THE RELATIONSHIP BETWEEN SCHOOL OFFICE DISCIPLINE REFERRALS

AND PERCEPTION OF SCHOOL CLIMATE FOR URBAN MIDDLE SCHOOL

STUDENTS

By

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ABSTRACT OF THESIS

The relationship between school office discipline referrals and perception of school

climate for urban middle school students

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The constructs of school discipline and school climate have gained much attention as key factors contributing to racial, ethnic, and socio-economic disparity across the US public school system. This discussion has been fueled, in large part, by data demonstrating the impact of negative school climate and higher rates of school discipline on outcomes such as poor academic achievement, increased school dropout rates, and increased involvement in the criminal justice system disproportionately impacting minority and low income students (Darensbourg, Perez, & Blake, 2010; Gregory, Allen, Mikami, Hafen, & Pianta, 2015; Skiba, Michael, Nardo, Peterson, 2002; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Noticeably absent from the literature is a nuanced evaluation of the interaction between school office discipline referrals (ODRs) and perception of school climate at the individual, student level in low-income urban schools.

This study evaluated this relationship in a group of 229 sixth graders from an urban middle school in New Jersey (57% female; 94% Hispanic, 100% qualifying for free or reduced lunch). The interaction between perception of school climate and student ODR counts from the beginning to end of their first year in middle school was examined. Overall perception of school climate did not significantly moderate the relationship

between fall and spring discipline referrals. However, analysis of the climate subscales revealed that student's ability to shape their environment did significantly moderate the relationship between fall and spring discipline referrals, and that perceived support from teachers and staff approached significance ($p = .057$). For students with more positive perception of peer relationships, there was a large variance, approaching significance ($p < .06$) in spring ODRs, indicating that positive relationships with peers were associated with both high and low discipline counts. Exploratory analysis revealed that overall perception of school climate between fall and spring was moderated by fall ODRs. Across analyses, when separated by gender, results were consistently significant only for female students. Study results imply that a relationship between perception of school climate and discipline referrals is particularly meaningful for female students, and that interventions aimed at improving perceptions of teacher and staff support and student's ability to shape the environment may be most influential deterrents of ODR trajectories.

Keywords: school discipline, school climate, youth development, teacher support, Latino/a youth

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Table of Contents

List of Tables

List of Figures

Introduction

A negative perception of school climate and high rates of exclusionary discipline practices appear endemic in low income, urban schools. Negative school climate and elevated rates of exclusionary discipline are associated with many poor outcomes, including low academic performance, low college and career readiness, and high levels of interaction with the criminal justice system (Arcia, 2006; Greenwood, 2002; Gregory et al., 2015; Mendez, 2002; Mitchell & Bradshaw, 2013). Thus, both school climate and office discipline referral (ODR) systems are critical variables contributing to structural systems of inequality, thereby disadvantaging minority students from low socioeconomic backgrounds. Understanding the ways in which these variables interact is crucial to promoting meaningful change (Katz & Klagg, 2016).

Positive school climate has been identified as a protective mechanism against aggressive, violent, and deviant behavior (Kasen, Johnson, & Cohen, 1990; Thapa et al., 2013). At the same time, repeated disciplinary referrals have been associated with drug and alcohol use, school failure, and later social problems (Arcia, 2006; Mendez, 2002; Walker, 1995). The start of middle school is a critical moment for intervention in these patterns. Students are on the precipice of adolescence and are joining a new school community, whose culture and practices can have powerful influences on their growth (Wang & Eccles, 2012). Given these findings, I posit that in the early months of middle school, a student's perception of school climate will significantly interact with their experience of ODRs, creating a dynamic relationship that impacts the student's trajectory for ODRs in the later part of the school year.

School Discipline

Exclusionary school discipline rates in the United States are approximately double those of the 1970s, with over 3 million students suspended at least once per year and over 100,000 students expelled (Cregor & Hewitt, 2011). The ratio of disciplinary acts to race aligns with the disproportional rates of arrest and referrals of students to law enforcement to race. Hispanic students make up 17% of K-12 student enrollment in the US and they represent 20% of all students suspended or expelled in the twelfth grade (Smith, 2009). The discipline gap for Hispanic/Latino students seems to increase in middle school grades, along with a general increase in disciplinary rates and disparities during this time (Cregor & Hewitt, 2011; Skiba, Eckes, & Brown, 2009; Skiba et al., 2011). A robust literature indicates ODRs rates to be stable and related to negative academic and behavioral outcomes (McIntosh, Frank & Spaulding, 2010; Wright & Dusek, 1998).

Previous research indicates that ODRs and antisocial behavior is most prominent in the seventh grade, and that youth antisocial behavior, leading to ODRs, remains largely stable over time (Fortin, 2003). Thus, one ODR is highly predictive of future ODRs. Students with more than 10 ODRs in a school year are at high risk for drug and alcohol use, school failure and/or drop out, and later social problems (Walker, 1995). In a study comparing 85 middle school students (78% male, 47.6% Latino/a) in a central coast California community with previous ODR history to those with no prior offenses, repeated disciplinary referrals were found to significantly affect optimism about the future, such that students with multiple ODRs were less likely to think that the future holds something for them to look forward to. Repeated disciplinary referrals were also significantly correlated with higher rates of family conflict and lower GPAs compared to students who had never been referred to the office (Morrison, Anthony, Storino, &

Dillon, 2001).

Exclusionary discipline, by definition, takes the student out the classroom for anywhere between one course period and up to 10 days. This contrasts with literature documenting the positive relationship between time engaged in academic learning and academic achievement (Brophy, 1988; Fisher, 1981; Greenwood, 2002). Disproportionately taking students of color out of the classroom for disciplinary action may contribute to less time spent engaged in academic learning for these students, thus playing a role in the complex achievement gap (Gregory, Skiba, & Noguera, 2010). Several studies have also found that frequent suspensions significantly increase the risk of low academic achievement, drop out, and/or not graduating on time (Arcia, 2006; Mendez, 2002). Repeated exclusionary ODRs can also trigger a cycle of negative adult-student interaction and may contribute to a student's psychological disengagement (Gregory, Allen, Mikami, Hafen, Pianta, 2015).

School Climate

While the importance of school environment on student experience has long been studied in the field of educational reform, the construct of school climate has gained considerable momentum in the data-driven rhetoric of school improvement in the United States over the past three decades (Thapa et al., 2013). The National School Climate Council (2007) defined school climate as a depiction of the patterns of individuals' experiences of school life, reflecting the school's norms, values, structures, and practices (Council, 2007). Positive school climate was recommended by the Center for Disease Control as an empirically demonstrated way to promote school connectedness and healthy relationships, and prevent school dropout (Prevention, 2010).

Although positive school climate has been shown to be a strong protective variable against negative outcomes, the majority of poor, urban schools are characterized by negative school climates (Cohen, 2006). In a review of over 200 citations related to school climate, Thapa et. al (2013) reported multiple findings across the literature indicating that positive school climate has been shown to impact student's mental health wellness and motivation to learn, to mitigate the negative impact of socio-economic status, and to contribute to less aggression, violence, and harassment. In a longitudinal study of 300 students in New York, school climate was found to be a protective mechanism of antisocial behavior; specifically, high conflict in a school was predictive of higher disciplinary referrals (Kasen et al., 1990).

Importantly, significant differences in perception of school climate based on racial and ethnic differences have been indicated across the climate dimensions of caring, engagement, and equity (Bottiani, Bradshaw, & Mendelson, 2014; Thapa et al., 2013). In an analysis of 2,500 middle school students, Latino students reported that their relationships with teachers were more important to them than teachers modeling positive behaviors; this preference was opposite that of their White and Asian counterparts (Schneider & Duran, 2010). The present study focuses on a predominantly Latino middle school, to aid our understanding of this understudied population.

Aspects of School Climate

Support and Care by Teachers. A strong positive relationship with teachers and staff at a school has been associated with many positive student outcomes at the individual, classroom and school level across multiple studies. A student's perception of a teacher as caring, nurturing, and holding higher academic expectations has been shown to predict students' positive classroom behavior (Gregory & Thompson, 2010; Gregory &

Weinstein, 2008; Jackson, 2001) and to protect against depression and misconduct for adolescents in urban communities (Wang, Brinkworth, & Eccles, 2013). Specifically, the constructs of caring and high academic expectations have been found to predict lower ODRs and a smaller racial discipline gap at the classroom and school level. Authoritative schools, defined as highly supportive schools with very structured behavior and academic expectations, have been found to have lower school-wide suspension rates for both minority and non-minority students (Gregory, Cornell, & Fan, 2011).

On the other end of the spectrum, negative relationships between students and teachers have been associated with negative student outcomes at the individual and classroom level. Students who report unfair treatment by a particular teacher are more likely to receive an ODR and be perceived as uncooperative and defiant by that teacher (Gregory & Thompson, 2010; Gregory & Weinstein, 2008). Student rejection of their teacher as a model was found to be related to less social control in the classroom and higher ODRs (Kasen et al., 1990).

Interestingly, in a study of 491 in 31 schools teaching approximately 10,000 elementary school students (majority non-white and nearly half receiving free or reduced lunch) teacher burnout and teacher efficacy were not significantly predictive of referrals to the principal's office or in-school suspension. Teacher burnout and teacher efficacy *were* significantly predictive of out-of-school suspension, but in an unexpected direction. Higher levels of burnout and lower levels of efficacy predicted lower levels of out-of-school suspension. The authors hypothesize that burnout and efficacy are complex variables that could represent a by-product of teacher disengagement and learned helplessness, since, as author's note, the results were not in line with previous research on the burnout and low efficacy relating to high ODRs. In this same study, the overall level

of referrals made by a teacher significantly impacted the student's likelihood of being referred to the principal's office or for suspension (Pas, Bradshaw, Hershfeldt, & Leaf, 2010). This suggests that teachers utilize ODRs at different rates, and perhaps burnout and efficacy are not the mechanisms to best understand this phenomenon.

Friendship and Belonging. Peer friendship is a complex construct because peer bonds can be associated with both positive and negative behavior. A lack of social bonds has been predictive of antisocial behavior, while an association with anti-social peers is also predictive of rule-breaking behavior (Fortin, 2003; Morrison & Skiba, 2001). During adolescence, it is common for individuals to become more prone to risk-taking and influenced by peer relations. In a review of the literature on risk-taking in adolescence, Steinberg (2008) suggests that risk-taking behavior increases between childhood and adolescence due to changes in the brain's socio-emotional system. This is demonstrated primarily by dramatic changes in the brain's dopaminergic system, leading to an increase in reward-seeking, especially when around peers. Thus, Steinberg concludes that adolescence is a particularly vulnerable time for risky and reckless behavior that might often lead to ODRs. Anti-social or deviant behavior typically begins with smaller transgression in elementary school years, and eventually advances to more serious behavioral issues in adolescence (McEvoy & Welker, 2000). Students with previous suspensions are less likely to have concern for others or have friends who valued school (Morrison et al., 2001).

Student Respect. The *SCCP-II* subscale of student respect in many ways aligns with friendship and belonging, in that the items, such as, "students treat classmates with respect" focus on student-to-student interactions. However, these items differ slightly in

their focus on students respecting the larger school community. Little literature exists on this particular construct.

Students' Shaping Their Environment. When students feel that they have influence over their environment, such as in service-learning projects, they are more likely to increase their positive self-concept and tolerance for diversity (Morgan & Streb, 2001). Student voice has been shown to be an essential component of a positive school climate and is associated with increasing student achievement and decreasing student drop-out (Elias, 2010). In the literature, this aspect of school climate does not seem to be as closely linked to disciplinary behavior as other climate and structural variables. Perhaps this is because it would likely operate at a level slightly removed from the direct consequence of ODR.

The Current Study

Data were collected during the 2014-2015 academic year at an urban middle school in central New Jersey, from 524 students in the sixth grade class who incurred 1,728 ODRs. Of these, 297 students received at least one incident referral over the course of the year. The current study evaluated the interaction of these ODRs and the perception of school climate at the individual student level for this sixth grade class. Specifically, the study had three aims.

Study Aim 1: To evaluate overall perception of school climate as a moderator of the relationship between fall ODRs (IV) and spring ODRs (DV) at the individual student level, from the beginning to the end of a student's first year in middle school.

Hypothesis 1A: Following previous research demonstrating the stability of ODRs by student, I hypothesized that the ODR count in the fall 2014 would significantly predict ODR count in spring 2015.

Hypothesis 1B: Positive school climate has been shown to be a protective process against antisocial behavior, aggression, violence, and harassment at the school level. I hypothesized that individual student perception of overall school climate in fall 2014 would moderate the relationship of fall 2014 and spring 2015 ODRs. I hypothesized that this moderation would result in more positive perceptions of overall school climate diminishing negative the relationship between fall and spring ODRs.

Study Aim 2: To evaluate the way that the specific teacher support and peer relationships subscales of the school climate survey interact with the fall 2014 ODRs in prediction of spring 2015 ODRs at the individual student level.

Hypothesis 2A: The importance of teacher-student relationships in influencing student success in behavior, academics, and life has been well documented. Thus, I hypothesized that the school climate subscale of support and care by staff (i.e., teacher support), would significantly moderate the relationship between fall and spring ODR counts, when controlling for the associated variables of gender, fall GPA, and the remaining three climate subscales. I suggested that this relationship would be such that more positive subscale scores were associated with lower ODR counts in the spring, and more negative subscale scores were associated with higher ODR counts in the spring.

Hypothesis 2B: Peer relationships are complex, since *both* lack of peer bonds *and* bonds with anti-social peers have been found to be predictive of deviant behavior, whereas bonds with pro-social peers have been indicated as protective against deviant behavior. However, the climate subscale of friendship and belonging does not distinguish between bonds with peers who engage in anti-social behavior as opposed to those who engage in pro-social behavior. Because of this, students indicating a positive perception of friendship and belonging may be likely to have a spring ODR count at

either the higher or lower extreme, depending on the norms and values of the peer groups they are considering in the ratings (i.e., anti-social or pro-social). Therefore, I hypothesized that there would be a significantly larger variance on spring ODR scores for students with higher ratings on the friendship and belonging subscale as compared to those with lower ratings.

Study Aim 3: There is minimal research evaluating the alternative direction of the relationship of perception of school climate and ODR counts - how the experience of ODRs influences students' perception of school climate. In order to better understand this relationship, I proposed an exploratory moderation analysis of fall ODRs on the relationship between fall and spring overall perception of school climate and the school climate subscales, co-varying for the associated variables of academic achievement in the fall of 6th grade and gender.

As noted earlier, the literature specifically focusing on Latino/a youth is relatively sparse. While there is not sufficient diversity within the sample to allow for ethnic group comparison, Study Aims also will be examined specifically for the Latino/a population.

Method

Setting

The study took place in an urban middle school in central New Jersey. In the 2013-14 academic year, this middle school was designated a "priority" school improvement status, indicating that it was in the lowest-performing category when compared to schools across the state of New Jersey, outperforming only 10% of other schools in academic achievement. 1,337 students were enrolled in grades 6-8 in 2013-14; 48% female, 89.3% Hispanic, 9.2% Black, 1.0% White, and 0.4% Asian. 92.7% of students at the school were categorized as economically disadvantaged, 13% met criteria

for disability and 12.6% had limited English proficiency (Education, 2014). The school district in which the school resides published an internal document depicting lists of infractions and suggested consequences. This type of code of conduct, listing infractions and consequences, pays little attention to positive incentivizing, and is not an atypical discipline approach in urban schools.

Participants and Procedures

The setting was an urban New Jersey middle school of approximately 1400 students, virtually all eligible for free or reduced lunch, although a small percentage are not listed as eligible, likely because their guardian did not fill out required paperwork. Climate surveys were administered on paper scantrons in the fall and on a web-based survey program in the spring. In both cases, surveys were administered in the middle school by members of the Rutgers Social-Emotional and Character Development Lab at a single designated date. Students absent or unable to take the survey on the original date were provided an additional opportunity to take the survey within several days. The school climate survey measures were part of a larger survey including several other scales on constructs of school and individual functioning. The research procedures were approved by the Rutgers University IRB.

Sample Creation. The analysis sample was taken from the full sixth grade sample of students at NBMS in the 2014-15 academic year who met IRB criteria and whose demographic data were available in the school database ($n = 526$). (See Table 1 for demographic characteristics of the sample during the sample creation process.) Two students were deleted because their student identification numbers did not correspond to school records. To create the analysis sample, students who did not complete the full 20 items of the *SCCP-II* at both fall 2014 and spring 2015 time points ($n = 77$) were deleted

from the study sample. Students who did not complete one climate survey, either in the fall 2014 or spring 2015 ($n = 206$), were deleted from the study sample. The Final Analysis sample was examined for outliers. 13 students were identified with full year ODR counts (described in detail in the next section) greater than two standard deviations above the mean ($m = 2.69$, $SD = 5.18$). Thus the Final Analysis sample consisted of 229 participants.

Measures

       Measure of Office Discipline Referrals (ODRs). The participating school provided access to student individual disciplinary records, including description of discipline incident and resolution as well as demographic characteristics for individual students. In the school district's guidelines for implementation of disciplinary policies, disciplinary infractions are designated a level of severity from Level 1, "annoying behavior" to Level 2 "disruptive or interfering behavior" to Level 3 "persistent or antisocial behavior." Behavior issues in level 1 and some level 2 cases are intended to be handled in the classroom, and would not be entered into the school ODR tracking system. Thus, all referrals utilized in this study were responded to out of the classroom and can therefore be considered exclusionary. School ODRs were reported by school administration for the academic year. See Table 2 for ODR statistics for the Final Analysis Sample and Figure 1 for histogram chart of fall and spring ODR counts.

       Measure of School Climate. *School As A Caring Community Profile- II, Student Form (SCCP-II;* Lickona & Davidson, 2004*).* The SCCP-II is a 42-item measure of perception of school climate. Students rate their agreement to statements about their school's climate on a 5-point Likert scale (1 = Disagree A LOT! to 5 = Agree A LOT!). Twenty two items from the original measure, with factor loadings below .40 or cross

factor loadings, were eliminated to minimize item redundancy and administration time. The shortened SCCP-II was used to align with climate assessments conducted within the school district since 2005, in order to effectively compare to surrounding schools and progress over time. Thus, there were constraints in selecting a particular school climate measure. The measure yields an overall rating of school climate and four subscales: student respect, friendship and belonging, students' ability to shape their environment, and support and care by staff. Lickona and Davidson (2004) reported that across several studies, the alphas for the subscales ranges from .72-.79 and the total score alphas range from .73-.86. In line with current study aims, the adapted 20-item version of the *SCCP-II* employed in the present study had a Cronbach's alpha for the total score of .832 in the fall 2014 and .881 in the spring 2015 (N = 243). Subscales, adapted to meet a criteria of a Cronbach's alpha > .60, yielded Cronbach's alphas of .71 (friendship and belonging), .75 (student respect), .61 (students' shaping their environment), .69 (support and care by and for staff). See Table 3 for depiction of original and new subscale alphas, Appendix A for *SCCP-II,* and Appendix B for list of old and new subscale items for *SCCP-II*.

Measure of Fall Grades Grade point average was computed by averaging marking period grades for the four core subjects of math, English language arts, science and social studies. One student was missing one math score, and his GPA was prorated from averaging his other 3 core subjects.

Results

Descriptive Analysis

See Table 1 for complete frequency statistics for demographic variables for full sixth grade, excluded sixth graders, and final analysis sample. There were significant

differences between the samples by gender, race/ethnicity, age, and special education status. Students in the Final Analysis Sample were more likely to be female and Latino and less likely to have a special education classification than the excluded sixth graders. Students in the Final Analysis Sample also differed significantly from the excluded sixth graders by age ($t = 3.56$, $p < .001$), such that students in Final Analysis Sample were more likely than students in the sixth graders excluded from the sample to be older ($m = 11.13$ in Final Analysis Sample versus 11.33 in Full Sixth Grade Sample). Due to the small difference in mean age between groups, the same comparison was run excluding students who were 13 years old in fall 2014 ($n = 22$ in Full Sixth Grade Sample, $n = 1$ in Final Analysis Sample), since this group (13 year olds) was not representative of the majority of sixth graders. In this analysis, the age difference was no longer significant between groups ($t = -1.54$, $p = 0.124$). Thus, the one 13-year-old sixth grader who completed both climate surveys was deleted from the Final Analysis Sample.

The Final Analysis Sample was also compared to the excluded sixth graders on study variables. Students in the Final Analysis Sample did have a significantly higher GPA ($m = 78.9$) than those sixth graders excluded from the sample ($m = 75.33$, $t = 4.43$, $p < .001$). Significant differences were found between the excluded sixth graders and the Final Analysis Sample on spring discipline count ($t = -5.16$, $p < .001$) and fall discipline count ($t = -5.01$, $p < .001$), fall climate survey total scores ($t = 2.13$, $p < .001$). There were no significant differences found on spring climate survey total scores ($t = 1.09$). Additionally, no significant differences were found when mean scores on study variables were compared by gender groups (See Table 4 for gender group comparisons). To account for the skewed ODR variables, outliers (defined as students having scores more than two standard deviations above the mean) were eliminated ($n = 13$). When

compared to the Final Analysis Sample ($n = 229$) on study variables other than ODRs, the only significant difference between groups was found for the spring teacher support subscale, such that the Final Analysis Sample ($m = 3.94$) was significantly higher than the discipline outliers ($m = 3.35$), $t = 2.60$, $p = .010$. All other study variables did not need adjustment for normality or kurtosis (see Table 5 for descriptive statistics for all study variables).

Multiple Regression Analysis (MRA) was used for analysis of all study aims (Baron & Kenny, 1986). Although Poisson regression offered a valuable alternative for the analysis of count variables (Coxe, West & Aiken, 2009), because the exploratory analysis in Study Aim 3 assessed a continuous dependent variable, Poisson regression could not be used in that analysis. Thus, if Poisson regression were used for Study Aim 1 and not Study Aim 3, it would be more difficult to directly compare the results and determine magnitude of effects and directionality of moderation between perception of school climate and ODRs. MRA can be used for all continuous dependent variables.

Descriptives were run to determine the mean and standard deviation for all variables in order to mean-center predictor variables. All regresions were run twice, with the variables centered and un-centered, in order to compare results. In all cases, there were no differences in significance findings between centered and uncentered varaibles, thus results with centered variables were reported.

In each moderation analysis, variables were entered into MRA hierarchically. All results were assessed for significance at the .05 level. In Step 1, the regression models included the covariates, gender and fall GPA, and the first independent variable. In Step 2, the second independent variable was added to the model. In Step 3, the interaction of

independent variables was included in the model. The results for the regression analysis were reported using the unstandardized beta weights from the main effect of independent variables from Step 1 and Step 2 of the model. A significant beta weight indicated that the main effect of that variable significantly predicted the dependent variable. The beta weights of the interaction were taken from Step 3 of the model. A significant beta weight indicated that the interaction effect significantly moderated the prediction strength of the predictor on the outcome. The entire models for both Steps 1, 2, and 3 were assessed for significance through the results of the ANOVA for each model. R^2 for both models were reported to depict the amount of variance each model accounted for. Additionally, R^2 change was reported to explain the change in variance accounted for by adding the interaction to the model.

In order to evaluate the variables of gender and ethnicity, each analysis was also conducted for males-only, females-only, and Latino/a-only samples. In the case that results for one of these groups differed from that of the Final Analysis Sample, these results were reported.

Study Aim 1 Analysis

Hypothesis 1A. As expected, fall ODRs and spring ODRs were significantly correlated ($r = .25$, p < .01), although it is worth noting that the strength of the correlation decreases by .45 when outliers were removed. See Table 6 for correlations between all study variables for Final Sample Analysis. A hierarchical linear regression controlling for gender and fall grade point average also indicated that fall ODRs significantly predict spring ODRs ($F (3, 228) = 12.64$, $R^2 = .14$, $p < .001$). This significant finding held when run for only Latino students from the sample ($n = 216$), and non-Latino students ($n = 13$).

Hypothesis 1B. Unexpectedly, overall school climate in fall 2014 was not significantly correlated with spring ODRs ($r = -.124$), as shown in Table 6. Using standard OLS regression, perception of overall school climate in fall 2014 did not significantly moderate the relationship of fall 2014 and spring 2015 ODRs in the full Final Analysis Sample ($F (5, 228) = 8.15$, $\Delta R^2 = 0.01$). See Table 7 for full moderation results. This non-significant finding held when run for only Latino students from the sample ($n = 216$). When the analysis was run separately by gender, fall school climate was not a significant moderator of ODRs for either group; however, the direction of the relationship was positive for males ($B = .30$), counter to the study hypothesis (i.e., more positive perception of school climate interacted with fall ODRs to increase the spring ODR count) and negative for females ($B = -.38$).

Study Aim 2 Analysis

Hypothesis 2A. Unexpectedly, fall perception of teacher support was not significantly correlated with spring ODRs ($r = -.114$), but was significantly correlated with fall ODRs ($r = -.144$, $p < .05$). Teacher support in fall 2014 demonstrated a tendency toward significance in moderating the relationship of fall 2014 and spring 2015 ODRs in the Final Analysis Sample, such that lower scores on fall teacher support interacted with fall discipline to predict higher spring discipline counts ($F (8, 228) = 5.71$, $\Delta R^2 = 0.01$, $B = -.2$, $p = .057$) (see full moderation results in Table 8). When the analysis was run separately by gender, perception of teacher support in fall 2014 significantly moderated the relationship between fall and spring ODRs only for females $F (7, 129) = 5.50$, $\Delta R^2 = .06$, $B = -.46$, p = .002). (See Figure 2 for simple slopes plot of moderation analysis for males and Figure 3 for simple slopes plot of moderation analysis for females. The relationship was non-significant and positive for males $F (7, 98) = 2.34$, $\Delta R^2 = .004$, B =

.13). This same pattern was found when analysis was run for Latino-only participants (n = 213).

Scores on the fall climate subscale, students' shaping their environment, significantly moderated the relationship of fall and spring ODRs more strongly, and in the same direction, as teacher support (F (8, 228) = 4.08, ΔR^2 = 0.04, B = -.31, p = .002). When run separately for males and females, the results were only significant for females (F (7, 129) = 5.22, ΔR^2 = 0.05, B = -.37, p = .005). The peer support subscale did not significantly moderate the relationship between fall and spring ODRs, but it did follow the same negative interaction relationship as teacher support and students' shaping their environment (B = -.18). When the analysis was run separately for males and females the results were also non-significant and the direction was positive. The climate subscale of student respect also significantly moderated the relationship between fall and spring ODRs. However, this interaction operated in the opposite direction of teacher support and students' shaping their environment, such that higher scores on fall student respect interacted with fall discipline to predict higher spring discipline counts (F (8, 228) = 6.69, ΔR^2 = 0.02, B = .19, p = .045). This direction was replicated when run for both male and female subgroups, but was only significant for females (p = .008). When moderation analyses were run for students' shaping their environment, peer support, and student respect for the Latino-only sample, the direction and significance results were replicated.

Hypothesis 2B. To analyze Hypothesis 2B, a two sample F-test (Snedecor & Cochran, 1989) was used to test for a significant difference in variance of spring ODR count for students with positive scores on the fall peer relations climate subscale, as compared to students who had negative scores on this subscale. Because this test does not rely on an assumption of normality, the 13 ODR count outliers excluded in the Final Analysis

Sample were included in this analysis. No significant correlations were found between high perception of peer relationships (score of ≥ 4 out of 5) or low perception of peer relationships (≤ 3) and spring ODR count. Using Hartley's F_{max} statistic (Hartley, 1950) for students with high perception of peer relationships ($n = 53$, m spring ODRs = 2.60, SD spring ODRs = 4.28, $s^2 = 18.32$) compared to students with low perception of peer relationships ($n = 189$, m spring ODRs = 1.61, SD spring ODRs = 3.29, $s^2 = 10.83$), F_{max} (52, 2) = 1.69, this approaches, but does not reach significance at p < .05 (critical value = 1.78). Tables are not available for F_{max} statistic at the $p < .1$ significance level (see Appendix D for the published F_{max} Table). These results will be interpreted as a tendency toward significance (Karlin, 2016). See Table 9 for full results of two sample F-test. When the same analysis was run for the Latino-only sample, the result was significant (F_{max} (48, 2) = 1.84, $p < .05$). When this analysis was run separating the sample by gender, the results were significant for males (F_{max} (34, 2) = 2.41, $p < .05$), but not for females.

Study Aim 3 Analysis

A hierarchical linear regression (IV: spring overall school climate score, DV: fall overall school climate, Covariates: gender, fall grade point average) was run in order to assess the relationship between fall and spring climate scores. As expected, fall overall perception of school climate scores significantly predicted spring school climate scores ($r = .45$, F (3, 225) = 18.66, $R^2 = .19$, $p < .001$). Results were replicated when run for Latino-only group.

Fall ODRs significantly moderated the relationship between fall and spring perception of school climate when co-varying for gender and fall grade point average (F (5, 223) = 12.41, $\Delta R^2 = 0.02$, $B = -.14$, $p = .026$). See Table 10 for full moderation

analysis results. When run separately for male and female participants, the results were significant only for females (F (4, 129) = 13.63, ΔR^2 = 0.02, B = -.17 p = .029). When run separately for Latino-only participants, fall ODRs were no longer a significant moderator (F (5, 215) = 11.70, ΔR^2 = .01, B = -.10). This implies that the non-Latino sample was contributing to the significance of the finding for the Final Analysis Sample.

Fall ODRs did not significantly moderate the relationship between fall and spring perception of any individual subscale: teacher support, student respect, peer relationships, or students' shaping their environment, when co-varied for gender and fall GPA. These results were replicated when run for the Latino-only group, as well as for both gender groups, with the exception of students' shaping their environment, which became a significant moderator for both genders when run separately, but in opposite directions (Males: (F (4, 93) = 3.16, ΔR^2 = 0.04, B = .25, p = .031; Females: F (4, 121) = 8.53, ΔR^2 = 0.03, B = -.16, p = .053).

Discussion

Brief Review of Results

The main aim of this study was to examine the relationship between perception of school climate and school ODRs at the individual level for sixth graders at an urban middle school. The majority of students in this study sample were low income and Latino, thus representing a segment of the US population that is growing and continually facing high-risk environments (U.S. Census Bureau, 2011). Findings from this study contribute to a small, but growing, literature on understanding school climate at the individual level. Through the examination of not only the moderating role of overall perception of school climate on the trajectory of school ODRs, but also the specific subscales of teacher support and peer relationships, results from this study are useful in

better understanding the phenomena of over-disciplining and negative school climate in underserved populations in the US.

Results did not support the hypothesis that perception of overall school climate will significantly moderate school ODRs. However, the reverse relationship, fall ODRs moderating relationship of fall and spring overall perception of school climate, was found to be significant. Thus, an important relationship between perception of school climate and ODRs does appear to be present. Further, the specific subscale, perception of teacher support, did approach significance ($p = .057$) as a moderator of fall to spring ODRs. This indicates that students' perception of support from adults in their school was an important factor in the trajectory of ODRs, such that more positive perceptions of teacher support served as a protective moderator against increasing ODRs in the spring. For students with more positive perception of peer relationships, there was a large variance, approaching significance ($p < .06$) in spring ODRs, indicating that positive relationships with peers was associated with both high and low spring discipline counts. This likely reflects the nature of the peer groups with which students are involved. Interestingly, a significant gender difference was present in this sample, such that when separated by gender, significant, or near-significant, moderation findings for overall school climate and climate subscales were present only for females.

Comparison with Existing Literature

The stable trajectory ODRs from fall to spring found in the study sample was expected, considering previous similar findings (McIntosh, Frank & Spaulding, 2010; Wright & Dusek, 1998). However, the non-significant finding of perception of overall school climate as a moderator of ODRs was unexpected, considering results from Thapa et al.'s (2013) meta-analysis, indicating that positive school climate was found to be

associated with less aggression. However, the significant moderation of the relationship between fall and spring perception of school climate by fall ODRs indicates that there is a relationship between the two variables, but that a student's experience of ODRs may in fact impact their perception of the school climate, rather than the other way around. This suggests that the accumulation of ODR's is a salient experience for students, at least up to the point where their ODR's are so frequent, they may no longer be so salient (as might be the case for the outliers in this study).

In this study, the student's perception of teacher support was related to school discipline in accordance with previous literature demonstrating the powerful impact perception of support from teachers has on student's behavior in the classroom (Gregory & Thompson, 2010; Gregory & Weinstein, 2008; Jackson, 2001; Wang, Brinkworth, & Eccles, 2013). Gregory et al. (2015) found that repeated ODRs could trigger cycles of negative adult-student interaction, similar to finding in this study sample, in which negative perception of teacher support interacted with fall ODRs to predict increased referrals in the spring. In a recent study that examined factors of perception of school climate that predict office ODRs, one of three most important factors in decreasing ODRs for frequent recipients was the presence of a caring adult at school that reinforces appropriate behaviors (Gage, Larson & Sugal, 2016).

Previous studies have demonstrated that students' perception of empowerment to make changes in their environment is linked to improved positive self-concept and tolerance for diversity (Morgan & Streb, 2001) as well as increased student achievement and decreased school drop out (Elias, 2010). Thus, the significant finding of the subscale of perception of students' shaping their environment as a moderator of the relationship

between fall and spring ODRs, such that a more positive perception interacted with fall referrals to predict a fewer spring ODRs, logically follows these findings.

Put simply, the influence of adolescent peer relationships is complex. In a review of peer relationships in adolescence, Brown and Larson (2009) explicate that peer relationships are both highly influential on behavior, and frequently changing. Additionally, the authors note that adolescent self-reporting on peer relationships is often unreliable. Thus, the non-linear nature of the results regarding the relationship of perception of peer support aligns with the current state of the field's understanding of the complexity of the variable. The high level of variance in ODR counts for peers with high ratings of peer relationships is supported by evidence that during adolescence, peer influence is paramount (Steinberg, 2008). A plethora of evidence indicates that risk and deviant behavior is increased when an adolescent is associated with other anti-social peers (Fortin, 2003; Morrison & Skiba, 2001; Morrison et al., 2001). Thus, the large variance for high ratings found in the current study aligns with previous research. Adolescent friendships have been shown to be largely based on similarities, which increase over time (Cohen, 1977; Kandel, 1978). The other end of the spectrum accounting for the large variance found in the current study among spring ODR counts for students with high ratings of peer support, are students with low ODR counts. This finding aligns with previous research suggesting that for these students, it is possible that their positive peer rating indicates friendship with other pro-social peers.

Current policy efforts speak to the necessity of improving school climates across the United States, including a recommendation from the CDC (Prevention, 2010) and in the Educating All Students Act (United States Executive Office of the President, 2015). As noted previously, to my knowledge, the impact of ODRs on perception of school

climate has not been previously studied directly. In the current study, fall ODRs significantly moderated the relationship between fall and spring overall perception of school climate for the Final Analysis Sample. This indicates that not only does the perception of school climate influence ODRs, but ODRs can also influence perception of school climate. However, fall ODRs did not significantly moderate any subscale of school climate for the Final Analysis Sample. Thus, it appears that not all subscales are contributing to the moderation of overall school climate by fall ODRs in the same way. This finding, along with several others, may be explained by the unexpected significant variable of gender.

Throughout the data analysis, gender played a significant role, that aligned in some ways with previous literature, and diverged in others. From my review, little seems to be known about gender differences in perception of school climate. Much literature on perception of school climate will note, but rarely explore, that gender is a significant covariate. For this reason, it is challenging to decipher consistent patterns of gender impact on perception of school climate. In his review of school climate, Thapa et al. (2013) mention gender very infrequently. Bottiani, Bradshaw, and Mendelson (2016) did look at gender in their study of nearly 20,000 adolescents of diverse income status and race/ethnicity, finding that male students reported significantly higher levels of school belonging and perceived equity. However, no moderation or mediation analysis was conducted to understand the interaction of gender with perception of climate. Alternatively, females showed significantly higher perception of school climate in a study of nearly three thousand, majority minority, middle schoolers in California (Shneider & Duran, 2010). In their examination of perceptions of school climate relations to risk

behaviors, Shukla, Konold, and Cornell (2016) found yet another varied result- that no significant gender differences existed.

In the current study, there were no significant gender differences on mean scores for any climate variable. However, when moderation analysis was run for overall perception of school climate, as well as the subscales of teacher support and students' shaping their environment, separately by gender, in each analysis the results were only significant for the female group. To my knowledge, this result is unprecedented in the literature, and indicates that perhaps perception of school climate is more influential on female student's deviant behavior than male students.

In the literature on school discipline, similar to that of climate, gender is often cited as an important differential. It is well documented that male students have repeatedly been found to receive ODRs more frequently than females, sometimes as much as four times more often (Skiba, Michael, Nardo, Peterson, 2002). In the current study, males did have slightly more ODRs than females, however they were not significantly different. Consequently, the differences in moderation results when separated by gender do not appear to be explained by significant differences in either climate perception or number of discipline referrals.

Explanation of Results

There are multiple explanations to understand the results of this study. The primary aim of the study was to evaluate perception of school climate as a moderator of school discipline referrals. The results indicate that the overall measure of school climate does not significantly moderate school discipline referrals. One explanation is that a student's overall perception of school climate is simply not a strong enough influence on individual behavioral patterns and situational contexts such that their perception of the

overall climate holds little bearing on student behavior that could lead to an ODR. Interestingly, the reverse relationship was significant. The receipt of ODRs in the fall *did* significantly moderate their perception of school climate in the spring. I hypothesize that this result can be understood as evidence of the powerful impact of a discipline referral to negatively shift a student's attitude about their school.

Should these findings and explanations prove valid, there are important implications. The influence of an ODR on a student's experience of school may be powerful. Considering that ODRs negatively interact with school climate, such that students with more discipline referrals will have a less positive perception of the climate, and given that many students across the US, especially minority and low income students, are receiving far more ODRs than the previous generation, negative overall perception of school climate may in part be a repercussion of over-disciplining students. The literature is clear that negative perception of school climate is a significant impediment to learning, contributing to a negative trajectory that many low-income, urban students of color find themselves experiencing.

There are alternative possibilities. This study does not analyze the staff's perception of students. It is likely that teachers or staff members' attitudes toward students, in addition to their propensity to dispense discipline referrals, contribute to students' discipline referral trajectories. Perhaps this variable dominates any impact that a student's perception of overall school climate has on their trajectory. In much existing literature on school climate, measures from individuals have been pooled and analyzed to better understand the school as a whole. Perhaps, these same tools are less useful in understanding schools at the individual student level. Additionally, when the same analysis was run for the Latino-only group, the results were no longer significant,

implying that the non-Latino sample (in this school context, a minority within a minority)

contributed to the significance of the moderation. It is possible that a particular factor

about this small, non-Latino group explains the finding. Another option is that the

diverging strengths and directions of the school climate subscales indicates that the

overall perception of school climate combines several distinct factors that do not interact

with ODRs in the same way, thus weakening the overall measure's strength as a

moderator.

Unlike the overall school climate score, the climate subscale of teacher support

approached significance as a moderator of fall to spring ODRs. Teacher-student

relationships have repeatedly been shown to have a large influence on student attitudes

and behaviors (Gregory & Thompson, 2010; Gregory & Weinstein, 2008; Jackson, 2001;

Wang, Brinkworth, & Eccles, 2013). In the current study, it may be that students who felt

supported by teachers and staff in the school were able to understand ODRs from an

internal locus of control, attributing the incident to their own behavior, and because of

this attribution, believing in their own ability to act differently next time. Thus, for these

students, their trajectory of discipline referrals in the spring was lessened. For the

students who did not feel supported by teachers and staff in the school, they may interpret

an ODR from an external locus of control, believing the incident to be the result of a

system unsupportive of them, thus not believing in their own agency to change, and, as a

consequence, receiving more ODRs in the spring. A similar theory may explain why the

subscale of students' shaping their environment significantly moderated the relationship

of fall to spring discipline referrals. Again, a student's sense of agency over what happens

to them at school may be at the core of repeated disciplinary infractions. This explanation

implies that fostering a student's self-efficacy and feeling of support from the adults at

school are essential in helping students to escape from a downward trajectory of repeated ODRs.

It is also important to consider alternative explanations. The reliability scores of the teacher support and students' shaping their environment subscales (both alphas < .70) could imply that the constructs of teacher support and student's shaping the environment are not fully reliable in measuring a cohesive construct. There could also be a cultural explanation. Latino students indicated in a previous study that their relationships with teachers were more important than teachers modeling positive behavior (Schneider & Duran, 2010). Perhaps, the feeling of support from teachers does not relate to self-efficacy, but rather to sense of community, motivating students to behave out of respect for the community they belong to.

The large difference in variance on spring discipline scores for students rating high on peer relations suggests that peers strongly influence behavior. In this case, for some of these students, the peers they are connected with likely engage in deviant behavior, thus encouraging them to do the same. For the other students in this group, their peer group influences them toward pro-social behavior. Additionally, the significant finding of student respect interacting with fall ODRs to positively predict spring ODRs may also be understood through the lens of the complexity and non-linear nature of adolescent perceptions of peers. Interpreted in this way, study results imply that for this construct, the presence or absence of peer relationships is not the only important factor, but rather, for those who do have positive peer relationships, the values and social norms of peer relationships are paramount in predicting and influencing behavior.

The most consistent finding across study aims and analyses was the difference between genders, such that for female students, climate factors were significant

moderators in the hypothesized direction, and for males, they were not significant and often not even in the hypothesized direction. The strength of this finding was unexpected, because, as noted earlier, previous research on the relationship between school discipline and climate is limited, and results examining the role of gender are few and inconsistent. For this reason, a broader understanding of gender differences in adolescence may be useful in making sense of this consistent finding in the current study.

Social-cognitive theory of gender suggests that the interplay of experiences and self-regulatory and motivational mechanisms contribute to gender-linked behaviors throughout development (Bussey & Bandura, 1999). In a literature review of youth gender differences in peer relationships, Rose and Rudolph (2006), identify many consistent trends differentiating the groups. Compared to boys, girls engaged in more frequent pro-social interactions, were more likely to identify "connection-oriented" goals, were more likely to seek social support and express emotions in response to stress, and were more sensitive to the distress of others and the status of their peer relationships. On the other hand, boys were found to receive less emotional support from peers, engage in more physical play, be more likely to identify self-interest and dominance goals, and were more exposed to direct physical and verbal victimization (Rose & Rudolph, 2006). A recent study evaluating empathy development and perspective-taking in adolescents found that females increased in perspective-taking ability at a steeper slope than their male counterparts, and that females showed higher and more stable levels of empathetic concern than males (Van der Graaff, Branje, De Wied, Hawk, Van Lier, & Meeus, 2014). Considering the consistent evidence that adolescent females are more motivated by community and pro-social factors than adolescent males, this gender difference in social orientation likely explains why school climate factors would have a much stronger

interaction effect with ODR referrals for females than males. That is to say, this difference in social motivation and interests allows females students to be more influenced by climate factors.

The indicated gender difference has important implications on our understanding of the influence of school climate. The differential response to school climate factors suggests that efforts toward improving school climate would be effective for lessening ODRs for female students, but not necessarily for males. Perhaps climate interventions aimed at influencing school discipline at the individual ODR level will be more successful if specified by gender, targeting interpersonal climate change for females, and eliciting self-interested motivations for behavior change for males. An important consideration when interpreting the gender difference findings from this study is the female majority of teachers and staff in the school in which the study took place. This staff gender difference may contribute to female student's perception of school climate. Additionally, the study sample was significantly different than the excluded sixth graders on gender split, with a majority female. Thus, it is possible that results related to gender in the study sample do not generalize to the full sixth grade in the school.

Suggestions for Future Research and Practice

Results from this study indicate that future research is needed to better understand (1) the role of gender and culture in the relationship between school climate and discipline; (2) the differential influence of school climate sub-factors, particularly support from teachers and staff, peer relationships, and student's ability to shape their environment, on a variety of student behavior and outcomes; and (3) teacher and staff perception of school climate and student behavior relationship to student ODRs.

Few studies have examined the perception of school climate at the individual student level. Results from this study, and several other recent investigations (Gage, Larson & Sugal, 2016; Shukla, Konold & Cornell, 2016) have begun to address this gap. Future research should continue in this vein, using methods such as latent class modeling to understanding patterns and trends amongst student perceptions of climate as they relate to ODRs. The gender difference in the moderating strength of perception of school climate on discipline referrals must be further explored. Future studies investigating school climate and ODRs should explore whether this gender difference consistently replicates. Interventions should aim to approach males and females differently when aiming to impact school climate and deviant behaviors, focusing on interpersonal motivation for females and self-interested motivation for males. Additionally, this study investigated a predominantly Latino student population. Future research should aim to both further understand this important and growing demographic, as well as investigate if the relationship between perception of school climate and discipline is different for other cultures and schools.

Results from the current study indicated that factors contributing to overall school climate may operate in different ways when relating to students' ODR trajectories. Future studies should investigate if the role of support from teachers and students' ability to shape the environment continue to moderate students' ODR trajectories. Interventions should aim to increase these climate factors and evaluate if doing so impacts student ODRs. Future studies should also treat perception of peer relationships as a complex variable, understanding the strong influence of peer relationships in adolescence, and that positive peer relationships can predict both positive and negative behaviors. Interventions

aimed at decreasing ODRs should aim to promote positive, pro-social norms and relationships among adolescent peers.

Teacher and staff perceptions of school climate and student behavior were not included in the current study analysis. However, considering teachers and staff are responsible for making ODRs, their attitudes and beliefs about the school and students are a key component to the story. Future research should explore this variable further to better understand the strength and mechanisms in which teacher and staff perceptions impact student ODR trajectories, recognizing that tracking these perceptions at the individual staff level are highly challenging due to confidentiality issues.

Conclusion

Both school climate and school discipline have received substantial media and policy attention as potential influences on outcomes such as poor academic achievement, increased school dropout and increased involvement in the criminal justice system for low income, minority youth. Results from this study contribute to a more nuanced understanding of the interaction between perception of school climate and ODRs in a school with a predominantly Latino, low-income student population. Results indicate that (1) the subscales of school climate interact with ODRs in unique ways, (2) perception of school climate is a stronger moderator of discipline referrals for females than males and (3) the reverse relationship between climate and ODRs is present, such that the experience of ODRs moderate the perception of school climate from fall to spring.

Although the overall perception of school climate was not a significant moderator of ODRs, the subscales of teacher support and student's ability to shape the environment

did approach, and reach, significance, respectively. Thus, it is possible that students who feel supported by adults and agency to impact the school may attribute ODRs to an internal locus of control, whereas their counterparts who do not feel the same way may be view ODRs as indications of their lack of agency in their environment. Additionally, the exploratory result illuminating the negative interaction of ODRs with perception of school climate suggests that alternatives to ODRs may be beneficial in improving student's perception of school climate, and, in turn, may promote many other positive outcomes.

Many students are suffering in our current school system. The stakes are high, and educational researchers, policy makers, and school administrators have the capacity and responsibility to make positive change. Through considering the findings from this study when planning future research and practice, the downward trajectory of negative perceptions of school climate and high rates of ODRs may begin to shift. In this way, targeted interventions may be able to most effectively make a positive difference for students that need it.

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Tables and Figures

Table 1
Characteristics of Each Sample During Sample Creation

	Full Sixth Grade Sample	Excluded Students	Final Analysis Sample
	n	*n*	*n*
Gender[a]			
Male	271	172	99
Female	253	123	130
Race/Ethnicity[b]			
Latino	479	263	216
Non-Latino	45	32	13
Meal Status			
Free/Reduced Lunch	492	272	220
No Free/Reduced Lunch	32	23	9
Education Classification[d]			
Special Ed Classification	74	54	20
No Special Ed	450	241	209
Limited English Proficiency			
LEP	66	44	22
No LEP	458	251	207
Total	524	295	229

Note. Samples defined as follows: Full Sixth Grade Sample = All sixth graders with one Marking Period 1 grade in 2014-15 (excluding opt outs); Final Analysis Sample = Excluded students who did not complete all items of *SCCP-II* in both fall 2014 and spring 2016, and outliers with > 2 SD above means for ODRs and > 12 y/o.
[a] Significant difference in gender comparing to excluded sixth graders to Final Analysis Sample $(X^2, 1, N = 524) = 11.73$, $p = .001$
[b] Significant difference in ethnicity (Latino vs. non-Latino) comparing excluded sixth graders to Final Analysis Sample $(X^2, 1, N = 524) = 5.29$, $p = .021$
[d] Significant differences in special ed. classification comparing excluded sixth graders to Final Analysis Sample $(X^2, 1, N = 524) = 12.55$, $p < .001$

Table 2.

ODR Counts by Time Point and Gender

Variable	Median	Standard Deviation	Interquartile Range	Minimum	Maximum
fall 2014	0	1.32	0-1	0	8
Male	0	1.46	0-1	0	8
Female	0	1.21	0-1	0	8
spring 2015	0	3.54	0-2	0	9
Male	1.20	1.50	0-2	0	6
Female	0	1.84	0-2	0	9

Table 3.
SCCP-II Original and New Subscale Cronbach's Alphas

	Friendship and Belonging	Student Respect	Students' shaping Their Environment	Support and Care By and For Staff
Original Subscale	.71	.55	.73	.63
New Subscale	.71	.75	.61	.69

Table 4

Study Variables Means by Gender

	Gender		*t*	*df*
	Females (*n* = 130)	Males (*n* = 99)		
Overall Fall Climate	3.67 (.63)	3.60 (.55)	0.80	227
Fall Teacher Support	4.10 (.73)	3.92 (.71)	1.88	227
Fall Student Respect	3.37 (.84)	3.41 (.89)	-0.34	227
Fall Peer Relationships	3.81 (.92)	3.8 (.82)	0.07	227
Fall Students' Shaping Environment	3.37 (.99)	3.36 (.92)	0.05	227
Overall Spring Climate	3.49 (.69)	3.49 (.57)	-0.03	225.39
Spring Teacher Support	3.94 (.77)	3.95 (.79)	-0.14	227
Spring Student Respect	3.23 (.92)	3.21 (.88)	.18	227
Spring Peer Relationships	3.75 (.93)	3.63 (.78)	.10	227
Spring Students' Shaping Environment	3.24 (.92)	3.13 (.87)	.93	227
Fall ODR	.47 (1.21)	.63 (1.46)	-.95	227
Spring ODR	1.14 (1.84)	1.19 (1.49)	-.24	227

Note. No Significant results. Standard Deviations appear in parentheses next to means. Climate subscale means range from 1-5, with higher scores indicating more positive perception.

Table 5
Continuous Study Variable Descriptive Statistics

	Mean	*Standard Deviation*
Fall Climate Survey Total	3.64	0.60
Spring Climate Survey Total	3.49	0.64
Fall Student Respect	3.39	0.86
Fall Friendship and Belonging	3.81	0.88
Fall Students' shaping Their Environment	3.36	0.96
Fall Teacher Support	4.02	0.72
Spring Teacher Support	3.94	0.78
Fall Mean GPA	78.96	8.54

NOTE: All variables fall within normal kurtosis and skewness (-2-2). Climate subscale means range from 1-5, with higher scores indicating more positive perception. GPA scores are calculated from 0-100, with higher scores indicating higher grades.

Table 6.

Study Variable Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Spring Discipline	1	.25**	-.12	-.11	-.02	-.04	-.12	-.11	-.34**	-0.02	-.09	-.12	-.03	-.10	-.08
2. Fall Discipline		1	-.13	-.09	-.09	-.01	.03	-.14*	-.28**	-0.06	-.04	-.06	-.07	-.08	-.10
3. Fall Climate Survey Overall			1	.45**	.60**	.81**	.78**	.68**	.12	0.05	.07	.35**	.30**	.40**	.36**
4. Spring Climate Survey Overall				1	.27**	.32**	.34**	.37**	.06	-0.00	.03	.76**	.66**	.81**	.80**
5. Fall Student Respect					1	.41**	.33**	.15*	.01	-0.02	.02	.13*	.28**	.28**	.26*
6. Fall Friendship and Belonging						1	.66**	.48**	.07	.01	.08	.23**	.23**	.31**	.25**
7. Fall Shaping Environment							1	.39**	0.06	.00	.19**	.24**	.22**	.31**	.31**
8. Fall Teacher Support								1	.16*	.12	-.02	.42**	.21**	.26**	.22**
9. Fall Mean GPA									1	.16*	-.05	.07	.13**	.04	-.02
10. Gender										1	-.02	-.01	.01	.07	.06
11. Ethnicity (Latino Y/N)											1	.41	.00	.00	.05
12. Spring Teacher Support												1	.32**	.51**	.47**
13. Spring Student Respect													1	.48**	.44**
14. Spring Friendship and Belonging														1	.65**
15. Spring Shaping Environment															1

**Correlation is significant at the 0.01 level (2-tailed), *Correlation is significant at the 0.05 level (2-tailed)

Table 7.

Fall 2014 Overall Perception of School Climate as Moderator of Fall 2014 ODRs Predicting Spring 2015 ODRs, Centered Predictors

Predictor	R^2	ΔR^2	B
Step 1	.14	.14**	
Gender			.15
Fall GPA			-0.06**
Fall Discipline Ref.			0.21*
Step 2	.15	.01	
Gender			0.16
Fall GPA			-0.06**
Fall Discipline Ref.			0.20*
Fall School Climate			-0.20
Step 3	.15	.01	
Gender			0.13
Fall GPA			-0.06**
Fall Discipline Ref.			0.17
Fall School Climate			-0.21
Interaction: F.Disc. x Climate			-0.20

**p < .001, *p < .05

Table 8.

Fall 2014 Teacher Support as Moderator of Fall 2014 ODRs Predicting Spring 2015 ODRs, Centered Predictors

Predictor	R^2	ΔR^2	B
Step 1	.16	.16[**]	
Gender			0.15
Fall GPA			-0.06[**]
Fall Discipline Ref.			0.22[*]
Fall Student Respect			0.04
Fall Peer Relationships			0.15
Fall Shaping Environment			-0.27
Step 2	.16	.00	
Gender			0.17
Fall GPA			-0.06[**]
Fall Discipline Ref.			0.22[*]
Fall Student Respect			0.03
Fall Peer Relationships			0.18
Fall Shaping Environment			-0.26
Fall Teacher Support			-0.10
Step 3	.172	.01[a]	
Gender			0.17
Fall GPA			-0.06[**]
Fall Discipline Ref.			0.17
Fall Student Respect			-0.01
Fall Peer Relationships			0.21
Fall Shaping Environment			-0.26
Fall Teacher Support			-0.12
Interaction: T. Sup. x F. Disc.			-0.21[a]

[**]$p < .001$, [*]$p < .05$, [a]$p = .057$

Table 9

F$_{max}$ Statistic Analysis

	n	*M* Spring Disc. Referrals	*SD* Spring Disc. Referrals	*s²* Spring Disc. Referrals	*F$_{max}$* Statistic
High Perception of Peer Support (≥4)	53	2.60	4.28	18.32	
Low Perception of Peer Support (≤3)	189	1.61	3.29	10.83	
					1.69[a]

[a]Likely significant at *p* < .06. Biometric table not easily available (Hartley, 1950)

Table 10

Fall 2014 ODRs as Moderator of Fall 2014 Overall Perception of School Climate Predicting Spring 2015 Overall Perception of School Climate, Centered Predictors

Predictor	R^2	ΔR^2	B
Step 1	.19	.19**	
Gender			-.04
Fall GPA			.00
Fall School Climate			.48**
Step 2	.20	.001	
Gender			-.04
Fall GPA			.00
Fall School Climate			.48**
Fall Discipline Ref.			.01
Step 3	.22	.02*	
Gender			-.06
Fall GPA			.00
Fall School Climate			.47**
Fall Discipline Ref.			-.04
Interaction: F.Clim x F.Disc.			-.14*

**p < .001, *p < .05

Table 11

Fall 2014 ODRs as Moderator of Fall 2014 Teacher Support Predicting Spring 2015 Teacher Support, Centered Predictors

Predictor	R^2	ΔR^2	B
Step 1	.18	.18**	
Gender			-.10
Fall GPA			.00
Fall Teacher Support			.46**
Step 2	.18	.00	
Gender			-.10
Fall GPA			.00
Fall Teacher Support			.46**
Fall Discipline Ref.			.00
Step 3	.18	.00	
Gender			-.10
Fall GPA			.00
Fall Teacher Support			.46**
Fall Discipline Ref.			-.00
Interaction: T.Supp. x F.Disc.			-.03

**p < .001, *p < .05

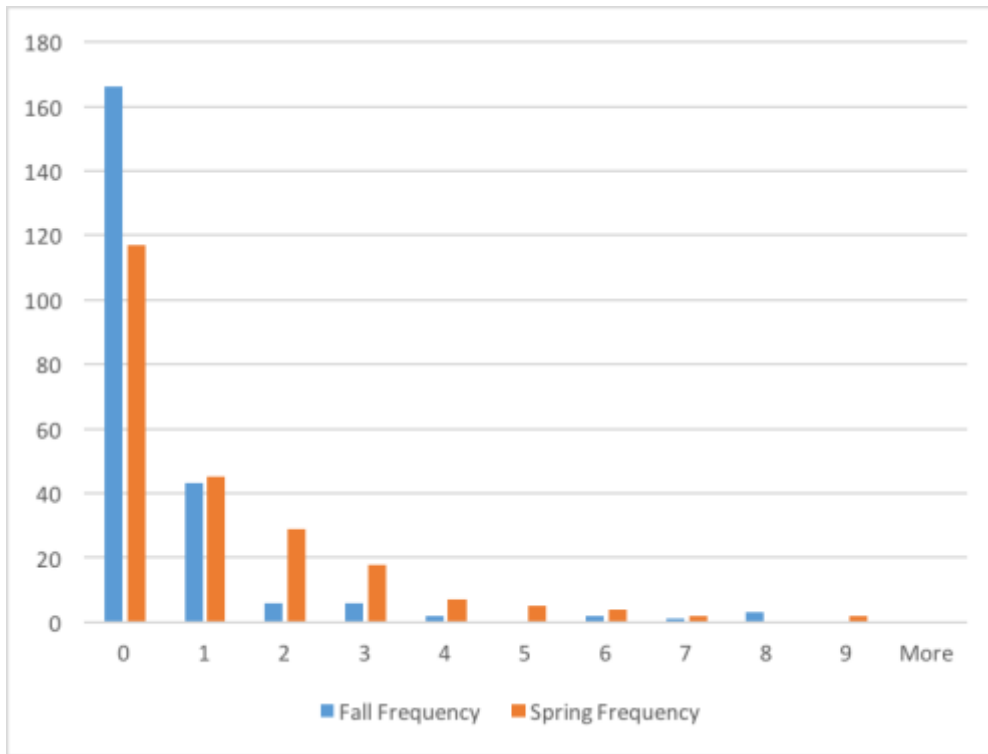*Figure 1. Number of ODR Referrals for Fall and Spring Semester*

Figure 2. Interaction of Teacher Support and Fall ODRs in Predicting Spring ODRs, Males. n = 99. Not Significant
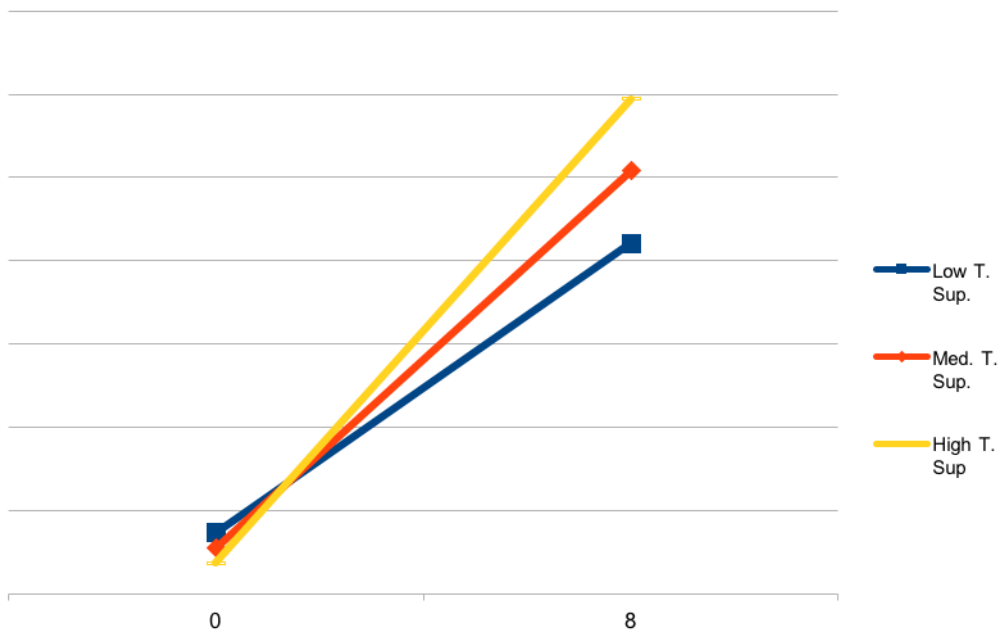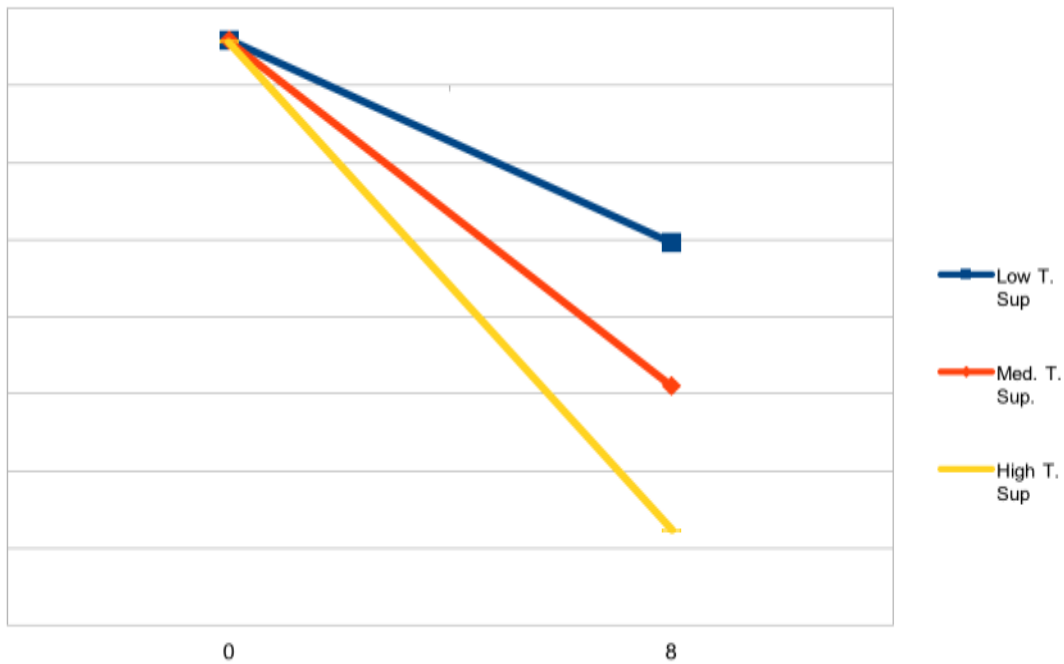

Figure 3. Interaction of Teacher Support and Fall ODRs in Predicting Spring ODRs, Females. n = 130. p = .002

List of Appendixes

Appendix A

School As A Caring Community Profile- II, Student Form (SCCP-II; Lickona & Davidson, 2004).
20 Item Short Version

Here are some sentences. Please decide if you *DISAGREE A LOT*, *DISAGREE A LITTLE*, *NEITHER AGREE NOR DISAGREE*, *AGREE A LITTLE*, or *AGREE A LOT* with each sentence.

To "Disagree" means that you DON'T think the sentence is true for you.

To "Agree" means that you DO think the sentence is true for you.

A	B	C	D	E
Disagree A LOT!	Disagree a little	Neither Agree Nor Disagree	Agree a little	Agree A LOT!

5. Students treat classmates with respect. That means they are polite, think about others' feelings when with them, and don't say bad things to them.

6. Students exclude those who are different. "Exclude" means to leave out of groups or other activities.

7. Students help each other, even if they are not friends.

8. When students do something hurtful, they try to make up for it.

9. Students try to get other students to follow school rules.

10. Students work well together.

11. Students are disrespectful toward their teachers.

12. Students help new students feel accepted.

13. Students pick on other students. To "pick on" means to put down or to tease.

14. Students are willing to forgive each other. When you "forgive", you are telling someone that you are not angry with them any more.

15. Students resolve conflicts without fighting, insults, or threats. That means when students are upset with others or disagree, they will find a way to deal with it without fighting, insulting, or threatening others.

16. Students like being in this school.

17. Students are involved in helping to solve school problems.

18. Students can talk to their teachers about problems that are bothering them.

19. In this school, students don't feel like they learn anything useful. That means that students don't think that what they learn can be used in their everyday life or future.

20. Teachers go out of their way to help students who need extra help.

21. Teachers in this school like to come here.

22. In this school you can count on adults to try to make sure students are safe.

23. Teachers are unfair in their treatment of students. That means that teachers do not treat all students the same way.

24. Students here have a lot of school pride.

Appendix B

SCCP-II Subscales

Student Respect:

Original
- Students treat classmates with respect
- Students are disrespectful towards their teachers
- Students pick on other students

Current Study:
- Students treat classmates with respect
- Students help each other, even if they are not friends
- Students try to get other students to follow school rules

Friendship and Belonging

Original:
- Students exclude those who are different'
- Students help each other, even if they are not friends'
- Students work well together'
- Students help new students feel accepted'
- Students are willing to forgive each other'

Current Study:
- Students work well together'
- Students help new students feel accepted'
- Students are willing to forgive each other'

Students' Shaping Their Environment:

Original:
- When students do something hurtful, they try to make up for it'
- Students try to get other students to follow school rules'
- Students resolve conflicts without fighting, insults, or threats'
- Students are involved in helping to solve school problems'

Current Study:
- When students do something hurtful, they try to make up for it
- Students resolve conflicts without fighting, insults, or threats
- Students are involved in helping to solve school problems

Support and Care By and For Staff:

Original:

- Students can talk to their teachers about problems that are bothering them
- Teachers go out of their way to help students who need extra help
- In this school you can count on adults to try to make sure students are safe
- Teachers are unfair in their treatment of students

Current Study:
- Students can talk to their teachers about problems that are bothering them
- Teachers go out of their way to help students who need extra help
- In this school you can count on adults to try to make sure students are safe
- Teachers are unfair in their treatment of students
- Teachers in this school like to come here

Appendix C

F_{max} Statistic Significant Values at $p < .05$ for k mean squares and v degrees of freedom (for smaller group n) (Hartley, 1950)

k / v	2	3	4	5	6	7	8	9	10	11	12
2	39·0	87·5	142	202	266	333	403	475	550	626	704
3	15·44	26·6	36·8	46·9	55·1	63·8	72·1	80·5	87·4	93·7	101
4	9·60	14·8	19·2	23·1	26·7	29·9	33·2	36·2	38·5	40·9	43·4
5	7·15	10·4	12·9	15·3	17·3	19·1	20·7	22·2	23·6	25·0	26·0
6	5·82	8·14	10·0	11·6	12·9	14·1	15·0	16·1	17·0	17·8	18·5
7	4·99	6·81	8·13	9·34	10·3	11·1	11·9	12·6	13·2	13·7	14·4
8	4·43	5·90	6·99	7·88	8·61	9·32	9·90	10·4	10·8	11·4	11·8
9	4·03	5·22	6·13	6·90	7·55	8·10	8·59	8·95	9·31	9·68	10·1
10	3·72	4·77	5·54	6·18	6·70	7·18	7·55	7·86	8·17	8·50	8·85
12	3·28	4·10	4·71	5·21	5·58	5·93	6·23	6·49	6·69	6·96	7·17
15	2·86	3·49	3·94	4·31	4·57	4·86	5·05	5·21	5·37	5·58	5·76
20	2·46	2·92	3·25	3·49	3·71	3·86	4·02	4·14	4·26	4·35	4·48
30	2·08	2·39	2·59	2·75	2·89	3·00	3·10	3·16	3·22	3·29	3·35
60	1·67	1·84	1·95	2·03	2·10	2·16	2·20	2·25	2·29	2·32	2·34
∞	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00