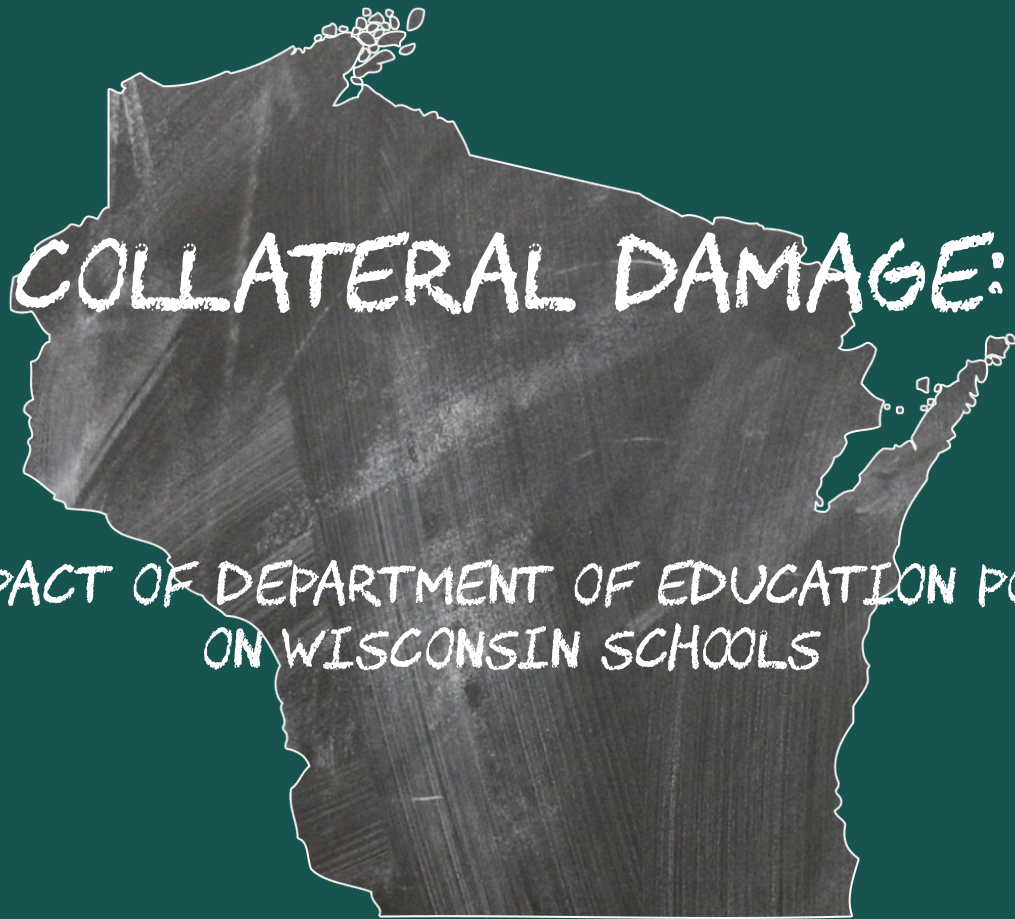


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January, 2018



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EXECUTIVE SUMMARY

In response to allegations of bias in suspension rates in schools along racial lines, the Obama Administration increased federal involvement in discipline policy across the country. Through a 'Dear Colleague' memo, federal incentives and legal threats, the Department of Education and Department of Justice worked in concert to push forward a system of positive behavioral support that was designed to reduced suspension rates, particularly among minority students. While these policies may seem reasonable on their face, little research has examined the impact of these policies on the classroom. This study represents the first attempt to do so at the state level.

We gathered data on the implementation of the Positive Behavioral Intervention and Supports (PBIS) system from more than 2,000 schools throughout Wisconsin from 2009-2016. We combined this with data on the number of suspensions and academic outcomes of most schools in the state over the same time frame. Along with a host of control variables, this represents the most comprehensive attempt to date to isolate the impact of PBIS on classroom climate.

Among our key findings:

1. **Suspension rates have fallen in schools with large numbers of African American Students that implement PBIS.** To the extent that the goal of PBIS was to reduce suspensions for this demographic group, the system appears to be successful.
2. **Suspension rates have *increased* in schools with small numbers of African American Students that implement PBIS.** In schools with fewer than 15% African American students, the implementation of PBIS is counterintuitively associated with an increase in the number of suspensions.
3. **Mathematics and Reading Proficiency are lower in schools that implement PBIS.** The implementation of PBIS is associated with a decline in proficiency of approximately 1% on state exams, controlling for a number of other factors that are known to impact proficiency.
4. **Negative proficiency effects of PBIS are stronger in suburban and rural schools.** With a significant exception discussed below, proficiency at urban schools does not suffer significantly when PBIS is implemented. However, performance in rural and suburban schools was found to decline.
5. **Negative proficiency effects of PBIS are also found in Milwaukee.** In contrast to urban schools in general, when we isolate Milwaukee's schools, we find that the implementation of PBIS is related to a decline in proficiency rates for English/Language Arts.

INTRODUCTION

Under the Obama Administration, the federal government assumed the unprecedented role of coercing school districts to overhaul their school discipline policies. Sympathetic to arguments that traditional discipline policies were having a disparate impact on students from minority backgrounds, they pushed forward an agenda of relaxing discipline standards and alternatives to suspension (Department of Education, 2016). Despite an increasing number of calls to rescind this policy, it has remained in place under the Trump Administration at the time of this writing and is the subject of ongoing debate.

Previous research by WILL (Flanders & Goodnow, 2017) and others (Eden, 2017) has provided evidence that the discipline policies have been having a negative effect on school climate. However, little research has been able to examine the impact of the Obama Administration's suspension policy on student academic performance.

At the district level, scholars at the University of Pennsylvania recently released a paper on the implementation of discipline alternatives and school climate in the Philadelphia school district (Gray et. al., 2017). The focus in this study, as in ours, was on schools that have implemented the Positive Behavioral Initiatives & Supports (henceforth, PBIS). The results of the study, which was funded by a grant from the Department of Justice, are underwhelming at best. For example, "teachers in district-supported PBIS schools were no more likely than those in other [non-PBIS implementing] schools to agree that their schools do a good job of addressing disciplinary challenges proactively." While the principals they surveyed expressed reluctance to use out-of-school suspensions, teachers felt differently:

"Overall – and in schools in the district's PBIS program as well as those that are not – teachers expressed the overwhelming view that suspension plays an important role in maintaining order and ensuring student learning.... In interviews, teachers and other non-administrative staff frequently described frustration with their administrators' refusal to suspend students for what they regarded as serious or repeated offenses."

Closer to home, scholars at the University of Wisconsin conducted a survey of Madison teachers on new discipline policies (Kuo & Moberg, 2016). They found that teachers were unlikely to agree that new discipline policies had a positive effect on student behavior, and did not believe that students were ready to re-engage in class when they were returned to the classroom.

These studies suggest that alternative discipline policies like PBIS may be having a negative effect on the classroom, but what does the data say? To answer this question, we gathered data on the implementation of the PBIS system throughout the state of

Wisconsin from 2009-2016. We combined this with data on the number of suspensions and academic outcomes of most schools in the state over the same time frame. Along with a host of control variables, this represents the most comprehensive attempt to date to isolate the impact of PBIS on classroom climate.

Our results, based on four years of school-level data, show that the softer discipline policies, pushed by the Obama Administration, are having a negative impact on student test scores in Wisconsin, and a potentially disturbing impact on the disparity of suspension rates between white and African American students.

HISTORY OF PBIS & THE OBAMA ADMINISTRATION

For years, the practice of disciplining students in schools through discipline referrals, suspensions, and expulsions was widely accepted. After tragedies like the Columbine shootings, fear of violence led to the adoption of “zero-tolerance” policies in many schools. This meant that after one strike for breaking certain rules, students might be suspended or expelled. The behavior could be as serious as bringing a weapon to school, or a lesser offense such as talking back to a teacher or tardiness.

But over the last decade the pendulum has swung in the other direction. There has been growing support among academics and educators for alternatives to traditional discipline practices, i.e. less punitive policies. This has come about due to high rates of suspensions nationwide and evidence of minority students being suspended at higher rates than their white peers (Fabelo et. al., 2011). Though the extent to which this is due to racial biases rather than actual behavioral differences is the subject of extensive debate (MacDonald, 2012; Epstein, 2014).

The thrust of the Obama-driven reforms has been to replace traditional discipline with “restorative” or “positive” approaches. Perhaps the most widely adopted tool has been the Positive Behavioral Supports and Interventions System (PBIS). PBIS eschews “exclusion” in favor of pro-active interventions to address underlying behavior. For example, instead of suspending a student, a school implementing PBIS may opt for a different method to address their behavior, such as a mini-conference with the student, re-teaching appropriate behavior, restitution, such as a written apology, or restorative practices.

PBIS found a champion in President Obama. In 2009, Education Secretary Arne Duncan penned a letter to Chief State School Officers nationwide asking them to review their discipline policies and endorsed PBIS (United States Department of Education, 2009). The next year, Duncan announced the Department of Education (ED) would be focused on educational equity (United States Department of Education, 2010). One point of emphasis was suspension rates, particularly the disproportionately high rate of African-

American students suspended compared to their white peers. In 2011, ED partnered with the Department of Justice on a new initiative to make sure school discipline practices didn't push students through the "school-to-prison pipeline." This also emphasized the use of tiered supports – "such as Positive Behavioral Interventions and Supports" (United States Department of Justice, 2011; United States Department of Education, 2014).

And in 2014, the Department of Education and Department of Justice issued a "Dear Colleague" letter, threatening to investigate public schools that did not take appropriate action to reduce suspensions (United States Department of Education & United States Department of Justice, 2014). Schools were told to take a hard look at their discipline policies, bearing in mind discrimination can happen even "if a policy is neutral on its face – meaning that the policy itself does not mention race – and is administered in an evenhanded manner but has a *disparate impact*, i.e., a disproportionate and unjustified effect on students of a particular race." In an accompanying document, PBIS was given as a solution for schools to use as they revamped their discipline policies (United States Department of Education, January 2014).

The "Dear Colleague" letter was a classic example of the Obama Administration trying to make law through executive decree. Senior Fellow Max Eden of the Manhattan Institute describes the rollout of the letter (Eden, December 2017):

"Secretary Duncan "accused teachers who suspended unruly kids of 'racial discrimination' and threatened their superintendents with federal investigation if their districts didn't reduce suspensions. Duncan declared that schools needed to shift to 'evidence-based' discipline, such as the Department of Education-backed 'Positive Behavioral Interventions and Supports.'"

The Obama Administration played a significant role in the increased implementation of PBIS in thousands of schools across the United States.¹

According to the Obama Administration, approaches like PBIS are "evidence based." But what is the evidence? The most comprehensive literature review of "positive" and "restorative" practices was done by the WestEd Research Center (Fronius et. al., 2016). While sympathetic to the notion, the study admitted that the internal validity of this research was weak because they generally do not include a control group.

¹ For more information on this, see the timeline in Appendix 2 on PBIS and the Obama Administration.

BACKGROUND OF PBIS IMPLEMENTATION IN WISCONSIN

In 2007, several Wisconsin public schools began following the example of neighboring Illinois and started to implement PBIS on their own. Two years later the Wisconsin PBIS Network and the Response to Intervention (RtI) Center was created, a collaboration between the Wisconsin Department of Public Instruction and the CESA Statewide Network. PBIS in Wisconsin is federally-funded through a special education grant to the states (Catalog of Federal Domestic Assistance 2018).

On its website, the Wisconsin PBIS Network explains why suspensions can be problematic for students and how PBIS may help schools decrease their suspensions, particularly for black and Hispanic students.

In 2009-2010, the RtI Center began offering PBIS training to schools. The RtI Center also offers training in math and reading support systems as well, and 710 schools have attended both an academic and behavior [PBIS] system training (Wisconsin RtI Center, 2017). In 2016-17, 330 schools were assessed in both areas and 190 schools reached fidelity in behavior and “full implementation in an academic content area” (Wisconsin RtI Center, 2017).²

The PBIS framework is divided into three tiers that build upon each other to provide a continuum of support: Tier 1 *universal* – intended for schoolwide support to all students; Tier 2 *supplemental* – aimed at supporting small groups of students; and Tier 3

² Wisconsin’s PBIS Network and the RtI Center list seven types of self-assessments a school may use to determine if it is delivering the programming as intended – i.e. operating at fidelity – and to help it sustain that: 1) Benchmarks of Quality (BOQ) evaluates just Tier 1, the implementation of a universal behavior support system, each spring. A score of 70% or higher means a school is implementing Tier 1 to fidelity. 2) The Team Implementation Checklist (TIC) is completed both spring and fall each year until BOQ reaches 70% or above. For this assessment, schools scoring 80% or above are implementing Tier 1 to fidelity. 3) The Self-Assessment Survey (SAS) evaluates the staff perception of implementation at all levels and is conducted each fall. Schools scoring 80% or higher on the Implementation Average are considered to be implementing to fidelity. 4) Benchmarks of Advanced Tiers (BAT) is an annual assessment for Tiers 2 and 3 that schools complete in the spring. 5) Monitoring Advanced Tiers Tools (MATT) is a quarterly assessment for Tiers 2 and 3. Once schools consistently score 80% or above they can stop using MATT and use BAT instead. 6) Schoolwide Evaluation Tool (SET): if a school scores 80% or higher on the Expectations Taught Subscale and the Overall Scale, they are operating Tier 1 to fidelity. 7) Tiered Fidelity Inventory (TFI) is an assessment for all tiers and may be used up to four times a year for schools not operating at fidelity, or annually for schools at fidelity (i.e. a score of 70% or higher at Tier 1). TFI can replace BOQ and TIC for Tier 1, and BAT and MATT at Tiers 2 and 3. While there are benchmarks for Tiers 2 and 3, the Wisconsin PBIS Network website says “No fidelity score cut-off has been established yet.” <https://www.wisconsinpbisnetwork.org/fidelity-tools>, <https://www.wisconsinpbisnetwork.org/tiered-fidelity-inventory.html>, https://www.wisconsinrticenter.org/assets/files/resources/1512598395_SystemAssessmentsInMLSS4.pdf

intense – an individual level of support for high-risk students. Tiers 2 and 3 are geared toward students who need additional behavioral intervention beyond the baseline established by Tier 1. The majority of schools in Wisconsin implementing PBIS are only utilizing Tier 1, which is the basic level of support.

According to a report from the RtI Center, over the last two years 653 schools have sustained at fidelity – a self-assessed high level of implementation – at Tier 1 for the past two years (Wisconsin RtI Center, 2017). Its preventative programming is meant to apply to all students, staff, and school settings. Examples of interventions might include teaching behavior expectations and having common schoolwide rules.

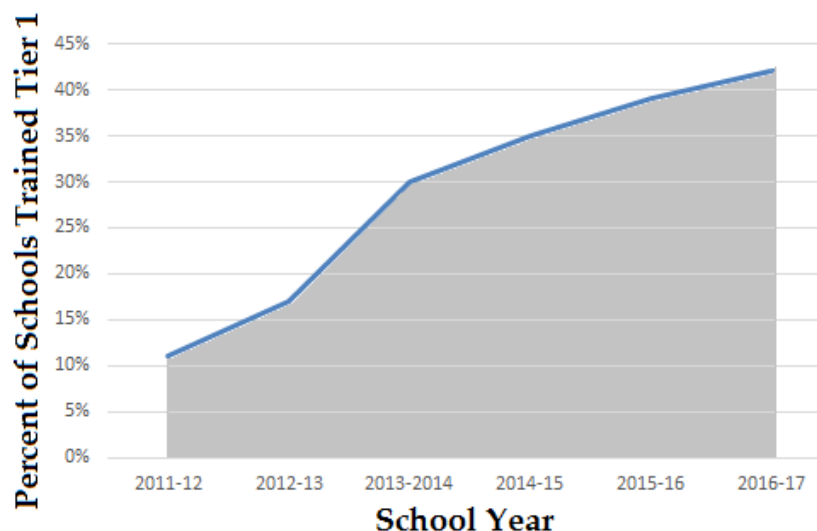
For Tier 2, 268 Wisconsin schools have sustained at fidelity in this tier for the last two years (Wisconsin RtI Center, 2017). The procedures for this tier are made to address the behavioral challenges of groups of students with similar behavior problems. One possible intervention at this level is social skills instruction.

Very few schools in the state implement Tier 3, with just 21 schools sustaining at fidelity over the last two years (Wisconsin RtI Center, 2017). The processes for this tier are aimed at addressing problematic behaviors of individual high-need students. Interventions for this tier are most individualized and might include intensive case management and progress monitoring.

The implementation of PBIS has expanded rapidly over the past few years. The chart below shows the increase in the number of schools that have participated in Tier 1 universal training beginning with the 2011-12 school year³. In the 2011-12 school year, only approximately 11% of schools in the state had received training at the lowest level. By 2016-17, this number has grown to more than 42% of public schools in Wisconsin.

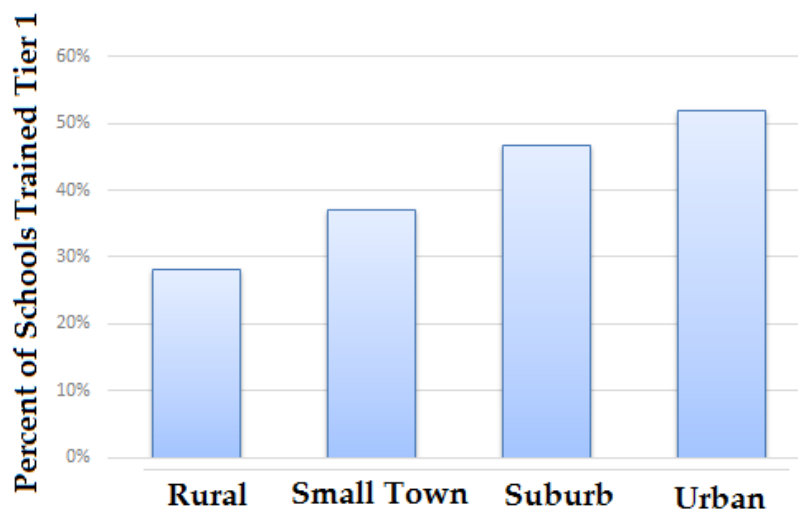
³ There is also Administrator-only Tier 1 training that would add to the share of schools that have trained if included. However, the classes are described on the PBIS website as a “sequence” with administrator training coming earlier.

Figure 1. Share of Wisconsin School with PBIS Tier 1 Universal Training, 2011-2017



Which schools are choosing to participate in PBIS? The chart below breaks down the share of schools that have received training by urbanicity for the 2015-16 school year. Schools in urban areas are most likely to have trained, with over 50% having taken the training at some point. But suburban schools are not far behind, with 46% having trained. Rural schools are the least likely to have trained, with only 27.7% of such schools having done so.

Figure 2. Share with PBIS Tier 1 Universal Training by Urbanicity



Other characteristics of schools that implement PBIS are higher shares of African American, Hispanic, and Native American students, disabled students.⁴

⁴ See Appendix Table A2.

According to a recent report from the RtI Center of Wisconsin, schools executing PBIS Tiers 1 and 2 at fidelity and/or a reading support system at full implementation saw some improvement in academic performance of students, as measured by the MAP assessment (Measures of Academic Progress), an optional test schools can use to determine students' academic growth (Wisconsin RtI Center, 2017). Among the findings was that schools that implemented PBIS saw greater improvements in MAP scores for English Language Learners, disabled students, and African American students.

However, those results come with some significant disclaimers. As the report acknowledges, the RtI Center only has MAP results from schools willing to share that information; 150 schools that implement PBIS at fidelity responded.⁵ As mentioned above, MAP is also not mandatory – schools choose whether or not to administer it. It is quite possible that schools that saw improvement on MAP scores are more incentivized to share their progress than schools that did not, skewing the results shown in the report. Moreover, the numbers reported by the RtI Center do not include adequate controls for making true 'apples to apples' comparisons between schools. Our report seeks to do just that.

METHODS

In order to determine the impact of the Obama Administration's discipline policies, we study the relationship between a school's test scores and whether they implemented PBIS. To do this, we first collected the following data from the Wisconsin Department of Public Instruction: 1) whether a school received PBIS training, 2) the level of training, i.e. Tier 1, Tier 2, etc., and 3) whether the school implemented PBIS at a high standard, i.e. "fidelity." We obtained this data for four school years, over 2,000 schools each year.

Schools are classified as having implemented PBIS in the year following the completion of training.⁶ We analyze PBIS Tier 1 (universal implementation) and Tier 2 (smaller groups of students) results separately. There are an insufficient number of schools that have implemented at Tier 3 for a statistical analysis to be conducted.

For the other variables, we gathered data from the Department of Public Instruction's annual state report cards for every year in which they are available (2011-2016)⁷. Our

⁵ The RtI report said they got responses on MAP outcomes from 421 schools statewide that do not implement PBIS, 97 schools that implement only PBIS at a high standard (i.e. fidelity), and 53 schools that have implement both PBIS and the reading system to a high standard (i.e. "fidelity" for PBIS and "full implementation" for the reading system).

⁶ It was also possible with the data provided to look at the subset of schools which achieved "fidelity" according to PBIS. These results are contained in Appendix Table A1, and do not differ substantively from the main results reported in text.

⁷ No report cards were issued in the 2014-15 school year. This year is omitted from our analysis.

dependent variables are suspension rates⁸ and academic performance in reading and mathematics on the state-mandated exams. To account for other changes that may have occurred over the time frame analysis, we include a count of years as a variable.

We also collected data on a number of other factors that could plausibly influence academic performance or suspension rates. These include the racial breakdown of students in the school, the number of disabled students in the school, the share of students in the school who are economically disadvantaged, and the number of students who are English Language Learners. Indicator variables are also included for the grade levels of the school (e.g. Elementary or High School) and whether the school is an alternative or charter school. A count of years is also included in the analysis to account for other factors that may have impacted our dependent variables over the time frame of analysis.

We attempt to answer the following questions. First, did the implementation of PBIS have an impact on suspension rates? To answer that question, we estimate a model in which suspension rate serves as the dependent variable:

$$\text{Suspension Rate} = \alpha + \beta_1(\text{PBIS}) + \beta_2(\text{Controls})$$

Our statewide analysis also adds fixed effects for each school district in the state.⁹ If PBIS is having its intended effect of reducing suspensions, we would expect to see a negative coefficient on β_1 .

The second, larger, question is whether PBIS is having a positive or negative effect on other outcomes within the school. We estimate models based on reading proficiency, math proficiency, and the school's attendance rating on the state report card for each year of analysis¹⁰.

$$\text{Proficiency} = \alpha + \beta_1(\text{PBIS}) + \beta_2(\text{Controls})$$

If PBIS is having a positive effect on each of these variables, we would expect a positive coefficient on β_1 . If PBIS is having a negative impact, we would expect to find a negative coefficient on β_1 .

We also include an analysis specifically on schools in Milwaukee for several reasons. Milwaukee Public Schools is the largest school district in Wisconsin and more than 76%

⁸ Suspension rate is found by dividing the number of suspended students in the school by the enrollment of the school.

⁹ District charters are counted with their home district. Independent charters are classified as their own school districts.

¹⁰ While the state exam has changed over the years, proficiency rates in these subjects have remained relatively consistent. We account for over-time variation in test performance additionally through the year count variables.

of schools have implemented PBIS at Tier 1. In addition, it represents over 50% of the minority students of the state, which would theoretically be impacted most by Obama-era discipline policies.

RESULTS: STATEWIDE TIER 1

Finding 1: PBIS Tier 1 training led to a decline in suspensions in schools with more African American students while increasing suspensions in schools with more non-minority students.

Table 1 depicts the results on the question of whether PBIS is effective in its goal of reducing suspensions. Note that more than 400 fixed effects are included in these analyses for each school district, but dropped from the table for ease of viewing. The results in Column 1 below depict the baseline analysis, without interactive effects. In this model, the effect of PBIS on suspension rates is insignificant. This is a curious finding, suggesting that PBIS training is ineffectual. Recall that one of the chief motivations for the implementation of programs like PBIS was to reduce the disparity in suspension among students from different demographic backgrounds. The effect of PBIS on suspensions varies based on the racial makeup of a school.

Table 1. Effect of PBIS Training on Suspension Rates

VARIABLES	(1) Suspension Rate	(2) Suspension Rate
<i>PBIS Tier 1</i>	0.00174 (0.00250)	0.00630** (0.00281)
<i>African American</i>	0.182*** (0.0118)	0.202*** (0.0131)
<i>African American X Tier 1</i>	--	-0.0356*** (0.00999)
<i>Hispanic</i>	-0.00245 (0.0167)	-0.00811 (0.0168)
<i>Native American</i>	-0.0471* (0.0280)	-0.0487* (0.0280)
<i>Enrollment</i>	5.21e-06 (3.33e-06)	5.43e-06 (3.33e-06)
<i>English Language Learner</i>	-0.0392* (0.0209)	-0.0382* (0.0209)
<i>Economically Disadvantaged</i>	0.119*** (0.00997)	0.120*** (0.00996)

<i>Disabled</i>	0.121*** (0.0144)	0.120*** (0.0144)
<i>Alternative School</i>	0.0586*** (0.00652)	0.0572*** (0.00653)
<i>Elementary School</i>	0.0634*** (0.00650)	0.0620*** (0.00651)
<i>Charter School</i>	-0.0256 (0.00352)	-0.00286 (0.00353)
<i>Elementary/Secondary</i>	0.0390*** (0.00232)	0.0389*** (0.00231)
<i>High School</i>	0.0303*** (0.00833)	0.0306*** (0.00833)
<i>Middle School</i>	0.0417*** (0.00237)	0.0416*** (0.00237)
<i>Year Count</i>	-0.00166*** (0.000570)	-0.00175*** (0.000570)
Constant	-0.0519 (0.0366)	-0.0545 (0.0366)
Observations	8,244	8,244
R-squared	0.427	0.428

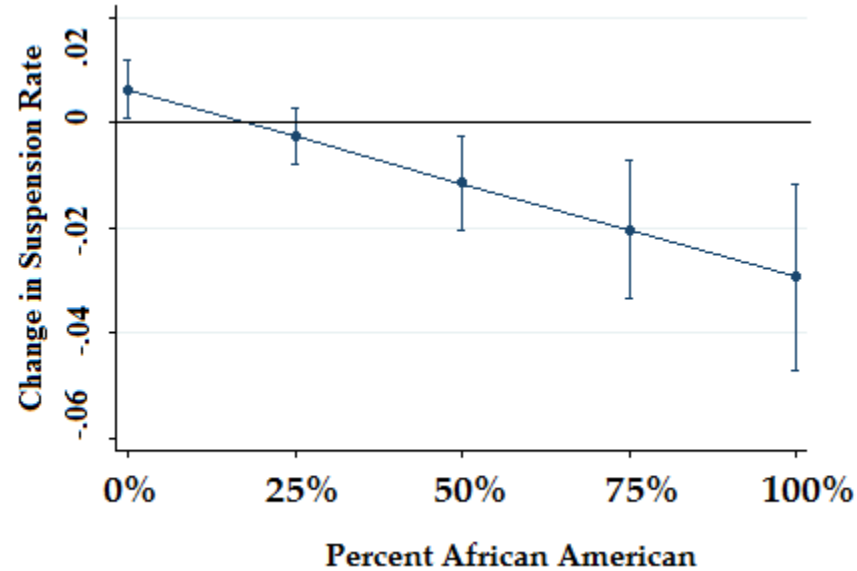
Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The inclusion of the interaction effect clarifies the results. Here, the overall effect of PBIS is positive and significant ($p < .05$), but the effect of PBIS on African Americans specifically is negative and highly significant ($p < .01$). In other words, PBIS training does appear to lower suspension rates among African American students but raise them among other students. A similar relationship was not found when interactions between PBIS training and other demographic variables were attempted.

These surprising results are depicted in Figure 3 below. At schools with less than approximately 10% African American students, the effect of PBIS was to *increase* suspensions. However, as the share of African American students in a school increases, the effect of PBIS on suspensions becomes negative.

Figure 3. Marginal Effect of PBIS Training on Suspension by Share African American



For a state like Wisconsin, the share of schools with less than 10% African Americans is not substantively meaningless. The average percentage of African Americans in Wisconsin schools is 9.5% in our sample, and 81.3% of schools have fewer than 10% African American student populations.

Finding 2: PBIS Tier 1 Training is related to a decline in proficiency rates in both mathematics and English/Language Arts

Having established that PBIS does lower suspensions, at least in some circumstances, we now move on to the question of whether PBIS training has a positive or negative effect on the classroom. Table 2 below contains the results of an analysis of proficiency rates on statewide exams over the past five years. Once again, district-level fixed effects are included in the model but excluded from the table for space.

Table 2. Effect of PBIS Training on Math & ELA Proficiency, Wisconsin

VARIABLES	(1) Math Proficiency	(2) ELA Proficiency
<i>PBIS Training Tier 1</i>	-0.00829*** (0.00314)	-0.00726*** (0.00272)
<i>African American</i>	-0.297*** (0.0160)	-0.242*** (0.0139)
<i>Hispanic</i>	-0.182*** (0.0211)	-0.136*** (0.0183)

<i>Native American</i>	-0.135*	-0.233***
	(0.0736)	(0.0637)
<i>English Language Learners</i>	-0.0613**	-0.146***
	(0.0259)	(0.0224)
<i>Disability</i>	-0.246***	-0.240***
	(0.0288)	(0.0250)
<i>Enrollment</i>	-1.56e-05***	1.61e-06
	(4.51e-06)	(3.91e-06)
<i>Economic Status</i>	-0.337***	-0.336***
	(0.0144)	(0.0125)
<i>Alternative School</i>	-0.130***	-0.0643***
	(0.0158)	(0.0137)
<i>Charter School</i>	-0.0314***	0.0103**
	(0.00517)	(0.00448)
<i>Elementary School</i>	-0.108***	-0.0176*
	(0.0111)	(0.00959)
<i>Elementary/Secondary School</i>	-0.104***	-0.00766***
	(0.00310)	(0.00268)
<i>High School</i>	-0.0921***	-0.0367***
	(0.0104)	(0.00904)
<i>Middle School</i>	-0.0571***	-0.00976***
	(0.00288)	(0.00249)
<i>Year Count</i>	-0.0183***	0.0169***
	(0.000713)	(0.000617)
<i>Constant</i>	0.745***	0.571***
	(0.0442)	(0.0383)
<i>Observations</i>	7,589	7,589
<i>R-squared</i>	0.764	0.741

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Here, we see that PBIS training has a significant, negative effect on academic performance even when controlling for a large number of other variables that could plausibly effect proficiency. The effects here are substantively small – PBIS training is associated with approximately 1% lower proficiency in math ($p < .1$) and 1% lower proficiency in English/Language Arts ($p < .01$). These effects pale in comparison to the effect, for example of economic status, which leads to a decline in proficiency of approximately 33%. That said, the PBIS effect should give policymakers pause when evaluating the utility of the program.

Finding 3: PBIS Tier 1 training was related to proficiency declines in rural and suburban areas while having an insignificant impact in urban areas.

Do the effects of PBIS differ in urban or rural areas? To answer that question, we broke down the results by the level of urbanicity of the school district on the following page.

It appears that the significant, negative impacts of PBIS training on proficiency are largely in rural and suburban areas of the state and not seen (on the whole) in urban areas. In rural areas, PBIS training is related to a decline in proficiency of about 1% in English/Language Arts ($p < .1$). No negative effect on proficiency was found in mathematics for rural areas. In suburban schools, a negative effect of PBIS training was found in both English ($p < .01$) and mathematics ($p < .1$). While the effects are insignificant in urban areas, both coefficients are negative.

Why the negative effects of PBIS training on proficiency are stronger in these areas is not clear, but one could hazard some suppositions. Training rates are lower in rural and suburban areas than they are in urban areas, as shown in Figure 2. It could be the case that the higher levels of implementation in urban schools makes it more difficult to identify tease-out effects *within* this subset of schools. Further research would be needed to fully test this proposition.

Table 3. Effect of PBIS Training on Proficiency by Urbanicity

VARIABLES	Urban ELA	Suburb ELA	Rural ELA	Urban Math	Suburb Math	Rural Math
<i>PBIS Tier 1</i>	-0.00401 (0.00532)	-0.0135*** (0.00495)	-0.00765* (0.00409)	-0.00271 (0.00612)	-0.0104* (0.00574)	-0.00165 (0.00472)
<i>African American</i>	-0.129*** (0.0255)	-0.356*** (0.0540)	-0.345*** (0.0769)	-0.115*** (0.0294)	-0.295*** (0.0626)	-0.363*** (0.0889)
<i>Hispanic</i>	0.00130 (0.0364)	-0.249*** (0.0708)	-0.105* (0.0585)	0.0420 (0.0418)	-0.320*** (0.0821)	-0.103 (0.0676)
<i>Asian</i>	0.0812* (0.0438)	0.116 (0.0866)	0.00871 (0.0757)	0.210*** (0.0503)	0.241** (0.100)	0.164* (0.0874)
<i>Native American</i>	-0.330** (0.153)	-0.442 (0.322)	-0.242*** (0.0756)	-0.175 (0.176)	0.116 (0.374)	-0.193** (0.0874)
<i>Disability</i>	-0.214*** (0.0429)	-0.334*** (0.0646)	-0.202*** (0.0364)	-0.192*** (0.0493)	-0.110 (0.0749)	-0.227*** (0.0421)
<i>Economic Status</i>	-0.495*** (0.0250)	-0.239*** (0.0322)	-0.253*** (0.0194)	-0.540*** (0.0288)	-0.316*** (0.0374)	-0.192*** (0.0224)
<i>Alternative School</i>	-0.0344 (0.0214)	-0.202*** (0.0237)	0.00789 (0.0298)	-0.111*** (0.0246)	-0.281*** (0.0275)	0.0131 (0.0344)
<i>Enrollment</i>	-1.07e-05 (7.99e-06)	-1.65e-05** (7.73e-06)	-2.75e-06 (6.30e-06)	-3.76e-06 (9.19e-06)	-2.40e-05*** (8.96e-06)	-2.48e-05*** (7.28e-06)
<i>ELL</i>	-0.191*** (0.0370)	-0.0883 (0.0755)	-0.213*** (0.0647)	-0.123*** (0.0426)	-0.00472 (0.0876)	-0.252*** (0.0748)
<i>Elementary School</i>	-0.0118 (0.0136)	0.0580** (0.0280)	-0.0326 (0.0222)	-0.0722*** (0.0156)	-0.194*** (0.0325)	-0.234*** (0.0257)
<i>High School</i>	-0.0120 (0.00831)	0.0163** (0.00740)	-0.00353 (0.00328)	-0.106*** (0.00956)	-0.105*** (0.00858)	-0.0953*** (0.00379)
<i>Elementary/Secondary</i>	--	-0.0638 (0.0391)	-0.0343*** (0.00940)	--	-0.192*** (0.0454)	-0.0874*** (0.0109)
<i>Middle School</i>	-0.0128** (0.00640)	-0.00708 (0.00508)	-0.00800** (0.00322)	-0.0486*** (0.00736)	-0.0563*** (0.00589)	-0.0601*** (0.00373)
<i>Year Count</i>	0.00967*** (0.00149)	0.0240*** (0.00135)	0.0168*** (0.000846)	-0.0259*** (0.00171)	-0.0166*** (0.00156)	-0.0180*** (0.000977)
Constant	0.619*** (0.0465)	0.568*** (0.0234)	0.578*** (0.0820)	0.715*** (0.0534)	0.746*** (0.0271)	0.643*** (0.0947)
Observations	1,525	1,387	4,544	1,524	1,387	4,545
R-squared	0.806	0.825	0.544	0.806	0.825	0.613

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Finding 4: PBIS Tier 2 training was related to a decline in mathematics proficiency. No effect was found on ELA proficiency.

We conducted the same analysis as in Table 2 looking at PBIS training at Tier 2. At this tier, we find a strong, negative effect of PBIS on math proficiency ($p < .01$), but no effect on proficiency in English/Language Arts.

VARIABLES	(1) Math Proficiency	(2) ELA Proficiency
<i>PBIS Tier 2 Training</i>	-0.00956** (0.00470)	0.00353 (0.00407)
<i>African American</i>	-0.298*** (0.0160)	-0.242*** (0.0139)
<i>Hispanic</i>	-0.183*** (0.0211)	-0.136*** (0.0183)
<i>Native American</i>	-0.135* (0.0736)	-0.237*** (0.0638)
<i>English Language Learner</i>	-0.0607** (0.0259)	-0.147*** (0.0224)
<i>Disability</i>	-0.249*** (0.0288)	-0.243*** (0.0249)
<i>Enrollment</i>	-1.59e-05*** (4.51e-06)	1.20e-06 (3.91e-06)
<i>Economic Status</i>	-0.339*** (0.0144)	-0.337*** (0.0125)
<i>Alternative School</i>	-0.128*** (0.0158)	-0.0630*** (0.0137)
<i>Charter School</i>	-0.0299*** (0.00512)	0.0124*** (0.00444)
<i>Elementary/Secondary</i>	-0.107*** (0.0111)	-0.0174* (0.00959)
<i>High School</i>	0.104*** (0.00310)	-0.00713*** (0.00268)
<i>Junior High School</i>	-0.0915*** (0.0104)	-0.0361*** (0.00904)
<i>Middle School</i>	-0.0570*** (0.00288)	-0.00948*** (0.00250)
<i>Year Count</i>	-0.0186*** (0.000700)	0.0162*** (0.000606)
Constant	0.742*** (0.0442)	0.568*** (0.0383)

Observations	7,589	7,589
R-squared	0.763	0.741
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

RESULTS: MILWAUKEE

Finding 5: PBIS Training was related to a decline in ELA proficiency in Milwaukee. No effect was found on mathematics training.

The same results for academic outcomes depicted in Table 2 for the state of Wisconsin as a whole are depicted for Milwaukee specifically in Table 4. While the direction of the effect of PBIS is negative for math proficiency, it is insignificant in the Milwaukee results. However, proficiency in ELA is significantly lower ($p<.1$) in Milwaukee among schools that participated in PBIS Training.

Table 4. Effect of PBIS Training on Math & ELA Proficiency, Milwaukee

VARIABLES	(1) Math Proficiency	(2) ELA Proficiency
<i>PBIS Training Tier 1</i>	-0.00665 (0.00894)	-0.0134* (0.00720)
<i>African American</i>	-0.261*** (0.0309)	-0.215*** (0.0249)
<i>Hispanic</i>	-0.0850*** (0.0299)	-0.0523** (0.0240)
<i>Native American</i>	-2.514*** (0.534)	-1.519*** (0.430)
<i>English Language Learners</i>	-0.103** (0.0503)	-0.239*** (0.0405)
<i>Disability</i>	-0.136** (0.0602)	-0.0829* (0.0485)
<i>Enrollment</i>	-8.84e-07 (1.57e-05)	1.62e-05 (1.26e-05)
<i>Economic Status</i>	-0.385*** (0.0420)	-0.414*** (0.0338)
<i>Alternative School</i>	-0.120*** (0.0399)	-0.0483 (0.0321)
<i>Charter School</i>	0.00430 (0.0114)	-0.0169* (0.00922)

<i>Elementary School</i>	-0.0696*** (0.0168)	-0.0202 (0.0136)
<i>Middle School</i>	-0.114*** (0.0131)	-0.0424*** (0.0105)
<i>High School</i>	-0.0526*** (0.0198)	-0.0130 (0.0159)
<i>Year Count</i>	-0.0186*** (0.00240)	0.00826*** (0.00194)
Constant	0.796*** (0.0247)	0.685*** (0.0199)
Observations	543	543
R-squared	0.718	0.756

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Data was not provided to us on the implementation of PBIS Tier 2 for Milwaukee, so we are unable to replicate the Tier 2 analysis for the district.

LIMITATIONS

Like all researchers, we are limited by the data that has been made available to us. It is possible that school districts have utilized alternative discipline policies outside of the PBIS system, or that PBIS has been implemented, to some extent, even in the absence of training. To the extent that better data on alternative discipline practices becomes available in the future, it may be worthwhile to replicate the research conducted here.

Additionally, this paper is not able to identify the mechanisms that are leading to lower proficiency in PBIS schools. While the supposition is that PBIS is an inferior discipline system to traditional methods that is leading to more disruptive behavior in the classroom, a more fine-grained analysis that includes interactions with those ‘on the ground’ would lend further credence to this theory.

Another limitation is created by the unwillingness (or inability) of the DPI to provide us with data on the date of implementation despite repeated requests, both informally and through open records law. Because of this, the analyses here are similar to “Intent to Treat” effects – akin to a medical study in which the researchers provide a person with a pill but cannot guarantee that the pill was taken (Fisher et. al., 1990). A richer analysis could be conducted if data on implementation date could be identified.

CONCLUSIONS

This paper is among the most rigorous examinations of the impact of Obama-era discipline policy on educational outcomes. While it appears that PBIS may be meeting

its goal of reducing suspensions for African American students, an uptick in suspensions among non-African American students should be a matter of concern. If we accept that suspensions are a bad thing and should only be used as a last resort, as the proponents of changes to suspension policy suggest, why are suspensions increasing among certain demographic groups under PBIS training?

Even more concerning is the evidence presented here that implementation of positive behavioral supports is leading to worsened academic outcomes for Wisconsin's kids. While some individual schools may have positive results from PBIS, the larger results are troubling. Both statewide and in Milwaukee, we observe lower proficiency on state exams in English/Language Arts after schools participate in PBIS training. At the state level, we find a similar reduction in mathematics proficiency after PBIS training. This adds to the evidence from surveys of teachers and students (Kuo & Moberg 2016) that these policies are fostering an environment not conducive to learning in many classrooms.

Rather than trying to force PBIS and its like down the throats of schools, districts and schools should be empowered to find practices that work in their classrooms to help improve students' behavior and academic outcomes. While there may be schools in which PBIS is effective, a 'one size fits all' approach is almost never the answer in education. At the state level, there are things that can be done to empower teachers to regain control of the classroom. In Wisconsin, for example, legislation has been proposed that would allow teachers to remove students from the classroom for a short time, and increase the availability of information to teachers about the behavioral issues of students in their classes. At the federal level, this paper provides the best arguments to date for rescinding the 'Dear Colleague' letter produced by the Obama Administration. This policy that was intended to help urban African American students is not only hurting them, but also hurting suburban and rural students.

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APPENDICES

Appendix 1: Alternative way of measuring PBIS impact

An alternative means of measuring the impact of PBIS policies would be to only include among the implementers those schools that have implemented to “fidelity.” Because the Department of Public Instruction would not provide us with additional data, fidelity was assumed to be reached in the school year following the completion of PBIS training for those that are listed by the Department as having reached fidelity. As can be seen in the Table below, the effects of PBIS fidelity on proficiency are similarly negative as the effects of PBIS Training.

Table A1. Effect of PBIS Training on Proficiency

VARIABLES	Math Proficiency	ELA Proficiency
<i>PBIS Fidelity</i>	-0.00744** (0.00331)	-0.00595** (0.00284)
<i>African American</i>	-0.293*** (0.0163)	-0.244*** (0.0140)
<i>Hispanic</i>	-0.186*** (0.0215)	-0.134*** (0.0185)
<i>Native American</i>	-0.0679 (0.0748)	-0.286*** (0.0643)
<i>English Language Learners</i>	-0.0535** (0.0263)	-0.149*** (0.0226)
<i>Disability</i>	-0.255*** (0.0293)	-0.233*** (0.0252)
<i>Enrollment</i>	-1.48e-05*** (4.58e-06)	1.22e-06 (3.94e-06)
<i>Economic Status</i>	-0.339*** (0.0146)	-0.337*** (0.0126)
<i>Alternative School</i>	-0.132*** (0.0161)	-0.0620*** (0.0138)
<i>Charter School</i>	-0.0316*** (0.00527)	0.0105** (0.00453)
<i>Year Count</i>	-0.0207*** (0.000952)	0.0206*** (0.000818)
Constant	0.767*** (0.0515)	0.553*** (0.0442)
Observations	7,588	7,588

R-squared	0.756	0.737
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Appendix A2. Predicting Implementation of PBIS at Tier 1 and Tier 2

VARIABLES	(1) Tier 1 Implementation	(2) Tier 2 Implementation
<i>ELA Proficiency</i>	-0.946** (0.439)	-1.805** (0.731)
<i>Math Proficiency</i>	0.559 (0.367)	0.180 (0.627)
<i>African American</i>	1.839*** (0.241)	-4.020*** (0.612)
<i>Hispanic</i>	1.986*** (0.361)	-3.015*** (0.631)
<i>Native American</i>	2.796*** (0.468)	1.162* (0.634)
<i>English Language Learners</i>	-1.912*** (0.514)	3.711*** (0.842)
<i>Economic Status</i>	0.0145 (0.278)	1.078** (0.470)
<i>Disability</i>	3.717*** (0.723)	-0.0487 (1.310)
<i>Alternative School</i>	-0.904 (0.658)	0.0178 (1.121)
<i>Charter School</i>	-1.773*** (0.175)	-1.470*** (0.392)
<i>Year Count</i>	0.433*** (0.0246)	0.697*** (0.0469)
<i>Enrollment</i>	0.000552*** (0.000114)	0.000680*** (0.000209)
<i>Urban</i>	0.577*** (0.104)	0.141 (0.173)
<i>Suburban</i>	0.508*** (0.0956)	0.612*** (0.153)
<i>Rural</i>	-0.00767 (0.0865)	-0.505*** (0.148)
<i>Elementary School</i>	-0.401 (0.291)	0.282 (0.523)

<i>Middle School</i>	-0.507*** (0.0975)	-0.946*** (0.191)
<i>Junior High School</i>	-1.214*** (0.405)	-0.197 (0.453)
<i>Middle School</i>	-0.341*** (0.0830)	-0.405*** (0.144)
Constant	-2.851*** (0.293)	-3.856*** (0.511)
Observations	7,588	7,588

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix 2: Timeline of PBIS in the Obama Administration

2009

In 2009, Education Secretary Arne Duncan wrote a letter to Chief State School Officers nationwide on the topic of PBIS (United States Department of Education, 2009). Citing Illinois as an example for its focus on PBIS, he wrote:

“...I am encouraging each State to review its current policies and guidelines regarding the use of restraints and seclusion in schools to ensure every student is safe and protected, and if appropriate, develop or revise its policies and guidelines.

My home State of Illinois has what I believe to be one good approach, including both a strong focus upon Positive Behavior Intervention and Supports (PBIS) as well as State regulations that limit the use of seclusion and restraint under most circumstances....

Approximately 8,000 schools across the country are already implementing PBIS, a systems approach to establishing the social culture needed for schools to achieve social and academic gains while minimizing problem behavior for all children. PBIS provides a framework for decision making that guides the implementation of evidence-based academic and behavioral practices throughout the entire school, frequently resulting in significant reductions in office disciplinary referrals, suspensions, and expulsions.”

2010

Duncan announced the Department of Education would be focusing on the issue of educational equity (United States Department of Education, 2010). A major concern was suspension rates, particularly the disproportionately high rate of African American students suspended compared to their white peers.

2011

ED partnered with the Department of Justice to create the Supportive School Discipline Initiative to make sure school discipline practices didn't push students through the "school-to-prison pipeline." This emphasized the use of tiered supports "such as Positive Behavioral Interventions and Supports" (United States Department of Justice, 2011; United States Department of Education, 2014).

2014

The Department of Education and Secretary Duncan issued a "Dear Colleague" letter, threatening to investigate public schools that did not take appropriate action to reduce suspensions (Department of Education & Department of Justice, 2014). The letter warned that even fair policies fairly applied could open schools to federal investigation if they had a disparate impact on minority students.

In an accompanying document, "Guiding Principles: A Resource Guide for Improving School Climate and Discipline," PBIS was given as a solution for schools to use as they overhauled their discipline policies to help improve school climate and "promote positive student behavior" (Department of Education, January 2014).

Additionally, starting in 2014, ED began supporting the School Transformation Grant – Local Educational Agency Grants. These competitive grants would be used "to develop, enhance, or expand systems of support for, and technical assistance to, schools implementing an evidence-based multi-tiered behavioral framework for improving behavioral outcomes and learning conditions for all students" (United States Department of Education). The grant conditions included that the applicant work with a technical assistance provider, *"such as the PBIS Technical Assistance Center funded by the Department."*