The Behavior Intervention Support Team (BIST) Program
2012 Evaluation Report

Prepared for:
Ozanam

This report was prepared by:

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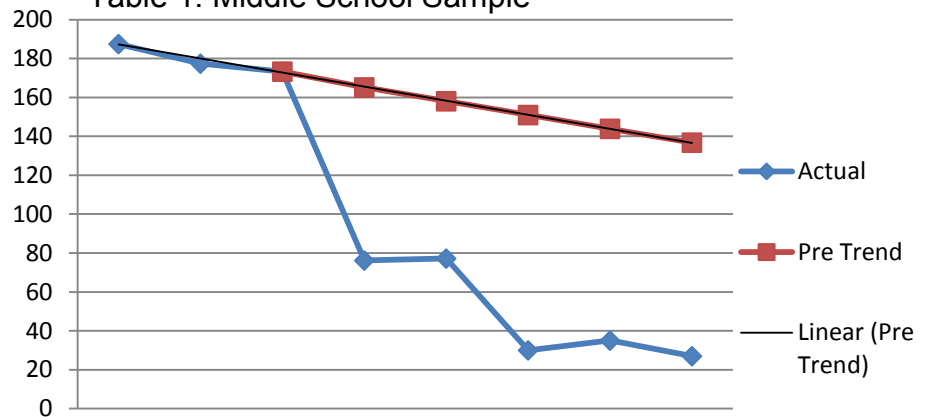*Resource Development Institute*

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INTRODUCTION

In April 2008, Ozanam contracted with the Resource Development Institute (RDI) to provide technical assistance / evaluation services and start the process of positioning the Behavior Intervention Support Team (BIST) program as an evidence-based program.

EXECUTIVE SUMMARY

BIST is evidence-based. With the increasing body of evidence showing positive results from multiple schools in multiple states serving a wide variety of student populations, BIST's position as an evidence-based program is increasingly strengthened. In addition, the data from the teacher surveys support the data on office discipline referrals (ODR's) and the use of interrupted time series with segmented regression to analyze the ODR data combine to further strengthen the BIST's position as evidence-based.

Fifteen (15) schools, in four (4) states, that implemented BIST on a school-wide basis have been evaluated by the Resource Development Institute to date. A segmented regression analysis of interrupted time series has been conducted on the ODR data, allowing evaluators to assess, in statistical terms, how much BIST changed the office disciplinary referrals, immediately and over time. The evaluations consistently revealed ***statistically significant*** reductions in the number of office discipline referrals (ODR's). See Table 1: for a sample school evaluation results.

Table 1: Middle School Sample

	Pre Yr 1	Pre Yr 2	Pre Yr 3	Post Yr 1	Post Yr 2	Post Yr 3	Post Yr 4	Post Yr 5
BIST School 1 ODR's per 100 Students	187.5	177.4	173.3	76.2	77.2	30.0	35.0	27.0
Linear Trend based on Pre ODR's	186.5	179.4	172.3	165.2	158.1	151.0	143.9	136.8
Linear Trend Line calculated based on projected trend with Y = -7.1X+193.6								

The reduction in ODR's could reflect a change in the way teachers manage their classrooms; a change in student behavior, and/or policies restricting a teacher's option of sending disruptive students to the office. If the reduction was just the result of the latter, and teachers were simply keeping the disruptive students in their classrooms with no other changes taking place, it could be hypothesized that there would be a negative impact on the academic performance of all students. While academic performance is dependent on a multitude of factors and was not the focus of the BIST evaluations, it is worth noting an analysis of school performance ratings found **consistent trends in improved academic performance** in settings where BIST was implemented (see Appendix 1), indicating at the very least, there were no adverse effects on academic performance because of students being kept in the classroom.

Thus, in addition to conducting the secondary analysis of ODR's, teacher perceptions, based on their direct classroom observations, of how implementing the BIST program impacted student behavior was collected through an online-survey.

One hundred sixty-eight (168) teachers and administrators who had been trained in BIST at least three years prior to the survey completed the online survey; representing eleven (11) elementary schools and four (4) middle schools, in three states, with school-wide BIST programs that had been implemented for at least three years.

Teachers indicated that implementation of BIST on a school-wide basis impacted the way they manage their classrooms as well as the actual behavior of students. In addition, teachers **strongly agreed** that the incorporation of the BIST model by the entire school has been integral to overall efforts to improve student academic performance.

Disruptive behaviors are dealt with by the teachers in the classroom resulting in students staying in the learning environment of the classroom more often after implementation of the BIST program compared to years prior to implementation. Serious rule violations which threatened the safety of students or included threats continue to be referred to the office. From 2% to 3% of the overall student body received half of the ODR's in the latter BIST years of one study.[i] School administrator, staff and teachers indicated that learning to implement the program takes time, practice, and that regular opportunities for collaborative with BIST consultants and discuss student concerns and barriers to implementation was crucial.[ii]

The results of multiple evaluations suggest that the positive effects from implementing the BIST model on a school-wide scale appear to be substantial, cumulative and sustainable over multiple academic years. While academic performance is dependent on a multitude of factors and was not the focus of these evaluations, it can be noted that the core principles of the BIST model compliment the Professional Learning Community model which many of these schools implemented simultaneously with the BIST model. As noted above, there are is a consistent trend in improved academic performance indicators in settings where BIST is implemented, and teachers strongly agreed that the incorporation of the BIST model by the entire school has been integral to overall efforts to improve student academic performance.

METHOD / SCOPE OF SERVICES:

During 2011, RDI conducted focus groups / key stakeholder interviews and worked with key BIST staff and BIST school personnel in conducting the following activities.

ASSIST SCHOOLS IN EXPLORING DATA COLLECTION AND FUNDING OPPORTUNITIES

1. RDI met with representatives from BIST schools and school districts to discuss:
   o The use of analysis of interrupted time series with segmented regression to measure impact of BIST on schools and how to pair that data with teacher and administrator perceptions to present a more comprehensive picture of the impact of BIST;
   o How to continue collect and use meaningful data to ensure the BIST program is data driven;
   o How to use data in their communications with the public, parents, and other educators; and
   o How to use data to demonstrate to potential funding sources how the BIST program fits within the funder's interest areas.

2. RDI reviewed comments from the US Department of Education peer reviewers on the 2010 application for the Investing in Innovation Fund (i3) Grant Program, and discussed them with Ozanam staff.

3. RDI worked with Ozanam staff to review feedback from federal reviewers during the decision process of whether to resubmit a new proposal in 2011.

4. RDI met with school district administrators and discussed data needed to maintain support at the district level, the impact of implementing the BIST Model on building policy, impact on teachers and intervention with students as well as student growth/change.

IMPLEMENTATION PROCESS

- RDI interviewed BIST and BIST school personnel concerning the implementation of BIST (i.e., sequence of training teachers and administrators, role of BIST consultants, institutional support, fidelity, etc.).
- RDI continued to review BIST training manuals, training agendas, and informational materials as they were updated and assist BIST staff in assuring

they met expectations for submission as components for certification(s) of the BIST program as evidence-based (see below).

- RDI continued to conduct interviews with BIST consultants to discuss use of BIST fidelity measures during consultations; and processes and fidelity measures for training of consultants.

- RDI discussed with BIST consultants the need to systematically collect, aggregate and store data from the schools concerning their use of the fidelity check list in their review of students and consultations the BIST personnel.

- RDI continued to work with BIST staff to clarify overall data collection and management needs and options for a BIST focused data management system. This will includes exploring potential funding opportunities.

- RDI introduced BIST staff to an evaluation model based on longing at organizational change as well as professional development as an appropriate way to measure and demonstrate the impact of BIST on schools.

EVALUATION

A secondary analysis of office discipline referral (ODR) data collected prior to, and during the evaluation period was conducted. In addition the evaluator conducted an online survey of BIST teachers and interviews with BIST consultants and school administrators. The primary dependent measure for the evaluation was the number of office discipline referrals (ODR's) issued each academic year. Office discipline referrals were issued by teachers for disruptive behaviors which rose to the level of being a safety issue or included threats or violence. Research has shown that natural resources such as the number of office discipline referrals is an efficient evaluation measure of school climate and the functioning of the school-wide discipline system.[iii] Using ODR's as a sole measure of impact does not provide specific evidence distinguishing whether the change is reflected in teacher behavior, student behavior, or both. Using ODR's as a primary measure is not as precise as data generated from direct classroom observations and alone cannot be considered a thoroughly valid measure for problem student behavior. The reduction in ODR's may reflect a change in the way teachers

manage their classrooms and/or a change in the actual behavior of students. Thus, in addition to conducting the secondary analysis of ODR's, teacher perceptions, based on their direct classroom observations, of how implementing the BIST program impacted student behavior was collected through an online-survey.

- RDI staff worked with BIST staff and BIST school personnel to conduct evaluations in several additional sites.

- RDI collected office disciplinary referral (ODR) data from additional elementary and middle schools which have implemented a school-wide BIST plan for at least two full years.

- RDI also collected office disciplinary referral (ODR) data from elementary and middle schools which implemented a school-wide BIST plan to supplement an existing PBS program for at least two full years.

- RDI collected student performance data from schools being evaluated to assess trends prior to, and after implementation of a school-wide BIST plan.

- RDI analyzed the ODR (using analysis of interrupted time series with segmented regression) and student performance data within the context of student demographics and school characteristics;

- RDI prepared three evaluation reports documenting the findings in preparation for submission as a component for certification(s) of the BIST program as evidence-based (see below).

- RDI conducted additional on-line surveys with teachers, administrators and staff from schools that have implemented school-wide BIST programs assessing their perceptions on the fidelity of the implementation of the program, and the impact the program has had on student behavior and teacher, staff, administration behavior.

- RDI prepared the second of several evaluation reports documenting the findings from the on-line survey (see attached) for submission as components for certification(s) of the BIST program as evidence-based (see below).

- RDI prepared and updated a new 2012 "fact sheet" summarizing findings from evaluations conducted to assist Ozanam and BIST schools explain to their

stakeholders that the program has been evaluated with similar positive results in multiple and varying sights (see attached).

- RDI is posting all evaluation and the updated fact sheet on its website; and is providing a link to BIST for their website, so community stakeholders and potential BIST schools can easily access the reports. It should be noted that some of the reports will not be posted until after any journal submissions using the same data has been accepted, as reviewers question whether the article is using new data or not when they can search the web and find a report with the same data and findings.
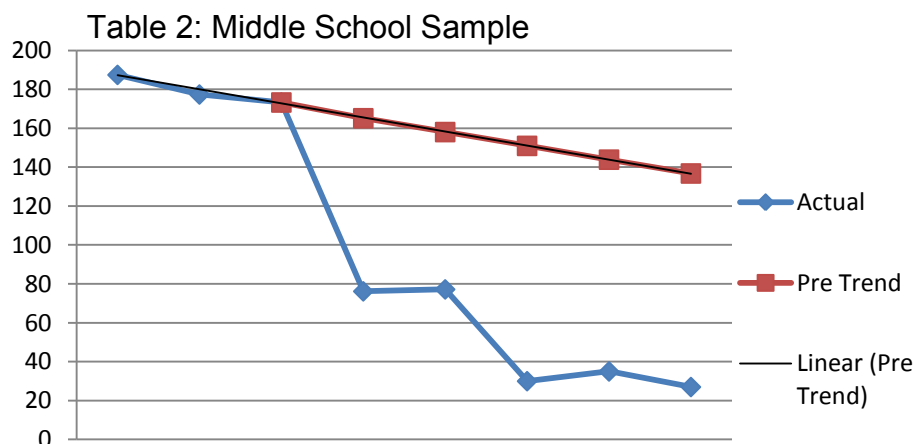
ANALYSIS

A segmented regression analysis of interrupted time series (ITS) was conducted on the ODR data, allowing evaluators to assess, in statistical terms, how much BIST changed the office disciplinary referrals, immediately and over time. Increasingly, the interrupted time series (ITS) design is used to evaluate the effects of interventions. After its introduction to the health services research literature,[iv] ITS analysis has been widely used in assessing the effects of health services and policy interventions, such as implementation of changes in institutional formularies,[v] payment restrictions for medications in state programs[vi] or educational and administrative interventions.[vii] ITS designs, especially when they involve analysis of comparison series, are the strongest observational designs[viii] to evaluate changes caused by interventions because they can account for the pre-intervention level and trend of the outcome measures. Time series models allow for description, explanation, prediction, and control.[ix] Depending on data structures, alternative statistical modeling methods are available.

SUMMARY OF RESULTS

Fifteen (15) schools, in four (4) states, that implemented BIST on a school-wide basis have been evaluated by the Resource Development Institute to date. A segmented regression analysis of interrupted time series has been conducted on the

ODR data, allowing evaluators to assess, in statistical terms, how much BIST changed the office disciplinary referrals, immediately and over time. The evaluations consistently revealed **_statistically significant_** reductions in the number of office discipline referrals (ODR's). See Table 2: for a sample school evaluation results.

Table 2: Middle School Sample

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SUBMISSION FOR CERTIFICATION

- RDI submitted the required materials for BIST to be considered for certification by the National Registry of Evidence-based Programs and Practices (NREPP), a service of the Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA contacted RDI to let us know they were only reviewing programs with specific substance abuse content in 2012 because of the large number of proposals they received.

- RDI submitted the required materials for BIST to be considered for certification by the What Works Clearinghouse for certification. The What Works Clearinghouse was established by the U.S. Department of Education's Institute of Education Sciences.

ARTICLES

- RDI reworked the article submitted the journal article <u>A comprehensive approach to teacher development: The Behavior Intervention Support Team Program</u> to the journal *Teacher Development* after receiving a request for additional information from the reviewers.
- The 2nd article RDI prepared <u>Applying the ecological framework to the Behavior Intervention Support Team Program</u> and is submitting to the journal *Advances in Social Work* focuses on the use an ecological framework to conceptualize the BIST (combining outcome data from multiple evaluation reports with teacher's perception data). After multiple attempts to determine it was taking so long to hear back from them, I was able to find out they had changed editors and the transition had really slowed their process. I spoke with the new editor and revised the article to better align with her new focus for upcoming editions, and resubmitted it just before completing this report.
  - The 3rd article <u>Integrating BIST and PBS</u> was also submitted to *Reclaiming Children and Youth* and we are awaiting review.

CONCLUSIONS

The Behavior Intervention Support Team (BIST) program is well-grounded in behavioral theory[xii] and combines strengths-based and resiliency principles[xiii] within the context of the ecological, person-in-environment model.[xiv] The BIST model simultaneously engages school administrators, teachers, parents, and students in a proactive/preventative, multi-level, problem-solving school discipline plan designed to teach social and behavioral skills, enhancing student academic and social growth.[xv]

Multiple evaluations of BIST have resulted in an increasing body of evidence showing consistent, positive results across multiple schools (both elementary and middle) in multiple states serving a wide variety of student populations. The results of these evaluations repeatedly demonstrate that the positive effects from implementing the BIST model on a school-wide scale appear to be substantial, cumulative and sustainable over multiple academic years.

While consistent evaluations demonstrate the school-wide BIST program is evidence-based and effective, there remain opportunities for further evaluation into the various components of the multi-faceted program. It is recommended that continued evaluation of BIST as both a professional development and organizational change program, be conducted.

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