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# Final Progress Report: Wisconsin School Violence and Bullying Prevention Project (2014-CK-BX-0011)

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**Abstract**

The *Wisconsin School Violence and Bullying Prevention Study*, funded by the National Institutes of Justice (NIJ) was developed and implemented to study the impact of a concerted effort, on the part of schools, towards increasing their bullying prevention program on bullying victimization and perceptions of safety among middle school students. Assessment of a schools' program was conducted through completing of the Wisconsin Bullying Prevention Program Assessment Tool which includes 9 domains and a total of 42 questions.

The design of the project asked schools to assess their program and make improvements in line with gaps that exist. This study, by design, was minimally prescriptive. This is due to the reality that schools are at different places, have different strengths and different opportunities for improvement, as shown by the completing of the assessment tool.

The study was a case-control design in which districts where matched based on similar charactr4ists and then randomly assigned to experimental or control groups. Those in the experimental group received technical assistance during the 2015-16 and 2016-17 school years and were allocated $15,000 to use for the purposes of professional development and training and the purchasing of materials that would support their bullying prevention programs. Control schools were given technical assistance in fall 2017 after the data collection period had concluded.

Several findings resulted, including: (1) a quantified relationship between bullying victimization status and feeling of safety at school (2) evidence that schools are capable to enhancing their bullying prevention program within a short time frame and with a relatively

small amount of financial capital to support such efforts (3) evidence that these efforts have a quantifiable and significant impact on bullying victimization at the middle school level.

Overall, the *Wisconsin School Violence and Bullying Prevention Study* accomplished its goals. We learned that with a minimally prescriptive approach to enhancing a school's bullying prevention program, a real change can be made in a short period of time and the impacts be shown in school practices and procedures and rates of bullying victimization. The research partners have published, to date, one peer-reviewed journal article and presented and two national conferences. Future publications are expected.

**Project Purpose**

The Wisconsin School Violence and Bullying Prevention Study, funded by the National Institutes of Justice (NIJ) sought to understand the impact of a comprehensive bullying prevention program on outcomes related to violence and safety, including rates of bullying both from the school and student perspectives. Schools selected to participate had an inclusion criteria requirement of being at fidelity for tier 1 (universal) Positive Behavioral Interventions and Supports (PBIS). The purpose of this criteria was to insure that schools recruited to participate have made a prior, concerted, effort towards addressing the climate of their schools. This provided a stable platform from which future efforts towards violence prevention would be able to be undertaken.

**Project Subjects**

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The focus of the project was at the middle school level (grades 6 through 8) across 24 Wisconsin schools. Anonymous data were collected and analyzed exclusively by the state education agency (SEA) of Wisconsin and used questions included in commonly administered school climate surveys. As such, it was determined by the SEA and NIJ that a formal IRB process was not needed. Students were not required to complete the questionnaire and their voluntary completion was explicitly stated on the form. In addition, schools were free to institute their own protocol of consent (opt-in vs opt-out).

**Project Design and Methods**

The Wisconsin School Violence and Bullying Prevention study was a case-control designed project that sought to understand the degree of change in a variety of bullying and violence related behaviors in the middle school environment associated with a change in schools' bullying program. To assess the bullying programs, the *Wisconsin Bullying Prevention Program Assessment Tool* (BPPAT) was completed by participating schools. Based on these results, schools in the experimental group were to make enhancements to their programs to address existing gaps within the context of what they are able to successfully accomplish. The design of the project involved a two-year period of active implementation and data collection.

As part of the project design, schools in the control condition were asked to delay implementation of new bullying prevention programming until the start of the 2017-18 school year. However, it was also made clear to these schools that they were not expected to avoid directly addressing new issues of bullying and violence prevention in their schools if extenuating circumstances required that situations be addressed, immediately. Changes in the BPPAT may

provide some evidence of such instances however, there was no direct requirement to communicate instances that might cause schools to break their treatment assignment. This decision was made out of ethical considerations but also to retain the general structure of this study that relied on real-world and applicable contexts to schools regardless of their current bullying prevention program status.

The strength of the bullying prevention program was quantified through completion of the Bullying Prevention Program Assessment Tool (BPPAT) completed by a team of school personnel in spring 2015 (baseline), spring 2016 and spring 2017. The instrument was developed over a period of 18 months, independent of project funding, under a collaboration between the Wisconsin Department of Public Instruction (DPI) and academic and community representatives from throughout the state of Wisconsin. The BPPAT is comprised of nine sections (listed below) with varying numbers of prevention goals in each. The structure of the BPPAT is such that the school official rates the bullying prevention status of the school along a continuum of "not in place", "partially in place" and "fully in place". Criteria for partially in place are included with every item. Sections are the following:

1. Policy and Procedures (6 items; Example: School bullying policy makes a clear distinction between "bullying" and "harassment")

2. Program Selection/Implementation (3 items; An externally validated (i.e., evidence based and/or evidence informed) bullying prevention program has been implemented by the school/school district)

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3. Staff Training (6 items; A minimum of 90% of faculty/staff (including non-teaching staff such as SRO) have received inservice training (initial and/or refresher) in the following this academic year: How to respond to bullying incidents)

4. Parent Education and Communication (3 items; Twice-yearly updates are sent to parents about the school's bullying prevention program)

5. Classroom Instruction/Student Training (9 items; A minimum of 90% of students has received classroom instruction (initial and/or refresher) on how to respond to bullying incidents this academic year)

6. Universal (Tier 1) Components (2 items: Bullying policies are communicated with local community agencies, including police, public health, childcare and human services)

7. Selected (Tier 2)/Intensive (Tier 3) Components (3 items; Supports are provided to students not responding to less intense interventions)

8. Reporting Systems (6 items; A reporting system is in place for students and staff for documenting bullying incidents that includes electronic collection and maintenance of data)

9. Analysis and Continuous Quality Improvement (CQI) (4 items; Data are analyzed by the School Safety Team at least quarterly to identify "hot spots" for incidents, involving time and place, and sub-populations disproportionately affected)

Bullying rates (school level).

Multiple measures were used to assess bullying. To obtain rates of bullying victimization, bullying incidents reported by the schools were obtained. During a four-week/20 school day period in fall and spring semesters, schools were instructed to track and report data related to bullying incidents that meet certain criteria. A suggested 20 day period was identified, however variability in the specific dates used was required to account for differences in spring breaks, off days, etc. between districts.

For an incident to be included, it needed to match the public health definition of bullying (repeated, imbalance of power), involve a conversation between the victim and school staff and documentation of name(s) involved (victim and perpetrator) and the type of bullying involved. Schools were also encouraged to document resolution or next steps. The number of incidents, number of student victims and perpetrators, and the demographic characteristics of victims and perpetrators were retained in aggregate form for each school and were submitted to the DPI for analysis.

Using aggregate numbers of students involved as victim, rates of bullying victimization were calculated. The numerator in the equation being the aforementioned number of students. The denominator was based on school population as collected in proximity to the data collection period. Specifically, fall figures used 3rd Friday of September enrollment data; spring figures used 2nd Friday of January enrollment data.

Student survey

In both the fall and spring semesters, students completed a survey that assessed bullying victimization (any form or physical bullying), physical fighting, and opinions of the school

environment regarding general violence, bullying, and harassment. Including demographics, the survey totaled 11 questions. Surveys were submitted anonymously by the students to the Wisconsin Department of Public Instruction in either computer or paper form. The questions used wording identical to the Youth Risk Behavior Survey (YRBS) items administered through previous CDC and/or Wisconsin administered surveys within the schools participating in the study.

*Bullying and violence.* Following a yes or no format, questions specific to bullying asked: (1) During the past 30 days, have you ever been bullied on school property? (2) During the past 30 days, have you ever been physically bullied on school property? (3) During the past 30 days, have you been involved in a physical fight on school property? Each question was coded a 0 for "no" and 1 for "yes"

*Perception of safety.* The second part of the perception survey includes questions asking about students' perception of the school climate (1) How often do you feel safe and secure at school? never, rarely, sometimes, most of the time, always (2) Do you agree or disagree that violence is a problem at your school? strongly agree/agree/not sure/disagree/strongly disagree (3) Do you agree or disagree that harassment and bullying by other students is a problem at your school? strongly agree/agree/not sure/disagree/strongly disagree. For each question, responses were coded on a Likert scale with a 0 assigned to the most negative responses "never" and "strongly agree" [to violence/bullying being a problem] and a 4 for the most positive "always" and "strongly disagree"

**Data Analysis**

The analytic procedures for the project were able to be conducted using ordinary least squares (OLS) regression and correlation procedures. Due to the structure of the project, students were not able to be followed on an individual level across semesters. As a result of this, analysis was conducted at the school-level. All analysis was conducted utilizing SPSS with graphic illustrations originating from either SPSS output of Excel.

**Project Findings**

*Baseline data – association of bullying victimization and safety at school*

Utilizing baseline data from all participating schools (fall 2015) analysis was conducted to assess the degree to which bullying victimization in the past 30 days was associated with feeling unsafe at school. Students were asked two questions pertaining to bullying victimization (1) were you bullied in the past 30 days and (2) were you bullied, physically, in the past 30 days. For bullying victimization, students were categorized into one of three groups (1) not bullied in the past 30 days (2) bullied, but not physically, in the past 30 days (3) bullied physically in the past 30 days. Students who reported "no" to being bullied, but "yes" to being bullied physically were omitted from the analysis. A student was coded as feeling unsafe at school if they responded "never" or "rarely" to the question of *how often do you feel safe and secure at school*.

Results found that students who were bullied, but not physically, were 3 times as likely to report feeling unsafe at school. Those who were bullied physically were 9 times as likely to report feeling unsafe at school. This represents a multiplicative interaction on this association. These findings were published in an article in the *Journal of School Nursing* in 2018.

**Table 2: Generalized Linear Mixed Models Assessing Association between Bullying Victimization Status and Feel Unsafe at School**

| Bullying Victimization Category | Odds Ratio (95% CI) - Unsafe at School | |
| --- | --- | --- |
| | Model 1 n=4887 | Model 2[a] n=4527 |
| Not Bullied | 1.00 (Referent) | 1.00 (Referent) |
| Bullied (non-specific) | 3.1 (2.7-3.5) | |
| Bullied (physical) | | 9.12 (6.9-12.1) |
| Model 1: includes students reporting (a) not bullied or (b) bullied (any), but not bullied physically | | |
| Model 2: includes students reporting (a) not bullied or (b) bullied physically | | |
| [a] Controlling for gender | | |

*Program Implementation Analysis*

When working within schools it is important to understand that unique variables that can impede the implementation of practices, policies and procedures. While many of these are not unique to the school environment, staff turnover, budget cuts, incidents that cause a change of focus and other components can complicate the ability of changes to be made in areas, including violence prevention procedures. As a result, it was important to analyze the degree to which schools were able to make changes in their bullying prevention program the relatively short life of the *Wisconsin School Violence and Bullying Prevention Program*.

With regards to enhancing schools' programs, significant improvements in BPPAT score occurred between spring 2015 (baseline) and 2016 among those in the experimental group. Comparing 2015 to 2017, overall improvements occurred in both the experimental and control groups, indicating a gradual crossover effect. A factor in this cross-over could be specific sections (1, 3 and 9) associated with the data collection requirements of the project. As a result,

the clarity of the difference between treatment arms is reduced. These results indicate that these improvements can, in fact be made within the school environment when the emphasis is placed on activities that hold minimal logistic barriers.

| Bullying Prevention Program Assessment Tool Scores: By section and project treatment arm | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All | | | Experimental | | | Control | | |
| | 2015 | 2016 | 2017 | 2015 | 2016 | 2017 | 2015 | 2016 | 2017 |
| Total Score (possible score: 0-84) | 40.2 | **52.9** | **57.9** | 44.1 | **60.8** | **65.9** | 36.9 | 46.2 | **51.1** |
| | | | | | | | | | |
| Section 1: Policy and Procedures | 73.7% | **87.5%** | **89.9%** | 75.8% | 88.6% | 89.4% | 72.4% | **86.5%** | 90.4% |
| Section 2: Program Selection and Implementation | 39.6% | 50.7% | **65.3%** | 48.5% | **80.3%** | **92.4%** | 32.1% | 25.6% | 42.3% |
| Section 3: Staff Training | 31.3% | **53.8%** | **62.9%** | 38.6% | 65.2% | **72.0%** | 25.0% | 44.2% | **55.1%** |
| Section 4: Parent Education and Communication | 30.6% | 36.1% | **48.6%** | 34.9% | 43.9% | **59.1%** | 26.9% | 29.5% | 39.7% |
| Section 5: Classroom Instruction and Student Training | 51.9% | 66.0% | **75.9%** | 52.0% | **76.8%** | **89.9%** | 51.7% | 56.8% | 64.1% |
| Section 6: Universal Components | 68.8% | 69.8% | **79.2%** | 68.2% | 72.7% | 81.8% | 69.2% | 67.3% | 76.9% |
| Section 7: Selected/Intensive Components | 61.8% | 72.2% | **75.7%** | 65.1% | 77.3% | **86.4%** | 59.0% | 68.0% | 66.7% |
| Section 8: Reporting Systems | 49.7% | **71.5%** | **68.4%** | 57.6% | **80.3%** | **77.3%** | 43.0% | 64.1% | 61.0% |
| Section 9: Analysis and CQI | 37.0% | **59.4%** | **63.5%** | 46.6% | 69.3% | 69.3% | 28.9% | 51.0% | **58.7%** |
| Bolded font indicates significant chance (p<.05) relative to baseline (Spring 2015) | | | | | | | | | |

*Intention to Treat Analysis*

The primary objective of the study was to investigate the impact of an enhanced bullying prevention program on outcomes, including bullying victimization. For this analysis, the outcome of interest was rates of students experience verified bullying incidents, as collected by the school.

Results showed that a significant decline in the rate of students being bullied occurred among the overall population (n=24 schools) comparing the reference period (fall 2015) to each subsequent semester. From an ITT analytic perspective, a significant decline in experimental schools (n=11) relative to baseline in bullying victimization rates resulted in each of the three

subsequent semesters (Table 1). Rates in the four time periods were: 2.34 (per hundred), 0.97, 1.22, and 0.61. Among those in the control group, while rates declined (2.27, 1.35, 1.65, 1.36), the extent of the decline did not reach statistical significance.

When looking at the effect size of this difference a one-way ANOVA was calculated at baseline (fall 2015) and end of project (spring 2017) to determine if an effect size could indicate the strength of the impact of treatment arm assignment. Using the equation (SSbetween/SSwithin), effect size at baseline (.038/195.136) was minimal. By spring 2017, the effect size (3.381/30.972) was .11.

Results addressing outcomes on the 6-items of interest in the student survey did not reveal any significant changes among experimental schools when comparing T0 (fall 2015) to T3 (spring 2017) or comparing fall semesters or spring semesters to one another.

These results were presented as a poster at the Society for Prevention Research Conference in Washington, DC in May of 2018.

*Treatment Received Analysis*

When looking at results of changes in the BPPAT throughout the course of the project, a point of note was that in some sections of the instrument, significant improvements occurred among control schools. These increases occurred in section 1 (policy and procedures, section 3 (staff training), and section 9 (analysis and continuous quality improvement). It was determined that a large portion of this improvement was due to control schools adhering to project requirements pursuant to data collection. This reduced the difference between the experimental and control schools in terms of their program implementation. As a result, treatment receive

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analyses were conducted to investigate if change in program structure was associated with change in student outcomes.

Using a treatment received analysis including all 24 schools, a significant inverse association at the school-level existed (-.519; p=.009) between the proportion of students reporting past 30-day bullying victimization comparing spring 2017 to spring 2016 and enhancement of bullying prevention program based on total BPPAT score from baseline to spring 2017. Comparison of fall semesters (r=.303) and baseline to spring 2017 (r=-.357, p=.087) did not reach significance at the 5% level.

These results were presented in association with the aforementioned changes in program implementation at the Society for Research on Adolescence Biennial Meeting (Minneapolis, MN) in April 2018.



Bullying Victimization Rate (per 100) by semester
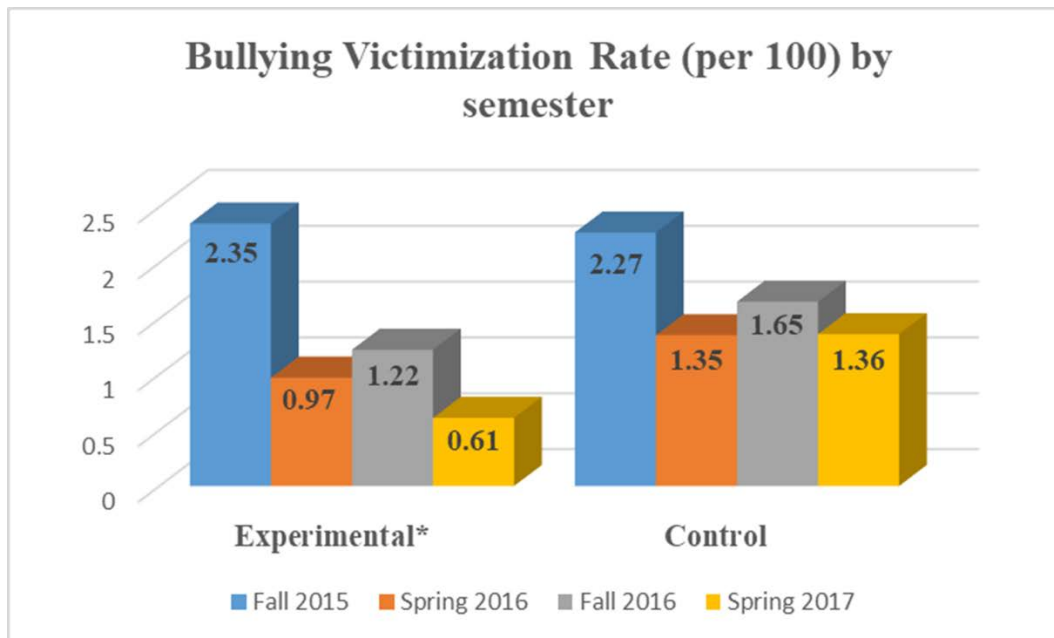
*Future Dissemination*

Currently, a summative manuscript is being finalized for submission. A previous iteration was not published and the journal audience is being revisited for future submission.

## Budget Expenditures

The *Wisconsin School Violence and Bullying Prevention Project* expended a total fund amount below the maximum allotted from the award. The left over funds were due to three primary factors (1) a fewer number of schools than anticipated, which was resolved early in the project period through a programmatic GAN (2) individual districts submitting less than their maximum allocation, which did not impact the effort put into the project by these districts (3) personnel costs at the State Education Agency being less than anticipated.

In earlier conversations with project officers, it was suggested that left-over funds could be used for additional items. However from a scientific perspective, this would have ultimately deviated from our hypotheses and project structure. With this desired for scientific and fiduciary integrity, this option was not exercised and, as such, the project was able to accomplish its goals under the budget figure allocated.

In terms of how funds were ultimately spent, this reflects the general tenor of the project in which the goal was to keep efforts relatively simple to ensure that findings could be disseminated and applied widely. With this in mind, the majority of funds went to participating districts. Within these districts, expenditures were generally limited to staff time as stipends or to pay for subs to avoid double-dipping. Additionally, schools used funds to purchase curriculum

and materials that aided in their tier 1 and/or tier 2 efforts with regards to bullying prevention and a safe school environment.

Other funds were spent for staffing at the lead agency, the Wisconsin Department of Public Instruction. This was allocated to Dr. John Bowser, who served as the Principal Investigator. Additional funds were used to contract with academic partners, Dr. Amy Bellmore (University of Wisconsin-Madison) and Dr. James Larson (University of Wisconsin-Whitewater)

## Implications

School climate and school safety are true partners. It is no coincidence that school climate and school safety have a relationship that has both correlation and causation. Changes in the school climate can improve school safety (perceptual and measurable). By the same token, changes in the safety of the school environment, good and bad, can had a direct impact on the school climate and the various measures with which in encompasses. The results from this study indicated that a concerted effort on the part of schools can have an impact on the climate with regards to bullying victimization. The impact towards criminal justice policy and practice is related to the circular causality that exists between bullying victimization, connectedness and propensity to violent behaviors. Students who are bullied, regardless of physicality, are more likely to feel unsafe at school and, thus, less connected. A lack of connection to the school environment is associated with increased violence related variables, in and out of school. As such it is imperative that when seeking to reduce violence on the part of school-age children, a concerted effort on improving the school climate can have these impacts, direct and latent, on the actions of these same children.

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Our results showed that changes in the comprehensive nature of a schools' bullying prevention program can, in fact, reduce bullying victimization. This was shown from the perspective of school verified incidents and perceptions on the part of the schools. Furthermore, by showing that schools are able to make improvements to their bullying prevention program with relatively minimal constraints (time and financial), policies that further enable schools to make these adjustments can have a positive impact on bullying victimization, which as an upstream variable to connectedness and potential violence, can have significant benefits. By design the nature of the enhancement to programs was non-prescriptive in an effort to meet schools where they are. This structure enhances the real-world applications and the pragmatism associated with transferring this from research into practice is baked in, increasing its immediate usability. While future research allowing for more intricate analysis of which specific topics or sub-topics have the most impact would be desired, currently this research strongly indicates that a concerted effort to fill existing gaps can be accomplished in the middle school environment and can significantly improve the school safety climate through reduced incidents of bullying victimization.