

## ***IS SCHOOL-WIDE POSITIVE BEHAVIOR SUPPORT AN EVIDENCE-BASED PRACTICE?***

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A major focus for current policy and systems change efforts in education and mental health is the extent to which states are investing in practices and procedures that are supported by rigorous research evidence. Evidence-based practices have been demonstrated in formal research studies to be related to valued outcomes for children and their families.

A reasonable question is if School-wide Positive Behavior Support (SWPBS) is an evidence-based practice. The purpose of this document is to lay out the current evidence assessing SWPBS and the considerations that may be relevant for state, district and national decision-makers.

Any claim that a practice or procedure is “evidence-based” should be framed in the context of (a) explicit description of the procedure/practice, (b) clear definition of the settings and implementers who use the procedure/practice, (c) identification of the population of individuals who are expected to benefit, and (d) the specific outcomes expected. Given this context, the research involving the practice/procedure may be reviewed, and an array of criteria have been proposed by different agencies and organizations (c.f. American Psychological Association, What Works Clearinghouse, SAMSA, Institute for Education Science) for how this literature may be examined to determine the level of experimental rigor, and the confidence with which any statement about “evidence-based” effects can be claimed. A summary of suggestions for defining evidence-based practices from Quantitative (Gersten et al., 2005), Correlational (Thompson et al., 2005) and Single Subject (Horner et al., 2005) research methods was reviewed for educational literature in special section of *Exceptional Children* (Odom et al., 2005).

We provide here (a) the citations defining the context content for SWPBS, (b) the current status of evidence for each of the three tiers of the SWPBS approach (Primary Prevention, Secondary Prevention, Tertiary Prevention), and (c) summary of current and expected directions.

### School-wide Positive Behavior Support

School-wide Positive Behavior Support is a systems approach to establishing the social culture and behavioral supports needed for all children in a school to achieve both social and academic success. SWPBS is not a packaged curriculum, but an approach that defines core elements that can be achieved through a variety of strategies. The core elements at each of the three tiers in the prevention model are defined below:

Prevention Tier	Core Elements
Primary	Behavioral Expectations Defined Behavioral Expectations Taught Reward system for appropriate behavior Continuum of consequences for problem behavior Continuous collection and use of data for decision-making
Secondary	Universal screening Progress monitoring for at risk students System for increasing structure and predictability System for increasing contingent adult feedback System for linking academic and behavioral performance System for increasing home/school communication Collection and use of data for decision-making
Tertiary	Functional Behavioral Assessment Team-based comprehensive assessment Linking of academic and behavior supports Individualized intervention based on assessment information focusing on (a) prevention of problem contexts, (b) instruction on functionally equivalent skills, and instruction on desired performance skills, (c) strategies for placing problem behavior on extinction, (d) strategies for enhancing contingency reward of desired behavior, and (e) use of negative or safety consequences if needed. Collection and use of data for decision-making

The core elements of SWPBS are integrated within organizational systems in which teams, working with administrators and behavior specialists, provide the training, policy support and organizational supports needed for (a) initial implementation, (b) active application, and (c) sustained use of the core elements (Sugai & Horner, in press).

Is there evidence indicating that SWPBS can be implemented with fidelity and is related to improved social and/or academic outcomes for students?

Among the most rigorous standards for documenting that a practice/procedure is “evidence-based” is demonstration of at least two peer-reviewed randomized control trial research studies that document experimental control. To meet this standard the practice/procedure must be operationally defined, there must be formal measures of fidelity, there must be formal outcome measures, and these elements must be used within a randomized control trial group research design.

### Measures

SWPBS measures documenting fidelity

Cohen, R., Kincaid, D., & Childs, K. (in press). Measuring school-wide positive behavior support implementation: Development and validation of the “Benchmarks of Quality.” *Journal of Positive Behavior Interventions*.

Horner, R. H., Todd, A., Lewis-Palmer, T., Irvin, L., Sugai, G., & Boland, J. (2004). The school-wide evaluation tool (SET): A research instrument for assessing school-wide positive behavior support. *Journal of Positive Behavior Intervention* 6(1) 3-12.

Irvin, L.K., Horner, R.H., Ingram, K., Todd, A.W., Sugai, G., Sampson, N., & Boland, J. (2006). Using office discipline referral data for decision-making about student behavior in elementary and middle schools: An empirical investigation of validity. *Journal of Positive Behavior Interventions*, 8(1), 10-23.

Irvin, L.K., Tobin, T., Sprague, J., Sugai, G. and Vincent, C. (2004). Validity of office discipline referral measures as indices of school-wide behavioral status and effects of school-wide behavioral interventions. *Journal of Positive Behavioral Interventions* 6, 131-147.

Safran, S. P. (2006). Using the Effective Behavior Supports Survey to guide development of school-wide positive behavior support. *Journal of Positive Behavior Support*, 8, 3-9.

### **Primary Prevention Tier of School-wide Positive Behavior Support**

**Randomized Control Trials** assessing SWPBS are (a) proposed, (b) being conducted, or (c) recently completed.

- a. Horner, R., Sugai, G., Smolkowski, K., Todd, A., Nakasato, J., & Esperanza, J., (under review). *A Randomized Control Trial of School-wide Positive Behavior Support in Elementary Schools*.

This paper documents that typical state agents were successful in implementing SWPBS practices, and that these practices were experimentally linked to improved perception of school safety, with preliminary support that implementation was associated with improved proportion of students at 3<sup>rd</sup> grade who met the state reading standard.

The paper is currently under peer review.

- b. Bradshaw, C., Leaf, P., Debnam, K. (2007) Project Target: a presentation at the Maryland State SWPBS Conference

This paper documents a randomized control trial conducted in Maryland in which implementation of SWPBS was demonstrated to occur with fidelity, and be linked to (a) improved organizational health, (b) improved

academic outcomes, and (c) reductions in office discipline referrals. The paper has only been disseminated as a professional presentation at this time, and has not gone through peer review. It is anticipated that this paper will be submitted for publication within the next 12 months.

- c. Sprague, J., & Biglan, A., et al (in progress). A Randomized Control Trial of SWPBS with Middle Schools.

This research is currently in data-collection phase, with preliminary results presented at professional conferences indicating reduction in problem behavior levels when SWPBS core features were implemented. Publishable results are anticipated for 2010.

- d. Wagner, M., Sumi, C., et al., (under consideration). Effectiveness Study of School-wide Positive Behavior Support.

This grant proposal is under review. The grant proposes a four year randomized control analysis of SWPBS across three states. If funded the study would produce results in 2011.

### **Syntheses of School-wide PBS from Mental Health Institute**

Kutash, K., Duchnowski, A., & Lynn, N. (2006). *School-based Mental Health: An Empirical Guild for Decision-makers*. The Research and Training Center for Children's Mental Health, Florida Mental Health Institute, University of South Florida

“Most experts in the field agree that school-wide PBS is in its infancy (Dunlap, 2006). However, the early results of PBS interventions implemented at the indicated level, and the growing body of support for implementation at the universal and selective levels for children who have emotional/behavioral problem is very promising.” P. 32

“Because the roots of PBS are in applied experimental analysis of behavior, the evidence for PBS, at this time, is primarily derived from single subject designs. This research, while not in the traditional empirical mode, is nevertheless rigorous, generalizable, and strong in social validity (Sugai & Horner, 2002). Therefore, administrators have a preponderance of evidence to support their exploration of PBS as a viable model for School-based Mental Health programs.” P. 33

**Evaluation studies** examining SWPBS that used research quality measures, but did NOT employ experimental designs document both implementation of the core feature by typical school personnel, and either improved academic performance, or reductions in office discipline referrals.

- Barrett, S., Bradshaw, C., & Lewis-Palmer, T. (in press). Maryland state-wide PBIS initiative. *Journal of Positive Behavior Interventions*
- Benedict, E., Horner, R.H., & Squires, J. (in press). Assessment and implementation of Positive Behavior Support in preschools. *Topics in Early Childhood Special Education*.
- Biglan, A. (1995). Translating what we know about the context of antisocial behavior in to a lower prevalence of such behavior. *Journal of Applied Behavior Analysis*, 28, 479-492
- Blonigen, B., Harbaugh, W., Singell, L., Horner, R.H., Irvin, L., & Smolkowski, K. (in press). Application of economic analysis to school-wide positive behavior support programs. *Journal of Positive Behavior Interventions*
- Bohanon, H., Fenning, P., Carney, K., Minnis, M., Anderson-Harriss, S., Moroz, K., Hicks, K., Kasper, B., Culos, C., Sailor, W., & Piggott, T. (2006). School-wide application of positive behavior support in an urban high school: A case study. *Journal of Positive Behavior Interventions* 8(3), 131-145
- Chapman, D., & Hofweber, C., (2000). Effective behavior support in British Columbia. *Journal of Positive Behavior Interventions*, 2 (4), 235-237.
- Colvin, G., & Fernandez, E., (2000). Sustaining Effective Behavior Support Systems in an Elementary School. *Journal of Positive Behavior Interventions* 2(4), 251-253.
- De Pry, R. L., & Sugai, G. (2002). The effect of active supervision and precorrection on minor behavioral incidents in a sixth grade general education classroom. *Journal of Behavioral Education*, 11, 255-267.
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- Galloway, R., Panyan, M., Smith, C. & Wessendorf, S. (in press) Systems change with school-wide positive behavior supports: Iowa's work in progress. *Journal of Positive Behavior Interventions*.
- George, H., & Kincaid, D. (in press). Building district-level capacity for positive behavior support. *Journal of Positive Behavior Interventions*

- Hirsch, E. J., Lewis-Palmer, T., Sugai, G., & Schnacker, L. (2004). Using school bus discipline referral data in decision making: Two case studies. *Preventing School Failure, 48*(4), 4-9
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- Irwin D., & Algozzine, R., (2005) *North Carolina Positive Behavior Supports Evaluation Report*. Unpublished evaluation report
- Lassen, S., Steele, M., & Sailor, W. (2006). The relationship of school-wide positive behavior support to academic achievement in an urban middle school. *Psychology in Schools 43*(6), 701-712
- Lewis, T. J., Colvin, G., & Sugai, G. (2000). The effects of precorrection and active supervision on the recess behavior of elementary school students. *Education and Treatment of Children, 23*, 109-121.
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- McIntosh, K., Flannery, K. B., Sugai, G., Braun, D., & Cochrane, K. L. (in press). Relationships between academics and problem behavior in the transition from middle school to high school. *Journal of Positive Behavior Interventions*
- McIntosh, K., Horner, R.H., Chard, D., Boland, J., & Good, R. (2006). The use of reading and behavior screening measures to predict non-response to school-wide positive behavior support: A longitudinal analysis. *School Psychology Review*35, 275-291.
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## **Secondary Tier of School-wide Positive Behavior Support.**

### Randomized Control Trials

Bradshaw C., Leaf, P., et al, (in progress) Randomized control trial of secondary and tertiary interventions added to schools already using primary prevention efforts.



This research began 2007 and is scheduled for completion 2011.

Cheney, D., et al., (in progress). Randomized control trial of Check-in/ Check-out procedures. Results have been collected and are being summarized. Preliminary presentations at professional conferences indicate functional effect between use of procedures and both improved scores on standardized assessment instruments, and direct observation of problem behavior.

#### Materials and Research on Specific Secondary Interventions..

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Chafouleas, S.M., Christ, T.J., Riley-Tillman, T.C., Briesch, A.M., & Chanese, J.M. (in press). Generalizability and dependability of Daily Behavior Report Cards to measure social behavior of preschoolers. *School Psychology Review*.

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Hawken, L. H. & Johnston, S. (in press). Preventing severe problem behavior in young children: The Behavior Education Program. *Journal of Early and Intensive Behavior Intervention*

Hawken, L. & Horner, R. (2003). Evaluation of a targeted group intervention within a school-wide system of behavior support, *Journal of Behavioral Education, 12*, 225-240.

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### **Check & Connect (Drop-out Prevention)**

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### First Steps to Success

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### Social Skills Training – Research Summary Articles

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### **Tertiary Prevention**

The research supporting the effectiveness of functional behavioral assessment, the design of individualized behavioral interventions, and the active use of data in the implementation of behavior support is perhaps the most robust of the databases within SWPBS. The majority of this research has employed single-case designs to examine the effects of specific interventions, but increasingly studies are linking behavioral and academic interventions to reduction in problem behavior.

This research has not at this time assessed the interaction effects associated with implementation of elements at all three tiers in the SWPBS prevention framework.

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