

Table 2. School-Based Behavioral Health Effectiveness Literature: Secondary, Targeted Interventions

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Anthony, B.J. and J. Sebian	Georgetown University Center for Child and Human Developme nt	2011	80,000 elementary, middle, and high school students in 200 schools in Baltimore City Public Schools compared students who received Expanded School Mental Health services in schools compared to students who did not receive services.	Expanded School Mental Health clinicians provided direct, face-to- face behavioral counseling and group treatment sessions to students as well as universal prevention activities at the group, classroom, grade, and whole school level.	Academic performance on standardized tests and academic engagement via attendance and number of suspensions	Positive effects observed on English and math concepts mastery, attendance improved and suspensions declined among students who received direct ESMH services.	1, 2, 3

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Browne, G. et al.	Social Science & Medicine	2004	Synthesis of reviews of evidence-based evaluations of non-clinical mental health programs for school-age children.	A variety of universal population based services and early intervention population-based services; most reviews involved services that were all or, in part, within a school setting, but school setting was not required for inclusion in review.	A variety of behavioral health outcome measures and a small number of academically related outcome measures.	Universal or early intervention programs to develop protective factors are more effective than programs to reduce existing negative behaviors; program effectiveness can vary by age, gender and ethnicity of children; programs to address a specific problem sensitive to cultural or gender-based differences have greater effect than broad, unfocused interventions; programming with multiple, integrated elements involving more than the single domain of family, school or community, is more likely to have positive results than single focus, single domain interventions; and in general, effect sizes decreased over time for knowledge, skills acquisition and behavior reduction.	1, 2

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Bruns EJ, Moore E, Stephan SH, Pruitt D, Weist MD	Journal of Youth and Adolescence	2005	41 elementary schools with ESMH programs compared to 41 schools without from a pool of nonspecialized elementary schools in Baltimore City.	ESMH services included individual, group, and family therapy; implementation of prevention and school- wide programs; and teacher consultation for student behavioral and emotional issues provided by school personnel and mental health masters- or doctoral-level clinicians from collaborating community mental health center placed in the school.	Out of school suspension rates	The presence of ESMH clinicians in the study schools did not predict out- of-school suspension rates. Qualitative data suggested that most students suspended were never referred for services or were referred after the school administrator already suspended and schools with clinicians lacked structure for ensuring early and consistent referral of students at risk for suspension for intervention.	1, 2, 3
Dix KL, Slee PT, Lawson MJ, Keeves JP	Child and Adolescent Mental Health	2012	4,900 students in 96 elementary schools in Australia.	School-wide mental health promotion, prevention and early intervention implemented by school administrators and staff.	Academic performance and quality of implementation of intervention.	Positive, significant relationship observed between quality of implementation and academic performance. The difference between students in high- and low- implementing schools was equivalent to a difference in academic performance of up to 6 months of schooling.	1, 2

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Farahmand FK, Grant KE, Polo AJ, Duffy SN	Clinical Psychology: Science and Practice	2011	Meta-analytic review of 19 interventions for low-income, urban youth in elementary, middle and high schools; majority of studies were in elementary and middle school settings.	Interventions included both universal interventions provided to all youth at the schools and interventions delivered to youth selected on the basis of symptoms, behaviors, or other criteria short of diagnosis.	A variety of behavioral health outcome measures and academically related outcome measures.	Five programs were classified as effective (17%), eight as mixed (28%), and 16 as ineffective (55%). Effectiveness observed for programs that targeted internalizing problems or had a broader socio- emotional focus and universal intervention programs. No effectiveness observed for programs that targeted externalizing problems and were delivered selectively to youth with existing problems.	1, 2
Gulzar SA, Ali TS, Aijaz A, Hussain N.	Journal of the College of Physicians and Surgeons Pakistan assurance project	2010	300 students ages 14 to 16 in a private school in Karachi Pakistan who were identified as having low academic performance.	School professionals, either health nurse or student counselor, provided intervention consisting of mental health awareness sessions such as stress management, physical education classes, and counselling sessions to assist students with problem identification, goal setting, implementation and evaluation.	Academic performance via grades and self- reported academic behaviors.	Significant reduction in the number of students receiving low grades; participants also reported enhanced self-esteem, positive attitudes towards learning, and improved time management and decision-making skills. [Students scoring low grades had a mean of 55 + 2.8 and post-intervention score of 56 + 2.6 (t = 0.001)]	2

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Hoagwood , K.E. et al.	Journal of Emotional and Behavioral Disorders	2007	Systematic review of 24 studies of school-based programs, majority of studies were of students in kindergarten and elementary school.	All school-based interventions administered by school staff; majority of interventions had a preventive focus and targeted prosocial and antisocial behaviors at multiple levels and contexts such as classroom, school, and home.	A variety of behavioral health outcome measures including behavioral issues, emotional problems, impaired functioning, or psychiatric diagnoses, and academically related outcome measures including grades, special education placement, attendance, and suspensions.	Fifteen of the 24 studies (62.5%) that examined both academic and mental health outcomes found a statistically significant effect on both; 8 studies (33.3%) found the program to improve mental health but not academic outcomes, and 1 (4.2%) found no significantly positive effect on either mental health or educational outcomes.	1, 2
Hussey, D.L and S. Guo	Journal of Community Psychology	2003	201 students grades K to 5 identified with severe emotional and behavioral difficulties from 15 elementary schools in large, urban district in Ohio.	Licensed School-Based Community Support Program mental health professionals placed on site to deliver interventions to identified students aimed to improve students' behavioral functioning and school performance.	Behavioral functioning via a variety of report rating scales.	Observed statistically significant reductions in conduct disorder behavior ($p < .01$), attention deficit hyperactivity ($p < .05$), and depressive symptomatology ($p < .01$) following one year of intervention treatment.	2, 3

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Jennings J, Pearson G, Harris M	Journal of School Health	2000	Over 10,000 elementary, middle and high school students in Dallas Public Schools which operated a school-based health center (Youth and Family Center)	Licensed mental health professionals employed by the district lead multidisciplinary team of physical health and mental health providers to deliver services to students and their families at the school.	Academic engagement via attendance, behavior, grades, and test scores.	Among students receiving mental health services, 32% decrease in absences, a 31% decrease in failures, and a 95% decrease in disciplinary referrals following intervention.	2, 3
Kataoka, S., et al.	Ethnicity & Disease	2011	Approximately 120 6th grade students in two large middle schools in Los Angeles who reported exposure to violence and had symptoms of PTSD.	Cognitive-Behavioral Intervention for Trauma in Schools (CBITS) administered by trained school mental health clinicians.	Academic grades.	Positive, significant impact on spring semester grades. Early intervention students were more likely to have a passing grades in language arts (O.R. 2.9, CI 1.1, 7.5; p=0.033) and have significantly better mean math grades (2.0 vs.1.6, p=0.048).	2, 3
Koffman S, Ray A, Berg S, Covington L, Albarran NM, Vasquez M	Children & Schools	2009	Approximately 380 high school students in Belmont High School of Los Angeles Pico-Union school district; sample comprised of 91% Latino and 71% male.	Juvenile Intervention Prevention Program (JIPP) is a school-based gang intervention and prevention program conducted in Spanish and English language by a master's-level psychiatric social worker who also is a certified parenting instructor.	Behavioral health related outcome measures and academically related outcome measures.	Observed improved outcomes on all measures after the intervention; experimental design methods and analysis not reported.	2

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Malti T, Schwartz SE, Liu CH, Noam GG	New Directions for Youth Development--Program evaluation: relationships as key to student development	2008	92 students in 7th and 8th grade in an urban middle school.	The Responsive Advocacy for Life and Learning in Youth (RALLY) program is a school-based holistic student support intervention that includes classroom support, informal support, formal after-school groups, one-on-one mentoring or counseling with a RALLY practitioner, and referrals to external agencies. The RALLY program delivery team consists of classroom teachers, practitioners, a school program director, and a clinical coordinator.	Behavioral and academic functioning via practitioner and teacher report rating scales and student self-report.	Observed impact on students' resilience and academic skills and decrease in students' behavioral problems.	1, 2
McCrary D, Lechtenberger D, Wang	Preventing School Failure	2012	790 students in grades 4 to 12 in four schools in impoverished communities in rural west Texas.	School-wide Positive Behavior Support implemented by school administrators and staff	Academic engagement via school discipline measures.	Observed decrease in discipline referrals, in-school suspension rates, and failure rates in first year of program implementation compared to previous years prior to program implementation.	1, 2

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Miranda, A., M.J. Presentación, and M. Soriano	Journal of Learning Disabilities	2002	52 students identified with ADHD in 3rd and 4th grade across 17 schools in Valencia Spain.	Cognitive-behavioral techniques and instructional management strategies implemented by teachers in the classroom setting.	Academic and behavioral functioning measured via a variety of tests, rating scales and classroom grades.	Positive, significant impact observed on students' grades, and positive impact reported on students' academic and behavioral functioning.	2
Pas, E.T. and C.P. Bradshaw	The Journal of Behavioral Health Services & Research	2012	Students in 421 elementary and middle schools in Maryland implementing School-wide Positive Behavioral Interventions and Supports (SW-PBIS).	School-wide Positive Behavioral Interventions and Supports (SW-PBIS) implemented by school administrators and staff	Academic achievement and engagement.	SW-PBIS fidelity associated with higher math achievement, higher reading achievement, and lower truancy. School contextual factors were related to implementation fidelity and outcomes.	1, 2
Pfiffner, L.J. et al.	School Psychology Quarterly	2013	57 students who met screening criteria for ADHD in 2nd to 5th grades across nine schools in a California urban public school district.	School-based mental health professionals delivered Collaborative Life Skills Program intervention treatment in school setting and supervised additional intervention components carried out by teachers and parents.	Academic performance via benchmark assessment, grades and classroom observation, and behavioral functioning via a variety of measures and report rating scales.	Significant improvement observed in academic performance and behavioral functioning. Effect sizes for the outcomes were uniformly large.	2, 3

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Rones M, Hoagwood K	Clinical Child and Family Psychology Review	2000	Review of 47 studies on school-based mental health services for children.	A variety of school- based mental health services ranging from universal preventive interventions for all students to indicated early interventions for targeted individuals.	Behavioral functioning via a variety of report rating scales.	Authors found impact across a range of emotional and behavioral problems evident in a group of studies. Important features of implementation that increase the probability of service sustainability and maintenance include: consistent program implementation; inclusion of parents, teachers, or peers; use of multiple modalities; integration of program content into general classroom curriculum; and developmentally appropriate program components.	1, 2
Stein, B.D., et al.	Journal of the American Medical Association	2003	Approximately 120 6th grade students at two large middle schools in Los Angeles who reported exposure to violence and had symptoms of PTSD.	Cognitive-Behavioral Intervention for Trauma in Schools (CBITS) administered by trained school mental health clinicians.	Classroom behavior and symptoms of PTSD and depression.	Observed significant decrease in symptoms of PTSD and depression; no significant difference in classroom behavior	2, 3

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Walter, H.J., et al.	Journal of School Health	2011	638 students grades K to 8 in 2 public elementary schools in inner-city neighborhoods of major Midwestern city.	School-wide PBIS universal, indicated preventive and clinical interventions implemented over 1 school year by mental health professionals in collaboration with school teachers.	Behavioral functioning via a variety of report rating scales.	Observed significantly fewer mental health difficulties, less functional impairment, and improved behavior, and reported improved mental health knowledge, attitudes, beliefs, and behavioral intentions.	1, 2, 3
Watabe, Y., et al.	School Mental Health	2013	41 students with or at-risk for ADHD in grades K to 5th across five elementary schools in a rural Southeast Ohio school district.	District-employed school mental health professionals (trained school social worker or school counselor) delivered the Youth Experiencing Success in School (Y.E.S.S.) Program behavioral consultation sessions to students and also provided training to teachers of treatment students.	Behavioral functioning and academic functioning via a variety of parent and teacher report rating scales.	Observed positive, significant improvement in parent-reported academic functioning (ES = .65) and overall functioning (ES = .57) and positive but not significant improvement in parent-reported behavioral functioning. Non- significant changes observed in teacher- reported outcomes (ranged from -.12 on self-esteem scale to .42 on inattention scale).	2

Author(s)	Journal/ Source	Year	Population	Intervention/ Structure	Outcomes Assessed	Findings	Tier
Weare, K. and M. Nind	Health Promotion International	2011	Systematic review of 52 reviews and meta-analyses of mental health programs in schools for students ages 4 to 19 years.	A variety of evidence-based interventions and programs in schools addressing student mental health; the majority of studies were of universal interventions and others were targeted, indicated, and classroom-based interventions.	A variety of behavioral health outcome measures and academically related outcome measures.	The effect sizes associated with most interventions were generally small to moderate. Interventions were effective if implemented with fidelity especially for whole-school interventions reviewed.	1, 2
Wilson, S.J. and Lipsey, M.W.	American Journal of Preventive Medicine	2007	Two hundred forty-nine experimental and quasi-experimental studies of school-based programs.	A variety of school-based mental health services ranging from universal preventive interventions for all students to indicated early interventions for targeted individuals.	Variety of academic and behavior outcomes including aggression and violence, social skills, academic performance, and self-esteem.	Positive overall intervention effects were found on aggressive and disruptive behavior	2
Wolmer, L., Laor, N., Dedeoglu, C., Siev, J. and Yazgan, Y.	Journal of Child Psychology and Psychiatry	2005	Approximately 500 students, ages 9 to 17 years, who experienced a natural disaster trauma across three schools in Turkey; students who received the intervention were compared to students who did not in this sample.	School leaders and teachers implemented psycho-educational modules and cognitive-behavioral techniques in 8 sessions to students receiving the intervention.	Behavioral health related outcomes including posttraumatic, grief and dissociative symptoms, and academic related outcomes including academic performance, social behavior and general conduct.	Positive, significant impact observed on students' academic performance, social behavior, and general conduct; the correlations between the students' mental health symptoms and daily functioning were small and not significant.	2

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Yampolska ya S, Massey OT, Greenbau m PE	The Journal of Primary Prevention	2006	447 high school students identified as low-achieving or at-risk in a large urban high school in Florida.	GEAR UP is a 5-year school-based intervention consisting of mentoring, tutoring, counseling, and other supportive services delivered by teachers, tutors and case managers.	Academically related outcomes including grades, GPA, standardized assessments, attendance and discipline records, as well as degree of participation in intervention activities.	Observed positive impact on GPAs among students who spent a substantial amount of time on academic activities, but no effect on math and reading assessment scores (all students' assessment scores increased). Observed significant reduction in disciplinary referrals ($p < .05$) among students who utilized behavior-related services and participated in social activities. Results indicated that race (African American) and sex (female) were associated with high participation.	2