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To Educate or To Incarcerate: Factors in Disproportionality in School Discipline

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Abstract

The school-to-prison pipeline describes the process by which school suspension/expulsion may push adolescents into the justice system disproportionately based on race/ethnicity, socioeconomic status, and gender. The current study moves the field forward by analyzing a survey of a diverse sample of 2,539 students in 10th to 12th grade in Southern California to examine how demographic, individual, and family factors contribute to disparities in office referral and suspension/expulsion. African Americans, boys, and students whose parents had less education were more likely to be suspended/expelled. Higher levels of student academic preparation for class, hours spent on homework, and academic aspiration were associated with less school discipline. Findings suggest that helping students engage in school may be protective against disproportionate school discipline.

Keywords

disciplinary disparities; disproportionality; out-of-school suspension; expulsion; school discipline

Introduction

Commonly referred to as the “school-to-prison pipeline” (American Civil Liberties Union, 2012) or the “cradle-to-prison pipeline” (Children’s Defense Fund, 2012), suspension and expulsion can push children out of school and into the juvenile justice system, a process that tends to more severely penalize students of color as well as those who are male, of lower socioeconomic status (SES), and who have disabilities (Krezmien, Leone, & Wilson, 2014). Over 2,000,000 secondary school students – or approximately 1 out of 9 - were suspended from U.S. middle and high schools during the 2009–2010 school year (Losen & Martinez, 2013). Suspension has increased in frequency in recent years coinciding with an increase in the gap in racial disproportionality. Between the 1972–1973 and 2009–2010 school years, rates of suspension doubled for African American (11.8% to 24.3%) and Latino (6.1% to

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12.0%) students, whereas rates increased only slightly for White students (6.0% to 7.1%) (Losen & Martinez, 2013).

Krezmien et al. (2014) describe two pathways, one direct and the other indirect, through which suspension and expulsion can lead to students entering the justice system. In the direct pathway, schools refer students facing suspension/expulsion directly to the police and courts (Kupchik & Monahan, 2006; Krezmien, Leone, Zablocki, & Wells, 2010). In the indirect pathway, suspensions lead to the youth's disconnection from school, reduced academic performance, increased delinquent activity, and incarceration (Butler, Bond, Drew, Krelle, & Seal, 2005; Krezmien et al., 2014; Skiba & Rausch, 2006). Students who are suspended and/or expelled, especially those who are repeatedly disciplined, are more likely to be held back a grade or to drop out than students not receiving such discipline (Arcia, 2006; Balfanz, Byrnes, & Fox, 2014; Fabelo et al., 2011; Skiba & Rausch, 2006). School suspension hinders academic growth and contributes to racial disparities in achievement, accounting for approximately one-fifth of black-white differences in performance (Morris & Perry, 2016). School suspension is also associated with contact with the juvenile justice system the following year (Fabelo et al., 2011), antisocial behavior (Hemphill, Toumbourou, Herrenkohl, McMorris, & Catalano, 2006), and arrest in that same month versus months when youth had not been suspended or expelled (Monahan, VanDerhei, Bechtold, & Cauffman, 2014).

Most prior research has only included suspension and expulsion as outcome variables, but a smaller number of studies have also found office referrals (i.e., a teacher or school official sent a student to the office for disciplinary purposes) for students to be disproportionate based on race, SES, and gender (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010; Rocque, 2010; Skiba, Michael, Nardo, & Peterson, 2002). Office referrals are an important form of discipline that can reduce student opportunities to learn (Scott & Barrett, 2004) and increase the risk for future suspension and dropout (Morrison & Skiba, 2001). As a result, this study examines both suspension/expulsion and office referrals as outcomes. The term *school discipline* will refer to all of these outcomes. Doing so also allows a comparison of factors for the different forms of discipline as they can operate via different processes (Gregory, Skiba, & Noguera, 2010).

Despite extensive research linking the demographic factors of race, SES, and gender to school discipline, fewer studies address the role of multiple, varied risk and protective factors with disciplinary actions. The current study addresses this gap by testing whether individual risk factors (e.g., delinquency, substance use), individual protective factors (e.g., academic engagement and mental health), and family factors (e.g., alcohol and drug use, cultural values about family, parental monitoring) along with demographic factors (e.g., race/ethnicity, parent education, and gender) are associated with school disciplinary action.

Disproportionality by Race/Ethnicity

African American and Latino students are negatively affected by disproportionate suspension/expulsion rates in comparison to Whites, whereas Asian Americans tend to experience a lower rate of punishment than Whites. In 2007, the National Center for Education Statistics (NCES) conducted a nationally representative survey of student

discipline among public school students in grades 6 through 12. Based on parental reports, lifetime suspension rates were 43% for African Americans, 22% for Latinos, 16% for Whites, 14% for Native American/Alaskan Natives, and 11% for Asian Americans; lifetime expulsion rates were 13% for African Americans, 3% for Latinos, and 1% for Whites (Aud, Fox, & KewalRamani, 2010). Official school records show that school districts reported suspension rates of 17% for African American students, 8% for Native Americans, 7% for Latinos, 5% for Whites, and 2% for Asian Americans in the 2009–2010 academic year (Losen & Martinez, 2013). A large literature corroborates these disparities in suspension and/or expulsion (e.g., Fabelo et al., 2011; Krezmien, Leone, & Achilles, 2006; Raffaele Mendez, & Knoff, 2003; Skiba et al., 2011; Wallace, Goodkind, Wallace, & Bachman, 2008). Moreover, African American students are more likely than students of other races/ethnicities to experience office referral (Bradshaw et al., 2010; Rocque, 2010; Skiba et al., 2002). Importantly, differences in student behavior have not justified disparities in school discipline across race (Bradshaw et al., 2010; McCarthy & Hoge, 1987; Skiba et al., 2002; Wehlage & Rutter, 1986; Wu, Pink, Crain, & Moles, 1982).

Disproportionality by Socioeconomic Status

Students of low SES are also more likely to be suspended or expelled (Petras, Masyn, Buckley, Ialongo, & Kellam, 2011; Skiba et al., 2002; Skiba, Peterson, & Williams, 1997; Sullivan, Klingbeil, & Van Norman, 2013; Wu et al., 1982). In particular, level of parents' education as a measure of SES has been associated with suspension rates, with less education predicting greater punishment (Hemphill, Plenty, Herrenkohl, Toumbourou, & Catalano, 2014; McCarthy & Hoge, 1987). In one study, when family SES comprised parental education, family income, and parent/guardian occupational prestige, SES was not associated with student misbehavior, but increased SES reduced the likelihood of suspension/expulsion (Peguero & Shekarkhar, 2011).

Disproportionality by Gender

Schools tend to suspend boys at a much greater rate than girls (Costenbader & Markson, 1998; Raffaele Mendez & Knoff, 2003; Skiba, Peterson, & Williams, 1997; Skiba et al., 2002; Wu et al., 1982). According to the 2007 NCES survey previously mentioned, almost twice as many boys than girls in grades 6 through 12 were suspended (28% vs. 15%) and expelled (4.5% vs. 2.3%) at least once in their lifetime (Aud, Fox, & KewalRamani, 2010). In addition, several studies found a powerful interaction of race/ethnicity and gender whereby the highest rates of suspension were for African American boys (Losen & Martinez, 2013; Losen & Skiba, 2010; Skiba et al., 2002; Raffaele Mendez & Knoff, 2003; Wallace et al., 2008).

Individual Risk Factors

Even though schools discipline disproportionately based on race/ethnicity, SES, and gender, student behavior influences punishment (Skiba et al., 2014). In addition, research has indicated that alcohol and drug (AOD) use is associated with lower expectations for academic success (Donovan, 1996; Sutherland & Shepherd, 2001), reduced educational achievement (Degenhardt et al., 2010; Engberg & Morral, 2006; Jeynes, 2002; Lynskey, Coffey, Degenhardt, Carlin, Patton, 2003; Martins & Alexandre, 2009), and delinquency

(D'Amico, Edelen, Miles, & Morral, 2008). To address this, we include both delinquency and AOD use in our analyses.

Individual Protective Factors

Students with a greater interest in school achievement are less likely to have a history of suspension (Costenbader & Markson, 1998; Morrison, Anthony, Storino, & Dillon, 2001). Further, having high expectations for future educational achievement increases the likelihood of high school graduation (Ensminger & Slusarcick, 1992) and reduces dropout among children of immigrants (Rumbaut, 2005). In a study of school resiliency, a combination of teacher and student measures indicated that students who were suspended less (both in school and out of school) worked harder, engaged in more learning activities, attended more regularly, were more prepared for class, and expended more effort to complete assignments (Finn & Rock, 1997).

Some limited evidence suggests that mental health may affect the likelihood of school discipline. Data from the National Longitudinal Study of Adolescent Health indicate that students who report persistent depressive symptoms are more likely to be suspended one year later (Rushton, Forcier, & Schectman, 2002). Furthermore, optimism about the future is associated with a lower dropout rate, even after controlling for grade point average, suspension and SES (Suh, Suh, & Houston, 2007). As prior research has only begun to measure the association between mental health and school discipline, this study aims to address that gap.

Family Factors

A variety of research suggests the importance of family on adolescents' school outcomes. More family conflict and family AOD use are associated with office referral (Morrison et al., 2001). Another study found that parental involvement and discussing homework are associated with reduced student misbehavior but not associated with school punishment (Peguero & Shekarkhar, 2011). Familism is often protective for Mexican-American youth and bolsters academic achievement (Valenzuela & Dornbusch, 1994). Increased family cohesion, measured in part as familism, is associated with a greater level of engagement in school and schoolwork discipline (Rumbaut, 2005). Increased family respect is also associated with higher academic achievement (Fuligni, Tseng, & Lam, 1999). Given the influence that family can have on student academics, we include family factors in our model to increase understanding of how they may affect school discipline and its disproportionate application.

The Present Study

In sum, a large body of research supports the conclusion that schools discipline students disproportionately based on race/ethnicity, SES, and gender, and that doing so may have severe consequences, such as entry into the justice system. Despite the extensive work examining these demographic factors, fewer studies have explored the following specific factors either individually or simultaneously: individual factors (academic engagement, mental health) and family relationships (family alcohol/marijuana use, cultural values about family, parental monitoring). Furthermore, much of the prior research on these factors has

focused on school achievement and dropout and has not addressed school discipline directly. This study adds to the existing literature by examining associations of these multiple individual and family factors with two key disciplinary outcomes, student office referrals and suspension/expulsion, thus affording the opportunity to compare results across a broader spectrum of outcomes. In addition, to test whether individual and family factors can reduce disproportionality across demographic factors, this research examines interactions between each of these variables and parent education.

Using self-report from a large, diverse sample of high school students primarily living in Southern California, this study answers the following research questions:

1. What individual and family factors are associated with school discipline?
2. Do individual and family factors interact with parent education on the outcome of school discipline, suggesting a mechanism for disproportionality?

Methods

Participants and Procedure

Participants are part of a longitudinal study of adolescent risk behavior (D'Amico et al., 2012). Beginning in the fall of 2008, 16 schools across three districts were selected to participate to obtain a diverse sample. Seventh- and eighth-grade students received parental consent forms to participate in the study. Ninety-two percent of parents replied with 71% giving permission for their child to participate in the study. As youth graduated from middle school to high school between waves 5 and 6, they transitioned to over 200 high schools nationally and internationally. The current study uses Wave 6 data, which was completed between May, 2013, and April, 2014, when participants were in grades 10 through 12 ($n = 2539$). Of the youth who were eligible for the Wave 6 survey (6th or 7th grader at Wave 1, could be located, were re-consented), 61% completed the survey. Dropout from prior waves was not associated with demographics or risk behaviors, such as alcohol and marijuana use (Ewing et al., 2015). Because this was the first wave to measure suspension/expulsion and office referral, we could not determine whether those variables associated with survey dropout. There were 59 (2.3%) African American participants, 532 (21.0%) Asian American, 1115 (43.9%) Latino, 300 (11.8%) Multiracial, and 533 (21.0%) White. Youth who received parental permission to participate and who assented to the surveys were representative of the school populations (D'Amico et al., 2012). No weighting was applied to the analysis. A Certificate of Confidentiality from the National Institutes of Health was obtained to protect survey responses. The institution's internal review board, the school districts, and the individual schools approved all materials and procedures.

Measures

Sociodemographic Characteristics—Variables included race/ethnicity, gender, age, and parents' education. Youth were categorized using NIH guidelines into race/ethnic categories: Hispanic/Latino, White, African American, Asian American, and Multiracial/Other (which included African American multiracial, Native American, Native Hawaiian). For parent education, participants answered the question "How far did your father/mother go

in school?” for each parent by selecting one of “Did not finish high school”, “Graduated from high school”, “Some college”, “Graduated from college”, “Don’t know.” Answers to the questions were scored on a 1 to 4 scale (4 = graduated from college) for mother and father and then averaged into one variable to represent parent education.

Individual Risk Factors—Variables included delinquency and AOD use in the past year. Delinquency was measured with 4 items that asked how often in the past year the respondent had “been involved in fights”, “taken something from a store that did not belong to you”, “damaged something on purpose that did not belong to you”, and “written things or sprayed paint on walls or sidewalks or cars where you were not supposed to” (Ellickson, Tucker, Klein, 2001; Tucker, Orlando, Ellickson, 2003). Participants answered on the following scale: not at all, 1–2 times, 3–5 times, 6–9 times, 10–19 times, 20 or more times. Because few participants indicated any level of affirmative response (79.5% answered “not at all” to all 4 questions), answers for the four measures were coded as a dichotomous yes/no and then averaged to form the delinquency score ($\alpha = 0.77$). Alcohol and marijuana use in the past year were assessed using Monitoring the Future survey items by asking “During the past year, how many times have you used or tried” each one, specifying with alcohol “at least one drink.” Original responses ranged from 1=“0 times” to 6=“more than 20 times”. Responses were dichotomized (1=“any use” versus 0=“no use”) due to infrequent responses at high levels of use (Ellickson, McCaffrey, Ghosh-Dastidar, & Longshore, 2003; WestEd., 2008).

Individual Protective Factors—These variables included four indicators of academic engagement and a measure of mental health. Academic engagement measures were taken from the High School Longitudinal Study of 2009 (Ingels et al., 2011). Participants reported whether their *grades were important* by indicating “getting good grades in school is important to you” on a 5 point scale from strongly agree to strongly disagree. *Academic preparedness* was assessed by asking youth how often they “go to class without your homework done”, “go to class without pencil or paper”, “go to class without books”, and “go to class late” Participants chose from: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often. Items were summed to create a total score with lower values indicating more preparedness ($\alpha = 0.75$). For *homework hours*, respondents answered the question “During a typical weekday during the school year how many hours do you spend working on homework and studying for your classes?” by selecting from: Less than 1 hour, 1 to 2 hours, 2 to 3 hours, 3 to 4 hours, 4 to 5 hours, 5 or more hours. *Academic aspiration* was measured with the question “What is the highest level of school that you plan to finish?” Participants chose from: “I may not finish high school; I plan to finish high school; I plan to go to vocational or trade school after high school graduation; I plan to go to college, but may not finish; I plan to graduate from college; I plan to go to graduate school or professional school, such as medical or law school.” Answers to the questions were scored on a 1 to 6 scale (1 = I may not finish high school, 6 = I plan to go to graduate school or professional school). *Mental health* status was assessed using the Mental Health Inventory-5 (MHI-5) (Stewart, Ware, Sherbourne, & Wells, 1992). Participants answered 5 questions about their overall emotional functioning (e.g., “How much of the time have you felt downhearted and blue?”) using the following scale: 1 = All of the time, 2 = Most of the time, 3 = A good bit of the time, 4 =

Some of the time, 5 = A little bit of the time, 6 = None of the time. As is customary with the MHI-5, the mean of the 5 responses is the mental health score ($\alpha = 0.75$).

Family Factors—Variables included family AOD use, family-related cultural values, and parental monitoring. *Sibling alcohol use* was measured by asking “Do any of your older brothers or sisters drink alcohol sometimes?” *Sibling marijuana use* was measured by asking “Do any of your older brothers or sisters smoke marijuana sometimes?” Participants chose from: A = I don’t have any older brothers or sisters, B = No, C = Yes (D’Amico & Fromme, 1997). *Adult alcohol use* was measured by asking “How often does the adult who is most important to you drink alcohol?” *Adult marijuana use* was measured by asking “How often does the adult who is most important to you use marijuana?” Respondents used the following scale: 1 = Never, 2 = Less than once a week, 3 = 1–3 days a week, 4 = 4–7 days a week (Tucker, Ellickson, & Klein, 2003). *Familism* (e.g., “if anyone in my family needed help, we would all be there to help them;” $\alpha = .83$) and *respect* (e.g., “it is important to respect my parents;” $\alpha = 0.90$) were assessed with an updated version of the Cultural Values Scale (Unger et al., 2002). Youth responded to 4 items for each construct using the following scale: 1 = Strongly Agree, 2 = Sort of Agree, 3 = Sort of Disagree, 4 = Strongly Disagree. Items were averaged such that a higher score indicated higher levels of familism and respect. *Parental monitoring* was measured using the Communities that Care - Risk and Protective Factor Scale to determine the extent that parents had rules (e.g., “Rules in my family are clear;”) and monitored youth (e.g., “My parent(s) or guardian(s) ask if I’ve gotten my homework done.”) ($\alpha = 0.79$) (Arthur, Hawkins, Pollard, Catalano, & Baglioni Jr., 2002). Youth rated 5 items on the following scale: 1 = Strongly Agree, 2 = Sort of Agree, 3 = Sort of Disagree, 4 = Strongly Disagree, and items were coded and averaged with higher scores indicating greater parental monitoring.

School Discipline—*Office referral* and *suspension/expulsion* were measured with two items that asked how often in the past year the respondent had been “sent out of the classroom for causing trouble” and “suspended or expelled from school” (Tucker et al., 2003; Ellickson et al., 2003). Answer choices were: Not at all, 1–2 times, 3–5 times, 6–9 times, 10–19 times, 20 or more times. Consistent with prior research, the variables were converted into a dichotomous yes/no for analysis. Moreover, the distribution of each of these variables was skewed with few reporting office referral or suspension/expulsion, preventing treating the variable as ordered.

Analysis

If a participant did not answer a question for a measure, then that participant was removed from the sample for only the regression analysis that used that variable. This allowed for the maximum sample size for each regression but limited between regression comparisons. We conducted logistic regression analyses and first regressed school discipline outcomes (office referral, suspended/expelled) independently on the demographic variables of race/ethnicity, gender, parent education, and age. For race/ethnicity, we used African American as the reference group because prior research has consistently found African American students to be disproportionately impacted relative to other racial/ethnic groups.

To answer research question #1 focused on what individual and family factors are associated with school discipline, we conducted multivariable logistic regressions on both forms of school discipline independently with the factors grouped into blocks based on their constructs. Model 1 (the base model) included the covariates of race/ethnicity, gender, parent education, and age. Building on the base model, Block Model 2 added the three individual risk factors, Block Model 3 added the five individual protective factors, and Block Model 4 added the seven family factors to the covariates. For the final model (Model 5), we conducted separate regressions with office referral and suspension/expulsion, including only variables that were statistically significant ($p < .05$) in the block models for that specific dependent variable. To answer research question #2, whether individual and family factors interact with parent education on the outcome of school discipline, we tested interactions with each of the individual risk, individual protective, and family factors while controlling for covariates. Respondents within schools were too sparse to justify clustering within school. Youth in the sample attended over 200 high schools with 103 schools containing only a single student and with only 11 schools having 30 or more participants, which does not support a multilevel modeling approach (Bell, Morgan, Kromrey, & Ferron, 2010; Clarke and Wheaton, 2007; Hox, 1998; Maas & Hox, 2004; Maas & Hox, 2005).

Results

School Discipline By Demographic Factors

As shown in Table 1, main effects for race, gender, and parent education existed for both office referral and suspension/expulsion. Latinos were most likely to receive office referral, and African Americans were most likely to be suspended/expelled. Boys were more likely than girls to receive office referral and to be suspended/expelled. Higher parent education associated with less office referral and suspension/expulsion. Age was not a significant predictor of office referral or suspension/expulsion.

Demographic Factors and School Discipline

Including each of the demographic factors/covariates in a single analysis revealed several statistically significant effects (Table 2). Students were more likely to have received an office referral if they were male, younger, and if their parents had lower education levels; however, this form of discipline was not significantly associated with being African American relative to other race/ethnicities. Suspension/expulsion was more likely among students who were male, were African American (vs. Asian American), and had parents with lower education levels.

Block Models

We performed a series of regression analyses with blocks of related factors. Block Model 2 (Individual Risk Factors), Model 3 (Individual Protective Factors) and Model 4 (Family Factors) are shown in Tables 3 and 4. For individual risk factors, delinquency in the past year was associated with a higher likelihood of office referral, and both delinquency and marijuana use in the past year were associated with a higher likelihood of suspension/expulsion. For individual protective factors, greater academic preparedness and more time spent on homework were both associated with a lower likelihood of office referral. In

addition, greater academic preparedness, more homework hours and greater academic aspirations were all associated with a lower likelihood of suspension/expulsion. Sibling alcohol use was associated with a higher likelihood of office referral, and adult marijuana use was associated with a higher likelihood of suspension/expulsion.

Final Model

For the final analysis (Model 5 in Tables 3 and 4), increased delinquency was associated with a higher likelihood of office referral, whereas increased academic preparedness and homework hours were associated with a lower likelihood of office referral. For demographic factors, boys were more likely to receive an office referral than girls, and younger students were more likely than older students. Increased delinquency and prior year marijuana use were associated with higher rates of suspension/expulsion. Greater homework hours and academic aspirations were associated with a lower likelihood of suspension/expulsion. African American students were more likely to be suspended/expelled than Whites and Asian Americans, and those with parents who had lower parent education were also more likely to be suspended/expelled. Gender was no longer a significant correlate of suspension/expulsion in the final model.

Secondary Analyses: Interactions of Parent Education and Predictor Variables

To answer research question #2, we tested interactions between parent education and each predictor variable while controlling for covariates. There were no statistically significant interactions with office referral as the outcome, but two variables had significant interactions for suspension/expulsion: Grades Important X Parent Education ($\beta = .27$, $SE = .11$, $p = .018$; Table 5, Figure 1a) and Parental Monitoring X Parent Education ($\beta = .26$, $SE = .13$, $p = .040$; Table 5, Figure 1b). For students with parents who had higher parent education, rates of suspension/expulsion were unrelated to the importance of grades or amount of parental monitoring. However, for students with parents with lower parent education, suspension/expulsion was more likely among students who placed less emphasis on grades or reported less parental monitoring. Two other interactions are worth noting: Marijuana Use X Parental Education ($\beta = -.36$, $SE = .19$, $p = .054$; Table 5, Figure 1c) and Adult Alcohol Use X Parental Education ($\beta = -.18$, $SE = .09$, $p = .064$; Table 5, Figure 1d). For students with parents with higher parental education, rates of suspension/expulsion were unrelated to marijuana use in the past year or adult alcohol use, but for students with parents with lower parental education, suspension/expulsion was more likely among students who reported more marijuana use and adult alcohol use.

Discussion

This is the first study to simultaneously examine associations of a broad range of demographic, individual, and family factors with two key forms of school discipline: office referral and suspension/expulsion. Understanding the role that these factors may play in school discipline may help remedy the “school-to-prison pipeline.” Our first research question addressed whether specific individual and family factors were associated with the two outcomes of school discipline while controlling for demographic factors of race/ethnicity, parental education, and gender. Results indicate that youth were more likely to

report an office referral if they had been involved in more delinquency during the prior year, had lower academic preparedness, and spent fewer hours doing homework. For suspension/expulsion, youth were more likely to report this outcome if they had been involved in more delinquency and if they had used marijuana during the prior year, but also if they spent fewer hours doing homework and had lower academic aspirations.

Among the individual risk factors, delinquency had a more powerful association than prior year alcohol or marijuana use. It is important to note that the delinquency measure was not indicative of the reason for school discipline, but rather was a measure of overall delinquent behavior during the prior year both during and after school. Thus, as one might expect, youth who were engaging in problem behaviors were also more likely to be disciplined at school. Prior year alcohol use was not related to either office referral or suspension/expulsion, but prior year marijuana use was associated with a greater likelihood of suspension/expulsion. Alcohol or drug infractions typically encompass less than 5% of suspensions (Krezmien et al., 2014; Rausch & Skiba, 2004). Therefore, the finding that marijuana use associates with suspension/expulsion suggests that marijuana may be a problem (or a marker for another problem) for youth even if they are not specifically caught with it on school grounds. Given that youth tend to view marijuana use as having fewer consequences than alcohol use (D'Amico et al., 2013), findings highlight the importance of focusing on this drug in prevention and intervention efforts, especially given recent changes to marijuana policies in several states.

Academic preparedness and homework hours had significant associations with office referral; academic aspirations and homework hours were associated with suspension/expulsion. Although parental education was also associated with office referrals in the block models, it did not remain significant when including delinquency, academic preparedness, and homework hours in the final model. This highlights the importance of delinquent behavior in increasing risk, and also suggests that academic preparedness and homework hours may be protective factors that can reduce disproportionality with regards to parent education. This is especially notable as prior research has found higher SES to be associated with a lower likelihood of office referral (Rocque, 2010; Skiba et al., 2002). Our results for suspension/expulsion did not indicate a reduction in disproportionality for parent education when the individual risk, individual protective, or family factors were included. Even though suspension/expulsion was more likely among boys than girls, this gender difference was no longer significant when controlling for homework hours, academic aspirations, delinquency, and marijuana use. Certainly the risk factors of delinquency and marijuana use are important, but the protective findings regarding homework hours and academic aspirations suggest that these indicators of academic engagement merit further attention.

Although it is an expected finding that spending more time on homework may reduce the likelihood of receiving any form of school discipline, it is important to note that the association between both more parent education (with office referral) and being a boy (with suspension/expulsion) were no longer significant with inclusion of homework hours. Tangible efforts to increase student time on homework may therefore be a protective factor to reduce at least two forms of disproportionality in discipline. Thus, school and community based efforts to assist with homework, such as tutoring or increased library hours to provide

safe places to study, may be practical ways to reduce unequal school discipline. Furthermore, providing these types of after school activities may also reduce the likelihood that youth will engage in other risk behaviors, such as delinquency and marijuana use (D'Amico et al., 2008). It is not clear the mechanism through which having high aspirations reduced suspension/expulsion, but it may help youth stay more involved in school or affect the way teachers and administrators treat the student. Future longitudinal studies could explore this as well as test whether specific programs can enhance academic aspirations (e.g., adult mentoring of youth), thereby reducing disproportionality in suspension/expulsion.

Our measure of mental health was not related to either form of school discipline. There is limited work in this area, although one study (Rushton et al., 2002) found that students who reported persistent depressive symptoms were more likely to be suspended. Our measure was not an in-depth measure of symptoms or diagnosis and therefore may not have captured the severity of symptoms. Specifically, the MHI-5 asks respondents about their depressive symptoms for only the last month. Future research could assess mental health more in depth.

Family AOD use, cultural values about family, and parental monitoring were not associated with office referral or suspension/expulsion in the final model. Our results are consistent with Peguero and Shekarkhar (2011), who reported that parental involvement, discussing homework, and engaging in activities with children were not related to school punishment. Nevertheless, prior research has shown that these factors are associated with school achievement and dropout (Balfanz, Herzog, & Mac Iver, 2007; Christenson & Thurlow, 2004; Ensminger & Slusarcick, 1992; Rosenthal, 1998). This suggests that for these family factors, the role of family is more important for school completion than for school discipline. It is also important to note that our respect measure was heavily skewed with most students reporting a max level of respect, which likely weakened the ability to find an effect (Miles et al., 2012).

Consistent with prior research, African American students reported rates of suspension/expulsion that were significantly higher than for White and Asian American youth. The effect of race/ethnicity became even stronger when controlling for students' prior year delinquency and marijuana use. These results suggest that even when youth report similar levels of engagement in these behaviors, African American youth are more likely to be suspended/expelled. Prior work in this area has shown that African American students who committed the same infractions as White youth were more likely to be suspended and expelled (McCarthy & Hoge, 1987; Skiba et al., 2002; Wallace et al., 2008; Wu et al., 1982). Our results add to the research as this disparity occurred even when controlling for individual factors that appeared to reduce disproportionality based on gender. Although African American students were more likely to be suspended/expelled, we did not find that they were significantly more likely than other racial/ethnic groups to report an office referral. This finding differs from prior studies that utilized official school reports (Rocque, 2010; Bradshaw et al., 2010; Skiba et al., 2002), and it may be the case that our self-report measure ("sent out of the classroom for causing trouble") captures something different (and perhaps less severe) than official school reports of youth being referred to the principal's office. Another explanation is that due to the small number of African American students in

the sample uncertainty was introduced into the results, preventing this effect from emerging. The disproportionality in rates of both office referral and suspension/expulsion with regards to parent education and gender without covariates are consistent with prior research. Notably, boys were punished at nearly double the rate as girls, similar to the prior national study of suspension/expulsion (Aud et al., 2010).

Findings from our second research question on interactions between parental education and the protective/risk factors indicated that the likelihood of being suspended/expelled from school was significantly associated with using marijuana, exposure to adult role model alcohol use, less belief that grades were important, and lower parental monitoring only among students who had parents with less education. For those with more highly educated parents, these factors were unrelated to suspension/expulsion status. Thus, being from a higher parental education family seemed to prevent these students from receiving severe discipline. This suggests that interventions for students from lower parental education backgrounds that address these factors, such as reducing marijuana use or bolstering the belief that grades are important, may be especially helpful at reducing disproportionality in suspension/expulsion.

It is important to note some limitations of the current study. First, the small number of African American students in the sample reduced the power to find race effects, although several effects were statistically significant, and power limitations also prevented examining interactions with risk/protective factors. Second, we relied exclusively on self-report data, including the measurement of school discipline (it was not feasible to collect official school reports given that participants were from over 200 high schools). The measure of office referral asked students if they had been “sent from class,” which could be measuring something different than an official report of office referral. Third, the survey did not include certain types of information that would have allowed for more fine-grained analyses. For example, we did not have information on reasons for school discipline and cannot infer that students who reported delinquent behaviors or substance use necessarily faced disciplinary action due to these behaviors. In addition, we were not able to examine whether students received office referrals or suspension/expulsion for different infractions based on race, as other studies have shown (e.g. Skiba et al., 2002). We also lacked data on school level factors (e.g., suspension rate, weak and inconsistent adult leadership, school racial composition; Christle, Jolivette, & Nelson, 2005; Flannery, 1997; Krezmien, 2007; Theriot, Craun, & Dupper, 2010; Welch & Payne, 2010; Wu et al., 1982), as well as staff attitudes and behavior, which could affect school discipline (Skiba et al., 2014). The survey also did not ask about disability, and prior research has found disproportionality in suspension/expulsion is related to this (U.S. Department of Education, 2014; Vincent, Sprague, & Tobin, 2012). Fourth, the cross-sectional analyses preclude us being able to draw any causal conclusions; other factors may have been driving the observed relationships, and one cannot determine the way school discipline related to the observed variables even when associations existed. Fifth, it is possible that the sample does not include some students who may have already been expelled or dropped out. However, the sample includes students from schools that focus on at-risk youth and continuation schools, so many who may have been expelled from or dropped out of traditional schools still participated.

Results from this study suggest that when controlling for demographic, individual, and family variables, schools disproportionately suspend/expel by student race/ethnicity and parental education, and that schools discipline with office referral disproportionately by gender. Our findings with academic engagement emphasize the need to bolster student academic preparedness (e.g., teaching study skills), provide safe places to do homework (e.g., restoring library hours that were reduced during budget shortfalls), and support academic aspirations (e.g., through mentoring and university outreach/recruitment programs). In terms of individual risk factors, we found that teen marijuana use was associated with suspension/expulsion, so improved drug prevention and treatment may reduce that punishment. In particular, each of these efforts could be made in communities and with populations that experience disproportionate punishment and that have been historically underserved.

Even when controlling for delinquent behavior and marijuana use, rates of suspension/expulsion were higher for African American students and for those from families with low parental education backgrounds. In order to reduce the disproportionality associated with the demographic factors, school districts could assess and change policies that rely on or reinforce inequality, whether the policies do so inadvertently or not. As with much prior research, this study suggests that African American students are suspended and expelled at a greater rate irrespective of behavior. Therefore, schools could better train teachers and administrators to accurately and fairly assess student behavior and apply discipline equally regardless of background. Because disparities increase in schools with police presence and with rigid zero tolerance policies (Carter, Fine, & Russell, 2014), schools could adopt alternative forms of discipline that are less disruptive than suspension/expulsion (Anyon et al., 2014), such as School-Wide Positive Behavioral Interventions and Supports (Flannery, Fenning, Kato, & McIntosh, 2014; Horner, Sugai, & Anderson, 2010) or restorative justice (Gregory, Clawson, Davis, & Gerewitz, 2014). For a more thorough discussion of school-based interventions, see Gregory, Bell, and Pollock (2014).

Using an intersectionality theoretical framework in which such factors as race, gender, class, sexual orientation, and disability are considered simultaneously could provide great insight (Cho, Crenshaw, McCall, 2013; Rios, 2011; Shedd, 2015). For example, the school discipline of African American girls can be quite different than for African American boys in relation to their gender and race as well as their place (e.g., school, neighborhood) (Morris, 2012). Overall, efforts to reduce disproportionality should address both the protective/risk factors indicative of academic engagement identified in the study as well as the demographic factors of race/ethnicity, parental education, and gender. Most importantly, the school-to-prison pipeline is our own creation. Because we have grown it in the last 40 years, we can also dismantle it.

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Highlights

- Advances the field by measuring how demographic, individual, and family factors contribute to disparities in office referral and suspension/expulsion.
- African Americans, students whose parents had less education, and boys were more likely to be suspended/expelled.
- Higher levels of student academic preparation for class, more hours spent on homework, and less prior year delinquency were associated with lower office referral; more hours doing homework, higher academic aspirations, less delinquency, and not using marijuana during the prior year were associated with less suspension/expulsion.
- An interaction existed between parental education and several factors such that students with parents with less education were suspended/expelled significantly more when they indicated more marijuana use or adult role model alcohol use or less belief in the importance of grades or parental monitoring.
- Findings suggest that interventions that promote student engagement in school may be protective against disproportionate school discipline.

Figure 1.
Interactions with parent education.

Table 1

School Discipline by Demographic Variables

Category	Number	Percent	# Office Referral	% Office Referral	# Suspended/Expelled	% Suspended/Expelled
Race						
Asian American	532	21.0	31	5.8	10	1.9
Multiracial	300	11.8	36	12.0	11	3.7
White	533	21.0	67	12.6	23	4.3
Latino	1115	43.9	165	14.8	67	6.0
African American	59	2.3	6	10.2	5	8.5
<i>Race main effect</i>						
			$\chi^2 (4) = 27.8, p < .001$		$\chi^2 (4) = 16.8, p < 0.01$	
Gender						
Boys	1162	45.8	187	16.1	69	5.9
Girls	1377	54.2	118	8.6	47	3.4
<i>Gender main effect</i>						
			$\chi^2 (1) = 33.0, p < .001$		$\chi^2 (1) = 8.7, p < 0.01$	
Parent Education *						
1	230	9.6	39	17.0	20	8.7
1.5	120	5.0	25	20.8	4	3.3
2	274	11.4	36	13.1	20	7.3
2.5	184	7.7	23	12.5	10	5.4
3	345	14.4	44	12.8	25	7.3
3.5	191	8.0	22	11.5	5	2.6
4	1054	44.0	97	9.2	23	2.2
<i>Parent Education main effect</i>						
			$\chi^2 (6) = 18.3, p < .001$		$\chi^2 (6) = 36.26, p < .001$	
Age						
16	243	11.9	30	12.4	6	2.5
17	971	47.5	121	12.5	39	4.0
18	829	40.6	76	9.2	33	4.0
<i>Age main effect</i>						
			$\chi^2 (2) = 5.3, p = 0.069$		$\chi^2 (2) = 1.37, p = 0.505$	

* Note: For an individual respondent for parent education, 1 = "Did not finish high school", 2 = "Graduated from high school", 3 = "Some college", and 4 = "Graduated from college."

Table 2

Model 1 – Logistic regression of demographic factors on office referral and suspension/expulsion.

Demographic Factor	Office Referral <i>n</i> = 2398		Suspended/Expelled <i>n</i> = 2397	
	Beta	SE	Beta	SE
(Intercept)	2.01	1.49	−1.22	2.28
Age	−0.24 **	0.09	−0.01	0.14
African American	Ref.		Ref.	
White	0.23	0.45	−0.70	0.52
Latino	0.27	0.45	−0.83	0.50
Asian American	−0.76	0.48	−1.58 **	0.58
Multiracial	0.18	0.47	−0.83	0.56
Boys	0.72 ***	0.13	0.69 ***	0.20
Parent Education	−0.20 **	0.07	−0.42 ***	0.11

p < .001

**
p < .01

*
p < .05

Table 3

Multivariable logistic regressions on office referral.

	Model 2 n = 2396	Model 3 n = 2392	Model 4 n = 2377	Model 5 n = 2397
Factor	Beta (SE)	Beta (SE)	Beta (SE)	Beta (SE)
<i>Demographic</i>				
(Intercept)	1.42 (.61)	1.96 (1.66)	3.70 (1.63)	0.31 (1.63)
Age	−0.34 (.10)	−0.24 (.09) ***	−0.27 (.09) **	−0.28 (.10) **
African American	Ref.	Ref.	Ref.	Ref.
White	0.02 (.47)	0.35 (.46)	0.33 (.47)	0.14 (.47)
Latino	0.26 (.46)	0.32 (.46)	0.47 (.46)	0.31 (.46)
Asian American	−0.57 (.49)	−0.58 (.49)	−0.52 (.49)	−0.49 (.49)
Multiracial	0.09 (.49)	0.27 (.48)	0.38 (.48)	0.14 (.49)
Boys	0.64 (.14) ***	0.55 (.14) ***	0.79 (.14) ***	0.52 (.14) ***
Parent Education	−0.18 (.07) *	−0.13 (.07)	−0.19 (.07) **	−0.11 (.08)
<i>Individual Risk</i>				
Delinquency	1.78 (.19) ***			1.62 (.17) ***
Alcohol prior year	0.24 (.18)			
Marijuana prior year	0.36 (.20)			
<i>Individual Protective</i>				
Grades Important		−0.13 (.09)		
Academic Preparedness		−0.19 (.02) ***		−0.16 (.03) ***
Homework Hours		−0.23 (.05) ***		−0.24 (.05) ***
Academic Aspirations		−0.05 (.07)		
Mental Health		−0.004 (.003)		
<i>Family</i>				
Sibling alcohol use			0.44 (.16) **	0.26 (.15)
Sibling marijuana use			0.16 (.19)	
Adult alcohol use			0.01 (.07)	
Adult marijuana use			0.33 (.11)	
Familism			−0.06 (.13)	
Respect			−0.22 (.13)	
Monitoring			−0.19 (.11)	

p < .001**
p < .01*
p < .05

Table 4

Multivariable logistic regressions on Suspended/Expelled

	Model 2 <i>n</i> = 2395	Model 3 <i>n</i> = 2391	Model 4 <i>n</i> = 2376	Model 5 <i>n</i> = 2379
Factor	Beta (SE)	Beta (SE)	Beta (SE)	Beta (SE)
<i>Demographic</i>				
(Intercept)	−1.49 (2.48)	−0.85 (2.43)	0.69 (2.46)	−1.84 (2.53)
Age	−0.10 (.15)	0.01 (.14)	−0.04 (0.14)	−0.07 (.15)
African American	Ref.	Ref.	Ref.	Ref.
White	−1.10 (.55) *	−0.64 (.53)	−0.53 (.53)	−1.09 (.54) *
Latino	−0.92 (.52)	−0.77 (.51)	−0.56 (.52)	−0.92 (.52)
Asian American	−1.36 (.59) *	−1.39 (.59) *	−1.24 (.60) *	−1.20 (.60) *
Multiracial	−1.10 (.59)	−0.78 (.57)	−0.58 (.58)	−1.05 (.60)
Boys	0.48 (.22) *	0.48 (.22) *	0.75 (.21) ***	0.33 (.23)
Parent Education	−.42 (.12) ***	−0.33 (.11) **	−0.41 (.11) ***	−0.33 (.12) **
<i>Individual Risk</i>				
Delinquency	1.42 (.19) ***			1.28 (.18) ***
Alcohol prior year	−0.50 (.31)			
Marijuana prior year	1.21 (.32) ***			0.73 (.25) **
<i>Individual Protective</i>				
Grades Important		−0.15 (.13)		
Academic Preparedness		−0.12 (.04) **		−0.05 (.04)
Homework Hours		−0.17 (.08) *		−0.17 (.08) *
Academic Aspirations		−0.24 (.08) **		−0.24 (.09) **
Mental Health		−0.005 (.005)		
<i>Family</i>				
Sibling alcohol use			0.22 (.26)	
Sibling marijuana use			0.42 (.29)	
Adult alcohol use			−0.07 (.11)	
Adult marijuana use			0.38 (.14) **	0.05 (.17)
Familism			−0.04 (.20)	
Respect			−0.22 (.25)	
Monitoring			−0.30 (.16)	

p < .001**
p < .01*
p < .05

Table 5

Interactions of parent education and select predictor variables.

	Interaction 1 <i>n</i> = 2395	Interaction 2 <i>n</i> = 2394	Interaction 3 <i>n</i> = 2396	Interaction 4 <i>n</i> = 2390
Factor	Beta (SE)	Beta (SE)	Beta (SE)	Beta (SE)
<i>Covariates</i>				
(Intercept)	3.61 (2.67)	3.43 (2.63)	−0.81 (2.36)	−1.73 (2.32)
Age	−0.00 (.13)	−0.05 (.14)	−0.09 (.14)	−0.01 (.13)
African American	Ref	Ref	Ref	Ref
White	−0.79 (.52)	−0.68 (.52)	−0.75 (.53)	−0.68 (.52)
Latino	−0.85 (.50)	−0.77 (.50)	−0.80 (.51)	−0.80 (.50)
Asian American	−1.68 (.58) **	−1.60 (.58) **	−1.41 (.59) *	−1.59 (.58) **
Multiracial	−0.89 (.56)	−0.81 (.56)	−0.83 (.58)	−0.82 (.56)
Boys	0.62 (.21) **	0.66 (.21) **	0.80 (.21) ***	0.70 (.21) ***
Parent Education	−1.63 (.53) **	−1.30 (.44) **	−0.28 (.14) *	−0.26 (.13)
<i>Predictor Variables</i>				
Grades Important	−1.06 (.30) ***			
Monitoring		−1.20 (.35) ***		
Marijuana prior year			2.44 (.53) ***	
Adult alcohol use				0.54 (.27) *
<i>Interactions with Parent Educ.</i>				
Grades Important	0.27 (.11) *			
Monitoring		0.26 (.13) *		
Marijuana prior year			−0.36 (.19)	
Adult alcohol use				−0.18 (.09)

p < .001**
p < .01*
p < .05