

A Multilevel Analysis of Statewide Disproportionality in Exclusionary Discipline and the Identification of Emotional Disturbance

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Abstract

Racial minority youth are disproportionately removed from their learning environment due to school discipline and placed in special education for emotional disturbance. These disparities continue to trouble families, educators, and policy makers, particularly within urban schools. Yet there is a paucity of research on how behavioral outcome disparities occur in different states. This study addresses this gap examining the extent and predictors of behavioral outcome disparities in Wisconsin. Using the entire state's data, we conducted multilevel logistic regression analyses. The analyses showed that African American students were seven times and Native American and Latino students were two times more likely to receive exclusionary discipline. African American students and Native American students were two to three times more likely to be labeled as emotionally disturbed. Students' race, gender, income, language, attendance, and academic proficiency were related to outcome disparities while school

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characteristics were not substantively meaningful predictors, excepting the percentage of transferred students. Implications for future research and practice are discussed.

Keywords

Racial disproportionality, discipline, suspension, expulsion emotional disturbance, multilevel logistic regression, social justice

Racial minority youth face immense educational disparities in the United States. A major contributor to this problem is the disparities that minority students experience in behavioral outcomes. Behavioral outcomes in schools are typically studied through two interrelated measures: (a) exclusionary discipline removal from the learning environment (suspension and expulsion) and (b) special education placement for emotional disturbance (ED; American Psychological Association [APA], 2008; The Office for Civil Rights, 2014; U.S. Department of Education, 2014). Disproportionality in behavioral outcomes has been identified as a significant problem of social justice that contributes to negative academic and social consequences in the lives of students, families, educators, and in society (Gregory, Skiba, & Noguera, 2010; Harry & Klingner, 2014; Skiba, Michael, Nardo, & Peterson, 2002).

In U.S. schools, over three million students lost instructional time due to discipline in the 2009-2010 academic year (Losen & Gillespie, 2012). Exclusionary discipline fails to improve functional behaviors and safety at school and is negatively associated with academic achievement (APA, 2008; Skiba & Knesting, 2001). It weakens the student-school bond, increasing the probability that a student will drop out of school (Rumberger, 2011). Moreover, exclusionary discipline has an impact on the likelihood of involvement in the juvenile justice system known as the school-to-prison pipeline (Gregory et al., 2010; Krezmien, Leone, & Achilles, 2006; Mallett, 2017). Similarly, placement in special education programs with the label of ED has negative effects on long-term education and life outcomes for students of color. A disability label is supposed to provide additional support for students experiencing emotional and behavioral problems. However, the ED label may stigmatize students, isolate them from their peers, expose them to a weak curriculum, and limit their access to higher education, especially when services are provided in a segregated setting (Harry & Klingner, 2014; U.S. Department of Education, 2014). The purpose of the study is to examine the extent and predictors of racial disproportionality in behavioral outcomes (discipline removal and the identification of ED) in the state of Wisconsin.

Below, we review the research literature on racial disproportionality to contextualize the rationale and significance of the present study.

Racial Disproportionality in Behavioral Outcomes in U.S. Schools

Racial disparities in behavioral outcomes have a long history in the United States (Children's Defense Fund, 1975). These disparities hold today with African American, Latino, and Native American students who are disproportionately suspended and expelled more frequently for more subjective reasons such as disrespect, insubordination, or excessive noise (Skiba et al., 2002; The Office for Civil Rights, 2014). Nationally, one in every six African American students, one in 12 Native American students, one in 14 Latino students, one in 20 White students and one in 50 Asian students were suspended at least once (Losen & Gillespie, 2012). Furthermore, Native American and African American students are disproportionately placed in special education as emotionally disturbed (U.S. Department of Education, 2014). The risk ratio (RR) of ED identification is 1 to 2 times higher for African American and Native American students compared with their White peers, which is particularly problematic because of the poor outcomes for students with ED identification, such as a 51.1% high school graduation rate (U.S. Department of Education, 2014). Once in special education programs, racial disparities persist: racial minority students are more likely to be educated in segregated settings such as self-contained classrooms than White students with the same disability label (Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006).

Racial disproportionality is a dynamic, multidimensional systemic problem, specifically in urban education systems where a majority of students of color are educated and face enormous inequalities (Anyon, 2005; Ladson-Billings, 2006). There may be a misconception that racial disproportionality is a clearly understood problem because it has been identified consistently. However, despite an increasing national interest, there is still a paucity of research in the literature on behavioral outcome disparities, even in the urban education literature. Blanchett, Klingner, and Harry (2009) pointed out that "the intersection of race, culture, language, and disability still remains largely unexplored in the urban education research literature . . . even though, like race, disability has been and is still being used as a method of sorting, stratifying, and excluding" (pp. 392-393). Overall, the full complexity and underlying mechanisms of disproportionality are yet to be uncovered (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Morgan et al., 2015; Waitoller, Artiles, & Cheney, 2010; Wright, Morgan, Coyne, Beaver, & Barnes, 2014).

In addition to the dearth of empirical research, the literature has important methodological limitations. First, the majority of disproportionality studies rely on the nationally representative data sets. These data sets are aggregated at district or school level and often do not contain student-level data that would allow inferences about the role of individual factors (Sullivan, Klingbeil, & Van Norman, 2013). Moreover, although disproportionality has persisted, its extent, direction, and predictors vary considerably from one state to another (U.S. Department of Education, 2014). For instance, while African American students have the highest suspension rate in most states, these students are underrepresented in suspension compared with White students in the state of Montana (Losen & Gillespie, 2012). In addition, within each state, there are unique variations in individual- and school-level factors (Hibel, Farkas, & Morgan, 2010; Theriot, Craun, & Dupper, 2010). Therefore, nationally representative data sets also mask within-state differences.

Second, the studies using nationally representative samples often lack sufficient numbers of cases of populations of interest. As a result, those studies often focused on the differences between African American and White students (e.g., Morgan et al., 2015; Skiba et al., 2006). To illustrate, Morgan and colleagues (2015) analyzed the data from the ECLS-Kindergarten Cohort [Early Childhood Longitudinal Study (ECLS)], 1998-1999. Their analysis excluded Latino, Asian American, and Native American students due to small cell size. Not including all racial groups limits the ecological validity of analyses (Wright et al., 2014).

The third limitation with the literature is that the prior studies analyzed the special education placement and school discipline separately (see, for example, Bal, Sullivan, & Harper, 2014; Skiba et al., 2014; Sullivan & Bal, 2013; Sullivan et al., 2013; Wright et al., 2014). The dispersed analyses of behavioral outcomes limit educators' and policy makers' nuanced understanding of and accurate responses to the disparities in a full spectrum. For example, Latino students are underrepresented in ED identification while they are overrepresented in disciplinary removal compared with their White peers (Losen & Gillespie, 2012; Sullivan, Van Norman, & Klingbeil, 2014).

The fourth limitation is related to analytical models. Hibel and colleagues (2010) pointed out that the majority of disproportionality studies used single-level models analyzing either student or school characteristics. With increasing national efforts, a new line of research using multilevel regression analyses has begun to examine the effects of both school- and student-level variables (e.g., Bradshaw, Mitchell, Brennan, & Leaf, 2010; Eitle & Eitle, 2004; Hibel et al., 2010; Skiba et al., 2014).

Present Study and Research Questions

To address these limitations in the literature, we examined the extent and predictors of disproportionality across five racial groups (African American, Asian, Latino, Native American, and White) considering both student- and school-level variables in a single state using the entire state's public school education data. We answered the following questions:

Research Question 1: To what extent are minority students represented in special education placement for ED?

Research Question 2: To what extent are minority students represented in exclusionary discipline?

Research Question 3: To what extent is risk of exclusionary discipline and ED placement predicted by student- and school-level variables?

Method

Sample

Participants were all public school students in the 2010-2011 school year. Data for this study were acquired through a data use agreement from Wisconsin Department of Public Instruction (WDPI). Additional data that focused on teacher variables were publicly available on the WDPI website. Our sample included 429,725 students in grades pre-K-12 in 2,116 public schools. Although urban districts make up only 5% of the total number of districts, their enrollment comprises 35% of all public school students in Wisconsin (Applied Population Laboratory, 2014). The population size is significantly larger than the samples in the prior multilevel analyses that used nationally representative data sets.¹

Student-level data. Student data obtained for this analysis included race (White, African American, Latino, Asian, and Native American; White students served as a referent group), gender (dichotomous variable indicating if the student was male), free or reduced priced lunch (FRL) status (dichotomous variable indicating if the student received FRL), English language learner (ELL) status (dichotomous variable indicating if the student was a nonnative English speaker), and attendance (percentage of days attended). Also, student proficiency levels on the statewide Wisconsin Student Achievement System (WSAS) assessment in reading and math were constructed as dichotomous variables (1 as advanced or proficient; 0 as basic or minimal). We created a transfer variable indicating whether a student changed schools

during the 2010-2011 school year (students who did not transfer were the referent group).

School-level data. Student- and teacher-level variables were aggregated to create school-level variables for the hierarchical analysis. To test the impact of teacher characteristics thought to be predictors (Skiba et al., 2011), this analysis includes the percent of teachers identified as White, the percent of teachers with master's degrees, and the percent of teachers that are bilingual. From the student-level data, we created school-level variables indicating the percent of students on FRL, the percent of ELLs, the mean attendance rate, school-level WSAS reading and math proficiency, and the percent of Asian, African American, Latino, and Native American students (White students as the referent group).

Outcome variables. Outcomes focused on student-level data related to the ED identification and discipline removal. ED status was created as a dichotomous variable indicating if a student had been identified as having ED. Another dichotomous variable was created that indicated whether a student was removed from school (expelled, suspended out of school, and suspended in school) at any point in that school year to create the discipline removal variable. Collapsing different types of exclusionary disciplinary actions into one dichotomous variable is common in the disproportionality research (e.g., Losen & Gillespie, 2012; Sullivan et al., 2013).

Analyses

Descriptive analysis. Elementary school students represented 50.1%, middle/junior high school students represented 17.3% and high school students represented 31% of the population. Students who attended elementary/secondary combined schools represented 1.5% of the population. Composition of non-White students included 4% Asian, 9.5% Latino, 11.3% African American, and 1.7% Native American students. Parents provided students' racial background data, but only one primary racial group was recorded. Males accounted for 51.6% of the public school population. Fifty-two percent of students were eligible for FRL. Students with disabilities represented 15% of the population. Finally, 7.4% of students were ELLs.

At the school level, compositions of non-White students averaged 3.27% Asian, 10.47% African American, 8.62% Latino, and 2.04% Native American. The average percent of the school population that qualifies for FRL is 41.83%, and the average percent ELLs is 6.25%. The average attendance rate is 94.12%, and the average percent of students that transferred is 9%. The large

size of this data set, along with the descriptive statistics, demonstrated that there were adequate proportions of the population in each category of interest. For example, we have about 8,500 Native American students in the study. For schools in the 75th percentile of Native American enrollment the mean number of students per school that are Native American is 10. At the school level, the average percent proficient or advanced in math is 68.74, while the percent proficient or advanced in reading is 74.58. Schools average 0.62% bilingual teachers, 95.62% White teachers, and 51.50% teachers with master's degrees. Only one category of teacher race was used in our analysis because 95% of the sample included White teachers and there was not enough variability to split the categories further. The average composition of students with ED is 2.13%, and the average percent of students removed is 0.36%. Table 1 shows the means and standard deviations for all variables.

Risk analysis. Risk analysis was completed using RRs. RRs are determined by first finding the risk index (RI). The RI is the proportion of a given group served in a given category and describes disproportionality as a group's representation in a category compared with other groups. To interpret the RI, a ratio of the risk of the target group to one or more groups was constructed, termed a RR. A RR of 1.0 indicates exact proportionality, whereas RRs above or below 1.0 indicate over and underrepresentation, respectively. We used White students as a comparison group following Artiles, Rueda, Salazar, and Higuera (2005), who stated,

White students have been traditionally used as a comparison group in equity analyses because they are the dominant group in society who have not had systematic problems with access and opportunity issues . . . White students can be used as a stable contrast group because various cultural and linguistic groups are compared to the same group. (p. 289)

Multilevel logistic regression. We used Stata's `xtmelogit` command with the Laplace approximation to predict the log odds of our two outcomes (odds ratios) from (a) a set of student level predictors including demographic data, language proficiency, and attendance rate; and (b) a set of school context predictors including demographic data, attendance rates, teacher data, and percentage of White and bilingual teachers. Odds ratios are calculated by exponentiating the coefficients from the logistic regression, and the ratio is interpreted similar to the above description of RRs, except that the ratio is a comparison of the odds of placement for the group of students in question. The Laplace approximation allows for more efficient computations given the large size of the data set and the number of predictors. Although the approximation does carry some risk of biased

Table 1. Descriptive Statistics.

	<i>M</i>	<i>SD</i>
Student level (<i>n</i> = 429,725)		
Male	0.52	0.13
Asian	0.04	0.20
African American	0.11	0.32
Latino	0.09	0.29
Native American	0.02	0.13
White	0.74	0.44
FRL	0.39	0.49
ELL	0.07	0.26
Attendance	94.28	4.51
Transferred during school year	0.03	0.18
Proficient or advanced—Math	0.78	0.42
Proficient or advanced—Reading	0.83	0.37
ED	0.02	0.13
Disciplinary removal	0.06	0.23
School level (<i>n</i> = 2,116)		
Percent Asian	3.27	5.43
Percent African American	10.47	21.00
Percent Latino	8.62	12.76
Percent Native American	2.04	6.78
Percent White	75.61	26.42
Percent FRL	41.83	23.50
Percent ELLs	6.25	9.67
Attendance rate	94.12	5.87
Proportion transferred during year	0.09	0.12
Percent proficient or advanced—Math	68.74	25.94
Percent proficient or advanced—Reading	74.58	25.81
Percent bilingual teachers	0.62	3.18
Percent White teachers	95.62	10.82
Percent teachers with master's degree	51.50	19.31
Percent ED	2.13	5.57
Percent disciplinary removal	0.36	1.37

Note. FRL = free or reduced priced lunch; ELL = English language learner.

estimates when the clusters are small (Rabe-Hesketh & Skrondal, 2012), our school-level clusters of individual data are quite large.

Dependent variables were dichotomous indicators of ED status and of disciplinary removal. Independent variables were modeled as follows: Model 1:

Table 2. Risk Ratios for Placement in ED Category and Removal From School for Disciplinary Reasons.

	ED	Removed
Race		
Reference group incidence (White)	1.4%	3.1%
Asian	0.22	0.56
African American	2.12	7.29
Latino	0.71	2.07
Native American	3.18	2.91
Free or reduced priced lunch status		
Reference group incidence (non-FRL)	0.9%	2.5%
FRL	2.98	4.21
Gender		
Reference group incidence (Female)	0.8%	3.6%
Male	3.06	2.06
Linguistic status		
Reference group incidence (non-ELL)	1.7%	5.7%
ELL	0.26	0.81
Transfer status		
Reference group incidence (not transfer)	1.5%	5.1%
Transfer	3.77	4.47

Note. ED = emotional disturbance; FRL = free or reduced priced lunch; ELL = English language learner.

gender at the student level and race at both the student and school levels. Model 2 adds FRL and ELL statuses, again at both levels. Model 3 adds student- and school-level attendance rate, transfers in the 2010-2011 school year, WSAS reading and math proficiency indicators. Model 4 adds teacher characteristics (percent of teachers who are White, bilingual, and hold master's degrees).

Results

Descriptive Analyses of Risk

Risk analyses were completed to understand the extent of the behavioral outcome disparities. Table 2 shows the elevated risk of placement in ED for students who are male, African American, Native American, received FRL, and who transferred, respectively. African American students and Native American students were two and three times more likely to be identified as emotionally

disturbed than White students. Male students and students who received FRL were three times more likely to be referred than females and those students who did not receive FRL. Finally, students who transferred were four times more likely than those who did not transfer to be labeled with ED.

A similar trend was noted for removal from the learning environment due to discipline. African American students were seven times more likely to be removed from the learning environment. Students who received FRL and those who transferred were four times more likely to be removed than those who did not. Male Native American and Latino youth were over 2 times more likely to be removed than female and White youth. These unconditional findings suggest exclusionary discipline and ED designation in Wisconsin schools are at an excessive level that may negatively affect minority students' academic success and life outcomes.

Predicting ED Identification: Multilevel Analysis

We conducted a multilevel analysis of disability risk conditional on individual- and school-level variables. Both individual-level and school-level characteristics significantly predicted ED identification in nearly all models, though the school-level variables were not generally substantively meaningful. Table 3 outlines the results for the multilevel analysis for the dichotomous outcome variable ED (1 = received designation). Model 1 included student gender and race at the student level and percent of each racial/ethnicity group at the school level. Boys when compared with girls (odds ratio: 3.12), African American (odds ratio: 2.77) and Native American (odds ratio: 2.85) youth had greater odds of identification with ED when compared with White students. Asian (odds ratio: .21) and Latino youth (odds ratio: .81) had lower odds of ED designation. School-level percentages of different racial categories were significant, but they were not meaningful in the magnitude of the effect, as all odds ratios were close to 1.

Model 2 adds FRL and ELL statuses, again at both student and school levels. Students who received FRL had greater odds of identification than those who did not (odds ratio: 3.6) while students who were categorized as ELL had lower odds than those who were not to be identified as ED (odds ratio: .24). Similar to Model 1, the school-level variables were not significant predictors to identification. Including FRL and ELL statuses into the model lowered the odds of identification for African American students from 2.77 to 1.80 and Native American students from 2.85 to 2.11. Furthermore, controlling for these variables reduced the effect of being Asian in the model as the odds ratio increased from .21 to .34 relative to White students.

Table 3. Odds Ratios for ED Outcome.

	Model 1	Model 2	Model 3	Model 4
Student level				
Gender	3.118***	3.161***	3.329***	3.33***
Asian	0.214***	0.335***	0.369***	0.375***
African American	2.765***	1.802***	1.255***	1.255***
Latino	0.805***	0.917**	0.783***	0.778***
Native American	2.845***	2.11***	1.525***	1.526***
FRL		3.572***	2.55***	2.55***
ELL status		0.242***	0.212***	0.216***
Attendance			0.962***	0.962***
Transferred this year			1.682***	1.693***
Reading test score			0.748***	0.749***
Math test score			0.96***	0.67***
School level				
Percent Asian	0.996	0.971***	0.989**	0.991
Percent African American	0.996***	0.997**	0.888***	0.989***
Percent Latino	0.993***	0.973***	0.978***	0.978***
Percent Native American	1.01***	1.008*	1.004***	1.005*
Percent ELL		1.037***	1.025***	1.023***
Percent FRL		0.995***	0.996***	0.997**
Proportion transferred this year			5.759***	3.54***
Percent proficient: Reading			0.998	0.999
Percent proficient: Math			1.001	1.000
Percent attendance			1.037***	1.034***
Percent White teachers				1.002
Percent bilingual teachers				1.006
Percent teachers with master's degree				1.005***

Note. ED = emotional disturbance; FRL = free or reduced priced lunch; ELL = English language learner.

* $p < .05$. ** $p < .001$. *** $p < .001$.

Model 3 included student-and school-level attendance rate, transfer status, and WSAS reading and math proficiency indicators. Students who transferred had greater odds of being identified (odds ratio: 1.69), while students who were proficient on the state reading test had lower odds of being identified as ED (odds ratio: .75). Schools with higher percentages of students who transferred had greater odds of identifying students as ED (odds ratio: 5.76). Attendance and proficiency levels at the school had minimal impact.

Controlling for attendance and test scores decreased the odds for African American students from 1.80 to 1.23, for Native American youth from 2.11 to 1.52 and for students who receive FRL from 3.57 to 2.55.

Model 4 added teacher characteristics (percentage of teachers who are White, bilingual, and hold master's degrees), aggregated to the school level. Percentage of teachers with master's degrees is considered statistically significant in the model, but is meaningless in magnitude of effect (odds ratio: 1.005). None of the other teacher characteristics were significantly predictive of increased odds. Controlling for the teacher variables decreased the impact of having a large population of transfer students on the model from 5.76 to 3.54. Students who were proficient on the state math test had lower odds of being referred, with the odds shifting from .96 to .67.

To summarize, conditional on individual- and school-level characteristics, boys and students who received FRL had greater odds of being labeled as ED. Native American and African American students had significantly greater odds than their White peers of being identified as ED while Latino students were significantly less likely than White students of being identified as ED. Finally, Asian American and ELL students had consistently lower odds than their White peers of being identified as ED. Students who transferred at least once during the school year had increased odds of being labeled as ED. Students who scored as proficient or advanced on state achievement tests had lower odds of being labeled. Students had increased odds for ED label in schools with more transient populations.

Predicting Disciplinary Action: Multilevel Analysis

Table 4 displays the conditional multilevel analysis for the dichotomous variable, disciplinary action, which indicated whether a student was ever removed from the classroom for disciplinary reasons during the 2010-2011 school year. Model 1 included student gender and race at both the student- and school-levels. Boys as compared with girls had greater odds of disciplinary action (odds ratio: 2.43). African American (odds ratio: 4.05), Latino (odds ratio: 1.40), and Native American (odds ratio: 2.48) youth had greater odds than their White counterparts of being removed from the learning environment, with African American students having particularly higher odds. There was little impact of school-level percentage of youth from different racial groups on the model, with odds ratios very close to 1.000.

Model 2 added FRL and ELL statuses at both student and school levels. Students who received FRL had greater odds of being disciplined than those who did not (odds ratio: 2.79) while students who were categorized as ELL had lower odds of being disciplined than those who were not ELL

Table 4. Odds Ratios for Exclusionary Disciplinary Actions.

	Model 1	Model 2	Model 3	Model 4
Student level				
Gender	2.429***	2.486***	2.707***	2.720***
Asian	0.448***	0.447***	0.464***	0.4678***
African American	4.049***	2.899***	2.361***	2.365***
Latino	1.394***	1.244***	1.108***	1.113***
Native American	2.477***	1.95***	1.513***	1.511***
FRL		2.787***	2.081***	2.077***
ELL status		0.631***	0.603***	0.598***
Attendance			0.946***	0.946***
Transferred this year			1.969***	1.959***
Reading test score			0.734***	0.734***
Math test score			0.783***	0.782***
School level				
Percent Asian	0.990	0.967***	0.994	1.001***
Percent African American	1.027***	1.025***	1.013***	1.012***
Percent Latino	1.008***	0.986***	0.998	0.999
Percent Native American	1.027***	1.021***	1.012***	1.013***
Percent ELL		1.032***	1.013**	1.008
Percent FRL		1.001	0.995***	0.996**
Proportion transferred this year			0.989	0.788
Percent proficient: Reading			0.998	0.997
Percent proficient: Math			0.982***	0.980***
Percent attendance			0.998	1.001
Percent White teachers				1.000
Percent bilingual teachers				1.002
Percent teachers with master's degree				1.005***

Note. FRL = free or reduced priced lunch; ELL = English language learner.

* $p < .05$. ** $p < .001$. *** $p < .001$.

(odds ratio: .63). Similar to Model 1, most school-level variables were statistically significant but not substantively meaningful predictors of identification, as they were very close to 1.000. Controlling for FRL and ELL statuses reduced the effects of being African American, Native American, and Latino (relative to White students) on the model. In other words, controlling for FRL and ELL status reduced the odds of disciplinary action for African American, Native American and Latino students as compared with White students.

Model 3 included student- and school-level attendance rate, transfer status, and WSAS reading and math proficiency indicators. Students who transferred had greater odds of being removed from school (odds ratio: 1.97), while students who were proficient on the state reading and math tests had lower odds of being disciplined (odds ratios: .73 and .78, respectively). School-level percentage of students who transferred and school-level attendance and proficiency levels had minimal substantive impact on the model. Controlling for attendance and test scores decreased the odds for African American students from 2.90 to 2.37, for Native American youth from 1.95 to 1.51, for Latino youth from 1.40 to 1.113 and for students receiving FRL from 2.79 to 2.01. In this model, the odds for boys to be disciplined increased from 2.49 to 2.71.

The final model, Model 4, added teacher characteristics (percent of teachers who are White, bilingual, and hold master's degrees). None of the teacher characteristics were substantively predictive of increased odds. In sum, the full model shows that boys, African American, Native American, Latino, and those students who received FRL or transferred during the school year had increased odds of disciplinary action. Asian students had lower odds of school removal as compared with White youth, as did ELLs compared with non-ELLs. Students who scored proficient or advanced on statewide reading and math tests had decreased odds of disciplinary action (odds ratios: .73 and .78, respectively). Excepting percent transferred, school-level factors were not substantively associated with disciplinary removal.

Discussion

The racialization of behavioral outcomes in schools is a pervasive, dynamic, multifaceted social justice problem. It contributes to further marginalization of racial minorities that mostly live in urban neighborhoods with extremely limited social and economic opportunities (Anyon, 2005; Mallett, 2017). The complexity and underlying mechanisms of racial disparities in behavioral outcomes within specific state contexts are yet to be discovered (Hibel et al., 2010; Skiba et al., 2014; Sullivan et al., 2014; Waitoller et al., 2010). Comprehensive, locally situated analyses examining how individual student characteristics and school contexts determine racial disproportionality in local states provide more accurate and actionable data to inform educational policies and systemic interventions. The present study expands the literature in generalizability and focus. We analyzed the effects of the special education placement for ED and discipline removal using the entire state's education data. Our study showed that Latino, Native American, and African American students are significantly overrepresented in exclusionary discipline. Native

American and African American students were overrepresented in special education placement for ED. These results show the pervasiveness of racial disparities in the state of Wisconsin. They also provide further evidence and a detailed picture of the racialization of behavioral problems in the United States.

Disproportionality risk in behavioral outcomes for African American students in Wisconsin was higher than the national average (The Office for Civil Rights, 2014; U.S. Department of Education, 2014). This finding becomes more meaningful in light of the recent studies identifying Wisconsin as offering some of the worst life outcomes to its African American residents (The Annie E. Casey Foundation, 2014). These disparities are the highest in urban communities. For instance, in Milwaukee County, over 50% of African American men in their prime working years (ages 30 through 45) have been incarcerated and two thirds of the incarcerated men came from the inner-city neighborhoods (Pawasarat & Quinn, 2013). Altogether, racial disparities have immense intergenerational impact in the lives of people of color and their communities in Wisconsin.

Looking at disability identification and discipline together gave us a better understanding of disparities across all racial groups. For instance, the present study showed that Latino students were underrepresented in the ED category. However, they were overrepresented in disciplinary removal. ELL status has been cited in previous research as being a variable of importance (The Office for Civil Rights, 2014). Sixty-eight percent of Wisconsin ELL students speak Spanish (WDPI, 2011); yet ELL status did not explain either of these patterns. This finding calls for the state's education agency, WDPI, to develop remedies for different aspects of school push out for Latino students (Orfield, Siegel-Hawley, & Kucsera, 2014). Moreover, it invites educators, researchers, and policy makers in other states to understand behavioral outcome disparities in a complete range so that they can develop more comprehensive interventions to address specific patterns and predictors within their local state contexts.

In our analysis, we included academic variables and identified a strong relationship between students' academic and behavior outcomes. Higher reading and math scores predicted lower odds for ED identification and exclusionary discipline. This is consistent with prior work suggesting academic and behavioral outcomes are "two sides of the same coin" and students' academic proficiency serves as a protective factor (Gregory et al., 2010). One of the implications of our analyses is that statewide reform initiatives and systemic interventions such as *Schoolwide Positive Behavioral Interventions and Supports* (SWPBIS) and Response to Intervention (RTI)

should consider behavioral and academic outcomes together and aim to close the opportunity gap and to keep minority students in school.

Our multilevel conditional analyses showed student characteristics (e.g., race and math and reading proficiency) were more predictive than income level, gender and English proficiency level of the schools they attended. Disparities in behavioral outcomes remained significant even controlling for other theoretically relevant student- and school-level variables. Previous multilevel studies consistently found individual-level variables (e.g., race, gender, disability status, income level, and previous suspensions) were significant predictors of behavioral outcomes, but have been inconsistent in terms of school-level predictors (e.g., Skiba et al., 2014; Sullivan et al., 2013). Our finding is consistent with Sullivan and colleagues' (2013, 2014) studies in a Midwestern school district. But it is inconsistent with Skiba and colleagues' (2014) findings from a Midwestern state. In Skiba and colleagues' study, the school-level variables (mean school achievement, percentage African American enrollment, and principal's perspective on discipline) were associated with the risk of school removal for African American students.

Limitations and Implications for Future Studies

This study is a cross-sectional analysis focusing on a single academic year. Examining disproportionality risk across multiple years through longitudinal analyses may provide a three-dimensional (social-geographical-temporal contexts) understanding of outcome disparities within specific state context. Longitudinal analyses may provide critical information for state education agencies to implement and monitor systemic preventions and interventions (Wright et al., 2014). Our research team is currently conducting longitudinal analyses to examine when and under what circumstances African American, Native American, and Latino students are removed from the learning environment and labeled as emotionally disturbed.

The data were limited as we only had access to public data on teacher characteristics. Likewise, our student-level data were limited to that which is collected through WDPI. As such, socioeconomic status at the student and school level was calculated only through FRL eligibility. A more nuanced examination of socioeconomic status with additional measures such as the full-time employment status of parents might have strengthened our analyses (see McCarthy & Hoge, 1987). Additional data regarding the schools implementing multitier systems of supports (SWPBIS and RTI) would enrich the analyses.

The present analyses included only the ED category of disability as this is closely aligned with behavioral issues. Sullivan and colleagues (2014)

disaggregated their findings by all disability categories and found higher rates of suspension in students identified with Other Health Impairments and ED. Further explorations should include all disability labels across multiple education settings such as alternative schools and juvenile correctional facilities. For instance, a recent study found African American and Latino students with ED spent considerably more time in disciplinary seclusion in juvenile correction facilities (Krezmien et al., 2015).

Prior studies on disproportionality generally analyzed only one type of infraction such as suspension (e.g., Sullivan et al., 2013). We analyzed suspension and expulsion as a combined, dichotomous variable. Analyzing types and length of disciplinary actions may provide a more comprehensive understanding of exclusionary discipline and the racialization of discipline. Skiba and colleagues (2014) found while more serious, less frequently occurring infractions determined more serious outcomes in discipline and race remained a significant predictor of suspension regardless of the severity of behavior. One of the strengths of the present study is its exclusive focus on the context of Wisconsin. Future research on behavioral outcome disparities should engage in situated analyses in other states (e.g., Eitle & Eitle, 2004; Krezmien et al., 2006). The statewide analyses across all racial groups provide more accurate and actionable data for local stakeholders to design and monitor systemic reform efforts (Bal, 2016; Bal et al., 2014).

Finally, the present study design cannot provide causal explanations of *why* disproportionality occurs in a specific context; future studies should include other methods that can address causality in different local contexts. In addition, social and institutional inquiries such as policy analyses may provide information about how racial disparities are reproduced in local systems (National Research Council, 2002). Using multiple methodologies (e.g., critical ethnography, community-based research) may provide a more comprehensive and practical understanding of disproportionality with specific individual, social, and institutional determinants as well as the possibilities for systemic change in local states.

Conclusion

In the United States, youth from racial minority backgrounds are much more likely to receive inferior educational opportunities, a discrepancy known as the opportunity gap (Ladson-Billings, 2006). Disproportionality may exacerbate the historical marginalization of students of color by deepening the opportunity gap at the intersection of race, class, language, and disability (APA, 2008; Gregory et al., 2010; Harry & Klingner, 2014). Exclusionary

discipline and the ED label have negative consequences such as academic failure, stigma, delinquency, and limited access to higher education (The Office for Civil Rights, 2014; U.S. Department of Education, 2014). We agree with Losen and Gillespie (2012): “Students who are barely maintaining a connection with their school are often pushed out, as if suspension were a treatment . . . We can and must do better for young people whose future is at stake” (p. 4).

Behavioral difficulties that students experience in schools are determined by a host of individual, interpersonal, and institutional processes (APA, 2008; Gregory et al., 2010; Morgan et al., 2015). Special education placement and discipline removal are processes that involve multiple people (e.g., teachers, parents, playground attendants, and student support and school-based problem solving teams) and institutional practices and school climate (e.g., zero tolerance, the culture of referral) usually over an extended period of time (Bal, 2016; Sugai, O’Keeffe, & Fallon, 2012). The present study confirms that researchers, education leaders, and policy makers need to comprehensively consider the multifarious function of individual and institutional characteristics in their specific contexts to identify why and how racial minority students are at risk for negative behavioral outcomes to plan adequate, timely, and ecologically valid preventions and interventions. A locally situated and comprehensive transformative research *with* local stakeholders (e.g., families, students, community representatives, civic leaders, and educators), specifically those from historically marginalized communities, is necessary to renovate the school discipline and disability identification systems in practice. Such locally meaningful, community-based systemic transformation efforts led and owned by stakeholders can foster inclusivity, cultural relevancy, and positive social climate in schools that can serve as expansive learning and development contexts for *all*.

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Note

1. In our data, 12,891 students attended multiple schools, resulting in multiple student-level cases nested in each school for transient students. The data did not include information about time spent at each school. For these cases, we randomly selected one student-level case from among the multiple cases, nesting the student in only one of the schools he attended. Prior to this procedure, we calculated the percent of students for each school that attended multiple schools and assigned a binary indicator to each student to indicate whether they transferred schools that school year.

References

- American Psychological Association. (2008). Are zero tolerance policies effective in the schools? *American Psychologist*, *63*, 852-862. doi:10.1037/0003-066X.63.9.852
- The Annie E. Casey Foundation. (2014). *Race for results*. Baltimore, MD: Author.
- Anyon, J. (2005). *Radical possibilities: Public policy, urban education, and a new social movement*. New York, NY: Routledge.
- Applied Population Laboratory. (2014). *Projecting public school enrollment in Wisconsin*. Madison, WI: Author. Retrieved from http://www.apl.wisc.edu/publications/WI_School_Enrollment_Projections_2014.pdf
- Artiles, A. J., Kozleski, E. B., Trent, S. C., Osher, D., & Ortiz, A. (2010). Justifying and explaining disproportionality, 1968-2008: A critique of underlying views of culture. *Exceptional Children*, *76*, 279-299.
- Artiles, A. J., Rueda, R., Salazar, J., & Higuera, I. (2005). Within-group diversity in minority disproportionate representation. *Exceptional Children*, *71*, 283-300.
- Bal, A. (2016). From intervention to innovation: A cultural-historical approach to the racialization of school discipline. *Interchange: A Quarterly Review of Education*, *47*, 409-427. doi:10.1007/s10780-016-9280-z
- Bal, A., Sullivan, A., & Harper, J. (2014). A situated analysis of special education disproportionality for systemic change in an urban school district. *Remedial and Special Education*, *35*, 3-14. doi:10.1177/0741932513507754
- Blanchett, W. J., Klingner, J. K., & Harry, B. (2009). The intersection of race, culture, language, and disability implications for urban education. *Urban Education*, *44*, 389-409.
- Bradshaw, C. P., Mitchell, M. M., O'Brennan, L. M., & Leaf, P. J. (2010). Multilevel exploration of factors contributing to the overrepresentation of black students in office disciplinary referrals. *Journal of Educational Psychology*, *102*, 508-520.
- Children's Defense Fund. (1975). *School suspensions: Are they helping children?* Cambridge, MA: Washington Research Project.
- Eitle, T. M., & Eitle, D. J. (2004). Inequality, segregation, and the overrepresentation of African Americans in school suspensions. *Sociological Perspectives*, *47*, 269-287.
- Gregory, A., Skiba, R., & Noguera, P. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher*, *39*, 59-68.

- Harry, B., & Klingner, J. K. (2014). *Why are so many minority students in special education?* New York, NY: Teachers College Press.
- Hibel, J., Farkas, G., & Morgan, P. L. (2010). Who is placed into special education? *Sociology of Education, 83*, 312-332.
- Krezmien, M. P., Leone, P. E., & Achilles, G. M. (2006). Suspension, race, and disability: Analysis of statewide practices and reporting. *Journal of Emotional and Behavioral Disorders, 14*, 217-226. doi:10.1177/10634266060140040501
- Krezmien, M. P., Travers, J. C., Valdivia, M., Mulcahy, C., Zablocki, M., Ugurlu, H. E., . . . Nunes, L. (2015). Disparate disciplinary confinement of diverse students in juvenile corrections. *Advances in Learning and Behavior Disorders, 28*, 273-290.
- Ladson-Billings, G. (2006). From the achievement gap to the education debt. *Educational Researcher, 35*, 3-12. doi:10.3102/0013189X035007003
- Losen, D. J., & Gillespie, J. (2012). *Opportunities suspended*. Los Angeles, CA: The Center for Civil Rights Remedies.
- Mallett, C. A. (2017). The school-to-prison pipeline: Disproportionate impact on vulnerable children and adolescents. *Education and Urban Society, 49*(6), 563-592.
- McCarthy, J. D., & Hoge, D. R. (1987). The social construction of school punishment. *Social Forces, 65*, 1101-1120. doi:10.1093/sf/65.4.1101
- Morgan, P. L., Farkas, G., Hillemeier, M. M., Mattison, R., Maczuga, S., Li, H., . . . Cook, M. (2015). Minorities are disproportionately underrepresented in special education. *Educational Researcher, 44*, 278-292.
- National Research Council. (2002). *Minority students in special and gifted education*. Washington, DC: National Academies.
- The Office for Civil Rights. (2014). *School discipline*. Washington, DC: Author.
- Orfield, G., Siegel-Hawley, G., & Kucsera, J. (2014). *Sorting out deepening confusion on segregation trends*. Los Angeles, CA: The Civil Rights Project.
- Pawasarat, J., & Quinn, L. M. (2013). *Wisconsin's mass incarceration of African American males*. Milwaukee, WI: The UW-Milwaukee Employment and Training Institute.
- Rabe-Hesketh, S., & Skrondal, A. (2012). *Multilevel and longitudinal modeling using Stata*. College Station, TX: State Press.
- Rumberger, R. W. (2011). *Dropping out*. Cambridge, MA: Harvard University Press.
- Skiba, R. J., Chung, C. G., Trachok, M., Baker, T. L., Sheya, A., & Hughes, R. L. (2014). Parsing disciplinary disproportionality. *American Educational Research Journal, 51*, 640-670. doi:10.3102/0002831214541670
- Skiba, R. J., Horner, R. H., Chung, C. G., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review, 40*, 85-107.
- Skiba, R. J., & Knesting, K. (2001). Zero tolerance, zero evidence: An analysis of school disciplinary practice. *New Directions for Youth Development, 2001*, 17-43.

- Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. L. (2002). The color of discipline. *The Urban Review, 34*, 317-342.
- Skiba, R. J., Poloni-Staudinger, L., Gallini, S., Simmons, A. B., & Feggins-Azziz, R. (2006). Disparate access: The disproportionality of African American students with disabilities across educational environments. *Exceptional Children, 72*, 411-424.
- Sugai, G., O'Keeffe, B., & Fallon, L. (2012). A contextual consideration of culture and positive behavior support. *Journal of Positive Behavior Interventions, 14*, 197-208.
- Sullivan, A., & Bal, A. (2013). Disproportionality in special education: Effects of individual and school variables on disability risk. *Exceptional Children, 79*, 475-494.
- Sullivan, A. L., Klingbeil, D., & Van Norman, E. (2013). Beyond behavior: Multilevel analysis of the influence of sociodemographics and school characteristics on students' risk of suspension. *School Psychology Review, 47*, 99-114.
- Sullivan, A. L., Van Norman, E. R., & Klingbeil, D. A. (2014). Exclusionary discipline of students with disabilities. *Remedial and Special Education, 35*, 199-210.
- Theriot, M. T., Craun, S. W., & Dupper, D. R. (2010). Multilevel evaluation of factors predicting school exclusion among middle and high school students. *Children and Youth Services Review, 32*, 13-19. doi:10.1016/j.childyouth.2009.06.009
- U.S. Department of Education. (2014). *The 36th annual report to congress on the implementation of the Individuals With Disabilities Education Act, 2007, Vol. 1*. Washington, DC: Author.
- Waitoller, F. R., Artiles, A. J., & Cheney, D. A. (2010). A review of overrepresentation research and explanations. *The Journal of Special Education, 44*, 29-49.
- Wisconsin Department of Public Instruction. (2011). *Statutory report 2010: Bilingual-Bicultural education programs* (Bulletin No. 02016). Madison: Author. Retrieved from <http://dpi.wi.gov/sites/default/files/imce/english-learners/pdf/legis-report.pdf>
- Wright, J. P., Morgan, M. A., Coyne, M. A., Beaver, K. M., & Barnes, J. C. (2014). Prior problem behavior accounts for the racial gap in school suspensions. *Journal of Criminal Justice, 42*, 257-266.

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