closeness as a Protective Factor

One of the first aims of the current research was to establish if there is a significant association between student-teacher relational closeness and exclusionary discipline (office discipline referrals). Based on previous research (Hosan & Hoglund, 2017; Jerome et al., 2009; Pianta et al., 2003; Roorda & Koomen, 2021), the first hypothesis predicted that higher levels of teacher reported student-teacher closeness would be associated with lower risk of receiving an Office Discipline Referral. This hypothesis was supported; when examined independently of student-teacher conflict, student-teacher closeness had a significant association with ODRs, with higher levels of STR Closeness decreasing the risk of receiving an ODR. This relationship suggests that when teachers perceive themselves to have close relationships with their students, they are less likely to send them to the office. The findings of this study suggest that in some capacity, student-teacher closeness may serve as a protective factor against exclusionary discipline. This reflects the findings of Zee et al. (2019) and Roorda et al. (2014), who identified significant associations between student-teacher closeness and achievement, respectively.

These results also align with previous literature by Pianta and colleagues (2003). Teachers who perceive a trusting, open relationship with their students may have greater empathy and understanding for these students when disruptive behaviors arise. This is also in line with attachment theory, which posits that students who feel safe around adults are better able to learn and explore their environments in healthy ways (Roorda et al., 2019). Based on both previous literature (Pianta et al., 2003, for example) and the current study, relational closeness may act as a protective factor for students, such that the closer their relationship with the teacher,

the less likely they are to be referred to the office and subsequently be at risk for involvement in the School-to-Prison Pipeline.

STR Conflict as a Risk Factor

The second aim of the current research was to investigate if there is a significant association between student-teacher relational conflict and ODRs. Based on previous research (Hosan & Hoglund, 2017; Jerome et al., 2009; Pianta et al., 2003; Roorda & Koomen, 2021). The second hypothesis predicted that higher levels of teacher reported student-teacher conflict would be associated with higher risk of receiving an Office Discipline Referral. When examined independently of student-teacher closeness, student-teacher conflict was significantly associated with ODRs, with higher levels of STR Conflict increasing the risk of receiving an Office Discipline Referral. This association suggests that when teachers experience more conflict with their students, they are more likely to send them to the office. Based on these findings, student-teacher conflict is a significant risk factor for exclusionary discipline.

The current study corresponds with several previous studies highlighting the negative predictive strength, or increased risk, of high levels of student-teacher conflict (Roorda et al., 2017; Zee et al., 2020). This assertion has a stronger research foundation than that of student-teacher closeness, thereby indicating a robust, research-based argument for the important role of student-teacher conflict in student success.

Importantly, when student-teacher closeness and student-teacher conflict were included in the same analysis, student-teacher closeness no longer shared a significant association with ODRs. Student-teacher conflict negated the predictive strength of student-teacher closeness. Instead of student-teacher closeness significantly predicting a decreased risk of receiving an ODR, student-teacher conflict predicted an increased risk of receiving an ODR. These results

suggest that when teachers perceive themselves to be in high levels of conflict with their students, they are significantly more likely to refer that student to the office compared to students with whom they have little conflict, regardless of relational closeness.

Conflict likely plays a more important role in a teacher's decision to refer a student than closeness, considering how including STR Conflict as a variable negated the predictive, and protective, strength of STR Closeness against ODRs. Conflict, too, is closely related to student behavioral concerns (Myers & Morris, 2009; Roorda et al., 2014), meaning that students with whom teachers experience high levels of conflict likely engage in disruptive behaviors. These behaviors can then contribute to a teacher's decision to refer students to the office. This sequence of events is what researchers describe as the entry point to the School-to-Prison Pipeline (Mowen & Brent, 2016). Unfortunately, the current study indicates that even for students with close relationships with their teachers, high levels of relational conflict increase the risk of receiving an ODR.

On a theoretical level, this study also supports the relevance of Pianta and colleagues' (2003) model of student-teacher relationships by establishing a meaningful association between that model and student outcomes (i.e., discipline). It also further confirms the different relevance of student-teacher closeness versus conflict suggested by Jerome et al. (2009) and Portilla et al. (2014), in that student-teacher conflict tends to be a stronger predictor of student outcomes than student-teacher closeness. However, the importance of fostering positive student-teacher relationships in school by minimizing conflict and promoting student-teacher closeness both remain vital for student success.

Classified Students' Relationship Quality and Discipline

The third and fourth aims of this research were to investigate the role of a specific risk factor, IEP Classification, in the overarching associations between student-teacher closeness and office discipline referrals, and student-teacher conflict and ODRs. There is ample evidence that students with disabilities are more likely to experience exclusionary discipline than their non-disabled peers (Losen & Gillespie, 2012; Vincent & Tobin, 2012). Minoritized students, including those with disabilities, are often subject to discrimination when it comes to school discipline. This discrimination can then contribute to a student following the pathway of the School-to-Prison Pipeline, becoming more and more likely to encounter the criminal justice system (Welch & Payne, 2018; Whitford, 2017).

However, the findings of this study appear to contradict these claims, as IEP classification did not significantly change the predictive strength of either student-teacher closeness or conflict regarding ODRs. Minoritized status did not significantly weaken or strengthen the associations between the student-teacher relationship qualities and exclusionary discipline. Instead, students with and without IEPs shared similar risks of being referred for an IEP when they had similar relationships with their teachers.

One possible explanation for these non-significant findings has a hopeful implication. IEP classification may not have impacted student risk of receiving an ODR because the participating teachers did not demonstrate bias in their reporting between students with and without IEPs. Instead, they referred students with and without IEPs at similar rates. This finding contradicts previous research highlighting the disproportionality of students with disabilities being disciplined (Whitford, 2017).

Additionally, given similar levels of relational conflict, teachers reported similar instances of ODRs between students with and without IEPs. Therefore, hypothesis 4 was not supported. Again, this is positive news; IEP classification did not significantly change the risk of receiving an ODR. These results suggest participating teachers demonstrated low levels of discipline bias between students with and without IEPs, despite the historical risk factor of disability status being a factor in discipline in previous research (Mendoza et al., 2020; Vincent & Tobin, 2012; Whitford, 2017).

A potential reason for these findings is that students with IEPs typically have protections designed to mitigate the risk of disproportionality in discipline. It is possible that the participating teachers are aware of these protections and are consequently cautious to refer a classified student, even if the teacher believes it appropriate. Given the design of the study and data gathered, there is no clear evidence to indicate *why* there was not a significant difference between students with and without IEPs.

Additional Findings

Beyond the research questions stated for this study, analyses revealed that males were roughly 15-20% more likely to receive an ODR than their female counterparts, all other factors equal (e.g., STR Closeness, STR Conflict). This association was present in all regression analyses. Previous studies have indicated that boys are more likely to be disciplined in schools than girls (Bradshaw, 2010), so this result is congruent with those studies.

Finally, given similar levels of closeness between teacher ratings, male teachers were 12% less likely to refer students than their female counterparts. This result was only significant in one regression analysis which only examined student-teacher closeness, suggesting it might be an anomaly. Additionally, there were significantly fewer male teacher participants compared to

female teachers, increasing the chance of statistical outliers related to teacher sex. The results are likely due to high variability in small sample size and likely have little generalizability outside the study itself.

Implications for Practice

The results of this study are important for educators for a few reasons. First, the current study summarized relevant literature regarding the impact of student-teacher relationship quality on numerous student outcomes. As a baseline, educators need to appreciate the importance of fostering high quality student-teacher relationships to promote the overall well-being of their students, including academic achievement, student engagement, and behaviors. These three areas are key factors for student success, supported by years of research. This study provides a concise discussion summarizing one way in which administrators and teachers can increase opportunities for holistic student success: build close, non-confrontational relationships with students.

Beyond a summary discussion of previous literature, this study provided fresh insight into the connect between teacher perceptions and decision-making. While causal statements are not applicable to this study, teacher's perceptions of their relationships with students were significant predictors of office discipline referrals. These referrals are often up to teacher discretion; one teacher's tolerance for classroom disruption may be different than another's. These differences were highlighted in the systemic differences in ratings between participants. These findings should encourage teachers to continue practicing self-reflection to assess how their interactions with students may be related to their disciplinary practices.

Additionally, educators should attend to the significance predictive strength of both student-teacher closeness and conflict. Relational closeness may be a protective factor against exclusionary discipline while closeness increases the risk of such experiences; teachers can

directly apply this information into their day-to-day practices. For example, educators may focus on minimizing conflict in their classroom while fostering a safe, secure environment for students. The findings of this study provide quantitative evidence that this may be an effective strategy for not only improving achievement and engagement, but for decreasing risk of discipline. Most importantly, this research proposes a *preventive* strategy educators can use to approach classroom management and disrupt the School-to-Prison Pipeline, rather than engaging in reactive efforts.

For school psychologists specifically, the implications of the current study related primarily to advocacy and intervention efforts. Some of the many responsibilities of school psychologists are data-based decision making, providing equitable services for students, and promoting safe and supportive environments for students (NASP Practice Model, 2020). As mentioned above, the current study is one of the first to provide quantitative support for improving student-teacher relationships to decrease risk of exclusionary discipline practices by establishing a direct relationship between the two variables. This study also included consideration of a diverse population, providing additional insight for school psychologists as they pursue equitable services for students with special education classifications. Mental health professionals can use the current study to remain mindful of the importance of unbiased relationship building and disciplinary practices.

Finally, school psychologists can use the findings of this research to inform their consultation with administrators and teachers while promoting safe and supportive school environments. School psychologists can advocate for building-level efforts to improve student-teacher relationship quality, especially at the elementary grades, based on evidence that doing so has implications for multiple areas of success: achievement, engagement, and now discipline

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practices, too. School psychologists can also integrate the current findings into their consultation on an individual level. Given that student-teacher conflict significantly increases risk of exclusionary discipline, school psychologists may consider suggesting specific strategies focused on minimizing power struggles for teachers struggling with conflict in their classrooms. More research is needed before drawing causal connections between relationship quality and discipline, but the current study emphasized the risks of student-teacher conflict and potential benefits of student-teacher closeness.

Research Limitations

This study was not perfect. For example, elements of the research design impacted the internal validity of the research design. First, Pianta et al. (2003) explicitly state that a student-teacher relationship is a dynamic construct made up of both teacher and student experiences. In this study, only the teacher perspective was obtained. This approach was a straightforward way to collect and analyze data, but it sacrificed a more complete profile of the student-teacher relationship. Additionally, the results may have been impacted by the response style of the teachers. Most notably, teachers tended to rate their relationships with students as very close and with minimal conflict. The measurement tool used (STRS Short Form) did not reveal much variation among the ratings. One explanation is that the school climate was positive, characterized by strong student-teacher relationships. Another, however, is that STR closeness ratings were impacted by a ceiling effect and analyses including student-teacher conflict were impacted by a basal effect. Future endeavors should consider using the full version of the Student-Teacher Rating Scale (Pianta, 2001) or another rating scale that would more accurately reflect the nuances in teacher ratings.

Second, teachers were asked to estimate the frequency of office discipline referrals for each student rather than obtaining exact information from official school records. These responses were then coded as a dichotomous variable for data analysis. While this approach was sufficient for a logistic regression analysis, dichotomizing the responses meant losing the exactitude of an analysis such as linear regression. Additionally, relying on teacher responses rather than school records may have introduced increased measurement error, simply because teachers may have under- or over-estimated the rates at which they referred students to the office.

Finally, this study was originally designed to include a measure of student behavior. A standardized behavior rating scale was considered but ruled out in favor of a succinct survey obtaining data essential to the research questions. No formal behavior rating scale was included in the teacher survey, negating the opportunity to accurately assess student behavior within the context of this research. Instead, disruptive behaviors were described by teachers for students who had been referred to the office. Such qualitative information might be interesting but had limited utility for the study itself. Since behavior is linked with both student-teacher relationships and exclusionary discipline (Gallagher et al., 2019; Roorda et al., 2014; Roorda & Koomen, 2021), it is possible the analytical model created is incomplete and therefore should be interpreted with caution.

The most notable threat to external validity in this study is the demographic profile of the sample. While most research examining the School-to-Prison Pipeline and disproportionate discipline is comprised of racially and socioeconomically diverse samples (Mowen & Brent, 2016; Skiba et al., 2014; Welch & Payne, 2018), this study was primarily White and from an upper middle class school district. All teachers and most students were White, suggesting the

results may not be generalizable to a racially diverse population. This study would be more appropriate to generalize to other upper middle class, primarily white school districts located in suburban areas. When districts are racially homogenous, data on office discipline referrals may not be directly comparable to other districts, which previous research has described as having high rates of discipline disproportionality (Anyon et al., 2014; Bradshaw et al., 2010). However, such districts can give rise to interesting research and findings regarding other forms of diversity, such as special education classification, and still merit further attention and research.

The current study established a starting point for future research. It created a replicable, straightforward design examining the direct association between student-teacher relationships and exclusionary discipline. This research study can function as a platform for future studies investigating additional variables (e.g., student behavior, student perceptions of relationship quality) and populations (e.g., different socioeconomic statuses, race, ages).

Implications for Research

Other researchers have examined student-teacher relationships in association with student behavior (Roorda, 2014), engagement (Zee et al., 2013), and achievement (Ansari et al., 2019). Researchers have also investigated other predictors of exclusionary discipline, such as race, sex, socioeconomic status, and special education status (Skiba et al., 2014; Welch & Payne, 2018). This study attempted to bridge these separate research areas and investigate the association between student-teacher relationships and exclusionary discipline. Given that both student-teacher conflict and closeness predicted differences in risk of office disciplinary referrals, further research is necessary to replicate these results and examine the variables in the larger context of the school to prison pipeline.

To build on the findings of this study, future researchers should include a reliable behavior rating scale. Previous researchers (e.g., Gerlinger et al., 2021; Roorda & Koomen, 2021) have identified student behavior as a predictor of ODRs *and* as associated with student-teacher relationship quality. The current study treated student behavior and ODRs as co-occurring instead of independent variables. Therefore, including a valid behavior rating scale would improve the current study design both by examining a more theoretically sound model and by discriminating between student classroom behavior and instances of office discipline referrals.

Additionally, research should expand to investigate similar variables with more diverse populations. The current study was limited to a primarily white, upper/middle class, suburban demographic, so replicating this study with populations from a broader racial and socioeconomic status would both increase the external validity of the implications and allow for more nuanced analysis of demographic variables such as race or SES.

Conclusion

This research was conducted to expand the current literature surrounding student-teacher relationships, exclusionary discipline, and the school-to-prison pipeline. Student-teacher conflict could be a significant risk factor for exclusionary discipline, and by extension, involvement in the school-to-prison pipeline. Additionally, student-teacher closeness may not serve as a strong enough protective factor to negate the risks of conflictual relationships in school. Extending the current research in a few ways could be beneficial for the current understanding of student-teacher relationships and exclusionary discipline. First, continuing research regarding these variables would deepen psychologists' understanding of the interplay between relationship quality and discipline, leading to more practical applications. This study was limited to one

sample with largely homogenous demographic characteristics; valuable insight might be gathered through surveying a more diverse population. Diverse demographics may include race, socioeconomic status, age, and special education classification status.

Secondly, teachers and school districts can be proactive in working to minimize relational conflict with students. Doing so may decrease instances of exclusionary discipline while also preventing entry to the school-to-prison pipeline. The detrimental effects of exclusionary discipline are various and disproportionately focused on minoritized students. Therefore, schools should also be especially cognizant of their treatment of these students. Lowering levels of relational conflict is one way to decrease risk for all students, including those of minoritized status and therefore, could be integrated into a Tier I, universal intervention.

In conclusion, the current research was a step in identifying additional meaningful predictors of exclusionary discipline (i.e., student-teacher relationships) that may, one day, be translated into practical, school-based intervention strategies specifically targeted at preventing students from entering the school-to-prison pipeline. This proactive perspective can guide future research endeavors to expand the literature in this area rather than engaging in reactionary, and often punitive, measures to conflict and discipline within schools.

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Tables

Table 1

Descriptive Statistics: Demographic Variables

Variable	Teacher					Student	
	n	%	*M*	*SD*	Range	*n*	%
Race							
White	14	100				127	90.7
Asian						6	4.3
Black or African American						1	0.7
Hispanic or Latino						3	2.1
Multi-Racial						3	2.1
Sex							
Male	2	14.3				71	50.7
Female	12	85.7				69	49.3
Grade							
1	5	35.7				50	35.7
2	4	28.6				40	28.6
3	5	35.7				50	35.7
Years of Experience			19.14	11.28	1-35		

Table 2

Descriptive Statistics: Variables of Interest

Variable	*n*	%	*M*	*SD*	Range	Skew
IEP Classification						
NO	124	88.6				
YES	16	11.4				
Office Discipline Referral			.50	1.929	0-20	7.884
NO	118	84.3				
YES	22	15.7				
ST Closeness [a]	140	100	32.19	6.634	12-40	-.770
ST Conflict	140	100	10.60	5.937	7-33	2.159

[a] "ST" stands for "Student-Teacher", as in scores from the Student-Teacher Relationship Scale (Pianta, 2001).

Table 3

Study Variables: Descriptive Statistics and Correlations

Variable	n	M	SD	1	2	3	4
1. ST Closeness [a]	140	32.19	6.63	-			
2. ST Conflict	140	10.60	5.94	-.29**	-		
3. IEP Classification	140	0.11	0.319	-.12*	.18*	-	
4. Office Discipline Referral	140	0.50	1.93	-.27**	.52**	.27**	-

[a] "ST" stands for "Student-Teacher", as in scores from the Student-Teacher Relationship Scale (Pianta, 2001).

* p < .05
** p < .01

Table 4

Logistic Regression: Student-Teacher Closeness and Office Discipline Referrals

Variable	*B*	*p*	Exp(B)	R^2 (Nagelkerke)	Chi-Squared
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	4.238	.101	69.280		
Teacher Sex	-2.133*	.016	.118		
Teacher Grade	-.309	.417	.734		
Teacher Years of Experience	.010	.669	1.010		
Student Race	-.127	.883	.881		
Student Sex	-1.655*	.007	.191		
Student-Teacher Closeness	-.082*	.041	.922		
				.232	5.889

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

Table 5

Logistic Regression: Student-Teacher Conflict and Office Discipline Referrals

Variable	*B*	*p*	Exp(B)	R² (Nagelkerke)	Chi-Squared
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	-5.66*	.045	.003		
Teacher Sex	-.932	.330	.394		
Teacher Grade	-.642	.204	1.900		
Teacher Years of Experience	-.031	.299	.970		
Student Race	-.602	.568	.548		
Student Sex	-1.548*	.033	.213		
Student-Teacher Conflict	.262*	< .001	1.299		
				.528	11.067

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

Table 6

Logistic Regression: Student-Teacher Conflict and Office Discipline Referrals

Variable	B	p	Exp(B)	R^2 (Nagelkerke)	Chi-Squared
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	-5.66*	.045	.003		
Teacher Sex	-.932	.330	.394		
Teacher Grade	-.642	.204	1.900		
Teacher Years of Experience	-.031	.299	.970		
Student Race	-.602	.568	.548		
Student Sex	-1.548*	.033	.213		
Student-Teacher Conflict	.262*	< .001	1.299		
				.528	11.067

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

Table 7

Logistic Regression: Student-Teacher Conflict and IEP Classification Interaction

Variable	B	p	Exp(B)	R^2 (Nagelkerke)	Chi-Squared
Block 1					
Constant	.647	.727	1.911		
Teacher Sex**	-1.50	.060	.223		
Teacher Grade	-.146	.686	.864		
Teacher Years of Experience	.009	.702	1.009		
Student Race***	-.121	.888	.88		
Student Sex	-1.891*	.002	.151		
				.186	4.758
Block 2					
Constant	-5.968	.122	.003		
Teacher Sex	-.884	.397	.413		
Teacher Grade	.516	.205	1.924		
Teacher Years of Experience	-.031	.296	.969		
Student Race	-.608	.566	.544		
Student Sex	-1.570*	.037	.208		
Student-Teacher Closeness	.007	.907	1.302		
Student-Teacher Conflict	.264*	< .001	1.007		
				.528	51.313
Block 3					
Constant	-6.103	.117	.002		
Teacher Sex	-.896	.393	.408		
Teacher Grade	.657	.205	1.929		
Teacher Years of Experience	-.030	.322	.970		
Student Race	-.345	.783	.708		
Student Sex	-1.563*	.038	.210		
Student-Teacher Closeness	.008	.895	1.008		

Student-Teacher Conflict	.271*	< .001	1.312		
Student-Teacher Conflict*IEP Classification	-.022	.734	.978		
				.529	51.424

* $p < .05$
**Males were coded as "0", Females coded as "1"
***White were coded "0", Non-White coded as "1"

Appendix A

Human Subjects Research Committee Approval Letter

Alfred University
COLLEGE OF LIBERAL ARTS & SCIENCES

607-871-2213   Saxon Drive, Alfred, NY 14802
www.alfred.edu

Human Subjects Research Committee

June 2, 2022

Renae Mellerski
91 Oakridge Drive, Apt #2
West Seneca, NY 14224

RE: HSRC Proposal 2022-014

Dear Mx. Mellerski,

On behalf of the Human Subjects Research Committee, I am writing to you in reference to your proposal, *The Association between student teacher relationship quality and exclusionary discipline* (#2022-014), which has been reviewed by the Human Subjects Research Committee (HSRC) at Alfred University under Federal-Wide Assurance ID IRB00007472 under IORG0006213 under the guidelines for the Ethical Treatment of Human Subjects in accordance with Common Rule 45 CFR 46, per the Office for Human Research Protections (OHRP; https://www.hhs.gov/ohrp/)**.**

Under **Expedited Review**, it was determined that this research presented no greater than minimal risk to subjects and was given **Exempt** status from all 45 CFR part 46 requirements, in accordance with Common Rule 45 CFR 46.104(d)(3), per the Office for Human Research Protections (OHRP; https://www.hhs.gov/ohrp/) for the following reason(s):

(i) The research involves benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal or written responses (including data entry) or audiovisual recording AND the information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

(ii) For the purpose of this provision, benign behavioral interventions are brief in duration, harmless, painless, not physically invasive, not likely to have a significant *adverse* lasting impact on the subjects, and the investigator has no reason to think the subjects will find the interventions offensive or embarrassing.

The Belmont Report's Principle of Respect for Persons necessitates that participants be given the opportunity to choose whether or not to participate in research. For this reason, voluntary informed consent should be obtained from participants for any exempt research where the investigator will be collecting data through interaction with participants.

Teacher Questionnaire

Teacher Code:_____   **Student Code: _____**

Part 3. Student-Teacher Interactions

Directions: Please reflect on the degree to which each of the following statements currently applies to your relationship with this student.

1 = Definitely does not apply
2 = Not really
3 = Neutral, not sure
4 = Applies somewhat
5 = Definitely applies

1. ___ I share an affectionate, warm relationship with this child.

2. ___ This child and I always seem to be struggling with each other.

3. ___ If upset, this child will seek comfort from me.

4. ___ This child is uncomfortable with physical affection or touch from me.

5. ___ This child values his/her relationship with me.

6. ___ When I praise this child, he/she beams with pride.

7. ___ This child spontaneously shares information about himself/herself.

8. ___ This child easily becomes angry at me.

9. ___ It is easy to be in tune with what this student is feeling.

10. ___ This child remains angry or is resistant after being disciplined.

11. ___ Dealing with this child drains my energy.

12. ___ When this child arrives in a bad mood, I know we're in for a long and difficult day.

13. ___ This child's feelings toward me can be unpredictable or can change suddenly.

14. ___ This child is sneaky or manipulative with me.

15. ___ This child openly shares his/her feelings and experiences with me.

Part 2. Behavior Management Strategies

1. In the past six months, have you sent this student out of the room due to their behavior?

   Please circle one: YES   NO

2. If YES, how many times? _____

3. In your perspective, what behavior(s) prompted your decision?

   - Physical Aggression
   - Inappropriate Language

- Defiance/Disrespect

- Tardy

- Dress Code

- Other _____

Part 3. Student Demographic Information

Student Demographic Information	
Race: ● American Indian or Native American ● Asian ● Black or African American ● Hispanic or Latino ● Native Hawaiian or Other Pacific Islander ● White ● Other _____	**Sex:** Male Female Other _____ **IEP or 504 Plan:** YES NO **If Yes, Classification:** _____

Appendix C

Teacher Consent Letter and Demographic Questionnaire

Dear Teacher,

My name is Renae Mellerski and I am a doctoral student in school psychology at Alfred University and an Intern with Clarence Central School District. I am conducting a research study to investigate the connection between student-teacher relationship quality and school discipline. I'm writing this letter to provide you with some information to help you decide if you would like to give your consent to participate in this research.

Important Information
As mentioned above, the purpose of my research is to examine the connection between student-teacher relationship quality and school discipline practices. If you provide your consent for this study, you agree to:
1. Send home parental informational forms with your students
2. Complete a brief, individual questionnaire regarding your interactions with each participating student
3. Help protect student identities by using the identification code on each consent form

The questionnaire takes about 10 minutes to complete. The total estimated time required to participate in this study is 2-3 hours, dependent on the number of participating students.

Risks and Benefits
There is minimal risk to participating in this study. The following are potential, though highly unlikely, risks:
1. Loss of confidentiality - your name and identifying information will be protected, but there is minimal risk that it could be shared.

Benefits of participating in this study include a chance to reflect on your interactions with your students, contributing to an important area of research, and gaining insight into your classroom's, and school's, discipline practices.

Confidentiality
Your name, identifying information, and responses will be anonymous to all but me, the researcher. Demographics and responses may be published via reports, presentations, or papers but will not be associated with your name or school district.

Voluntary Participation
Your participation is voluntary! If at any point, you desire to cease participation in this study, you may do so without repercussion.

Contact Information
If you have any questions or concerns about your participation in this study, please email me at rg12@alfred.edu, or contact Dr. Brad Daly at daly@alfred.edu. Additionally, if you have any concerns regarding your rights as a participant in this study, you are encouraged to contact Dr.

Daniell Gagne, Chair of the Alfred University Human Subjects Research Committee, at (607) 871-2213 or by email at HRSC@alfred.edu

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Teacher Consent

By signing below, I give consent for my demographic information and information regarding student-teacher interactions to be utilized for the purposes of the study outlined above. I have read and understood the purpose, risks and benefits, and confidentiality measures associated with this research and agree to provide the requested information to the best of my ability.

Teacher Name: _____

Teacher Signature: _____
Date: _____

Teacher Demographic Information	
Name: _____ **Race:** ● American Indian or Native American ● Asian ● Black or African American ● Hispanic or Latino ● Native Hawaiian or Other Pacific Islander ● White ● Other _____	**Sex:** Male Female Other _____ **Years Experience Teaching:** _____

Author Biography

Renae Mellerski is a certified school psychologist who works in the Buffalo, NY area. She has experience working with students kindergarten through college conducting psychoeducational assessments and providing mental health counseling. Additional experiences include adjunct teaching at Alfred State College and Alfred University as well as working with adults with significant mental health challenges. Renae is especially passionate about building relationships between schools, students, and families while using available resources to promote student growth and wellbeing.

Curriculum Vita

Renae Mellerski, MA
146 King Street, Apartment 2, East Aurora, NY, 14052
(717) 475-6550 ｜ rg12@alfred.edu

Education
2020-2023: Doctor of School Psychology
    Alfred University, Alfred, NY
2018-2020: Master of Arts, School Psychology
    Alfred University, Alfred, NY
2014-2017: Bachelor of Arts, Psychology/Applied, Pre-Therapy
    Houghton College, Houghton, NY

Professional Experience
East Aurora Union Free School District (2022-current) *School Psychologist*
- Practice the core duties of a school psychologist at the elementary level, including assessment, counseling, and consultation
- Chair Committee of Special Education meetings for elementary students, grades kindergarten through fourth grade

Clarence Central School District (2021-2022) *Doctoral Intern in School Psychology*
- Practice the core duties of a school psychologist, assessment, counseling, and consultation, under the supervision of Christine Berry-Krazmien, PhD, LP.
- Support students and teachers within the elementary and out-of-district schools using appropriate therapeutic techniques, standardized assessment tools, and collaboration.

Alfred University (2020-2021)
Adjunct Instructor, Department of Psychology
- Taught PSYC 471 - Child Psychopathology, covering the wide range of childhood mental disorders through a developmental, ecological lens.
- Wrote and implemented lesson plans, group activities, and assignments via virtual learning platforms (Zoom and Canvas).
Course Instructor, Center for Academic Success
- Taught UNIV 103, a course designed for students on academic probation to increase academic skill, motivation, and overall collegiate performance.
- Utilized multiple platforms, including Canvas, Microsoft Teams, and Zoom to facilitate learning.
- Implemented lesson plans, individual and group activities, and completed grading promptly.
Academic Consultant, Center for Academic Success
- Developed and facilitated the implementation of academic accommodations for undergraduate students with disabilities.
- Taught and supported academic skill development for students of all backgrounds and skill levels, including time-management, study skills, and test-anxiety management.

Alfred State College (January - May 2021)
Adjunct Instructor, Department of Social and Behavioral Sciences
- Taught PSYC 1013 - General Psychology, covering the foundational components of psychology, including research design, history, and broad concept areas (e.g., development, neuropsychology, mental health).
- Wrote and implemented lesson plans, group activities, and assignments via in-person and virtual learning platforms (in-person lecture, Zoom, Blackboard).

Arbor Housing and Development (2020-2021)
Mental Health Rehabilitation Assistant, Sedgwick House
- Provide regular behavioral and mental health support to the current residents, adults with mental health disabilities.
- Work with residents to achieve various behavioral and daily living goals, including coping skills, communication, personal hygiene, and finances.
- Practice crisis management and de-escalation techniques and monitor medications.
- Maintain a positive relationship with residents to promote a positive and safe living situation while each individual works towards management and independent living.

TW Ponessa and Associates, Inc. (2018)
Therapeutic Staff Support
- One-on-one support with behaviorally diagnosed children (ages 3-21), utilizing various interventions and emotional support.
- Follow a treatment plan developed by a Master's level supervisor.
- Transfer skills to caregivers to encourage a supportive, empowered environment.

Family Resource and Counseling Center (2017)
Undergraduate Intern
- Completed 160 internship hours under supervisor Dr. Peter Oscsodal.
- Conducted interviews with FRCC therapists.
- Completed independent research to provide additional resources for FRCC.

<u>Skills and Qualifications</u>

Counseling and Psychotherapy	Time Management and Organization
Psychological Assessment	Microsoft 365: Word, Excel, PowerPoint,
CPI Trained	Outlook
Restorative Practices	Virtual Platforms: Microsoft Teams, Zoom,
Interpersonal Relations	Canvas

<u>Awards and Honors</u>
Powell Institute David Olin Carpenter First-Year Fellow in School Psychology, 2018

<u>Professional Presentations</u>
Gochnauer, R., Elliott, K. & O'Connell, L. (2019). *Restorative Practices: Positives and Negatives,* New York Association of School Psychologists Conference. Syracuse, NY.

<u>Professional Associations</u>

New York Association of School Psychologists (2018 – Present)
National Association of School Psychologists (2018 – Present)
Psi Chi Honors Society (2017-Present)