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Author(s): Kristina K. Childs, Sara L. Bryson, Jennifer H. Peck, Kim Gryglewicz, Roberto H. Potter

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Brevard Public Schools School Safety and Climate Study: Final Summary Overview

Completed by:
Kristina K. Childs
Sara L. Bryson
Jennifer H. Peck
Kim Gryglewicz
Roberto H. Potter

University of Central Florida (UCF)

On behalf of:
Kelly Sarria and the Brevard County Public School Board

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Brevard Public Schools School Safety and Climate Study: Final Summary Overview

In 2015, the Brevard County Public School Board was awarded funding from the National Institute of Justice (NIJ) to implement and evaluate a comprehensive mental health program in five schools. The main goal of the program was to improve school safety. The following program components were implemented:

- Youth Mental Health First Aid (YMHFA), an 8-hour training, was provided to all personnel in the five schools. YMHFA introduces common mental health challenges for youth, reviews typical adolescent development, and teaches a 5-step action plan for how to help young people in both crisis and non-crisis situations (<https://www.mentalhealthfirstaid.org>).
- Crisis Intervention Training for Youth (CIT-Y), an 8-hour training, was provided to law enforcement officers assigned to the communities where the five schools are located. CIT-Y teaches officers how to identify youth mental health problems and ways to effectively manage situations by assessing, evaluating, and de-escalating situations ([https://www.nami.org/get-involved/Crisis-Intervention-Team-\(CIT\)-Programs/CIT-Programs-for-Youth](https://www.nami.org/get-involved/Crisis-Intervention-Team-(CIT)-Programs/CIT-Programs-for-Youth)).
- Administration of the Child and Adolescent Needs and Strengths (CANS) assessment with youth and families involved in the program. The CANS was used to help identify referred students' needs and strengths and to develop an intervention plan (<https://praedfoundation.org/tools/the-child-and-adolescent-needs-and-strengths-cans>).
- Zones of Regulation, an 18-lesson early intervention program, teaches young children regulation and emotional control skills that help develop prosocial coping mechanisms, allowing them to manage overwhelming, painful, and stressful situations (<http://zonesofregulation.com/index.html>).
- Community outreach for students, parents, and families. This involved referring and linking students and their families to needed community-based services. These referrals were based on the CANS.

Project Design and Methods

Five target schools were selected by the school board to participate in the program. These schools were in low income areas of Brevard County and were selected due to high rates of discipline incidents (e.g., suspensions, detention). The five schools represented a “feeder” pattern in which four elementary schools were selected that feed students into one large middle and high school. The four elementary schools offered the program for the full three years of implementation; the middle/high school stopped offering the program in late 2017 (the last year of implementation). Social workers from the Family Counseling Center (FCC) of Brevard County were placed in each school at the start of the 2015-2016 school year and remained at each school through the duration of the program. The social workers were responsible for the administration of all program components described above. A team of researchers from UCF was responsible for the evaluation of the project. To participate in the student-level evaluation,

parent consent and student assent was required. To be involved in the school-wide surveys and training evaluations, passive consent (i.e., completion of surveys implied consent) was required. The evaluation had three components which assessed program impacts: (1) at the school-level (i.e., aggregate effects), (2) among students who participated in the program, and (3) across trainings.

To assess the aggregate effects of the program, we compared perceptions of school safety among school personnel and students prior to and after program implementation. Changes were assessed by examining differences in perceptions of school safety at the five target schools from baseline to the last survey administration (i.e., within-schools) and by comparing perceptions of school safety in the target schools to three comparison schools.¹ The comparison schools were selected by the school board. The goal was to select schools that had similar rates of discipline incidents, students enrolled, and community characteristics. Surveys were administered at all 8 schools every semester from Fall 2015 to Spring 2017. The baseline was the 2014-2015 school year. The average response rate across semesters was 76% for the student surveys² and 88% for the school personnel surveys. All surveys were anonymous which precluded assessments of within-individual change.

The school personnel surveys were conducted in paper format during staff meetings. The questionnaire consisted of several questions that asked school personnel about their perceptions of their school's environment, students' behavior, and victimization experiences. The 4th- 12th grade survey was conducted online during school hours. The questionnaire consisted of questions that asked students about their feelings of safety at school, victimization experiences, and exposure to others' engaging in deviant behavior. These items were drawn from the 2013 School Crime Supplement (SCS) to the National Crime Victimization Survey (Bureau of Justice Statistics, 2013). The hypotheses guiding this component were:

Following the proposed program implementation, the target schools will show higher rates of positive perceptions of school safety compared to the comparison schools.

¹ None of the program components were implemented at the three comparison schools; participation by these schools was limited to survey administration only.

² No meaningful differences in student demographic characteristics were observed across the target and comparison schools and were also similar to the data reported in the schools' School Public Accountability Report (SPAR).

Compared to the pre-test measures from each target school, positive perceptions of school safety among school staff and students will increase.

Each school safety item was dichotomous (0 = never, 1 = experienced 1 or more times). These items were summed to create additive scales. Three school safety measures were created from school personnel surveys: exposure to student delinquency (12 items, $\alpha = 0.83$), beliefs about student behavior (8 items, $\alpha = 0.78$), and victimization experiences (6 items, $\alpha = 0.69$). Three school safety measures were also created from the 4th – 12th grade surveys: general victimization experiences at school (3 items, $\alpha = 0.74$), bullying victimization experiences at school (7 items, $\alpha = 0.84$), and the presence of gangs at school (1 item).

The second component of the evaluation involved a student-level, non-experimental pretest/posttest design to assess changes across several behavioral health domains among students who participated in the program (i.e., involvement in school-based services provided by the social workers). The hypothesis for this component of the project was:

Working with the social worker will result in improved behavioral health, decreased discipline incidents, and increased academic achievement.

To be eligible for the program, students had to have previous or current discipline, attendance, or mental health challenges. Once eligibility for the program was confirmed, the social workers obtained parental consent, student assent, and administered the baseline CANS. The CANS is a 60-item needs assessment designed to assist practitioners with case planning and service referrals. Based on the results from the CANS, social workers developed a service plan with the student. Service plans included one or more of the following: referral and coordination of community-based services (50% of service plans), participation in Zones of Regulation, an early intervention program that focuses on emotion regulation and coping skills (for elementary and middle school students only, 62% of service plans), psychosocial education (18% of service plans), crisis intervention (10% of service plans), individual or family counseling (5% of service plans), IEP services (6% of service plans), and other support services (e.g., housing, anger management, social skills support). Of participants who received at least one community-based referral, 63% were referred to mental health services. Of the students that participated in the Zones

of Regulation program, 75% completed the program (i.e., completed all 18 lessons). Therefore, the average number of Zones of Regulation lessons completed was 18 (SD = 10, range = 1 – 63).³

In-person interviews with program participants were conducted by trained UCF students at four time points: baseline (prior to working with social worker), immediately after services, 6 months after services, and 12 months after services. Interviews with 1st – 3rd graders were shorter (approximately 30 minutes) in length than interviews with 4th – 12th graders (approximately one hour). A breakdown of interview completion rates is provided in Table 1. Of the 215 4th – 12th grade students who completed a baseline interview, 47% identified as White and 40% identified as Black/African American, 57% were male, and the average grade level was 7th grade (SD = 2.2). Of the 125 1st – 3rd grade students who completed a baseline interview, 31% identified as White and 60% identified as Black/African American, 60% were male, and the average grade was 2nd (SD = 0.79).

Table 1. Interviews Completed

	<u>1st – 3rd Graders</u>	<u>4th- 12th Graders</u>	<u>Total Interviews</u>
Baseline	125	215	340
After Services	98	171	269
6-Month Follow-Up	46	134	180
12-Month Follow-Up	13	82	95
Baseline & After Services	91	152	243
Baseline, After Services, & 6-Month Follow-up	43	96	139
All 4 time points	10	45	55

Academic achievement was measured by asking students what grades they were currently earning. A 5-point Likert scale from “mostly Fs” to “mostly As” was used. Discipline incidents was measured by two questions asking how many days (in the past six months) the student was suspended from school and how many days (in the past six months) the student skipped school. These questions were not asked in the 1st – 3rd grade interviews. Delinquency at school was measured using the same 6 items (i.e., carried weapon, fighting, hit adult, hit students, loud and unruly, vandalism) in the 1st – 3rd and 4th – 12th grade interviews. These items were dichotomous indicators of engagement in each behavior at least once.

³ The completion of a lesson often required more than one session with the social worker. Therefore, in many cases, the number of sessions exceeded the number of lessons completed.

Responses to the six items were summed to create one diversity index ranging from 0 to 6 (since the last interview). We also examined changes in the CANS scores (administered by the program social workers) at baseline and after services to assess changes in risk and needs factors after program participation. All CANS domain scores range from 0 – 2; higher scores represent higher needs/greater strengths.

The third component of the evaluation was a pretest/posttest design measuring training effectiveness. As part of the project, YMHFA was offered to school personnel and CIT-Y was offered to law enforcement officers. Both trainings were administered by the program social workers. Prior to each training, participants were asked to consent to participate in the evaluation of the training. The pretest survey was completed on the day of the training, prior to the start of the training. The posttest survey was administered immediately after the training. The hypothesis guiding this component was:

Training participants will show positive increases in confidence and knowledge regarding youth mental health needs.

YMHFA is an 8-hour training administered by the social workers. A description of common mental health conditions in childhood and adolescence, warning signs and symptoms, and de-escalation strategies was included. A total of 488 staff members consented to participate in the YMHFA evaluation; 472 completed a pretest and a posttest survey (97%). Seventy-one percent of participants were teachers. Other participants included administrators (6%), support services (6%), and community partners (11%). The majority of first aiders (i.e., trainees) were female (80%), White (77%), and Non-Hispanic (88%). Over half (52%) of First Aiders reported no prior mental health, substance use, or suicide prevention training. YMHFA constructs included confidence (12 items, $\alpha = 0.95$), mental health literacy (8 item measure representing number correct), intentions to intervene (11 items, $\alpha = 0.78$), and negative attitudes or stigma (8 items, $\alpha = 0.70$).

CIT-Y is also an 8-hour training program. Core content included a description of common youth mental health disorders, available community-based services for youth, and de-escalation strategies to use in the field. It was offered to law enforcement officers who previously completed the 40-hour Crisis Intervention Training (CIT) and were assigned to the communities where the schools are located. Five

trainings were conducted with 58 officers. The majority were male (90%), White (73%), and Non-Hispanic (85%). Just over half (53%) identified as an officer (e.g., patrol, deputy) and 16% identified their role as supervisory. The average years in their current role was 8 years. CIT-Y measures included confidence (6 items, $\alpha = 0.87$), youth mental health stigma (5 items, $\alpha = 0.70$), knowledge (9-item measure that represents number correct), perceptions of available mental health services (3 items, $\alpha = 0.90$), and crisis intervention skills (3 items, $\alpha = 0.73$).

Data Analysis and Findings

Using data from the student and school personnel surveys, independent sample *t*-tests were used to compare the school safety measures prior to and after implementation of the program at the target schools (within-school changes) and across the target and comparison schools (i.e., between school differences). These results are provided in Table 2. Due to the large sample sizes, effect size estimates (i.e., Cohen’s *d*) were also used to understand the magnitude of difference.

Table 2. School Personnel and Student Perceptions of School Safety

	Target Schools		Comparison Schools	
	Baseline Mean (SD)	Spring 2017 Mean (SD)	Baseline Mean (SD)	Spring 2017 Mean (SD)
4-12th Graders				
General victimization	0.66 (0.99)	0.77 (1.09)	0.63 (0.99)	0.70 (1.04)
Bully victimization	1.43 (1.99)	1.48 (2.12)	1.35 (1.95)	1.53 (2.22)
Gangs at school	0.22 (0.42)	0.21 (0.40)	0.23 (0.42)	0.26 (0.44)
School Personnel Surveys				
Exposure to student delinquency ^a	4.97 (2.73)	3.71 (2.16)	4.51 (2.37)	4.33 (2.65)
Victimization	1.91 (1.39)	1.92 (1.52)	1.63 (2.05)	2.06 (1.49)
Beliefs about student behavior	5.34 (2.13)	4.89 (1.99)	5.31 (2.07)	5.18 (2.12)

Note: Among 4th – 12th grade surveys, N ranged from 1010 to 1986 at the target schools and 707 to 1374 at the comparison schools. Among school personnel surveys, N ranged from 233 to 277 at the target schools and 150 to 172 at the comparison schools.

^a Differences within schools from baseline to Spring 2017: Cohen’s *d* > 0.5

No meaningful differences in the three school safety measures were observed across the target and comparison schools (Cohen’s *d* ranged from 0.02 to 0.25). We also failed to identify strong within-school changes in perceptions of school safety. All effect sizes (Cohen’s *d*) showed weak to no differences in perceptions among 4th - 12th graders and school personnel (Cohen’s *d* ranged from 0.01 to 0.22 at the target schools). One exception was exposure to delinquency which showed a moderate reduction after program implementation (Cohen’s *d* = 0.51). One possible reason we failed to find strong support for our

school-level hypotheses may be due to the moderate to high levels of positive student and staff perceptions at the start of the intervention (i.e., baseline). Based on these relatively positive perceptions of the school environment at the start of the program, the small but significant changes observed may suggest a positive impact of the program on the school environment. Another possible reason that larger differences across target and comparison schools were not observed is that, although the comparison schools did not receive the comprehensive mental health program, other interventions and services were implemented and available to students during the study. Removing all services in a school was not feasible given that these schools were selected due to their low income, high discipline status.

To examine the impact of the program on participants' behavioral health and academic needs, paired sample *t*-tests and repeated measures ANOVA were used. In Table 3, we report data from three interviews: baseline, after services, and 6 months after services. Therefore, repeated measures ANOVA was used. In Table 4, we report paired sample *t*-tests based on the CANS since the social workers administered the assessment at two times points (prior to and after program participation).

Table 3. Repeated Measures ANOVAs Assessing Changes among Program Participants

	<u>N</u>	<u>Baseline</u> <u>Mean (SD)</u>	<u>After Services</u> <u>Mean (SD)</u>	<u>6-month</u> <u>follow-up</u> <u>Mean (SD)</u>
Grades*	83	3.42 (1.23)	3.49 (0.90)	3.78 (0.94)
Suspension (days)**	96	1.75 (2.94)	1.41 (2.67)	0.51 (1.75)
Skipped School (days)	96	1.42 (2.95)	0.91 (2.34)	0.71 (2.02)
Delinquency (4 – 12 graders)**	96	0.95 (1.07)	0.67 (1.10)	0.47 (0.85)
Delinquency (1 st – 3 rd graders)	40	0.70 (1.09)	0.80 (0.97)	0.85 (1.00)

Note. Due to the low number of participants, we do not report results from the 12-month follow-up interviews.

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

Table 4. Paired Sample T-Tests of CANS Scores from Baseline to Program Completion

	<u>N</u>	<u>Baseline CANS</u> <u>Mean (SD)</u>	<u>After Services CANS</u> <u>Mean (SD)</u>
Life Domain Functioning**	220	0.66 (0.37)	0.41 (0.32)
Youth Strengths**	219	1.21 (0.66)	1.05 (0.72)
Caregiver Strengths and Needs*	209	0.34 (0.38)	0.39 (0.33)
Acculturation	212	0.07 (0.29)	0.06 (0.27)
Youth Risk Behavior**	210	0.29 (0.32)	0.11 (0.19)
Youth Behavioral/Emotional Needs**	218	0.80 (0.49)	0.46 (0.36)
Total CANS Score**	219	0.62 (0.32)	0.46 (0.24)

Note: The most common reasons for incomplete post-program CANS were school transfer and refusal to participate. Changes in Caregiver Strengths and Needs are in the opposite direction.

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

Key findings from this component of the evaluation are summarized below:

- Program participants in grades 4-12 showed statistically significant, but marginal, improvements in academic achievement over time ($F[2] = 4.92, p < 0.01, \eta^2 = 0.06$) with the largest improvement observed from program release to the 6-month follow-up.
- Program participants in grades 4-12 showed a statistically significant, but marginal, decrease in days suspended from baseline to the six-month follow-up ($F[2] = 9.13, p < .001, \eta^2 = 0.09$).
- No statistically significant reductions in truancy were observed from the baseline interview to the 6-month follow-up interview ($F[2] = 2.96, p = .06, \eta^2 = 0.03$).
- Program participants in 4th – 12th grade showed statistically significant, yet marginal, reductions in self-reported delinquency at school across time points ($F[2] = 11.90, p < .001, \eta^2 = 0.11$). No significant differences in delinquent behavior at school were observed among 1st-3rd graders. However, the rate of delinquency among this group was low across each time point.
- Although program participants, on average, showed low to moderate needs at baseline, statistically significant improvements in several CANS domains were revealed. These domains include life functioning ($t[219] = 12.16, p < .001$), youth strengths ($t[218] = 4.16, p < .001$), youth risk behavior ($t[209] = 9.91, p < .001$), youth behavioral/emotional needs ($t[217] = 11.85, p < .001$), and the overall CANS score ($t[218] = 10.03, p < .001$).
- Program participants were satisfied with the program (e.g., Zones of Regulation, working with the social worker). For example, 81% of participants indicated that they were satisfied with the services received, 77% reported doing better in school after program participation, and 81% reported that they are better at handling daily life.

Overall, program participants experienced low to moderate improvements across several behavioral health domains. A key area for future investigation is to explore differences in the magnitude of these changes across programmatic characteristics. It may be that evidence of change emerges based on whether participants were referred to community-based services, the linkages among identified CANS needs and service referral, degree of program intensity, and program completion. It is also important to highlight the high attrition rate across the interviews and the CANS assessments. Common reasons for attrition included school transfer, expulsion, and refusal to participate after the program ended. Therefore, students who completed the follow-up interviews and CANS assessment may be less likely to show positive improvement and/or satisfaction. As a result, these results must be interpreted with caution.

To assess training effectiveness, paired sample *t*-tests were used to measure changes in the 4 YMHA constructs (i.e., literacy, attitudes/stigma, confidence, and intentions to intervene) and the 5 CIT-Y

constructs (literacy, attitudes/stigma, confidence, skills, and perceptions of mental health services).

YMHFA results are presented in Table 5. YMHFA was effective at increasing mental health literacy ($t[427] = -12.14, p < .001$; Cohen's $d = 0.74$), confidence ($t[459] = -25.77, p < .001$; Cohen's $d = 1.35$), and intentions to intervene ($t[455] = -15.72, p < .001$; Cohen's $d = 0.75$). Modest decreases in negative attitudes about youth with mental illness ($t[465] = 4.14, p < .001$; Cohen's $d = 0.18$) were also observed.

Table 5. Paired Sample T-Tests of Changes in YMHFA Key Constructs from Pretest to Posttest

	N	Range	Pretest Mean	Posttest Mean
Mental Health Literacy*	428	0-8	6.03 (1.83)	7.10 (0.94)
Negative Attitudes/Stigma*	466	1-5	1.90 (0.57)	1.80 (0.55)
Confidence*	460	1-5	2.90 (0.95)	3.99 (0.63)
Intentions to Intervene*	456	1-5	2.30 (0.41)	2.59 (0.36)

* Statistically significant changes ($p < .001$). Six to 44 cases were missing one or more posttest measures.

Paired sample t -tests assessing CIT-Y effectiveness are presented in Table 6. Results indicated that completion of CIT-Y led to statistically significant increases in confidence ($t[52] = -5.34, p < .001$; Cohen's $d = 0.76$) and perceptions of available mental health services ($t[52] = -4.67, p < .05$; Cohen's $d = 0.39$). However, no significant differences in stigma, crisis intervention skills, or perceptions of available services were revealed. These findings provide some support for our hypothesis. In addition, participants from both trainings reported positive experiences. For example, 87% of first aiders and CIT-Y participants reported that they liked the training and over three-quarters of participants reported that the training met their expectations.

Table 6. Paired Sample T-Tests of Changes in Key CIT-Y Constructs from Pretest to Posttest*

	N	Range	Pretest Mean (SD)	Posttest Mean (SD)
Confidence*	53	1-5	3.65 (0.57)	4.04 (0.48)
Youth Mental Health Stigma	53	1-5	2.73 (0.57)	2.63 (0.63)
Knowledge/Literacy	53	1-8	4.65 (1.76)	3.75 (1.75)
Perceptions of Mental Health Services*	53	1-5	2.44 (0.82)	2.78 (0.90)
Crisis Intervention Skills	53	1-5	4.08 (0.62)	4.14 (0.52)

* Statistically significant changes ($p < .05$). Five cases were missing posttest measures.

Implications for Policy and Practice

The evaluation of the Brevard County Public School Board's comprehensive mental health program provided mixed results. We found strong support for the effectiveness of YMHFA and some support for the effectiveness of CIT-Y. Both trainings significantly improved practitioners' confidence in their ability

to identify and respond to youth mental health needs and reduced negative perceptions, or stigma, related to youth mental health. Additionally, changes across several behavioral health domains were observed among students who participated in the program (and two or more data collection points). These improvements were observed for academic achievement, suspensions and truancy, delinquency, and CANS domains representing youth needs. However, perceptions of school safety among students and school personnel did not improve after implementation of the program. Thus, our findings suggest that the implementation of a comprehensive mental health program that targets school personnel and high-need students can lead to direct benefits for those involved (i.e., training participants and program participants) but may fall short at making substantial improvements to the broader school environment, particularly feelings of safety at school. Prior to implementing similar programs, it is recommended that school administrators clearly delineate short- and long-term goals of programming and the types of changes or outcomes envisioned for their school. If targeted intervention for high discipline students and/or personnel training or education is the goal, a similar mental health program may be effective. If making changes to the broader school environment is the goal, a classroom-based intervention targeting the general population of students may show more positive results.

Several barriers were experienced throughout the evaluation. One significant barrier was a large rate of attrition among student participants. This was due to several factors including student mobility, drop out, and expulsion. Per IRB-approved protocols, interviews were only able to be conducted on school grounds. Also, the reliability of the administrative data provided by the school board is questionable due to many missing cases and very low rates of discipline incidents reported. This limited our ability to assess changes in recorded academic achievement and disciplinary incidents across time points. We hoped to examine these changes over time at both the school-level and among program participants. Finally, the evaluation plan required buy-in from several school personnel including the social workers and administrators. This was difficult to maintain due to several factors, including strict student eligibility criteria, time taken away from educational activities, coordination of surveys and interviews on a regular basis, and resistance to collect research data due to limited understanding of funding requirements.