

***IS SCHOOL-WIDE POSITIVE BEHAVIOR SUPPORT
AN EVIDENCE-BASED PRACTICE?
A RESEARCH SUMMARY***

OSEP Center on Positive Behavioral Interventions and Supports¹

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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, (d) documentation of implementation fidelity, and (e) 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).

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In this research summary, we provide (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	<ul style="list-style-type: none"> • Behavioral expectations defined • Behavioral expectations taught • Continuum of consequences (i.e., rewards, reinforcers) for appropriate behavior • Continuum of consequences for problem behavior • Continuous active supervision or monitoring across all school settings • Continuous monitoring, collection, and use of data for decision-making
Secondary	<ul style="list-style-type: none"> • Early universal screening • Continuous progress monitoring for students with at risk behavior • 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 formative decision-making
Tertiary	<ul style="list-style-type: none"> • Functional behavioral assessment • Team-based comprehensive assessment and intervention • 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)

	<p>strategies for placing problem behavior on extinction; (d) strategies for enhancing contingent reward of desired behavior; and (e) use of negative or safety consequences if needed.</p> <ul style="list-style-type: none"> • Establishment of local behavioral expertise • Collection and use of data for decision-making
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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 and accurate 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, formal measures of fidelity must be applied, formal outcome measures must be specified and monitored, 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.

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 (a) typical state agents were successful in implementing SWPBS practices, (b) that these practices were experimentally linked to improved perception of school safety, and (c) implementation was associated preliminarily with improved proportion of students at 3rd grade who met the state reading standard.

- 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 school-wide positive behavior support 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, and proposes a four year randomized control analysis of SWPBS across three states. If funded, the study would produce results in 2011.

Syntheses of SWPBS 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*.
- 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.
- Colvin, G., Kameenui, E. J., & Sugai, G. (1993). School-wide and classroom management: Reconceptualizing the integration and management of students with behavior problems in general education. *Education and Treatment of Children*, 16, 361-381.
- Colvin, G., Sugai, G., Good, R., & Lee, Y. (1997). Effect of active supervision and precorrection on transition behaviors of elementary students. *School Psychology Quarterly*, 12, 344-363.
- 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.

- Dootlitte, 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., Panyon, M., Smith, C., & Wessendorf, S., (in press). Systems change with school-wide positive behavior support: 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*.
- Gottfredson, D.C. (1987). An evaluation of an organization development approach to reducing school disorder. *Evaluation Review, 11*, 739-763.
- Heck, A. Collins, J., & Peterson, L. (2001). Decreasing children's risk taking on the playground. *Journal of Applied Behavior Analysis, 34*, 349-352.
- 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.
- Irwin D., & Algozzine, R., (2005) *North Carolina positive behavior supports evaluation report*. Unpublished evaluation report.
- Jones, C., Caravaca, L., Cizek, S., Horner, R. H., & Vincent, C. G. (2006). Culturally responsive schoolwide positive behavior support: A case study in one school with a high proportion of Native American Students. *Multiple Voices, 9*(1), 108-119.
- 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., Hudson, S., Richter, M., & Johnson, N. (2004). Scientifically supported practices in EBS: A proposed approach and brief review of current practices. *Behavior Disorders, 29*, 247-259.
- Lewis, T. J., Sugai, G., & Colvin, G. (1998). Reducing problem behavior through a school-wide system of effective behavioral support: Investigation of a school-wide social skills training program and contextual interventions. *School Psychology Review, 27*, 446-459.

- Lohrmann-O'Rourke, S., Knoster, T., Sabatine, K., Smith, D., Horvath, G., & Llewellyn, G., (2000). School-wide Application of PBS in the Bangor Area School District. *Journal of Positive Behavior Interventions*, 2(4), 238-240.
- Luiselli, J. K., Putnam, R. F., Handler, M. W., & Feinberg, A. B. (2005). Whole-school positive behaviour support: Effects on student discipline problems and academic performance. *Educational Psychology* 25(2-3), 183-198.
- 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.
- Mayer, G. R., & Butterworth, T. (1979). A preventive approach to school violence and vandalism: An experimental study. *Personnel and Guidance Journal*, 57, 436-441.
- Mayer, G. R., Butterworth, T., Nafpaktitis, M., & Suzer-Azaroff, B. (1983). Preventing school vandalism and improving discipline: A three year study. *Journal of Applied Behavior Analysis*, 16, 355-369.
- 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. (in press). The use of reading and behavior screening measures to predict non-response to school-wide positive behavior support: A longitudinal analysis. *School Psychology Review*.
- Muscott, H. S., Mann, E., Benjamin, T. B., Gately, S., Bell, K. E., & Muscott, A. J. (2004). Positive behavioral interventions and supports in New Hampshire: Preliminary results of a statewide system for implementing schoolwide discipline practices. *Education and Treatment of Children*, 27, 453-475.
- Nakasato, J., (2000). Data-based Decision-making in Hawaii's Behavior Support Effort. *Journal of Positive Behavior Interventions* 2(4), 247-250.
- Nelson, J. R. (1996). Designing schools to meet the needs of students who exhibit disruptive behavior. *Journal of Emotional and Behavioral Disorders*, 4, 147-161.
- 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.
- Nelson, J. R., Johnson, A., & Marchand-Martella, N. (1996). Effects of direct instruction, cooperative learning, and independent learning practices on the classroom behavior of students with behavioral disorders: A comparative analysis. *Journal of Emotional and Behavioral Disorders*, 4, 53-62.

- Nelson, J. R., Martella, R., & Galand, B. (1998). The effects of teaching school expectations and establishing a consistent consequence on formal office disciplinary actions. *Journal of Emotional and Behavioral Disorders*, 6, 153-161.
- Nersesian, M., Todd, A., Lehmann, J., & Watson, J., (2000). School-wide behavior support through district-level system change. *Journal of Positive Behavior Interventions*, 2(4). 244-246.
- Putnam, R. F., Handler, M. W., Ramirez-Platt, C. M., & Luiselli, J. K. (2003). Improving student bus-riding behavior through a whole-school intervention. *Journal of Applied Behavior Analysis*, 36, 583-589.
- Putnam, R. F., Luiselli, J. K., Handler, M. W., & Jefferson G. L. (2003). Evaluating student discipline practices in a public school through behavioral assessment of office referrals. *Behavior Modification*, 27, 505-523.
- Putnam, R. F., Luiselli, J. K. & Sunderland, M. (2002). Longitudinal evaluation of behavior support intervention in a public middle school. *Journal of Positive Behavior Interventions*, 4, 182-188.
- Sadler, C., (2000). Effective Behavior support implementation at the district level: Tigard-Tualatin School District. *Journal of Positive Behavior Interventions*, 2(4), 241-243.
- Safran, S. P., & Oswald, K. (2003). Positive behavior supports: Can schools reshape disciplinary practices? *Exceptional Children*, 69, 361-373.
- Skiba, R. J., Peterson, R. L., & Williams, T. (1997). Office referrals and suspensions: Disciplinary intervention in middle schools. *Education and Treatment of Children*, 20, 295-315.
- Sprague, J., Nishioka, V., & Smith, S., (2007). Safe schools, positive behavior supports, and mental health supports: Lessons learned from three safe schools/healthy students communities. *Journal of School Violence*. 6(2) 93-115.
- Sulzer-Azaroff, B., & Mayer, G. R. (1994). *Achieving educational excellence: Behavior analysis for achieving classroom and schoolwide behavior change*. San Marcos, CA: Western Image.
- Taylor-Greene, S., Brown, D., Nelson, L., Longton, J., Gassman, Cohen, J., Swartz, J., Horner, R. H., Sugai, G., & Hall, S. (1997). School-wide behavioral support: Starting the year off right. *Journal of Behavioral Education*, 7, 99-112.
- Taylor-Greene & Kartub, D., (2000). Durable implementation of school-wide behavior support: The High Five Program. *Journal of Positive Behavioral Interventions*, 2(4) 231-232.
- 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.

Chaney, 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.

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.

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*

Chafouleas, S., Riley-Tillman, C., Sassu, K., LaFrance, M., Patwa, S., (2007) Daily behavior report cards: An investigation of the consistency of on-task data across raters and methods. *Journal of Positive Behavior Interventions, 9*(1), 30-37.

Crone, D. A., & Horner, R. H. (2003). *Building positive behavior support systems in schools: Functional behavioral assessment*. New York: Guilford Press.

Crone, D. A., Horner, R. H., & Hawken, L. S. (2004). *Responding to problem behavior in schools: The behavior education program*. New York: Guilford Press.

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.

Hawken, L. (2006). School psychologists as leaders in the implementation of a targeted intervention: The Behavior Education Program (BEP). *School Psychology Quarterly, 21*, 91-111.

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.
- Hawken, L. H. & MacLeod, K. S., & O'Neill, R. (2007). *Effects of function of problem behavior on the responsiveness to the Behavior Education Program*. Manuscript submitted for publication.
- Hawken, L. S., MacLeod, K. S. & Rawlings, L. (2007). Effects of the Behavior Education Program (BEP) on problem behavior with elementary school students. *Journal of Positive Behavior Interventions*, 9, 94-101.
- Kauffman, A., Todd, A., Meyer, G., & Horner, R., (in press). The effects of a targeted intervention to reduce problem behavior: Elementary School Implementation of Check-in/ Check-out. *Journal of Positive Behavior Interventions*.
- Lane, K. L., Wehby, J., Menzies, H. M., Doukas, G. L., Munton, S. M., & Gregg, R. M. (2003). Social skills instruction for students at risk for antisocial behavior: The effects of small-group instruction. *Behavioral Disorders*, 28, 229-248.
- March, R. E., & Horner, R.H. (2002). Feasibility and contributions of functional behavioral assessment in schools. *Journal of Emotional and Behavioral Disorders*, 10, 158-170.
- McCurdy, B. L., Kunsch, C., & Reibstein, S. (2007). Secondary prevention in the urban school: Implementing the Behavior Education Program. *Preventing School Failure*, 12-19.
- 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.
- Christenson, S. L., & Havsy, L. H. (2004). Family-school-peer relationships: Significance for social-emotional and academic learning. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?* (pp. 59-75) New York: Teachers College Press.
- Christenson, S. L., Sinclair, M. F., Lehr, C. A., & Hurley, C. M. (2000). Promoting successful school completion. In D. Minke & G. Bear (Eds.), *Preventing school*

- problems—Promoting school success: Strategies and programs that work.* Bethesda, MD: National Association of School Psychologists.
- 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*, 69-84
- Reschly, A., & Christenson, S. L. (2006). School completion. In G. G. Bear & K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 103-112). Bethesda, MD: National Association of School Psychologists.
- Sinclair, M., Hurley, C., Christenson, S., Thurlow, M., & Evelo, D. (2002). Connections that keep kids coming to school. In R. Algozzine & P. Kay (Eds.), *Preventing problem behaviors: A handbook of successful prevention strategies*. Thousand Oaks, CA: Corwin Press.
- 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

- Anderson, A. R., Christenson, S. L., Sinclair, M. F., & Lehr, C. A. (2004). Check & Connect: The importance of relationships for promoting engagement with school. *Journal of School Psychology, 42*(2), 95-113.
- Christenson, S. L., Hurley, C. M., Hirsch, J. A., Kau, M., Evelo, D., & Bates, W. (1997). Check and Connect: The role of monitors in supporting high-risk youth. *Reaching Today's Youth: The Community Circle of Caring Journal, 2*(1), 18-21.
- Christenson, S. L., & Thurlow, M. L. (2004). School dropouts: Prevention considerations, interventions, and challenges. *Current Directions in Psychological Science, 13*(1), 36-39.
- Christenson, S. L., Sinclair, M. F., Thurlow, M. L., & Evelo, D. (1999). Promoting student engagement with school using the Check & Connect model. *Australian Journal of Guidance & Counselling, 9*(1), 169-184.
- 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.
- Lehr, C. A., Sinclair, M. F., & Christenson, S. L. (2004). Addressing student engagement and truancy prevention during the elementary years: A replication study of the Check & Connect model. *Journal of Education for Students Placed At Risk, 9*(3), 279-301.
- Lyst, A. M., Gabriel, S., O'Shaughnessy, T. E., Meyers, J., & Meyers, B. (2005). Social validity: Perceptions of Check and Connect with early literacy support. *Journal of School Psychology, 43*(3), 197-218.

- Morse, A. B., Anderson, A. R., Christenson, S. L., & Lehr, C. A. (2004). Promoting school completion. *Principal Leadership*, 4(6), 9-13.
- Sinclair, M. F., Christenson, S. L., Evelo, D. L., & Hurley, C. M. (1998). Dropout prevention for youth with disabilities: Efficacy of a sustained school engagement procedure. *Exceptional Children*, 65(1), 7-21.
- Sinclair, M. F., Christenson, S. L., & Thurlow, M. L. (2005). Promoting school completion of urban secondary youth with emotional or behavioral disabilities. *Exceptional Children*, 71(4), 465-482.
- Sinclair, M. F., Lam, S. F., Christenson, S. L. & Evelo, D. (1994). Parent-teacher action research in profile. *Equity and Choice*, 10(1), 21-35.
- Thurlow, M. L., Christenson, S. L., Sinclair, M. F., & Evelo, D. L. (1997). Wanting the unwanted: Keeping those "out of here" kids in school. *Beyond Behavior*, 8(3), 10-16.

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.
- Golly, A., Stiller, B., & Walker, H. M. (1998). First Step to Success: Replication and social validation of an early intervention program. *Journal of Emotional and Behavioral Disorders* 6(4), 243-250.
- 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)
- Walker, H. M. (1998). First Steps to prevent antisocial behavior. *Teaching Exceptional Children*, 30(4), 16-19.
- Walker, H. M., Kavanagh, K., Stiller, B., Golly, A., Severson, H. H., & Feil, E. G. (1998). First Step to Success: An early intervention approach for preventing school antisocial behavior. *Journal of Emotional and Behavioral Disorders*, 6(2), 66-80.

Social Skills Training – Research Summary Articles

- Gresham, F. M., Sugai, G. & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. *Exceptional Children*, 67(3), 331-334.

- Lane, K. L., Wehby, J., Menzies, H. M., Doukas, G. L., Munton, S. M., & Gregg, R. M. (2003). Social skills instruction for students at risk for antisocial behavior: The effects of small-group instruction. *Behavioral Disorders, 28*(3), 229-248.
- Moote, G., Smyth, N. J., & Wodarski, J. S. (1999). Social skills training with youth in school settings: A Review. *Research on Social Work Practice, 9*, 427-465.
- 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 function-based approach to behavior assessment to 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. The following is a sample of the research related to function-based support and tertiary tier interventions.

- Benazzi, L., Horner, R. H., & Good, R. H. (2006). Effects of behavior support team composition on the technical adequacy and contextual fit of behavior support plans. *Journal of Special Education 40*(3), 160-170.
- 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*
- Borgmeier, C., & Horner, R.H. (2006). An evaluation of the predictive validity of confidence ratings in identifying accurate functional behavioral assessment hypothesis statements. *Journal of Positive Behavior Interventions 8*(2), 100-105
- Brooks, A., Todd, A. W., Tofflemoyer, S., & Horner, R. H. (2003). Use of functional assessment and a self-management system to increase academic engagement and work completion. *Journal of Positive Behavior Intervention, 5*, 144-152.
- Broussard, C. D., & Northrup, L. (1995). An approach to functional assessment and analysis of disruptive behavior in general education classrooms. *School Psychology Quarterly, 10*, 151-164.
- Burke, M. D., Hagan-Burke, S., & Sugai, G. (2003). The efficacy of function-based interventions for students with learning disabilities who exhibit escape-maintained problem behavior: Preliminary results from a single case study. *Learning Disabilities Quarterly, 26*, 15-25
- Carr, E. G., Horner, R. H., Turnbull, A. P., Marquis, J. G., Magito-McLaughlin, D., McAtee, M. L., et al. (1999). Positive behavior support for people with

- developmental disabilities: A research synthesis. *American Association on Mental Retardation Monograph Series*. Washington, D. C.: American Association on Mental Retardation
- Crone, D., Hawken, L., & Bergstrom, M., (2007). A demonstration of training, implementing and using functional behavioral assessment in 10 elementary and middle school settings. *Journal of Positive Behavior Interventions*, 9(1). 15-29.
- 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.
- Harvey, M. T., Lewis-Palmer, T., Horner, R. H., & Sugai, G. (2003). Trans-situational interventions: Generalization of behavior support across school and home environments. *Behavioral Disorders*, 28, 299-213.
- Ingram, K., Lewis-Palmer, T., & Sugai, G. (2005). Function-based intervention planning: Comparing the effectiveness of FBA indicated and contra-indicated intervention plans. *Journal of Positive Behavior Interventions*, 7, 224-236.
- Kern, L., Gallagher, P., Starosta, K., Hickman, W., & George, M. (2006). Longitudinal outcomes of functional behavioral assessment-based interventions. *Journal of Positive Behavior Interventions*, 8, 67-78.
- Lee, Y., Sugai, G., & Horner, R. (1999). Effect of component skill instruction on math performance and on-task, problem, and off-task behavior of students with emotional and behavioral disorders. *Journal of Positive Behavioral Interventions*, 1, 195-204.
- Lewis, T. J., & Sugai, G. (1996). Functional assessment of problem behavior: A pilot investigation of the comparative and interactive effects of teacher and peer social attention on students in general education settings. *School Psychology Quarterly*, 11, 1-19.
- Lucyshyn, J., Albin, R., Horner, R.H., Mann, J. C., Mann, J. A. & Wadsworth, G. (2007). Family implementation of positive behavior support with a child with autism: A longitudinal, single case experimental and descriptive replication and extension. *Journal of Positive Behavior Interventions* 9(3), 131-150.
- McIntosh, K., Borgmeier, C., Anderson, C., Horner, R.H., Rodriguez, B., & Tobin, T. (in press). Technical adequacy of the Functional Assessment Checklist for Teachers and Staff FBA intervention measure. *Journal of Positive Behavior Interventions*.
- McIntosh, K. Chard, D., Boland, J., & Horner, R. (2006). A demonstration of combined efforts in school-wide academic and behavioral systems and incidence of reading and behavior challenges in early elementary grades. *Journal of Positive Behavior Interventions*. 8(3). 146-154.
- Moore, D., W., Anderson, A., & Kumar, K. (2005). Instructional adaptation in the management of escape-maintained behavior in a classroom. *Journal of Positive Behavior Interventions*, 7, 216-223.

- Newcomer, L. L. & Lewis, T. J. (2004). Functional behavioral assessment: An investigation of assessment reliability and effectiveness of function-Based interventions. *Journal of Emotional and Behavioral Disorders* 12(3), 168-181.
- Preciado, J., Horner, R.H., & Baker, S. (in press). Using a function-based approach to decrease problem behavior and increase academic engagement for Latino English Language Learners. *Journal of Special Education*.
- Scott, T. M., & Caron, D. (2006). Functional behavior assessment at the school-wide level: Determining predictability and function of typical problem behaviors. *Preventing School Failure* 50(1), 13-20.
- Scott, T. M., Liaupsin, C., & Nelson, C. M., & McIntyre, J. (2005). Team-based functional behavior assessment as a proactive public school process: A descriptive analysis of current barriers. *Journal of Behavioral Education* 14(1), 57-71.
- Scott, T. M., McIntyre, J., Liaupsin, C., Nelson, C. M., Conroy, M., & Payne, L. (2005). An examination of the relation between functional behavior assessment and selected intervention strategies with school-based teams. *Journal of Positive Behavior Interventions*, 7(4), 205-215.
- Stover, A. C., Dunlap, G., & Neff, B. (in press). The effects of a contingency contracting program on the nocturnal enuresis of three children. *Research on Social Work Practice*.