



The Center for
Health and Health
Care in Schools

The Impacts of School-based Behavioral and Emotional Health Interventions on Student Educational Performance

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An Annotated Bibliography of Research Studies
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Purpose:

The purpose of this Annotated Bibliography is to provide information on recent empirical studies or reviews linking behavioral health interventions with students' educational outcomes. Studies were searched using PubMed, ERIC and Google Scholar. To be included in the list below (arranged in alphabetical order), studies or reviews needed to be published in a peer-reviewed journal or online resource in the last decade, utilize a quasi-experimental or experimental design, include more than 100 study participants, evaluate a school-based behavioral health intervention or mental health service that did not also include an educational component, and measure change in at least one education outcome (standardized test scores, grades, teacher/parent reports of academic performance, attendance, discipline rate, suspension rate, or drop out rate).¹

Findings:

In a search of studies in peer-reviewed journals that measured the association between behavioral health interventions and education outcomes, the most striking result was that very few studies measured education outcomes.² While many studies evaluated the impact of a behavioral intervention on *behavioral outcomes*, only a small number of these investigations also assessed changes in *education outcomes*, such as grades, test scores, or attendance. Evaluating the impact of behavioral health interventions on education outcomes appears to be understudied and an important area of research to expand. Collaboration between behavioral health and K-12 education may be enhanced when research studies measure education outcomes as well as behavioral ones.

¹ We chose to focus exclusively on behavioral health interventions that did not include an educational component in order to increase the likelihood that the effect on education outcomes could be attributed to a behavioral health intervention.

² After an exhaustive 25 hour search, using terms that included "evaluation of mental health intervention", "behavioral health intervention", and "social and emotional learning intervention", few studies met the criteria listed above. Only 11 of over 200 studies whose abstracts were reviewed met the criteria by including education outcomes in their study metrics.

Empirical Studies or Reviews

Catalano, R. F., Mazza, J. J., Harachi, T. W., Abbott, R. D., Haggerty, K. P., & Fleming, C.B. (2003). Raising healthy children through enhancing social development in elementary school: Results after 1.5 years. *Journal of School Psychology, 41*, 143-164.

A study of 938 elementary students from either first or second grade, in 10 schools (five control, five intervention) in the Pacific Northwest, found that those randomly assigned to the Raising Healthy Children (RHC) intervention had significantly higher teacher- and parent-reported academic performance. The RHC intervention consisted of teacher training on topics such as cooperative learning methods, strategies to enhance student motivation, and interpersonal skills. The intervention also included training for parents on family management and helping their child succeed in school, in addition to summer camps and in-home services to students referred for academic or behavior problems. The academic performance measure consisted of two questions on commitment to school (“student tries hard in school” and “student wants to do well in school”) and a rating scale of student performance in reading, language arts, and math compared to his or her peers.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Shellinger, K. B. (2011). The impact of enhancing students’ social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*, 405-432.

A meta-analysis of 213 school-based, universal social and emotional learning (SEL) programs involving 270,034 K-12 students were analyzed. Compared to controls, SEL participants demonstrated significantly improved social and emotional skills, attitudes, behavior, and academic performance as measured by standardized or math achievement test scores, GPA, or grades in specific subjects.

Flay, B. R., & Allred, C. G. (2003). Long-term effects of the positive action program. *American Journal of Health Behavior, 27* (supplement 1), S6-S21.

A study using archival school-level data from 129 elementary, middle and high school in one large southeastern school district during the 1997-1998 school year, found that students in schools that implemented the Positive Action (PA) program scored better on standardized tests compared with students in matched schools without the PA program. Students exposed to the PA program were also less likely to be suspended or absent, and less likely to drop out in high school. The PA program was teacher-implemented, consisted of 15-20 minute scripted lessons nearly every day, and included teaching: positive actions for one’s mind and body, social/emotional positive actions for managing oneself responsibly, how to get along with others, being honest with oneself and others, the basics of self-conception, and continually improving oneself.

Flay, B. R., Allred, C. G., & Ordway, N. (2001). Effects of the positive action program on achievement and discipline: Two matched-control comparisons. *Prevention Science, 2*, 71-89.

In a study of 12 schools in Nevada and eight schools in Hawaii that had implemented the Positive Action (PA) intervention for three or more years, the authors found that as compared to the matched control schools (N = 40), the intervention schools performed better on standardized math and reading tests, and had lower reports of in-school violence. The PA intervention was implemented as described above in the Flay 2003 study.

Hoagwood, K. E., Olin, S. S., Kerker, B. D., Kratochwill, T. R., Crowe, M., & Saka, N. (2007). Empirically based school interventions targeted at academic and mental health functioning. *Journal of Emotional and Behavioral Disorders, 15*, 66-92.

A review of 24 articles that examined the impact of school-based mental health interventions on both mental health and educational outcomes, out of more than 2,000 published articles between 1990 and June 2006, found that 15 of the study interventions demonstrated a positive impact on both education and mental health outcomes. The mental health interventions varied considerably, with four being shorter term (a semester or less) and primarily researcher implemented, and eleven targeting children at risk for antisocial behaviors with intensive programming across multiple levels (i.e. home, classroom, and/or school). Education outcomes included at least one of the following: reading, writing and math grades, standardized test scores, teacher and parent reported academic improvement, age-appropriate classes, academic engaged time, and school attendance.

Kataoka, S., Jaycox, L. H., Wong, M., Nadeem, E., Langley, A., Tang, L., & Stein, B. D. (In press). Effects on school outcomes in low-income minority youth: Preliminary findings from a community-partnered study of a school trauma intervention. *Ethnicity and Disease*.

A study of 123 middle-school students exposed to violence in East Los Angeles found that the group randomly assigned immediately to the Cognitive Behavioral Intervention for Trauma in Schools (CBITS) treatment (N = 59) had better math grades and were more likely to receive passing grades (a grade of "C" or higher) in language arts than the delayed intervention group (N = 64). However, language arts grades did not differ and there was no significant difference in passing grades in math between the two groups. CBITS incorporates standard cognitive behavioral therapy skills to address post-traumatic stress, anxiety, and depressive symptoms related to violence exposure. The CBITS treatment consisted of 10 group sessions and 1-3 individual sessions with CBITS trained school psychiatric social workers, usually during one class period per week.

Linares, L. O., Rosbruch, N., Stern, M. B., Edwards, M. E., Walker, G., Abikoff, H. B., & Alvir, J. M. J. (2005). Developing cognitive-social-emotional competencies to enhance academic learning. *Psychology in the Schools, 42*, 405-417.

A two-year time series study of 119 fourth grade students (through fifth grade) in two diverse New York City schools found that students in the intervention school exposed to the Unique Minds School Program (UMSP) showed gains in student self-efficacy, problem solving, social-emotional competencies, and math grades as measured by official student report cards. While there was a significant difference in math grades between the intervention and comparison group, there was no significant difference in reading grades, or reading and math standardized test scores between the two groups. The UMSP consisted of weekly, 30-minute sessions delivered by classroom teachers on uniqueness, problem solving and personal responsibility, feelings, stress and coping, and character and kindness count.

Payton, J., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Schellinger, K. B., & Pacham, M. (2008). *The positive impact of social and emotional learning (SEL) for kindergarten to eighth-grade students: Findings from three scientific reviews*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.

Three reviews of studies involving 1) universal SEL interventions 2) indicated SEL interventions and 3) after-school SEL interventions, for a total of 317 studies, involving 324,303 elementary- and middle-school students, found that SEL interventions led to positive effects on social-emotional skills, attitudes towards self, school, and others, social behavior, conduct problems, emotional distress, and academic performance as measured by standardized test scores or grades. Studies that collected data at follow-up indicated that these effects remained over time, although they were not as strong as the results at the end of the intervention.

Rimm-Kaufman, S. E., Fan, X., Chiu, Y., & You, W. (2007). The contribution of the responsive classroom approach on children's academic achievement: Results from a three-year longitudinal study. *Journal of School Psychology, 45*, 401-421.

A study of 2,790 second through fourth grade students from six schools in the Northeast found that the Responsive Classroom Approach (RCA) contributed to significant gains in standardized reading and math test scores in the intervention group, as compared to the control group. RCA is a teacher-implemented intervention focusing on student social interaction, cooperation, responsibility, empathy, and self-control. The intervention also emphasizes teachers knowing their students individually, culturally, and developmentally.

Sinclair, M. F., Christenson, S. L., & Thurlow, M. L. (2005). Promoting school completion of urban secondary youth with emotional or behavioral disabilities. *Council for Exceptional Children, 71*, 465-482.

A five-year longitudinal study of 144 ninth grade students receiving special education services for an emotional or behavioral disability in a diverse, urban school district, found that students randomly assigned to receive the Check & Connect treatment (N=71) attended school with greater consistency and were significantly less likely to drop out of high school than the control group (N= 73). The Check & Connect treatment emphasized the role of a caring adult, referred to as the "monitor", who provided on average an hour a week or more of: academic motivation, conflict resolution skills training, encouragement to participate in school-related activities, and family outreach. The monitors provided services throughout the entire year, including the summer.

Walker, S. C., Kerns, S. E., Lyon, A. R., Bruns, E. J., & Cosgrove, T. J. (2010). Impact of school-based health center use on academic outcomes. *Journal of Adolescent Health, 46*, 251-257.

A retrospective comparison study of 13 Seattle high schools found that the 108 ninth graders who received mental health services from a SBHC in the Fall of 2005 experienced a much steeper rise in GPA over the following five semesters than non-users (N = 1,861). While demographics of just mental health service users, separate from SBHC users as a whole, were not available, total SBHC users had significantly lower GPAs, lower attendance rates, higher discipline rates, greater percentages of African American or Native Americans, a greater likelihood of being eligible for free or reduce-priced lunch, and were more likely to be female. Attendance and discipline rates were not found to be associated with receiving mental health services from a SBHC. The study did not find that receiving mental health services from a SBHC had an impact on attendance and discipline rates.

Wyman, P. A., Cross, W., Brown, C. H., Yu, Q., Tu, X., & Eberly, S. (2010). Intervention to strengthen emotional self-regulation in children with emerging mental health problems: Proximal impact on school behavior. *Journal of Abnormal Child Psychology, 38*, 707-720.

A study of 226 kindergarten through third grade students with behavioral, social-emotional, and/or on-task learning behaviors (as determined from teacher ratings) from two schools, found that a classroom-based intervention that focused on emotional self-monitoring and maintaining control led to reduced problems with teachers, reduced discipline and suspension rates, and increased on-task learning behavior and peer social skills compared with the waitlist control group. The intervention, the Rochester Resilience Project, was implemented by four female paraprofessionals employed by the School District who were trained to deliver the intervention individually to children in 14 weekly, 25-minute lessons.