

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., (in press). A Randomized Control Trial of School-wide Positive Behavior Support in Elementary Schools. *Journal of Positive Behavior Interventions*.

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 3rd grade who met the state reading standard.

- b. Bradshaw, C., Koth, C., Bevans, K., Ialongo, N., & Leaf, P. (in press). The impact of school-wide positive behavioral interventions and supports (PBIS) on the organizational health of elementary schools. *School Psychology Quarterly*.

Bradshaw et al., document that implementation of school-wide PBIS by typical implementation personnel was successful in achieving high fidelity of adoption, and improved “organizational health” within the schools.

- c. Bradshaw, C., Reinke, W., Brown, L., Bevans, K., & Leaf, P. (2008). Implementation of school-wide positive behavioral interventions and supports (PBIS) in elementary schools: Observations from a randomized trial. *Education and Treatment of Children, 31*, 1-26.

The authors document a randomized control trial of SWPBIS with observations from school implementers.

- d. Bradshaw, C., Mitchell, M., & Leaf, P. (in press). Examining the effects of school-wide positive behavioral interventions and supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions*.

This randomized control trial documents experimentally that implementation of SWPBIS was related to (a) high fidelity of implementation, (b) reduction in office discipline referrals, (c) reduction in suspensions, and (c) improved fifth grade academic performance.

- e. 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.

- f. 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. (2008). Maryland state-wide PBIS initiative. *Journal of Positive Behavior Interventions*, 10, 1005-114.

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. (2008). 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.

- Doolittle, J., & Horner R., (2007). Sustaining school-wide positive behavior support. Manuscript in preparation.
- Duda, M.A., Dunlap, G., Fox, L., Lentini, R., & Clarke, S. (2004). An experimental evaluation of positive behavior support in a community preschool program. *Topics in Early Childhood Special Education* 24(3), 143-155
- Fanning, P., Theodos, J., Benner, C., & Bohanon-Edmonson, H. (2004). Integrating proactive discipline practices into codes of conduct. *Journal of School Violence*, 3(1), 45-61
- 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
- Horner, R.H., Sugai, G., Todd, A.W., & Lewis-Palmer, T. (2005). School-wide positive behavior support. In L. Bambara & L. Kern (Eds.) *Individualized supports for students with problem behaviors: Designing positive behavior plans*. (pp. 359-390) New York: Guilford Press
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- Luiselli, J. Putnam, R., & Sunderland M. (2002). Longitudinal evaluation of behavior support interventions in public middle school. *Journal of Positive Behavior Interventions, 4* (3), 182-188.
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- Metzler, C. W., Biglan, A., Rusby, J. C., & Sprague, J. R. (2001). Evaluation of a comprehensive behavior management program to improve school-wide positive behavior support. *Education and Treatment of Children, 24*, 448-479
- 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.
- Muscott, H., & Mann, E. (in press). Positive behavioral interventions and supports in New Hampshire: Effects of large-scale implementation of schoolwide positive behavior support on student discipline and academic achievement. *Journal of Positive Behavior Interventions*.
- Nakasato, J., (2000). Data-based Decision-making in Hawaii's Behavior Support Effort. *Journal of Positive Behavior Interventions 2*(4), 247-250.
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- Nelson, J. R., Colvin, G., & Smith, D. J. (1996). The effects of setting clear standards on students' social behavior in common areas of the school. *The Journal of At-Risk Issues, Summer/Fall, 10-17*.

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Vaughn, B., White, R., Dunlap, G., & Strobeck, S. (in press). A case study of a classroom intervention for problem behaviors: Collateral effects and social validation. *Journal of Positive Behavior Interventions*

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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Beard-Jordan, K., & Sugai, G. (2004). First Step to Success: An early intervention for elementary children at risk for antisocial behavior. *Behavioral Disorders*, 29, 396-409.

Cheney, D., Flower, A., Templeton, T. (2008). Applying response to intervention metrics in the social domain for students at risk of developing emotional and behavioral disorders. *Journal of Special Education*, 42, (2) 108-126.

Carter, D.R. & Horner, R.H. (in press). Adding functional behavioral assessment to First Step to Success: A case study. *Journal of Positive Behavior Interventions*.

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- Fairbanks, S., Sugai, G., Guardino, D., & Lathrop, M (2007). Response to intervention: Examining classroom behavior support in second grade. *Exceptional Children*, 73(3), 288-310.
- Filter, K. J., McKenna, M. K., Benedict, E. A., Horner, R. H., Todd, A. W., & Watson, J. (2007). Check in/ check out: A post-hoc evaluation of an efficient, secondary-level targeted intervention for reducing problem behaviors in schools. *Education and Treatment of Children*, 30(1), 69-84.
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- 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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Miller, M., Fenty, N., & Scott, T. M. (in press). An examination of the effects of social skills instruction in the context of small group reading. *Preventing School Failure*

Todd, A. W., Kaufman, A., Meyer, G., & Horner, R. H. (in press). The Effects of a Targeted Intervention to Reduce Problem Behaviors: Elementary School Implementation of Check In - Check Out. *Journal of Positive Behavioral Interventions*

Check & Connect (Drop-out Prevention)

Christenson, S., & Carroll, E. B. (1999). Strengthening the family-school partnership through Check and Connect. In E. Frydenberg (Ed.), *Learning to cope: Developing as a person in complex societies* (pp. 248-273). London: Oxford University Press.

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Todd, A., Kauffman, A., Meyer, G., & Horner, R.H. (in press). The effects of a targeted intervention to reduce problem behaviors: Elementary school implementation of check-in-check-out. *Journal of Positive Behavior Interventions*

Refereed Journal Articles: Secondary Interventions

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Lehr, C. A., Hansen, A., Sinclair, M. F., & Christenson, S. L. (2003). Moving beyond dropout towards school completion: An integrative review of data-based interventions. *School Psychology Review, 32(3)*, 342-364.

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First Steps to Success

Epstein, M. H., & Walker, H. M. (2002). Special education: Best practices and First Step to Success. In B. J. Burns & K. Hoagwood (Eds.), *Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders* (pp. 179-197). New York: Oxford University Press.

Golly, A., Sprague, J., Walker, H. M., Beard, K., & Gorham, G. (2000). The First Step to Success program: An analysis of outcomes with identical twins across multiple baselines. *Behavioral Disorders, 25*(3), 170-182.

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Walker, H., Stiller, B., & Golly, A. (1998). First Step to Success: A collaborative Home-School Intervention for Preventing Antisocial Behavior at the Point of School Entry. *Young Exceptional Children, 1*(2), 2-6. (\$5.00)

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Social Skills Training – Research Summary Articles

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Powers, L. J. (2003). Examining the effects of targeted group social skills intervention in schools with and without school-wide systems of positive behavior support. Unpublished doctoral dissertation. Columbia, MO: University of Missouri.

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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Blair, K.C., Umbreit, J., Dunlap, G., & Jung, G. (in press). Promoting inclusion and peer participation through assessment-based intervention. *Topics in Early Childhood Special Education*

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