



The Positive Impact of Social and Emotional Learning for Kindergarten to Eighth-Grade Students

*Technical
Report*

*Findings from
Three Scientific Reviews*



Collaborative for
Academic, Social, and
Emotional Learning
(CASEL)

December 2008

John Payton
Roger P. Weissberg
Joseph A. Durlak
Allison B. Dymnicki
Rebecca D. Taylor
Kriston B. Schellinger
Molly Pachan

Acknowledgments: This report is supported by grants awarded to Roger P. Weissberg and Joseph A. Durlak by the Lucile Packard Foundation for Children's Health and the University of Illinois at Chicago.

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

This technical report and an Executive Summary on the three reviews may be retrieved from www.casel.org or www.lpfch.org/sel.

Additional questions about these studies or related work may be addressed to:

Roger P. Weissberg, PhD
Department of Psychology (MC 285)
University of Illinois at Chicago
1007 West Harrison Street
Chicago, IL 60607-7137
Email: rpw@uic.edu

Joseph A. Durlak, PhD
Department of Psychology
Loyola University Chicago
6525 N. Sheridan Road
Chicago, IL 60626
Email: jdurlak@luc.edu

Note: John Payton, Roger P. Weissberg, Allison B. Dymnicki, and Rebecca D. Taylor are based at the University of Illinois at Chicago and affiliated with the Collaborative for Academic, Social, and Emotional Learning (CASEL). Joseph A. Durlak, Kriston B. Schellinger, and Molly Pachan are affiliated with Loyola University Chicago.

Cover image: ©iStockphoto.com/Daniela Andreea Spyropoulos
Document design: Desktop Edit Shop, Inc., Skokie, Illinois



Table of Contents

Acknowledgments	2
Table of Contents	3
List of Tables	3
Abstract	4
Introduction	5
Overview of Three Reviews	7
Methods	9
Results	12
Discussion	16
Appendix A: Bibliography of Reviewed Universal Studies	33
Appendix B: Bibliography of Reviewed Indicated Studies	42
Appendix C: Bibliography of Reviewed After-School Studies	46
References	49

List of Tables

Table 1 Descriptive Characteristics of 180 Studies with Outcomes at Post in the Universal Review	19
Table 2 Student Outcomes Obtained at Post and Follow-up in 180 Studies in the Universal Review	22
Table 3 Comparison of the Magnitude of Student Change at Post in 180 Studies in the Universal Review with Outcomes in Previous Meta-analytic Reviews	22
Table 4 Student Outcomes Obtained at Post in 180 Studies in the Universal Review in Programs Using and Not Using Evidence-based (SAFE) Training Practices	23
Table 5 Student Outcomes Obtained at Post in 180 Studies in the Universal Review by Reported Program Implementation Problems	24
Table 6 Student Outcomes Obtained at Post in 180 Studies in the Universal Review by Program Delivery Format	25
Table 7 Descriptive Characteristics of 80 School-Based Studies with Outcomes at Post in the Indicated Review	26
Table 8 Student Outcomes Obtained at Post and Follow-up in 80 Studies in the Indicated Review	29
Table 9 Student Outcomes Obtained at Post in 80 Studies in the Indicated Review by Presenting Problem, Program Deliverer, and Implementation Monitoring Status.	29
Table 10 Descriptive Characteristics of 57 Studies in the After-School Review	30
Table 11 Student Outcomes at Post in 55 After-School Studies of SAFE and Other Programs	32
Table 12 Comparison of the Magnitude of Student Change Obtained at Post in 55 Studies in the After-School Review with Outcomes in Previous Meta-analytic Reviews	32



*We cannot always
build the future for
our youth, but we
can build the youth
for our future.*

*—Franklin D.
Roosevelt*

Abstract

This report summarizes results from three large-scale reviews of research on the impact of social and emotional learning (SEL) programs on elementary- and middle-school students — that is, programs that seek to promote various social and emotional skills. Collectively the three reviews included 317 studies and involved 324,303 children.

SEL programs yielded multiple benefits in each review and were effective in both school and after-school settings and for students with and without behavioral and emotional problems. They were also effective across the K-8 grade range and for racially and ethnically diverse students from urban, rural, and suburban settings. SEL programs improved students' social-emotional skills, attitudes about self and others, connection to school, positive social behavior, and academic performance; they also reduced students' conduct problems and emotional distress. Comparing results from these reviews to findings obtained in reviews of interventions by other research teams suggests that SEL programs are among the most successful youth-development programs offered to school-age youth. Furthermore, school staff (e.g., teachers, student support staff) carried out SEL programs effectively, indicating that they can be incorporated into routine educational practice. In addition, SEL programming improved students' academic performance by 11 to 17 percentile points across the three reviews, indicating that they offer students a practical educational benefit. Given these positive findings, we recommend that federal, state, and local policies and practices encourage the broad implementation of well-designed, evidence-based SEL programs during and after school.



Introduction

Twenty-first century schools serve socio-culturally diverse students with varied abilities and motivations for learning (Learning First Alliance, 2001). While some students are academically engaged and participate energetically in class and extracurricular activities, others are less engaged and achieve poorly (Blum & Libbey, 2004). Many students become more disengaged from school as they progress from elementary to middle to high school. It is estimated that 40 to 60% of urban, suburban, and rural high school students become chronically disengaged from school — not counting those who have already dropped out (Klem & Connell, 2004). Approximately 30% of high school students participate in or experience multiple high-risk behaviors (e.g., substance use, sex, violence, depression, attempted suicide) that interfere with school performance and jeopardize their potential for life success (Centers for Disease Control and Prevention, 2008; Dryfoos, 1997). Furthermore, large percentages of students lack social-emotional competence, believe their teachers do not care about them, and disrupt the educational experiences of classmates (Benson, Scales, Leffert, & Roehlkepartain, 1999).

Preparing students for life success requires a broad, balanced education that both ensures their mastery of basic academic skills and also prepares them to become responsible adults (Association for Supervision and Curriculum Development, 2007). It is important for families, schools, and communities to identify and effectively implement research-based approaches that promote children's social, emotional, and academic engagement and growth in the early years of school. Research conducted during the past few decades indicates that social and emotional learning (SEL) programming for elementary- and middle-school students is a very promising approach to reducing problem behaviors, promoting positive adjustment, and enhancing academic performance (Diekstra, 2008; Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003; Wilson, Gottfredson, & Najaka, 2001; Weissberg, Kumpfer, & Seligman, 2003; Zins, Weissberg, Wang, & Walberg, 2004).

The purpose of this report is to summarize the primary findings and implications of three large-scale reviews of research evaluating the impact of SEL programs for school children in kindergarten through eighth grade.

1. Universal Review. This review examined the impact of universal school-based SEL interventions: that is, interventions that are appropriate for a general student body without any identified behavioral or emotional problems or difficulties (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2008).

2. Indicated Review. This review focused on school-based indicated programs: that is, interventions that identify and work with students who are displaying early signs of behavioral or emotional problems.

3. After-School Review. This review evaluated SEL interventions conducted in after-school programs, which primarily involved students without identified problems (Durlak, Weissberg, & Pachan, in press).

In other words, we evaluated SEL programs across two different time periods and settings (during the school day and after school) and for two different types of student populations (those without any identified problems in the Universal and After-School Reviews and those with early identified problems in the Indicated Review). Our findings were based on 317 studies that involved 324,303 participants. In sum, we examined evaluations of programs conducted by many different independent investigators in three different research literatures in an attempt to reach general conclusions about the impact of SEL interventions.

What is Social and Emotional Learning?

Social and emotional learning is the process through which children and adults ac-

Research conducted during the past few decades indicates that social and emotional learning programming for elementary- and middle-school students is a very promising approach to reducing problem behaviors, promoting positive adjustment, and enhancing academic performance.



Social-emotional competencies involve skills that enable children to calm themselves when angry, initiate friendships and resolve conflicts respectfully, make ethical and safe choices, and contribute constructively to their community.

quire the knowledge, attitudes, and skills to:

- Recognize and manage their emotions
- Set and achieve positive goals
- Demonstrate caring and concern for others
- Establish and maintain positive relationships
- Make responsible decisions
- Handle interpersonal situations effectively

These critical social-emotional competencies involve skills that enable children to calm themselves when angry, initiate friendships and resolve conflicts respectfully, make ethical and safe choices, and contribute constructively to their community (Collaborative for Academic, Social, and Emotional Learning, 2005; Elias, Zins, Weissberg, Frey, Greenberg, Haynes, Kessler, Schwab-Stone, & Shriver, 1997; Zins & Elias, 2006).

The Collaborative for Academic, Social, and Emotional Learning (CASEL) has identified five groups of inter-related core social and emotional competencies that SEL programs should address (Collaborative for Academic, Social, and Emotional Learning, 2005; Devaney, O'Brien, Keister, Resnik, & Weissberg, 2006):

- **Self-awareness:** accurately assessing one's feelings, interests, values, and strengths; maintaining a well-grounded sense of self-confidence;
- **Self-management:** regulating one's emotions to handle stress, controlling impulses, and persevering in addressing challenges; expressing emotions appropriately; and setting and monitoring progress toward personal and academic goals;
- **Social awareness:** being able to take the perspective of and empathize with others; recognizing and appreciating individual and group similarities and differences; and recognizing and making best use of family, school, and community resources;
- **Relationship skills:** establishing and maintaining healthy and rewarding relationships based on cooperation; resisting inappropriate social pressure; preventing, managing, and resolving interpersonal conflict; and seeking help when needed; and
- **Responsible decision making:** making decisions based on consideration of ethical standards, safety concerns, appropriate social norms, respect for others, and likely consequences of various actions; applying decision-making skills to academic and social situations; and contributing to the well-being of one's school and community.

Students who appraise themselves and their abilities realistically (self-awareness), regulate their feelings and behaviors appropriately (self-management), interpret social cues accurately (social awareness), resolve interpersonal conflicts effectively (relationship skills), and make good decisions about daily challenges (responsible decision making) are headed on a pathway toward success in school and later life. Thus, the short-term goals of SEL programming are to promote students' social-emotional skills and positive attitudes, which, in turn, should lead to improved adjustment and academic performance as reflected in more positive social behaviors, fewer conduct problems, less emotional distress, and better grades and achievement test scores (Collaborative for Academic, Social, and Emotional Learning, 2005; Zins et al., 2004).

This report addresses the following research questions: (a) What skills, attitudes, behaviors, and academic outcomes do SEL programs achieve for elementary- and middle-school (K-8) students? (b) Do SEL program effects endure over time? (c) Are SEL programs effective in school and after school and for students with problems (Indicated Review) and without problems (Universal and After-School Reviews)? and (d) What features are associated with highly effective SEL programs?



Overview of the Three Reviews

General Features of Each Review

For each review, we conducted our analyses using a meta-analytic approach, which summarizes in a quantitative fashion the overall impact of interventions across studies. Studies eligible for inclusion in these reviews had to emphasize the development of one or more social-emotional competencies, target students between the ages of 5 and 13 (i.e., grades K-8), include a control group, and report information for calculating effect sizes (ESs). For each review, we systematically examined published and unpublished literature sources to obtain a representative nonbiased sample of investigations that had appeared by Dec. 31, 2007.

The Universal Review included 180 school-based studies involving 277,977 students. The most common strategy involved classroom-based programming, which usually took the form of a specific curriculum or set of lessons that sought to develop social and emotional skills such as problem and feeling identification, goal setting, conflict-resolution strategies, and interpersonal problem-solving skills. In addition, there were some multi-component programs that supplemented classroom skills training with a schoolwide, parent, or community component to reinforce what was taught in the classroom (Durlak et al., 2008).

In the Indicated Review there were 80 studies involving 11,337 students. These studies focused on children who showed signs of social, emotional, or behavioral problems, but had not been diagnosed with a mental disorder or need for special education. More than half (59%) of the programs consisted of a single-intervention component such as small-group problem-solving sessions, in which leaders taught various social and emotional skills — e.g., recognizing feelings in oneself and others, making friends, and handling provocations by others. The remaining studies included multi-component programs involving different combinations of individual, group, classroom, and parent training supports.

The After-School Review included 57 studies involving 34,989 students. These after-school programs had to be implemented outside of regular school hours during at least part of a school year, be supervised or monitored by adults, and have the goal of developing one or more personal and social skills. After-school programs that focused only on improving academic performance or school attendance, and outdoor-extra-curricular, summer camp, or adventure programs such as Outward Bound, were not eligible (Durlak et al., in press).

Main Findings

Overall, the results indicated strong and consistent support for the value of SEL programs. There were six major sets of findings:

1. Students in SEL programs demonstrated improvement in multiple areas of their personal, social, and academic lives. SEL programs fostered positive effects on: students' social-emotional skills; attitudes towards self, school, and others; social behaviors; conduct problems; emotional distress; and academic performance. Notably, SEL programming yielded an average gain on achievement test scores of 11 to 17 percentile points.
2. SEL interventions were effective in both the school and after-school setting and for students with and without presenting problems. They were also successful across the K-8 grade range, for schools in urban, suburban, and rural areas, and for racially and ethnically diverse student bodies.
3. Studies that collected data at follow-up indicated these effects remained over time — although they were not as strong as the results at post (i.e., immediately after the intervention).
4. Data from the Universal and Indicated Reviews also indicated that SEL programs were effective when conducted by school staff, suggesting that these interventions can be incorporated into routine educational practice.

Students in SEL programs demonstrated improvement in multiple areas of their personal, social, and academic lives.



We recommend that well-designed programs that simultaneously foster students' social, emotional, and academic growth be widely implemented in schools.

5. In two of the reviews (Universal and After School), we found that interventions using four recommended practices for skill training (we called these SAFE programs) were more effective than programs that did not follow these recommendations. Each letter in the acronym SAFE refers to a recommended practice for teaching skills (Durlak et al., 2008):

- *Sequenced*: Does the program apply a planned set of activities to develop skills sequentially in a step-by-step fashion?
 - *Active*: Does the program use active forms of learning such as role-plays and behavioral rehearsal with feedback?
 - *Focused*: Does the program devote sufficient time exclusively to developing social and emotional skills?
 - *Explicit*: Does the program target specific social and emotional skills?
6. Placing current findings in the context of previous research offers strong support for SEL programming. Comparing the findings in our reviews to results obtained in reviews of evidence-based interventions conducted by other researchers suggests that SEL programs are among the most successful interventions ever offered to school-aged youth.

In conclusion, our findings demonstrate that SEL programs implemented by school staff members (e.g., teachers, student support personnel) improve children's behavior, attitudes toward school, and academic achievement. Given these broad positive impacts, we recommend that well-designed programs that simultaneously foster students' social, emotional, and academic growth be widely implemented in schools.



Methods

Study Inclusion Criteria

Studies eligible for inclusion in these reviews had to be written in English, appear by December 2007, emphasize the development of one or more SEL competencies, target students between the ages of 5 and 13 (i.e., grades K-8), include a control group, and report information sufficient for calculating effect sizes (usually the mean outcome of a treatment group and that of a control group post-intervention and the standard deviation of each).

Search methods

To assure that our sample was as representative as possible, we identified studies for inclusion in these reviews through a systematic search of published and unpublished reports. Five methods were used: (a) computer searches of multiple databases using relevant search terms; (b) searches of the reference lists and bibliographies of previous reviews; (c) manual searches of journals with relevant studies from January 1970 through December 2007; (d) searches of the web sites of organizations that promote youth development; and (e) contacting researchers, practitioners, and policy advocates who presented relevant work at professional conferences.

Student outcome variables

To analyze data from the reviewed studies, we grouped student outcomes in the same six categories across implementation contexts. These outcomes assessed three broad areas of student development—(a) social and emotional skills and attitudes (including self-perceptions and attitudes toward school and others); (b) indicators of behavioral adjustment (e.g., positive social behaviors, problem behaviors, and emotional distress); and (c) aspects of school performance (e.g., achievement on standardized tests and school grades). Grouping study outcomes into these categories enabled us to avoid small cell sizes with insufficient power to identify true differences between intervention and control groups.

Each category included a broad range of related outcomes. In the **social and emotional skills** category these included a variety of personal, social, cognitive, and affective skills such as emotional self-awareness, coping with stress, resolving conflict, and resisting unwanted peer pressure. All skill assessments were based on student, teacher, parent, or independent ratings completed in structured or test situations. Ratings of daily student behavior were placed in the positive social behavior outcome category described below.

Outcomes in the **attitudes toward self, school, and others** category included self-efficacy, bonding to school, pro-social attitudes, conventional pro-social beliefs about violence, social justice, drug use, and in a few after-school studies racial-ethnic identity or pride. Ratings in this outcome category were all based on student self-reports.

Outcomes in the **positive social behaviors** category included the appropriate expression of emotions, positive interactions with others, cooperation, leadership, appropriate responses to conflict and peer pressure, and assertiveness in social situations, as reflected in daily behavior rather than in hypothetical or test situations, as was the case in the social and emotional skills outcome category.

Outcomes in the **conduct problems** category included risky, disruptive, and delinquent behavior such as aggression, bullying, noncompliance, rebelliousness, disciplinary referrals, school suspensions, or delinquent acts based on reports from students, teachers, parents, independent raters, or school records.

Assessments of **emotional distress** included measures of anxiety, depression, and social withdrawal based on reports of students, teachers, and parents.

Outcome indicators of **school performance** were based only on standardized achievement test scores such as the Iowa Test of Basic Skills and grades in the form of overall GPA or grades in specific subjects.



Calculation of Effect Size

The indicator we used to determine program impact on the above student outcomes was the standardized mean difference or effect size (ES), usually calculated by subtracting the control group mean from the intervention group mean at post (or follow-up if relevant) and dividing the remainder by the pooled standard deviation of the two groups. Typically, we calculated one effect size for each analysis in each study. Whenever possible, we adjusted for any previous intervention differences between groups on each outcome measure by first calculating a pre ES and then subtracting this from the obtained post ES. To calculate a single overall effect size for a study, we averaged all of its individual effect sizes. Higher effect sizes reflected a greater positive program impact than lower effect sizes. These analyses also used a random effects model: by adding an error term to the calculation, the unique features of each program evaluation could be considered and the findings made more generalizable (Hedges & Olkin, 1985; Lipsey & Wilson, 2001). We used a two-tailed .05 probability level in determining statistical significance, and reported $\pm .05$ confidence intervals throughout the report. Means are statistically significant when their confidence intervals do not include 0.

Before data were analyzed, outliers falling beyond three standard deviations from the mean in either direction were reset using windsorizing, a technique that allows all relevant studies and their effects to be retained while eliminating extreme values that would distort results (Lipsey & Wilson, 2001).

Moderating Variables

In each review we evaluated the possible impact on student outcomes of selected moderating variables. In all three we evaluated whether or not a program had implementation problems (e.g., incomplete implementation, attendance problems, or inadequately trained new teachers) (Durlak & Dupre, 2008). In the universal and after-school reviews, we determined whether programs incorporated evidence-based training (i.e., SAFE) practices and their impact on student outcomes. Research on skills development in youth shows that such practices increase the likelihood of learning (Durlak et al., in press). Finally, in the universal and indicated reviews we evaluated the impact on student outcomes of program format or who delivered the program, which is discussed more fully below in the results section.

Quality of implementation has become important in interpreting program effects. A lack of significant findings in a partially implemented program, for example, may have a different meaning from such a finding in a fully implemented program. The former suggests that the program might have had significant effects if it had been properly implemented. The latter indicates that the program had little effect in its current state.

We used the acronym SAFE to designate criteria we developed to capture the application of evidence-based practices. These included: (a) a *Sequenced* set of connected learning activities that teaches social-emotional skills through a coordinated, step-by-step approach; (b) the use of *Active* learning methods such as role-play or behavioral rehearsal with feedback; (c) the inclusion of at least one program component that *Focused* specifically on the development of social-emotional skills through devoting sufficient instructional time to it on a regular basis; and (d) *Explicit* teaching of clearly identified skills with clear and specific learning objectives, as distinguished from a program goal on general skill enhancement.

Methodological Variables

To increase the credibility of our findings, we also examined the possible effects of three primary methodological variables to determine if they could account for any significant differences found between treatment and control groups. These included randomization to treatment or control conditions, problems with attrition, and the reliability and validity of outcome measures. Randomization compares the effects of



studies that used a randomized control design, where participants were randomly assigned to experimental and control conditions, with studies that used a quasi-experimental design. In the latter, researchers compared participants from experimental sites with participants from comparison sites that were matched on key demographic characteristics, such as race-ethnicity and socioeconomic status.

Problems with attrition, which refers to the loss of data from either treatment or control subjects due to subject dropout, can distort treatment effects. We coded attrition yes/no, yes when it was above 30% or when it was between 11-30% and study authors failed to check for differential attrition across conditions to determine whether continuers and dropouts had equivalent ratings on key outcome variables.

The third methodological variable we considered was the reliability and validity of outcome measures. The reliability of an outcome measure was considered acceptable if its alpha coefficient was $\geq .70$ or the kappa assessment of inter-judge agreement was $\geq .60$. A measure was considered valid if authors cited data on its construct, concurrent, or predictive validity. Analyses of these methodological variables (randomization, attrition, reliability, and validity) indicated little outcome bias, meaning that none of these variables influenced outcome effects.

Coding

A coding system available from the third author was developed to record information on many characteristics of the studies reviewed. We estimated reliability of the coding process by having pairs of students independently code a random sample of about 25% of the studies on most variables. Mean kappas for this process were 0.69, and rater agreement on continuous variables was consistently above 0.90. We resolved coding disagreements among raters through discussion.



Results

We describe our results for each review separately, starting with the universal, then moving on to the indicated and after-school reviews. Within each review, we first describe characteristics of the included programs and participant populations studied and then describe significant findings across student outcome categories. Where relevant, we report the effects of implementation (universal), use of evidence-based (SAFE) training practices (universal and after school), or factors such as presenting student problems (indicated), program components and program deliverers (universal and indicated) on outcomes.

Universal Review

Table 1 summarizes characteristics of 180 studies of programs with outcome data at post-intervention that were included in the universal review. Nearly 80% of these studies appeared since 1990 and most (79%) were in the form of published articles or books. Sixty-four percent of the studies evaluated programs that served elementary students in grades K-5. A large percentage of studies did not report on the racial-ethnic (29%) or socio-economic background (26%) of program participants. While this failure to report participants' race-ethnicity and socio-economic background did not allow us to determine the differential effects of these programs with different student groups, it is clear from the data that the studied programs served a very diverse student population in urban, suburban, and rural areas (see Table 1). Lack of follow-up data measured after the conclusion of the intervention did not allow us to determine the enduring effects of programs.

More than half of the programs studied were implemented by classroom teachers. They involved whole classes of students (i.e., not students who had volunteered to participate) with no identified adjustment or learning problems. Universal programs had to last at least 8 sessions. The most common program duration (31%) was from one semester to an entire school year with a mean of 45 sessions. More than three-quarters of studied curricula were rated as meeting all four SAFE criteria for evidence-based practices. In terms of methodological features, almost half (45%) used randomized designs and most (71%) reported no problems with attrition. Seventy-six percent of outcome measures were of acceptable reliability, and 50% were of acceptable validity. About one-quarter of the studies reported implementation problems.

Compared to students in the control groups, those participating in SEL universal programs demonstrated significantly enhanced social-emotional skills, attitudes, and positive social behavior, reduced conduct problems and emotional distress, and improved academic performance at post-intervention. The mean effect sizes for these outcomes ranged from 0.23 for reduced conduct problems and emotional distress and improved attitudes to 0.60 for enhanced social and emotional skills (see Table 2). Although the effect sizes for these outcomes were smaller at follow-up, they remained significant in five out of the six outcome categories. Only emotional distress was not significant at follow-up, and the mean effect for academic performance was directionally higher at follow-up (see Table 2).

These outcomes are comparable to or exceed the benefits on similar outcomes found in eight other meta-analyses of psychosocial or educational interventions for school-aged youth (see Table 3). Moreover, when these effect sizes were translated into improvement indices that show percentile gains achieved by the average student in an intervention class compared to the average student in a control class, they ranged from a 9-10% improvement in positive attitudes and social behaviors, conduct problems, and emotional distress to an 11% gain in academic performance and a 23% gain in social-emotional skills. These improvement indices provide a better indicator of the practical value of improved outcomes than effect sizes alone (Kirk, 1996; Vacha-Haase & Thompson, 2004).

Despite these overall positive findings, not all universal interventions were equally

effective. Those that used four evidence-based practices, indicated by the acronym SAFE (Table 4), and/or those that did not encounter any of several implementation problems (e.g., failure to implement all program components as written or inadequate training for new teachers implementing a program) (Table 5), had more significant outcome effects and larger effect sizes than those that did not use all four practices and/or experienced implementation problems. Universal interventions that included all four of these evidence-based practices had significant mean effect sizes in all six outcome categories. Programs that did not meet the SAFE criteria had significant effects in only three outcome categories (attitudes towards self, school, and others; conduct problems; and academic performance). Even though the mean effects for these three outcomes were significant, they were smaller in magnitude than those of programs that met the SAFE criteria.

When outcomes were analyzed by delivery format, significant outcomes in all six categories were achieved when a classroom-based intervention was implemented by the teacher (Table 6). These interventions usually consisted of a specific curriculum and set of instructional strategies. Similar classroom-based interventions implemented by researchers achieved significant outcomes in only two of the six categories – SEL skills and conduct problems. Multi-component programs that included both classroom instruction and a school-wide, parent, or community component achieved significant outcomes in only four of the six categories, perhaps due to the greater implementation challenges of such programs (Lipsey & Wilson, 2001). The results make clear that classroom teachers can effectively implement these programs. It is feasible for school staff to implement these programs (see Table 6).

Indicated Review

While many SEL programs are designed as universal interventions to address the needs of all children and youth both during school and in after-school settings, some programs focus on the needs of students who already show signs of social, emotional, behavioral, or learning problems. From a policy perspective, this is an important time to intervene: if this less-intensive type of programming can prevent students with presenting problems from developing full-blown diagnoses that require intensive mental health treatment, schools can save much money and time devoted to mental health services.

Table 7 summarizes many of the characteristics of the 80 indicated programs included in this review. More than half (56%) of the reviewed reports appeared since 1990, mostly in the form of published articles or books. Regarding methodological features, 80% of the indicated studies used a randomized design, and only 16% reported problems with attrition. Eighty-one percent used measures that met reliability standards, and two-thirds of the measures met validity standards.

Programs serving elementary- and middle-school students comprised 69% and 31%, respectively, of the reports reviewed, and over half of the programs were implemented in urban areas. Students participating in these programs most frequently displayed conduct problems (38%) such as aggression or bullying; followed by emotional distress (23%) such as anxiety or depression; and problems with peer relationships (10%). In the remainder of the programs, children presented either with more than one problem each (e.g., depression and relationship problems in the same child), designated as “comorbid problems,” or they presented as participants in a single program with a mixture of different problems.

School personnel identified children for participation in a program in 38% of the studies, while students self-identified or were identified by a peer in 18% and 9% of studies, respectively. More than half (59%) of the programs consisted of a single intervention component such as small-group problem-solving, in which programs taught students to become aware of bodily cues that indicate how they or others were feeling or strategies for coping with anxiety such as generating alternative solutions. Forty-one percent of programs included multiple components (e.g., both one-on-one and



group activities). Twenty-three percent of programs included training parents in how to reinforce what their children were learning at school (Table 7). Half of the indicated programs used non-school personnel exclusively to deliver the intervention; 21% used school personnel; and 20% used a combination of both school and non-school personnel. Most interventions lasted less than six months, and 51% lasted less than three months.

Significant mean effect sizes ranging from 0.38 for improved attitudes toward self, school, and others to 0.77 for improved social and emotional skills were achieved in all six outcome categories studied. Participants in these indicated SEL programs received significantly greater benefits across outcome categories than did participants in the control groups. Although the magnitude of these effects was generally lower at follow-up, they were still significant in five out of the six categories (all except academic performance) (see Table 8).

When program effects were calculated based on the presenting problems of participants, students with a range of presenting problems showed greater improvements than control students (see Table 9). Mean effects ranged from 0.42 for studies that included group of children with assorted presenting problems to 0.92 for those including individual children with more than one (i.e., “comorbid”) identified presenting problem. Similarly, significant mean program effects were achieved for all groups when calculated by program deliverer - school staff, non-school staff, or a combination of the two groups (Table 9). Similar to universal programs, school personnel can implement this type of programming effectively. While we have no data indicating why the effect size for combined program delivery was lower (0.26) than for programs with a single component, the greater coordination requirements of such delivery may have been a factor (Lipsey & Wilson, 2001).

After-school Review

Table 10 summarizes characteristics of the after-school studies included in this review. These studies tended to be more recent even than those that appeared in the universal review: more than 70% appeared since 2000. An equal proportion of them were unpublished reports. More than half of the studies (56%) looked at programs serving elementary school students, and like those in the universal review, most of these were intended for general student audiences rather than for students already exhibiting problems. As in the school-based studies, more than one-third of the after-school studies did not report the race-ethnicity of participants, and 44% did not report on socio-economic background. While these missing data did not allow us to determine differential program effects based on these factors, it is clear from the data available that after-school programs were effective with widely varying student populations based on race and socio-economic status.

The settings where programs were delivered were about equally divided between school grounds and the surrounding community. More than 56% of these programs lasted from six months to a year. In terms of content, a little more than half of the programs included no academic component, 58% used all four evidence-based (SAFE) practices, and 42% had parent involvement. With regard to methodological features, more than three-quarters did not use a randomized design. Two-thirds of the measures were of acceptable reliability, and only 14% reported problems with attrition.

Compared to students in control groups, participants in after-school SEL programs experienced significant mean effects in all five outcome categories analyzed, although one of these (emotional distress) was based on a very small sample size (Table 11). Other significant outcomes ranged from a 0.08 effect size for increased academic performance to 0.22 for attitudes toward self and others and positive social behaviors. The mean effect sizes were generally higher in the universal than after-school programs. Of the 55 programs included in the after-school review that reported outcomes at post, 32 of them met all four criteria for using SAFE evidence-based practices, as described earlier (see Table 11). As in the school-based universal review, these

programs achieved significantly better effects than those that didn't meet the SAFE criteria. Those meeting these criteria were significant in all five outcome categories analyzed, ranging from 0.17 for improved academic performance to 0.41 for improved positive social behaviors. Those not meeting SAFE criteria had no significant effects across the five outcome categories.

As in the review of universal programs, the mean effect sizes achieved in the after-school review were comparable to or greater than those achieved in eight other reviews of universal interventions for children and youth, although not all outcome categories were included in these other reviews (see Table 12).



The positive impact of these programs on academic outcomes was particularly noteworthy in light of the current educational policy environment in which schools are held accountable for raising student test scores.

Discussion

Our findings across reviews of universal and indicated SEL programs conducted during the school day and of SEL programs conducted in after-school settings showed that these programs significantly impacted a wide range of outcomes across multiple domains in children both with and without identified emotional or behavioral problems. These programs achieved significant effects across all six of the outcome categories studied (five categories in the after-school review): improved SEL skills; attitudes toward self and others; positive social behaviors; reduced conduct problems; emotional distress; and improved academic performance. In the universal and indicated reviews, program effects in most outcome categories remained significant at some follow-up point beyond post-intervention. Follow-up measurements in the after-school review were insufficient to determine if program effects persisted at follow-up.

The positive impact of these programs on academic outcomes, including school grades and standardized achievement test scores, was particularly noteworthy in light of the current educational policy environment in which schools are held accountable for raising student test scores. Although some educators argue against implementing this type of holistic programming because it takes valuable time away from core academic material, our findings suggest that SEL programming not only does not detract from academic performance but actually increases students' performance on standardized tests and grades.

The effects of these SEL programs were equal to or exceeded those of other school-based prevention and after-school psychosocial programs on comparable student outcomes. In fact, when the practical value of SEL programs was demonstrated through conversion of program effects to improvement indices, they showed that the average student in an SEL intervention class gained 11 to 17 percentile points on academic test scores compared to the average student in a control class.

The majority of studies reporting the racial-ethnic composition of the student bodies studied was diverse. We found that SEL program effects were achieved in student populations that were diverse racially-ethnically, socio-economically, and geographically (i.e., urban, suburban, and rural).

Moreover, our findings indicated that it is feasible for schools to implement these programs themselves. A common complaint about this type of holistic programming is that it cannot be sustained once the researchers leave the school because only researchers are capable of delivering it. But this is not the case with SEL programs. Not only can programs be delivered as effectively by school personnel as by researchers (or other non-school personnel), but in many cases in our reviews program implementation by school personnel achieved greater impact than implementation by non-school experts.

Our findings also indicated that including four evidence-based training practices (i.e., Sequenced or coordinated instructional steps, Active learning methods, a Focus on skill instruction, and Explicit teaching of specific skills) significantly improved program outcomes. Although SAFE practices don't capture all aspects of effective skill development, our findings indicated that they were effective in multiple outcome areas and that programs without these procedures were not as effective. We also found that good implementation is crucial to positive outcomes, even though our data were not detailed enough for us to differentiate the impact of different types of implementation problems on outcomes. The finding that multi-component programs were not as effective as single component programs may have been due to the fact that the former were less likely to have used SAFE practices and were more likely to have had implementation problems.

SEL intervention programs for students exhibiting adjustment or learning problems worked for a wide range of presenting problems, were effective when delivered by either school or non-school personnel, and had significant outcomes whether they



included only one or multiple program components.

Although care was taken to include a representative and up-to-date sample of recent studies, and analyses of methodological variables were conducted to rule out plausible alternative explanations for findings, our research did have several limitations. First, it wasn't possible to determine whether teaching certain skills or combinations of skills affected some outcomes more than others. This information would be helpful in designing programs to impact specific skills sets. Also, there are many program characteristics and evidence-based practices (beyond SAFE) associated with positive outcomes for youth that were not examined in this analysis. Second, because most studies measured outcomes at only one point in time, it was not possible to determine if certain skills mediated final outcomes by first contributing to intermediate or proximal outcomes. Knowing such mechanisms of change is also helpful in program design. Third, only 16% of the universal studies and less than one-third of the after-school studies collected data on academic achievement at post, and only 15% of universal studies assessed program impact at follow-up of at least six months duration. As a result, conclusions about the persistence of SEL program outcomes should be made with caution.

A fourth limitation was the small number of studies that collected demographic data on program participants. This made it impossible to determine the possible differential impact on student outcomes in any of the implementation contexts among different racial, ethnic, or cultural groups. However, we can say with confidence that SEL programs, especially those using evidence-based practices, benefit both children without identified social-emotional, behavioral, or learning problems and those who are beginning to show signs of such problems. Such programs should be recommended as potentially successful options for promoting youth well-being and adjustment both during and after school hours.

Future Research Directions

This manuscript is the first to systematically document the impact of SEL programming within Universal, Indicated, and After-School samples. One important question for future research is to determine the extent to which coordinated programming efforts (e.g., Universal plus Indicated or Universal plus After-school) produce more powerful effects than when programs are offered separately. In addition, although more research is needed to determine the relationship between academic performance and personal and social development, analyses done for this study suggest a synergistic effect between these two developmental domains. Future research should also aspire to identify (a) what program characteristics contribute to which specific outcomes, (b) the differential benefits that various student groups derive from these programs and how these programs can be adapted to meet the needs of these groups, (c) the degree to which program effects persist over time, and (d) how to improve student participation in these programs.

Policy Implications

The meta-analytic reviews of SEL program evaluation research on which we have focused here are part of a larger picture demonstrating the extent of current interest in SEL research, policy, and practice to promote school children's social, emotional, and academic development. Neuroscience research, for example, has demonstrated that because of the plasticity of the brain, experience across the lifespan changes it. This finding suggests that school children's participation in SEL programming will lay a strong neurocognitive foundation for their future learning, social functioning, and ability to emotionally self-regulate. In fact, SEL policymaking based on this research has already taken off in several states (e.g., Illinois, New York) and countries (e.g., Singapore, Great Britain, Spain).

Illinois has been a leader in establishing SEL policies by approving legislation that includes SEL as part of the State's learning standards and is now funding statewide

One important question for future research is to determine the extent to which coordinated programming efforts produce more powerful effects than when programs are offered separately.



Principal leadership in supporting SEL programming enhances student benefits from SEL programming, and professional development for administrators, teachers, student support staffs, and human service providers is critical to ensure the quality of SEL program implementation.

professional development for school teams involved in implementing schoolwide SEL. New York has also passed a similar law and is in the process of establishing guidelines to promote social and emotional learning and development. In addition, several large districts – such as Anchorage, Alaska - are developing their own SEL standards, aligning their curricula with these standards, and implementing SEL programming throughout the district. Consistent with the findings of research cited here, Anchorage has found that its SEL initiative has reduced problem behaviors among its students, improved their attitudes toward school, and increased their academic performance.

Recent research also finds that principal leadership in supporting SEL programming enhances student benefits from SEL programming (Kam, Greenberg, & Walls, 2003) and that professional development for administrators, teachers, student support staffs, and human service providers is critical to ensure the quality of SEL program implementation (Devaney, et al. 2006).

Although there is still much to learn about how best to implement and support school-wide SEL programming, the current research base clearly demonstrates its value in promoting the social, emotional, and academic development of school children.



Table 1: Descriptive Characteristics of 180 Studies with Outcomes at Post in the Universal Review

	N	%
General Publication Features		
<i>Date of report</i>		
1955-1979	15	8
1980-1989	26	14
1990-1999	73	41
2000-2007	66	37
<i>Source of report</i>		
Published article/books	142	79
Unpublished reports	38	21
Methodological Features		
<i>Randomization</i>		
Yes	80	45
No	100	55
<i>Reported problems with attrition</i>		
Yes	53	29
No	127	71
<i>Implementation</i>		
Not reported on	75	42
No significant problems reported	62	34
Significant problems reported	43	24
<i>Use of reliable outcome measures¹</i>		
Yes	483	76
No	154	24
<i>Use of valid outcome measures²</i>		
Yes	316	50
No	321	50
<i>Rater</i>		
Child	318	50
Parent	26	4
Teacher	130	20
Observer	75	12
Peer	15	2
School records	67	11
Researcher	3	<1
Unknown	3	<1

Table 1 cont.		
	N	%
Participant Features		
<i>Educational level of participants³</i>		
Elementary school (grades 1-5)	116	64
Middle school (grade 6-8)	64	36
<i>Predominant racial or ethnic group</i>		
Caucasian	42	23
African-American	17	9
Latino	1	<1
Asian American	1	<1
Native American	2	1
Mixed ⁴	64	36
Did not report	53	29
<i>Predominant socioeconomic status⁴</i>		
Lower/working	60	33
Middle/upper class	23	13
Mixed ⁴	50	28
Did not report	47	26
Intervention Features		
<i>Intervention format</i>		
Classroom by teacher	101	56
Classroom by research staff	34	19
Multiple contexts	45	25
<i>SAFE criteria</i>		
Curriculum rated as SAFE	137	76
Curriculum not rated as SAFE	16	9
Intervention had no curriculum	27	15
<i>Duration</i>		
9 weeks or less	24	13
10 weeks to 18 weeks (one semester)	51	29
19 to 36 weeks (one school year)	56	31
1 to 2 school years	22	12
More than 2 school years	27	15



Table 1 cont.

	N	%
<i>Mean number of sessions (based on 171 studies)</i>	45	
<i>Median number of sessions</i>	25	
<i>Locale of intervention</i>		
United States	158	88
Outside the United States	22	12
<i>General area of school</i>		
Urban	84	47
Suburban	30	17
Rural	25	14
Combination of areas	27	15
Did not report	14	7

Note: The percentages do not always add to 100% due to missing data.

¹ *The reliability of an outcome measure was satisfactory if its alpha coefficient was $\geq .70$, or evaluating inter-judge agreement for coding or rating variables was $\geq .70$ (for kappa, $\geq .60$). This is coded at the outcome level; therefore most studies have more than one outcome.*

² *The validity of an outcome measure was satisfactory if evidence of construct, predictive, or discriminant validity was provided by the authors.*

³ *Elementary students were 5 to 10 years old and middle school students were 11 to 13 years old.*

⁴ *Predominant means at least 75% of the sample involved this category; whereas mixed means that at least 20% of the sample was drawn from ≥ 2 of the listed categories.*



Table 2: Student Outcomes Obtained at Post and Follow-up in 180 Studies in the Universal Review

Outcome Category	Outcome Effects					
	At post			At follow-up		
	Mean effect size	Confidence interval	Number of studies	Mean effect size	Confidence interval	Number of studies
SEL skills	0.60*	0.49-0.71	56	0.36*	0.20-0.52	6 ^f
Attitudes toward self and others	0.23*	0.15-0.31	87	0.12*	0.03-.21	14
Positive social behavior	0.24*	0.15-0.32	84	0.17*	0.07-0.28	11
Conduct problems	0.23*	0.15-0.31	99	0.15*	0.08-0.23	17
Emotional distress	0.23*	0.10-0.35	39	0.13	0.00-0.26	6 ^f
Academic performance	0.28*	0.14-.41	29	0.32*	0.15-0.48	6 ^f

*Denotes mean effect is significantly different from zero at the .05 level

¶ Because of the small sample, caution is advised in interpreting these results.

Table 3: Comparison of the Magnitude of Student Change at Post in 180 Studies in the Universal Review with Outcomes in Previous Meta-analytic Reviews

Outcome Category	Outcome Effect	
	Mean effect size in current review	Mean effect size in reviews conducted by other researchers
SEL skills	0.60*	0.40 ^a
Attitudes toward self and others	0.23*	0.09 ^b
Positive social behavior	0.24*	0.39 ^a 0.37 ^c 0.15 ^d
Conduct problems	0.23*	0.26 ^a 0.28 ^c 0.21 ^d 0.17 ^e 0.30 ^f
Emotional distress	0.23*	0.21 ^b 0.24 ^c 0.17 ^g
Academic performance	0.28*	0.29 ^b 0.11 ^d 0.30 ^f 0.24 ^h

*Denotes mean effect is significantly different from zero at the 0.05 level

Note: Results from other meta-analyses are from outcome categories most comparable to those in the current review and values are drawn from weighted random effects analyses whenever possible.

a = Lösel & Beilmann, 2003 b = Haney & Durlak, 1998 c = Wilson & Lipsey, 2007

d = DuBois et al., 2002 e = Wilson et al., 2001 f = Durlak & Wells, 1997

g = Horowitz & Graber, 2007 h = Hill, Bloom, Black, & Lipsey, 2007



Table 4: Student Outcomes Obtained at Post in 180 Studies in the Universal Review in Programs Using and Not Using Evidence-based (SAFE)[§] Training Practices

Outcome Category	Outcome Effects					
	Programs used SAFE practices			Programs did not use SAFE practices		
	Mean effect size	Confidence interval	Number of studies	Mean effect size	Confidence interval	Number of studies
SEL skills	0.69*	0.51-0.87	54	-0.3	-0.96-0.90	2 [¶]
Attitudes toward self and others	0.25*	0.19-0.30	66	0.14*	0.03-0.24	21
Positive social behavior	0.28*	0.18-0.39	71	0.02	-0.20-0.25	13
Conduct problems	0.25*	0.18-0.32	77	0.16*	0.03-0.30	22
Emotional distress	0.27*	0.10-0.44	24	0.17	-0.52-0.39	15
Academic performance	0.29*	0.17-.41	20	0.23*	0.06-0.40	9 [¶]

* Mean effect is significantly different from zero at the 0.05 level

§ Sequenced, Active, Focused, and Explicit

¶ Because of the small sample, caution is advised in interpreting these results.



Table 5: Student Outcomes Obtained at Post in 180 Studies in the Universal Review by Reported Program Implementation Problems

Out- come Cat- egory	Outcome Effect								
	Implementation not mentioned			No implementation problems reported			Implementation problems reported		
	Mean effect size	Confidence interval	No. of studies	Mean effect size	Confidence interval	No. of studies	Mean effect size	Confidence interval	No. of studies
SEL skills	0.55*	0.28-0.83	21	0.96*	0.69-1.23	22	0.35*	0.01-0.72	13
Attitudes toward self and others	0.15*	0.07-0.23	37	0.32*	0.23-0.41	29	0.19*	0.10-0.29	21
Positive social behavior	0.32*	0.16-0.47	32	0.31*	0.16-0.45	34	0.01	-0.18-0.20	18
Conduct problems	0.23*	0.12-0.34	32	0.28*	0.18-0.39	38	0.16*	0.05-0.27	29
Emotional distress	0.21*	0.02-0.40	20	0.35*	0.09-0.61	10	0.14	-0.14-0.42	9 [¶]
Academic performance	0.31*	0.15-0.48	9 [¶]	0.34*	0.19-0.48	12	0.15	-0.02-0.31	8 [¶]

**Denotes mean effect is significantly different from zero at the .05 level*
¶ Because of the small sample, caution is advised in interpreting these results.

Table 6: Student Outcomes Obtained at Post in 180 Studies in the Universal Review by Program Delivery Format

Outcome Category	Outcome Effects by Program Delivery Format								
	Classroom-based intervention by teacher			Classroom-based intervention by researcher			Multi-component with parent or school-wide component in addition to classroom intervention		
	Mean effect size	Confidence interval	No. of studies	Mean effect size	Confidence interval	No. of studies	Mean effect size	Confidence interval	No. of studies
SEL skills	0.68*	0.46-0.90	34	0.84*	0.51-1.17	16	0.13	-0.37-0.64	6 [¶]
Attitudes toward self and others	0.24*	0.17-0.31	49	0.14	0.00-0.27	16	0.22*	0.13-0.32	22
Positive social behavior	0.27*	0.15-0.38	58	0.21	-0.08-0.49	10	0.19	-0.02-0.39	16
Conduct problems	0.21*	0.11-0.30	49	0.17*	0.01-0.33	14	0.27*	0.18-0.37	36
Emotional distress	0.23*	0.01-0.45	15	0.17	-0.11-0.45	10	0.27*	0.05-0.49	14
Academic performance	0.43*	0.22-0.63	7 [¶]	0.01	-0.38-0.41	2 [¶]	0.25*	0.14-0.36	20

* Denotes mean effect is significantly different from zero at the .05 level

¶ Because of the small sample, caution is advised in interpreting these results.



Table 7: Descriptive Characteristics of 80 School-Based Studies with Outcomes at Post in the Indicated Review

	N	%
General Publication Features		
<i>Date of report</i>		
1970-1979	7	9
1980-1989	27	34
1990-1999	28	35
2000-2007	18	22
<i>Source of report</i>		
Published article/books	68	85
Unpublished reports	12	15
Methodological Features		
<i>Randomization</i>		
Yes	64	80
No	16	20
<i>Reported problems with attrition</i>		
Yes	13	16
No	67	84
<i>Use of reliable outcome measures⁵</i>		
Yes	176	81
No	41	19
<i>Use of valid outcome measures⁶</i>		
Yes	149	69
No	68	31
<i>Rater</i>		
Child	83	38
Parent	14	7
Teacher	48	22
Observer	24	11
Peer	20	9
School records	28	13

Table 7 cont.

	N	%
Participant Features		
<i>Educational level of participants</i>		
Elementary school (grades K-5 or mean age 5-10)	55	69
Middle school (grades 6-8 or mean age 11-14)	25	31
<i>Locale of intervention</i>		
United States	68	85
Outside the United States	12	15
<i>General area of school</i>		
Urban	44	55
Suburban	8	10
Rural	14	18
Combination of areas	5	6
Did not report	9	11
<i>Primary presenting problem</i>		
Conduct problems	30	38
Emotional distress	18	23
Peer relations	8	10
Comorbid problems (i.e., each child presents with more than one problem)	3	4
Individual children present with a variety of problems	21	25
<i>Predominant racial or ethnic group⁷</i>		
Caucasian	12	15
African-American	10	13
Hispanic	2	2
Asian	1	1
Mixed ⁷	24	30
Did not report	31	39
<i>Predominant socioeconomic status⁷</i>		
Lower/working class	18	23
Middle/upper class	7	9
Mixed	12	15
Did not report	43	53

Table 7 cont.

	N	%
Intervention Features		
<i>How children were identified</i>		
Referral	16	20
Single measure	41	51
Multiple measures	23	29
<i>Who identified children</i>		
School personnel	30	38
Self	15	18
Peer	7	9
Parent	2	2
Multiple persons	26	33
<i>Intervention components</i>		
Single component intervention	47	59
Multi-component Intervention, including parent training	33	41
<i>Agent that primarily delivered intervention</i>		
School personnel	17	21
Peer leader	1	1
Non-school personnel	40	50
Combination	16	20
Did not provide adequate information	6	8
<i>Duration</i>		
Less than 3 months	41	51
3 to 6 months	18	23
6 months to 1 year	8	10
1 to 2 years	11	14
More than 2 years	2	2
<i>Implementation</i>		
No problems noted	42	53
Problems noted	11	13
Not monitored	27	34
<i>Note: The percentages do not always add to 100% due to missing data.</i>		
⁵ The reliability of an outcome measure was satisfactory if its alpha coefficient was $\geq .70$, or evaluating inter-judge agreement for coding or rating variables was $\geq .70$ (for kappa, $\geq .60$). This is coded at the outcome level; therefore most studies have more than one outcome.		
⁶ The validity of an outcome measure was satisfactory if evidence of construct, predictive, or discriminant validity was provided by the authors.		
⁷ Predominant means at least 75% of the sample involved this category; whereas mixed means that at least 20% of the sample was drawn from ≥ 2 of the listed categories.		

Table 8: Student Outcomes Obtained at Post and Follow-up in 80 Studies in the Indicated Review

Outcome Category	Outcome Effects					
	At post			At follow-up		
	Mean effect size	Confidence interval	Number of studies	Mean effect size	Confidence interval	Number of studies
SEL skills	0.77*	0.46-1.07	11	0.46*	0.12-0.79	6 [†]
Attitudes toward self and others	0.38*	0.19-0.56	29	0.30*	0.07-0.54	11
Positive social behavior	0.50*	0.34-0.66	38	0.42*	0.17-0.66	11
Conduct problems	0.47*	0.34-0.60	53	0.30*	0.14-0.47	21
Emotional distress	0.50*	0.34-0.67	35	0.58*	0.37-0.80	13
Academic performance	0.43*	0.17-0.69	12	0.67	0.40-1.74	1 [†]

*Denotes mean effect is significantly different from zero at the .05 level

† Because of the small sample size, caution is suggested in interpreting these results.

Table 9: Student Outcomes Obtained at Post in 80 Studies in the Indicated Review by Presenting Problem, Program Deliverer, and Implementation Monitoring Status

Moderating Variable	Outcome Effects		
	Mean effect size	Confidence interval	Number of studies
<i>Presenting problem(s) of child in study</i>			
Conduct problems	0.44*	0.29-0.58	30
Emotional distress	0.54*	0.33-0.76	18
Peer relations	0.89*	0.53-1.26	8 [†]
Each child presents with more than one problem (comorbid)	0.92*	0.36-1.47	3 [†]
Individual children present with a variety of problems	0.42*	0.24-0.60	21
<i>Program Deliverer</i>			
School personnel	0.54*	0.41-0.69	40
Non-school personnel	0.59*	0.49-0.79	17
Combination of school and non-school	0.26*	0.07-0.46	16
<i>Program Implementation Status</i>			
Monitored without problems	0.45*	0.32-0.57	42
Monitored with problems	0.30*	0.06-0.54	11
Not monitored	0.71*	0.53-0.88	27

*Denotes mean effect is significantly different from zero at the .05 level

† Because of the small sample size, caution is suggested when interpreting these results.



Table 10: Descriptive Characteristics of 57 Studies in the After-School Review

	N	%
Publication Features		
<i>Date of report</i>		
1983-1990	2	4
1991-2000	15	26
2001-2007	40	70
<i>Source of report</i>		
Published article	17	30
Unpublished report	40	70
Methodological Features		
<i>Randomization</i>		
Yes	13	23
No	44	77
<i>Use of reliable outcome measures⁹</i>		
Yes	245	67
No	119	33
<i>Problems with attrition</i>		
Yes	8	14
No	48	84
Not reported and incalculable	1	2
Characteristics of participants		
<i>Mean educational level</i>		
Elementary school (K-5)	32	56
Middle school (6-8)	25	44
<i>Presenting Problems</i>		
Some presenting problem	4	7
No presenting problem	53	93
<i>Predominant racial or ethnic group¹⁰</i>		
African-American	11	19
Latino	8	14
Asian/Pacific Islander	4	7
American Indian	1	2
Mixed ⁸	12	21
Did not report	21	37
<i>Predominant socioeconomic status¹⁰</i>		
Lower/working	24	42
Mixed income ⁸	8	14
Did not report	25	44

Table 10 cont.

	N	%
Program Features		
<i>Duration</i>		
≤ 25 weeks	12	22
26-52 weeks	31	56
> 52 weeks	12	22
<i>Setting</i>		
On school grounds	27	47
In community	28	49
Did not report	2	4
<i>Academic components</i>		
Tutoring/homework assistance	26	46
No academic component	31	54
<i>Use of evidence-based training Procedures (SAFE practices)</i>		
Yes	33	58
No	24	42
<i>Some parent involvement</i>		
Yes	24	42
No	33	60

Note. The percentages do not always add to 100% due to missing data.

⁹ *The reliability of an outcome measure was satisfactory if its alpha coefficient was $\geq .70$, or evaluating inter-judge agreement for coding or rating variables was $\geq .70$ (for kappa, $\geq .60$). This is coded at the outcome level; therefore most studies have more than one outcome.*

¹⁰ *Predominant means at least 75% of the sample involved this category; whereas mixed means that at least 20% of the sample was drawn from ≥ 2 of the listed categories.*



Table 11: Student Outcomes Obtained at Post in 55 After-School Studies of SAFE[§] and Other Programs

Outcome Category	Outcome Effects								
	All after school programs			SAFE programs			Other (non-SAFE) programs		
	Mean effect size	Confidence interval	No. of studies	Mean effect size	Confidence interval	No. of studies	Mean effect size	Confidence interval	No. of studies
Attitudes toward self and others	0.22*	0.11-0.20	39	0.32*	0.20-0.44	24	0.04	0.12-0.19	15
Positive social behavior	0.22*	0.11-0.34	33	0.41*	0.23-0.58	18	0.00	-0.08-0.09	15
Conduct problems	0.17*	0.10-0.25	51	0.35*	0.22-0.47	27	-0.03	-0.08-0.03	24
Emotional distress	0.91*	0.63-1.19	5 [¶]	0.90*	0.59-1.20	5 [¶]	--	--	--
Academic performance	0.08*	0.02-0.15	31	0.17*	0.08-0.26	13	-0.03-0.06	0.03-0.06	18

* Denotes mean effect is significantly different from zero at the .05 level

§ SAFE program used four evidence based skill training practices—Sequenced instruction, Active instructional methods, Focus on teaching social-emotional skills in at least one program component, and Explicit instruction on one or more social-emotional skills

¶ Because of the small sample, caution is advised in interpreting these results.

Table 12: Comparison of the Magnitude of Student Change Obtained at Post in 55 Studies in the After-School Review with Outcomes in Previous Meta-analytic Reviews

Outcome Category	Outcome Effect	
	Mean effect size in current review	Mean effect size in reviews conducted by other researchers
Attitudes toward self and others	0.22*	0.19 ^a (based on self-perception only)
Positive social behavior	0.24*	0.15 ^b , 0.39 ^c
Conduct problems	0.17*	0.21 ^b , 0.27 ^c , 0.09 ^d
Emotional distress	0.91*	0.17 ^e , 0.30 ^f
Academic performance	0.08*	0.11 ^b , 0.30 ^f , 0.24 ^g (based on achievement tests only)

*Denotes mean effect is significantly different from zero at the 0.05 level

^a = Haney & Durlak, 1998

^b = DuBois et al., 2002

^c = Lösel & Beelman, 2003

^d = Wilson et al., 2003

^e = Wilson et al., 2001

^f = Durlak & Wells, 1997

^g = Hill, Bloom, Black & Lipsey, 2007



Appendix A: Bibliography of Reviewed Universal Studies

- Aber, J.L., Brown, J., & Jones, S.M. (1999). *Resolving Conflict Creatively: Year 1 impact on teacher-reported aggressive and prosocial behavior and child academic achievement*. New York, NY: Columbia University, National Center for Children in Poverty.
- Aber, J.L., Jones, S.M., Brown, J.L., Chaudry, N., & Samples, F. (1998). Resolving conflict creatively: Evaluating the developmental effects of a school-based violence prevention program in neighborhood and classroom context. *Development and Psychopathology*, 10, 187-213.
- Adalbjarnardottir, S. (1993). Promoting children's social growth in the schools: An intervention study. *Journal of Applied Developmental Psychology*, 14, 461-484.
- Allen, G.J., Chinsky, J.M., Larcen, S.W., Lochman, J.E., & Selinger, H.V. (1976). *Community psychology and the schools: A behaviorally-oriented multilevel preventive approach*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Allred, C.G. (1984). The development and evaluation of positive action: A systematic elementary school self-concept enhancement curriculum, 1977-1983. *Dissertation Abstracts International*, 45 (11), 3244A. (UMI No. 8427771).
- Artley, C.W. (1985). Modification of children's behavior. *Dissertation Abstracts International*, 46 (11), 3288A. (UMI No. 8524311).
- Ayotte, V., Saucier, J.F., Bowen, F., Laurendeau, M.C., Fournier, M., & Blais, J.G. (2003). Teaching multiethnic urban adolescents how to enhance their competencies: Effects of a middle school primary prevention program on adaptation. *Journal of Primary Prevention*, 24, 7-23.
- Baker, B.B., & Butler, J.N. (1984). Effects of preventive cognitive self-instruction training on adolescent attitudes, experiences, and state anxiety. *Journal of Primary Prevention*, 5, 17-26.
- Battistich, V., Schaps, E., Watson, M., Solomon, D., & Lewis, C. (2000). Effect of the Child Development Project on students' drug use and other problem behaviors. *The Journal of Primary Prevention*, 21, 75-99.
- Battistich, V., Schaps, E., & Wilson, N. (2004). Effects of an elementary school intervention on students' "connectedness" to school and social adjustment during middle school. *The Journal of Primary Prevention*, 24, 243-262.
- Battistich, V., Solomon, D., Watson, M., Solomon, J., & Schaps, E. (1989). Effects of an elementary school program to enhance prosocial behavior on children's cognitive social problem-solving skills and strategies. *Journal of Applied Developmental Psychology*, 10, 147-169.
- Bauer, N.S., Lozano, P., & Rivara, F.P. (2007). The effectiveness of the Olweus Bullying Prevention Program in public middle schools: A controlled trial. *Journal of Adolescent Health*, 40, 266-274.
- Bhadwal, S.C., & Panda, P.K. (1992). The composite effect of a curricular programme on the test anxiety of rural primary school students: A one-year study. *Educational Review*, 44, 205-220.
- Bosworth, K., Espelage, D., DuBay, T., Daytner, G., & Karageorge, K. (2000). Preliminary evaluation of a multimedia violence prevention program for adolescents. *American Journal of Health Behavior*, 24, 268-280.
- Botvin, G.J., Baker, E., Dusenbury, L., Botvin, E.M., & Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. *The Journal of the American Medical Association*, 273, 1106-1112.
- Botvin, G.J., Baker, E., Dusenbury, L., Tortu, S., & Botvin, E.M. (1990). Preventing adolescent drug abuse through a multimodal cognitive-behavioral approach: Results of a 3-year study. *Journal of Consulting and Clinical Psychology*, 58, 437-446.
- Botvin, G.J., Baker, E., Filazzola, A.D., & Botvin, E.M. (1990). A cognitive-behavioral approach to substance abuse prevention: One-year follow-up. *Addictive Behaviors*, 15, 47-63.
- Botvin, G.J., Baker, E., Renick, N.L., Filazzola, A.D., & Botvin, E.M. (1984). A cognitive-behavioral approach to substance abuse prevention. *Addictive Behaviors*, 9, 137-147.
- Botvin, G.J., Epstein, J.A., Baker, E., Diaz, T., & Ifill-Williams, M. (1997). School-based drug abuse prevention with inner-city minority youth. *Journal of Child and Adolescent Substance Abuse*, 6, 5-19.
- Botvin, G.J., Griffin, K.W., Diaz, T., & Ifill-Williams, M. (2001). Preventing binge drinking during early adolescence: One- and two-year follow-up of a school-based preventive intervention. *Psychology of Addictive Behaviors*, 15, 360-365.
- Botvin, G.J., Griffin, K.W., Diaz, T., Scheier, L.M., Williams, C., & Epstein, J.A. (2000). Preventing illicit



- drug use in adolescents: Long-term follow-up data from a randomized control trial of a school population. *Addictive Behaviors*, 25, 769-774.
- Botvin, G.J., Griffin, K.W., & Ifill-Williams, M. (2001). Drug abuse prevention among minority adolescents: Post-test and one year follow-up of a school-based preventive intervention. *Prevention Science*, 2, 1-13.
- Botvin, G.J., Griffin, K.W., & Nichols, T.D. (2006). Preventing youth violence and delinquency through a universal school-based prevention approach. *Prevention Science*, 7, 403-408.
- Botvin, G.J., Griffin, K.W., Paul, E., & Macaulay, A.P. (2003). Preventing tobacco and alcohol use among elementary school students through life skills training. *Journal of Child and Adolescent Substance Abuse*, 12, 1-17.
- Botvin, G.J., Schinke, S.P., Epstein, J.A., & Diaz, T. (1994). Effectiveness of culturally focused and generic skills training approaches to alcohol and drug abuse prevention among minority youths. *Psychology of Addictive Behaviors*, 8, 116-127.
- Botvin, G.J., Schinke, S.P., Epstein, J.A., Diaz, T., & Botvin, E.M. (1995). Effectiveness of culturally focused and generic skills training approaches to alcohol and drug abuse prevention among minority adolescents: Two-year follow-up results. *Psychology of Addictive Behaviors*, 9, 183-194.
- Boyle, M.H., Cunningham, C.E., Heale, J., Hundert, J., McDonald, J., Offord, D.R., et al. (1999). Helping children adjust – A Tri-Ministry study: I. Evaluation methodology. *Journal of Child Psychology and Psychiatry*, 40, 1051-1060.
- Caplan, M., Weissberg, R.P., Grober, J., & Sivo, P.J. (1992). Social competence promotion with inner-city and suburban young adolescents: Effects on social adjustment and alcohol use. *Journal of Consulting and Clinical Psychology*, 60, 56-63.
- Cauce, A.M., Comer, J.P., Schwartz, D. (1987). Long term effects of a systems-oriented school prevention program. *American Journal of Orthopsychiatry*, 57, 127-131.
- Cecchini, T.B. (1997). An interpersonal and cognitive-behavioral approach to childhood depression: A school-based primary prevention study. *Dissertation Abstracts International*, 58 (12), 6803B. (UMI No. 9820698).
- Chalmers-MacDonald, J.H. (2006). The effects of a culture based social skills program on the prosocial behaviour of elementary school boys and girls. *Dissertation Abstracts International*, 66 (07), 3995B. (UMI No. 3184225).
- Ciechalski, J.C., & Schmidt, M.W. (1995). The effects of social skills training on students with exceptionalities. *Elementary School Guidance and Counseling*, 29, 217-222.
- Cochrane, L., & Saroyan, A. (1997). Finding evidence to support violence prevention program. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Coleman, J.K. (2000). A controlled evaluation of the effects of Classroom Coping Skills training on children's aggressive and externalizing behaviors. *Dissertation Abstracts International*, 61 (07), 3836B. (UMI No. 9978898).
- Conduct Problems Prevention Research Group. (1999b). Initial impact of the fast track prevention trial for conduct problems II. Classroom effects. *Journal of Consulting and Clinical Psychology*, 67, 648-657.
- Cook, T.D., Habib, F., Phillips, M., Settersten, R.A., Shagle, S.C., & Degirmencioglu, S.M. (1999). Comer's school development program in Prince George's County, Maryland: A theory-based evaluation. *American Educational Research Journal*, 36, 543-597.
- Cook, T.D., Murphy, R.F., & Hunt, H.D. (2000). Comer's school development program in Chicago: A theory-based evaluation. *American Educational Research Journal*, 37, 535-597.
- Cowen, E.L., Izzo, L.D., Miles, H., Telschow, E.F., Trost, M.A., & Zax, M. (1963). A preventive mental health program in the school setting: Description and evaluation. *The Journal of Psychology*, 56, 307-356.
- Cowen, E.L., Zax, M., Izzo, L.D., & Trost, M.A. (1966). Prevention of emotional disorders in the school setting: A further investigation. *Journal of Consulting Psychology*, 30, 381-387.
- Cunningham, E.G., Brandon, C.M., & Frydenberg, E. (2002). Enhancing coping resources in early adolescence through a school-based program teaching optimistic thinking skills. *Anxiety, Stress, and Coping*, 15, 369-381.
- Diguiseppa, R., & Kassinove, H. (1976). Effects of a rational-emotive school mental health program on children's emotional adjustment. *Journal of Community Psychology*, 4, 382-387.

- Dubow, E.F., Schmidt, D., McBride, J., Edwards, S., & Merk, F.L. (1993). Teaching children to cope with stressful experiences: Initial implementation and evaluation of a primary prevention program. *Journal of Clinical Child Psychology*, 22, 428-440.
- Durant, R.H., Barkin, S., & Krowchuk, D.P. (2001). Evaluation of a peaceful conflict resolution and violence prevention curriculum for sixth-grade students. *Journal of Adolescent Health*, 28, 386-393.
- Eiserman, W.D. (1990). *An evaluation of the first year pilot implementation of Positive Action at Montclair Elementary*. Unpublished summary report, Educational Research and Development Center, The University of West Florida.
- Elias, M.J. (2002). Evidence of effectiveness articles: *The Social Decision Making/Problem Solving Program*. Unpublished technical report, University of Medicine & Dentistry of New Jersey.
- Elias, M.J., Gara, M.A., Schuyler, T.F., Branden-Muller, L.R., & Sayette, M.A. (1991). The promotion of social competence: Longitudinal study of a preventive school-based program. *American Journal of Orthopsychiatry*, 61, 409-417.
- Elias, M.J., Gara, M., Ubriaco, M., Rothbaum, P.A., Clabby, J.F., & Schuyler, T. (1986). Impact of a preventive social problem solving intervention on children's coping with middle school stressors. *American Journal of Community Psychology*, 14, 259-275.
- Elliott, S.N. (1995, June). *Final Evaluation Report: The Responsive Classroom approach: Its effectiveness and acceptability*. Washington, D.C.: Author.
- Elliott, S.N. (1997). *The Responsive Classroom approach: Its effectiveness and acceptability in promoting social and academic competence*. University of Wisconsin, Madison, Prepared for The Northeast Foundation for Children.
- Enright, R.D. (1980). An integration of social cognitive development and cognitive processing: Educational applications. *American Educational Research Journal*, 17, 21-41.
- Facing History and Ourselves. (1998). *Improving inter-group relations among youth: A study of the processes and outcomes of Facing History and Ourselves*. Carnegie Corporation Initiative on Race and Ethnic Relations. Chicago, IL: Author.
- Farrell, A.D., & Meyer, A.L. (1997). The effectiveness of a school-based curriculum for reducing violence among urban sixth-grade students. *American Journal of Public Health*, 87, 979-984.
- Farrell, A., Meyer, A., Sullivan, T., & Kung, E. (2003). Evaluation of the Responding in Peaceful and Positive ways seventh grade (RIPP-7) universal violence prevention program. *Journal of Child and Family Studies*, 12, 101-120.
- Farrell, A.D., Meyer, A.L., & White, K.S. (2001). Evaluation of Responding in Peaceful and Positive ways (RIPP): A school-based prevention program for reducing violence among urban adolescents. *Journal of Clinical Child Psychology*, 30, 451-463.
- Farrell, A., Valois, R., Meyer, A., & Tidwell, R. (2003). Impact of the RIPP violence prevention program on rural middle school students. *The Journal of Primary Prevention*, 24, 143-167.
- Felner, R.D., Brand, S., Adan, A.M., Mulhall, P.F., Flowers, N., Sartain, B., et al. (1993). Restructuring the ecology of the school as an approach to prevention during school transitions: Longitudinal follow-ups and extensions of the School Transitional Environment Project (STEP). *Prevention in Human Services*, 10, 103-136.
- Felner, R.D., Ginter, M., & Primavera, J. (1982). Primary prevention during school transitions: Social support and environmental structure. *American Journal of Community Psychology*, 10, 277-290.
- Flay, B., Acock, A., Vuchinich, S., & Beets, M. (2006). *Progress report of the randomized trial of Positive Action in Hawai'i: End of third year of intervention* (Spring, 2005). Unpublished manuscript, Oregon State University.
- Flay, B.R., & Allred, C.G. (In press). Long-term effects of the positive action program. *American Journal of Public Health*.
- 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.
- Flay, B.R., Graumlich, S., Segawa, E., Burns, J.L., & Holliday, M.Y. (2004). Effects of 2 prevention programs on high-risk behaviors among African American youth. *Archives of Pediatric Adolescent Medicine*, 158, 377-384.
- Foshee, V.A., Bauman, K.E., Arriaga, X.B., Helms, R.W., Koch, G.G., & Linder, G.F. (1998). An evaluation of Safe Dates, an adolescent dating and violence prevention program. *American Journal of Public Health*, 88, 45-50.



- Foshee, V.A., Bauman, K.E., Ennett, S.T., Linder, F., Benefield, T., & Suchindran, C. (2004). Assessing the long-term effects of the Safe Dates program and a booster in preventing and reducing adolescent dating violence victimization and perpetration. *American Journal of Public Health*, 94, 619-624.
- Foshee, V.A., Bauman, K.E., Ennett, S.T., Suchindran, C., Benefield, T., & Linder, G.F. (2005). Assessing the effects of the dating violence prevention program "Safe Dates" using random coefficient regression modeling. *Prevention Science*, 6, 245-258.
- Foshee, V.A., Bauman, K.E., Greene, W.F., Koch, G.G., Linder, G.F., & MacDougall, J.E. (2000). The Safe Dates program: 1-year follow-up results. *American Journal of Public Health*, 90, 1619-1622.
- Frey, K.S., Nolen, S.B., Van Schoiack Edstrom, L., & Hirschstein, M.K. (2005). Effects of a school-based social-emotional competence program: Linking children's goals, attributions, and behavior. *Journal of Applied Developmental Psychology*, 26, 171-200.
- Frey, K.S., Hirschstein, M.K., Snell, J.L., Van Schoiack Edstrom, L., Mackenzie, E.P., & Broderick, C.J. (2005). Reducing playground bullying and supporting beliefs: An experimental trial of the Steps to Respect program. *Developmental Psychology*, 41, 479-490.
- Frey, K.S., Nolen, S.B., Van Schoiack Edstrom, L., & Hirschstein, M. (2001, June). *Second Step: Effects of a social competence program on social goals and behavior*. Poster session presented at the annual meeting of the Society for Prevention Research, Washington, DC.
- Gainer, P.S., Webster, D.W., & Champion, H.R. (1993). A youth violence prevention program. *Violence Prevention*, 128, 303-308.
- Garaigordobil, M., & Echebarria, A. (1995). Assessment of a peer-helping game program on children's development. *Journal of Research in Childhood Education*, 10, 63-69.
- Gesten, E.L., Rains, M.H., Rapkin, B.D., Weissberg, R.P., de Apocada, R.F., Cowen, E.L., et al. (1982). Training children in social problem-solving competencies: A first and second look. *American Journal of Community Psychology*, 10, 95-115.
- Gosin, M.N., Dustman, P.A., Drapeau, A.E., & Harthun, M.L. (2003). Participatory action research: Creating an effective prevention curriculum for adolescents in the Southwestern U.S. *Health Education Research*, 18, 363-379.
- Gottfredson, D.C. (1986). An empirical test of school-based environmental and individual interventions to reduce the risk of delinquent behavior. *Criminology*, 24, 705-731.
- Gottfredson, D.C. (1988). An evaluation of an organization development approach to reducing school disorder. *Evaluation Review*, 11, 739-763.
- Gottfredson, D.C., Gottfredson, G.D., & Hybl, L.G. (1993). Managing adolescent behavior: A multiyear, multischool study. *American Educational Research Journal*, 30, 179-215.
- Gottfredson, G.D., Jones, E.M., & Gore, T.W. (2002). Implementation and evaluation of a cognitive-behavioral intervention to prevent problem behavior in a disorganized school. *Prevention Science*, 3, 43-56.
- Greenberg, M.T., & Kusche, C.A. (1998). Preventive intervention for school-age deaf children: The PATHS curriculum. *Journal of Deaf Studies and Deaf Education*, 3, 49-63.
- Greenberg, M.T., Kusche, C.A., Cook, E.T., & Quamma, J.P. (1995). Promoting emotional competence in school-aged children: The effects of the PATHS curriculum. *Development and Psychopathology*, 7, 117-136.
- Griffin, K.W., Botvin, G.J., & Nichols, T.R. (2003). *Long-term follow-up effects of a school-based drug abuse prevention program on adolescent risky driving*. Manuscript submitted for publication.
- Grossman, D.C., Neckerman, H.J., Koepsell, T.D., Liu, P.Y., & Asher, K.N. (1997). Effectiveness of a violence prevention curriculum among children in elementary school. *Journal of the American Medical Association*, 277, 1505-1611.
- Hansen, W.B. & Dusenbury, L. (2004). All Stars Plus: A competence and motivation enhancement approach to prevention. *Health Education*, 104, 371-381.
- Harrington, N.G., Giles, S.M., Hoyle, R.H., Feeney, G.J., & Yungbluth, S.C. (2001). Evaluation of the All Stars character education and problem behavior prevention program: Effects on mediator and outcome variables for middle school students. *Health Education and Behavior*, 28, 533-546.
- Harris, P.A. (1998). Teaching conflict resolution skills to children: A comparison between a curriculum based and a modified peer mediation program. *Dissertation Abstracts International*, 59 (09), 3397A. (UMI No. 9905455).
- Hausman, A., Pierce, G., & Briggs, L. (1996). Evaluation of a comprehensive violence prevention pro-

- gram: Effects on student behavior. *Journal of Adolescent Health*, 19, 104-110.
- Hawkins, J.D., Catalano, R.F., Kosterman, R., Abbott, R., & Hill, K.G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatrics and Adolescent Medicine*, 153, 226-234.
- Haynes, L.A., & Avery, A.W. (1979). Training adolescents in self-disclosure and empathy skills. *Journal of Counseling Psychology*, 26, 526-530.
- Heckenlaible-Gotto, M.J. (1996). Classroom-based social skills training program: Impact on social behavior and peer acceptance of first grade students. *Dissertation Abstracts International*, 57 (03), 1025A. (UMI No. 9619573).
- Heinemann, G.H. (1990). The effects of the Lions-Quest "Skills for Adolescence" program on self-esteem development and academic achievement at the middle school level. *Dissertation Abstracts International*, 51 (06), 1890A. (UMI No. 9033128).
- Hennessey, B.A. (2004). *Promoting social competence in school-aged children: The effects of the Open Circle program*. Unpublished manuscript.
- Hepler, J.B., & Rose, S.F. (1988). Evaluation of a multi-component group approach for improving the social skills of elementary school children. *Journal of Social Service Research*, 11, 1-18.
- Hiebert, B., Kirby, B., & Jaknavorian, A. (1989). School-based relaxation: Attempting primary prevention. *Canadian Journal of Counseling*, 23, 273-287.
- Houtz, J.C., & Feldhusen, J.C. (1976). The modification of fourth graders' problem solving abilities. *The Journal of Psychology*, 93, 229-237.
- Hudgins, E.W. (1979). Examining the effectiveness of affective education. *Psychology in the Schools*, 16, 581-585.
- Hundert, J., Boyle, M.H., Cunningham, C.E., Duku, E., Heale, J., McDonald, J. et al. (1999). Helping children adjust – A Tri-Ministry Study: II. Program effects. *Journal of Child Psychology and Psychiatry*, 40, 1061-1073.
- Hunter, L. (1998). Preventing violence through the promotion of social competence and positive inter-ethnic contact: An evaluation of three elementary school-based violence prevention instructional approaches. *Dissertation Abstracts International*, 59 (08), 2851A. (UMI No. 9900664).
- Ialongo, N., Poduska, J., Werthamer, L., & Kellam, S. (2001). The distal impact of two first-grade preventive interventions on conduct problems and disorder in early adolescence. *Journal of Emotional & Behavioral Disorders*, 9, 146-161.
- Ialongo, N.S., Werthamer, L., Kellam, S.G., Brown, C.H., Wang, S., & Lin, Y. (1999). Proximal impact of two first-grade preventive interventions on the early risk behaviors for later substance abuse, depression, and antisocial behavior. *American Journal of Community Psychology*, 27, 599-641.
- Johnson, D.L., & Johnson, R. (1997). The impact of conflict resolution training on middle school students. *Journal of Social Psychology*, 137, 11-21.
- Johnson, D.W., Johnson, R.T., & Dudley, B. (1992). Effects of peer mediation training on elementary school students. *Mediation Quarterly*, 10, 89-99.
- Johnson, D.W., Johnson, R., Dudley, B., & Magnuson, D. (1995). Training elementary school students to manage conflict. *Journal of Social Psychology*, 135, 673-686.
- Johnson, D.W., Johnson, R., Dudley, B., Ward, M., & Magnuson, D. (1995). The impact of peer mediation training on the management of school and home conflicts. *American Educational Research Journal*, 32, 829-844.
- Kam, C-M., Greenberg, M.T., & Walls, C.T. (2003). Examining the role of implementation quality in school-based prevention using the PATHS curriculum. *Prevention Science*, 4, 55-63.
- Kenney, D.J., & Watson, T.S. (1996). Reducing fear in the schools: Managing conflict through student problem solving. *Education and Urban Society*, 28, 436-455.
- Knoff, H.M., & Batsche, G.M. (1995). Project ACHIEVE: Analyzing a school reform process for at-risk and underachieving students. *School Psychology Review*, 24, 579-603.
- Krogh, S.L. (1985). Encouraging positive justice reasoning and perspective-taking skills: Two educational interventions. *Journal of Moral Education*, 14, 102-110.
- Krug, E.G., Brener, N.D., Dahlberg, L.L., Ryan, G.W., & Powell, K.E. (1997). The impact of an elementary school-based violence prevention program on visits to the school nurse. *American Journal of Preventive Medicine*, 13, 459-463.
- Kumpfer, K.L., Alvarado, R., Tait, C., & Turner, C. (2002). Effectiveness of school-based family and



- children's skills training for substance abuse prevention among 6-8-year-old rural children. *Psychology of Addictive Behaviors*, 16, S65-S71.
- Kutnick, P. & Marshall, D. (1993). Development of social skills and the use of the microcomputer in the primary school classroom. *British Educational Research Journal*, 19, 517-534.
- LaFromboise, T., & Howard-Pitney, B. (1995). The Zuni life skills development curriculum: Description and evaluation of a suicide prevention program. *Journal of Counseling Psychology*, 42, 479-486.
- Larson, J.D. (1992). Anger and aggression management techniques through the Think First curriculum. *Journal of Offender Rehabilitation*, 18, 101-117.
- Leadbeater, B., Hoglund, W., & Woods, T. (2003). Changing contexts? The effects of a primary prevention program on classroom levels of peer relational and physical victimization. *Journal of Community Psychology*, 31, 397-418.
- LeCroy, C.W., & Rose, S.D. (1986). Evaluation of preventive interventions for enhancing social competence in adolescents. *Social Work Research & Abstracts*, 22, 8-16.
- Leming, J.S. (1998). *An evaluation of the Heartwood Institute's: An ethics curriculum for children*. Murphysboro, IL: Character Evaluation Associates.
- Leming, J.S. (2000). Tell me a story: An evaluation of a literature-based character education programme. *Journal of Moral Education*, 29, 413-427.
- Leming, J.S. (2001). Integrating a structured ethical reflection curriculum into high school community service experiences: Impact on students' sociomoral development. *Adolescence*, 36, 33-45.
- Lewis, T.J., Powers, L.J., Kelk, M.J., & Newcomer, L.L., (2002). Reducing problem behaviors on the playground: An investigation of the application of school-wide positive behavior supports. *Psychology in the Schools*, 39, 181-190.
- Lillenstein, J.A. (2001). Efficacy of a social skills training curriculum with early elementary students in four parochial schools. *Dissertation Abstracts International*, 62 (09), 2971A. (UMI No. 3025055).
- Linares, L.O., Rosbruch, N., Stern, M.B., Edwards, M.E., Walker, G., Abikoff, H.B., et al. (2005). Developing cognitive-social-emotional competencies to enhance academic learning. *Psychology in the Schools*, 42, 405-417.
- Lonzak, H.S., Abbott, R., Hawkins, J.D., Kosterman, R., & Catalano, R.F. (2002). Effects of the Seattle Social Development Project on sexual behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21 years. *Pediatrics and Adolescent Medicine*, 156, 438-447.
- Lopez, B.G. & Lopez, R.G. (1998). The improvement of moral development through an increase in reflection. A training programme. *Journal of Moral Education*, 27, 225-241.
- LoSciuto, L., Rajala, A.K., Townsend, T.N., & Taylor, A.S. (1996). An outcome evaluation across ages: An intergenerational mentoring approach to drug prevention. *Journal of Adolescent Research*, 11, 116-129.
- Lynch, K.B. & McCracken, K. (2001). *Highlights of findings of the Al's Pals intervention Hampton city public schools*. Virginia Institute for Developmental Disabilities, Virginia.
- Masters, J.R., & Lavery, G.E. (1977). The relationship between changes in attitude and changes in behavior in the Schools without Failure program. *Journal of Research and Development in Education*, 10, 36-49.
- McClowry, S., Snow, D.L., & Tamis-LeMonda, C.S. (2005). An evaluation of the effects of INSIGHTS on the behavior of inner city primary school children. *The Journal of Primary Prevention*, 26, 567-584.
- McNeese, R.M.F. (1999). Reducing violent behavior in the classroom: A comparison of two middle schools. *Dissertation Abstracts International*, 60 (08), 2756A. (UMI No. 9941589).
- Menesini, E., Codecasa, E., Benelli, B., & Cowie, H. (2003). Enhancing children's responsibility to take action against bullying: Evaluation of a befriending intervention in Italian middle schools. *Aggressive Behavior*, 29, 1-14.
- Merry, S., McDowell, H., Wild, C.J., Julliet, B., & Cunliffe, R. (2004). A randomized placebo-controlled trial of a school-based depression prevention program. *Journal of American Academy of Child & Adolescent Psychiatry*, 43, 538-547.
- Michelson, L. & Wood, R. (1980). A group assertive training program for elementary schoolchildren. *Child Behavior Therapy*, 2, 1-9.
- Miller, A.L., Gouley, K.K., Seifer, R., & Zakriski, A. (2003, June). *Evaluating the effectiveness of the PATHS curriculum in an urban elementary school*. Paper presented at the meeting of the Society for Prevention Research, Washington DC.

- Morrison, S. (1994). A description and a comparative evaluation of a social skills training program. *Dissertation Abstracts International*, 55 (05), 1226A. (UMI No. 9426011).
- Muuss, R.E. (1960). The effects of a one- and two-year causal-learning program. *Journal of Personality*, 28, 479-491.
- Nelson, G. & Carson, P. (1988). Evaluation of a social problem-solving skills program for third- and fourth-grade students. *American Journal of Community Psychology*, 16, 79-99.
- Nelson, J.R., Martella, R.M., & Marchand-Martella, N. (2002). Maximizing student learning: The effects of a comprehensive school-based program for preventing problem behaviors. *Journal of Emotional & Behavioral Disorders*, 10, 136-148.
- Norris, K. (2001). The ninth grade seminar: A ninth grade transition program evaluation. *Dissertation Abstracts International*, 62 (04), 1370A. (UMI No. 3012846).
- O'Donnell, J., Hawkins, J.D., Catalano, R.F., Abbott, R., & Day, L.E. (1995). Preventing school failure, drug use, and delinquency among low-income children: Long-term intervention in elementary schools. *American Journal of Orthopsychiatry*, 65, 87-100.
- O'Hearn, T.C., & Gatz, M. (1999). Evaluating a psychosocial competence program for urban adolescents. *The Journal of Primary Prevention*, 20, 119-144.
- Ojemann, R.H., Levitt, E.E., Lyle, W.H., & Whiteside, M.F. (1955). The effects of a "causal" teacher-training program and certain curricular changes on grade school children. *Journal of Experimental Education*, 24, 95-114.
- Olweus, D. (1994). Annotation: Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry*, 35, 1171-1190.
- Omizo, M.M., Omizo, S.A., & D'Andrea, M.J. (1992). Promoting wellness among elementary school children. *Journal of Counseling and Development*, 71, 194-198.
- Orpinas, P., Kelder, S., Frankowski, R., Murray, N., Zhang, Q., & McAlister, A. (2000). Outcome evaluation of a multi-component violence-prevention program for middle schools: The Students for Peace project. *Health Education Research*, 15, 45-58.
- Orpinas, P., Parcel, G.S., McAlister, A., & Frankowski, R. (1995). Violence prevention in middle schools: A pilot evaluation. *Journal of Adolescent Health*, 17, 360-371.
- Patton, G.C., Bond, L., Carlin, J.B., Thomas, L., Butler, H., Glover, S., et al. (2006). Promoting social inclusion in schools: A group-randomized trial of effects on student health risk behavior and well-being. *American Journal of Public Health*, 96, 1582-1587.
- Philliber, S., & Allen, J.P. (1992). Life options and community service: Teen Outreach program. In B.C. Miller (Ed.), *Preventing adolescent pregnancy: Model programs and evaluations* (pp. 139-155). Thousand Oaks, CA: Sage Publications, Inc.
- Possel, P., Horn, A.B., Goren, G., Hautzinger, M. (2004). School-based prevention of depressive symptoms in adolescents: A 6-month follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 1003-1010.
- Quest International. (1995). *Report for U.S. Department of Education expert panel on safe, disciplines, and drug-free schools: Lions-Quest Skills for Growing*. Newark, OH: Author.
- Reid, J.B., Eddy, M., Fetrow, A., & Stoolmiller, M. (1999). Description and immediate impacts of a preventive intervention for conduct problems. *American Journal of Community Psychology*, 27, 483-517.
- Renfro, J., Huebner, R., & Ritchey, B. (2003). School violence prevention: The effects of a university and high school partnership. *Journal of School Violence*, 2, 81-99.
- Reyes, O., & Jason, L.A. (1991). An evaluation of a high school dropout prevention program. *Journal of Community Psychology*, 19, 221-230.
- Rimm-Kaufman, S.E., Fan, X., Chiu, Y-J., & 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.
- Roberts, L., White, G., & Yeomans, P. (2004). Theory development and evaluation of project WIN: A violence reduction program for early adolescents. *Journal of Early Adolescence*, 24, 460-483.
- Rollin, S.A., Rubin, R., Marciel, R., Ferullo, U., & Buncher, R. (1995). Project KICK: a school-based drug education health promotion research project. *Counseling Psychology Quarterly*, 8, 345-359.
- Roseberry, L. (1997). An applied experimental evaluation of conflict resolution curriculum and social skills development. *Dissertation Abstracts International*, 58 (03), 724A. (UMI No. 9726399).



- Rotheram, M.J. (1982). Social skills training with underachievers, disruptive, and exceptional children. *Psychology in the Schools*, 19, 532-539.
- Rotheram, M.J., & Armstrong, M. (1980). Assertiveness training with high school students. *Adolescence*, 15, 267-76.
- Salzman, M., & D'Andrea, M. (2001). Assessing the impact of a prejudice prevention project. *Journal of Counseling and Development*, 79, 341-346.
- Sarason, I.G., & Sarason, B.R. (1981). Teaching cognitive and social skills to high school students. *Journal of Consulting and Clinical Psychology*, 49, 908-919.
- Sawyer, M.G., Macmullin, C., Graetz, B., Said, J.A., Clark, J.J., & Baghurst, P. (1997). Social skills training for primary school children: A 1-year follow-up study. *Journal of Pediatric Child Health*, 33, 378-383.
- Schaps, E., Moskowitz, J.M., Condon, J.W., & Malvin, J. (1984). A process and outcome evaluation of an affective teacher training primary prevention program. *Journal of Alcohol and Drug Education*, 29, 35-64.
- Schulman, J.L., Ford, R.C., & Busk, P. (1973). A classroom program to improve self-concept. *Psychology in the Schools*, 10, 481-486.
- Schultz, L.H., Barr, D.J., & Selman, R.L. (2001). The value of a developmental approach to evaluating character development programmes: An outcome study of Facing History and Ourselves. *Journal of Moral Education*, 30, 3-27.
- Shapiro, J.P., Burgoon, J.D., Welker, C.J., & Clough, J.B. (2002). Evaluation of the peacemakers program: School-based violence prevention for students in grades four through eight. *Psychology in the Schools*, 39, 87-100.
- Sharpe, T.L., Brown, M., & Crider, K. (1995). The effects of a sportsmanship curriculum intervention on generalized positive social behavior of urban elementary school students. *Journal of Applied Behavior Analysis*, 28, 401-416.
- Sharpe, T., Crider, K., Vyhldal, T., & Brown, M. (1996). Description and effects of prosocial instruction in an elementary physical education setting. *Education and Treatment of Children*, 19, 435-457.
- Shochet, I.M., Dadds, M.R., Holland, D., Whitefield, K., Harnett, P.H., & Osgarby, S.M. (2001). The efficacy of a universal school-based program to prevent adolescent depression. *Journal of Clinical Child Psychology*, 30, 303-315.
- Simons-Morton, B., Haynie, D., Saylor, K., Crump, A.D., & Chen, R. (2005). The effects of the Going Places Program on early adolescent substance use and antisocial behavior. *Prevention Science*, 6, 187-197.
- Smith, P.K., & Sharp, S. (Eds.) (1994). *School bullying: Insights and perspectives*. Routledge: London.
- Smokowski, P.R., Fraser, M.W., Day, S.H., Galinsky, M.J., & Bacallao, M.L. (2004). School-based skills training to prevent aggressive behavior and peer rejection in childhood: Evaluating the Making Choices program. *The Journal of Primary Prevention*, 25, 233-251.
- Solomon, D., Battistich, V., & Watson, M. (1993). *A longitudinal investigation of the effects of a school intervention program on children's social development*. Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans, LA.
- Solomon, D., Watson, M.S., Delucchi, K.L., Schaps, E., & Battistich, V. (1988). Enhancing children's prosocial behavior in the classroom. *American Educational Research Journal*, 25, 527-555.
- Sorsdahl, S.N., & Sanche, R.P. (1985). The effects of classroom meetings on self-concept and behavior. *Elementary School Guidance & Counseling*, 20, 49-56.
- Sprague, J., Walker, H., Golly, A., White, K., Myers, D., & Shannon, T. (2001). Translating research into effective practice: The effects of a universal staff and student intervention on key indicators of school safety and discipline. *Education and Treatment of Children*, 24, 495-511.
- Sprinthall, N.A., & Scott, J.R. (1989). Promoting psychological development, math achievement, and success attribution of female students through deliberate psychological education. *Journal of Consulting Psychology*, 36, 440-446.
- Stacey, S., & Rust, J.O. (1985). Evaluating the effectiveness of the DUSO-1 (revised) program. *Elementary School Guidance & Counseling*, 20, 84-90.
- Stafford, W.B., & Hill, J.D. (1989). Planned program to foster positive self-concepts in kindergarten children. *Elementary School Guidance & Counseling*, 24, 47-57.
- Stephenson, D. (1979). *Evaluation of the Twin Falls Primary Positive Action Program 1978-1979*. Un-

- published report, College of Southern Idaho.
- Stevahn, L., Johnson, D.W., Johnson, R.T., Oberle, K., & Wahl, L. (2000). Effects of conflict resolution training integrated into a kindergarten curriculum. *Child Development*, 71, 772-784.
- Stevahn, L., Johnson, D.W., Johnson, R.T., & Real, D. (1996). The impact of a cooperative or individualistic context on the effectiveness of conflict resolution training. *American Educational Research Journal*, 33, 801-823.
- Switzer, G.E., Simmons, R.G., Dew, M.A., Regalski, J.M., & Wang, C. (1995). The effect of a school-based helper program on adolescent self-image, attitudes, and behavior. *Journal of Early Adolescence*, 15, 429-455.
- Taub, J. (2001). Evaluation of the Second Step violence prevention program at a rural elementary school. *School Psychology Review*, 31, 186-200.
- Taylor, C.A., Liang, B., Tracy, A.J., Williams, L.M., & Seigle, P. (2002). Gender differences in middle school adjustment, physical fighting, and social skills: Evaluation of a social competency program. *The Journal of Primary Prevention*, 23, 259-272.
- The Center for Evaluation and Research with Children and Adolescents (1999). *The impact of The Great Body Shop on student health risk behaviors and other risk and protective factors using the Minnesota Student Survey: An evaluation report to the Children's Health Market*. Boston, MA: Author.
- Thompson, K.L., Bundy, K.A., & Wolfe, W.R. (1996). Social skills training for young adolescents: Cognitive and performance components. *Adolescence*, 31, 505-521.
- Thomson-Rountree, P., & Woodruff, A.E. (1982). An examination of Project AWARE: The effects on children's attitudes towards themselves, others, and school. *Journal of School Psychology*, 20, 20-30.
- Trudeau, L., Spoth, R., Lillehoj, C., Redmond, C., & Wiekrama, K.A.S. (2003). Effects of a preventive intervention on adolescent substance use initiation, expectancies, and refusal intentions. *Prevention Science*, 4, 109-122.
- Twemlow, S., Fonagy, P., Sacco, F., Gies, M., Evans, R., & Ewbank, R. (2001). Creating a peaceful school learning environment: A controlled study of an elementary school intervention to reduce violence. *American Journal of Psychiatry*, 158, 808-810.
- Van Schoiack-Edstrom, L., Frey, K.S., & Beland, K. (2002). Changing adolescents' attitudes about relational and physical aggression: An early evaluation of a school-based intervention. *School Psychology Review*, 31, 201-216.
- Vicary, J.R., Henry, K.L., Bechtel, L.J., Swisher, J.D., Smith, E.A., Wylie, R., et al. (2004). Life skills training effects for high and low risk rural junior high school females. *The Journal of Primary Prevention*, 25, 399-416.
- Vogrin, D., & Kassonove, H. (1979). Effects of behavior rehearsal, audio taped observation, and intelligence on assertiveness and adjustment in third-grade children. *Psychology in the Schools*, 16, 422-429.
- Waksman, S.A. (1984). Assertion training with adolescents. *Adolescence*, 19, 123-130.
- Watson, M., Battistich, V., & Solomon, D. (1997). Enhancing students' social and ethical development in schools: An intervention program and its effects. *International Journal of Educational Research*, 27, 571-586.
- Weissberg, R.P., & Caplan, M. (1994). *Promoting social competence and preventing antisocial behavior in young urban adolescents*. Unpublished manuscript.
- Weissberg, R.P., Gesten, E.L., Carnrike, C.L., Toro, P.A., Rapkin, B.D., Davidson, E., & Cowen, E. (1981). Social problem-solving skills training: A competence-building intervention with second- to fourth-grade children. *American Journal of Community Psychology*, 9, 411-423.
- Weissberg, R.P., Gesten, E.L., Rapkin, B.D., Cowen, E.L., Davidson, E., Flores de Apodaca, R., et al. (1981). Evaluation of a social-problem-solving training program for suburban and inner-city third-grade children. *Journal of Consulting and Clinical Psychology*, 49, 251-261.
- Welch, F.C., & Dolly, J. (1980). A systematic evaluation of Glasser's techniques. *Psychology in the Schools*, 17, 385-389.
- Work, W.C., & Olsen, K.H. (1990). Evaluation of a revised fourth grade social problem solving curriculum: Empathy as a moderator of adjustive gain. *Journal of Primary Prevention*, 11, 143-157.



Appendix B: Bibliography of Reviewed Indicated Studies

- Aberson, B. (1986). *I Can Problem Solve (ICPS): A cognitive training program for kindergarten children*. Unpublished manuscript.
- Allen, G.J., Chinsky, J.M., Larcen, S.W., Lochman, J.E., & Selinger, H.V. (1976). *Community Psychology and the schools: A behaviorally-oriented multilevel preventive approach*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Altmann, H.A., & Firnesz, K.M. (1973). A role-playing approach to influencing behavioral change and self-esteem. *Elementary School Guidance and Counseling*, 7, 276-281.
- Arbuthnot, J., & Gordon, D.A. (1986). Behavioral and cognitive effects of a moral reasoning development intervention for high-risk behavior-disordered adolescents. *Journal of Consulting and Clinical Psychology*, 54, 208-216.
- Asarnow, J.R., Scott, C.V., & Mintz, J. (2002). A combined cognitive-behavioral family education intervention for depression in children: A treatment development study. *Cognitive Therapy and Research*, 26, 221-229.
- August, G.J., Hektner, J.M., Egan, E.A., Realmuto, G.M., & Bloomquist, M.L. (2002). The Early Risers longitudinal prevention trial: Examination of 3-year-outcomes in aggressive children with intent-to-treat and as-intended analyses. *Psychology of Addictive Behaviors*, 16, S27-S39.
- Bienert, H., & Schneider, B.H. (1995). Deficit-specific social skills training with peer-nominated aggressive-disruptive and sensitive-isolated preadolescents. *Journal of Clinical Child Psychology*, 24, 287-299.
- Braswell, L., August, G.J., Bloomquist, M.L., & Realmuto, G.M. (1997). School-based secondary prevention for children with disruptive behavior: Initial outcomes. *Journal of Abnormal Child Psychology*, 25, 197-208.
- Butler, L., Mieztis, S., Friedman, R., & Cole, E. (1980). The effects of two school-based intervention programs on depressive symptoms in preadolescents. *American Educational Research Journal*, 17, 111-119.
- Camp, B.W., Blom, G.E., Hebert, F., & van Doorninck, W.J. (1977). "Think aloud": A program for developing self-control in young aggressive boys. *Journal of Abnormal Child Psychology*, 5, 157-169.
- Cavell, T.A., & Hughes, J.N. (2000). Secondary prevention as context for assessing change processes in aggressive children. *Journal of School Psychology*, 38, 199-235.
- Collier, C.E. (2002). *The effect of pro-social skills training on the problem behavior of selected African-American children in the District of Columbia public schools: Recommendations for change*. Unpublished doctoral dissertation, George Washington University.
- Conduct Problems Prevention Research Group. (2002). Evaluation of the first 3 years of the Fast Track prevention trial with children at high risk for adolescent conduct problems. *Journal of Abnormal Child Psychology*, 30, 19-35.
- Dadds, M.R., Spence, S.H., Holland, D.E., Barrett, P.M., & Laurens, K.R. (1997). Prevention and early intervention for anxiety disorders: A controlled trial. *Journal of Consulting and Clinical Psychology*, 65, 627-635.
- Deffenbacher, J.L., Lynch, R.S., Oetting, E.R., & Kemper, C.C. (1996). Anger reduction in early adolescents. *Journal of Counseling Psychology*, 43, 149-157.
- DeRosier, M.E. (2004). Building relationships and combating bullying: Effectiveness of a school-based social skills group intervention. *Journal of Clinical Child and Adolescent Psychology*, 33, 196-201.
- Dishion, T.J., & Andrews, D.W. (1995). Preventing escalation in problem behaviors with high-risk young adolescents: Immediate and 1-year outcomes. *Journal of Consulting and Clinical Psychology*, 63, 538-548.
- Filipeczak, J., Archer, M., & Friedman, R.M. (1980). In-school social skills training use with disruptive adolescents. *Behavior Modification*, 4, 243-263.
- Fraser, M.W., Day, S.H., Galinsky, M.J., Hodges, V.G., & Smokowski, P.R. (2004). Conduct problems and peer rejection in childhood: A randomized trial of the Making Choices and Strong Families programs. *Research on Social Work Practice*, 14, 313-324.
- Gallegos, R.A. (1985). *A brief school based preventive intervention with vulnerable early adolescents*. Unpublished doctoral dissertation, University of Denver.
- Gonzalez, G.M. (1988). *Comparing the efficacy of rational-emotive and process-oriented short-term*

- group approaches for potential Hispanic school dropouts. Unpublished doctoral dissertation, California School of Professional Psychology.
- Greenleaf, D.O. (1982). The use of structured learning therapy and transfer programming with disruptive adolescents in a school setting. *Journal of School Psychology*, 20, 122-130.
- Gresham, F.M., & Nagle, R.J. (1980). Social skills training with children: Responsiveness to modeling and coaching as a function of peer orientation. *Journal of Consulting and Clinical Psychology*, 48, 718-729.
- Hammond, W.R., & Yung, B.R. (1991). Preventing violence in at-risk African-American youth. *Journal of Health Care for the Poor and Underserved*, 2, 359-373.
- Harris, K.R., & Brown, R.D. (1982). Cognitive behavior modification and informed teacher treatments for shy children. *Journal of Experimental Education*, 50, 137-143.
- Hepler, J.B. & Rose, S.F. (1988). Evaluation of a multi-component group approach for improving social skills of elementary school children. *Journal of Social Service Research*, 11, 1-18.
- Hudley, C., Britsch, B., Wakefield, W.D., Smith, T., Demorat, M., & Cho, S. (1998). An attribution re-training program to reduce aggression in elementary school students. *Psychology in the Schools*, 35, 271-282.
- Hudley, C., & Graham, S. (1993). An attributional intervention to reduce peer-directed aggression among African-American boys. *Child Development*, 64, 124-138.
- Jaycox, L.H., Reivich, K.J., Gillham, J., & Seligman, M. (1994). Prevention of depressive symptoms in school children. *Behavior Research and Therapy*, 32, 801-816.
- Johnson, T., Tyler, V., Thompson, R., & Jones, E. (1971). Systematic desensitization and assertive training in the treatment of speech anxiety in middle-school students. *Psychology in the Schools*, 8, 263-267.
- Kahn, J.S., Kehle, T.J., Jenson, W.R., Clark, E. (1990). Comparison of cognitive-behavioral, relaxation, and self-modeling interventions for depression among middle-school students. *School Psychology Review*, 19, 196-211.
- Kamps, D., Kravits, T., Stolze, J. & Swaggart, B. (1999). Prevention strategies for at-risk students and students with EBD in urban elementary schools. *Journal of Emotional & Behavioral Disorders*, 7, 178-189.
- King, C.A., & Kirschenbaum, D.S. (1990). An experimental evaluation of a school-based program for children at risk: Wisconsin early intervention. *Journal of Community Psychology*, 18, 167-177.
- Kirschenbaum, D.S., DeVoge, J.B., Marsh, M.E., & Steffen, J.J. (1980). Multimodal evaluation of therapy versus consultation components in a large inner-city early intervention program. *American Journal of Community Psychology*, 8, 587-601.
- Ladd, G.W. (1981). Effectiveness of a social learning method for enhancing children's social interaction and peer acceptance. *Child Development*, 52, 171-178.
- LaGreca, A.M., & Santogrossi, D.A. (1980). Social skills training with elementary school students: A behavioral group approach. *Journal of Consulting and Clinical Psychology*, 48, 220-227.
- Larkin, R. (1998). *The effect of behavioral group counseling on improving self-esteem, perceived self-control, and classroom behavior of elementary students*. Unpublished doctoral dissertation, University of Georgia.
- Lochman, J.E., Burch, P.R., Curry, J.F., Lampron, L.B. (1984). Treatment and generalization effects of cognitive-behavioral and goal-setting interventions with aggressive boys. *Journal of Consulting and Clinical Psychology*, 52, 915-916.
- Lochman, J.E, Coie, J.D., Underwood, M.K., & Terry, R. (1993). Effectiveness of a social relations intervention program for aggressive and nonaggressive, rejected children. *Journal of Consulting and Clinical Psychology*, 61, 1053-1058.
- Lochman, J.E., Lampron, L.B., Gemmer, T.C., Harris, S.R., & Wyckoff, G.M. (1989). Teacher consultation and cognitive-behavioral interventions with aggressive boys. *Psychology in the Schools*, 26, 179-188.
- Lochman, J.E., & Wells, K.C. (2002). The Coping Power Program at the middle-school transition: Universal and indicated prevention effects. *Psychology of Addictive Behaviors*, 16, S40-S54.
- Lochman, J.E., & Wells, K.C. (2004). The Coping Power Program for preadolescent boys and their parents: Outcome effects at the one-year follow-up. *Journal of Consulting and Clinical Psychology*, 72, 571-578.



- Malgady, R.G., Rogler, L.H., & Costantino, G. (1990). Hero/heroine modeling for Puerto Rican adolescents: A preventive mental health intervention. *Journal of Consulting and Clinical Psychology, 58*, 469-474.
- Mannarino, A.P., Christy, M., Durlak, J.A., & Magnussen, M.G. (1982). Evaluation of social competence training in the schools. *Journal of School Psychology, 20*, 11-19.
- McConaughy, S.H., Kay, P.J., & Fitzgerald, M. (1999). The Achieving, Behaving, Caring project for preventing ED: Two-year outcomes. *Journal of Emotional and Behavioral Disorders, 7*, 224-239.
- Metropolitan Area Child Study Research Group. (2002). A cognitive-ecological approach to preventing aggression in urban settings: Initial outcomes for high-risk children. *Journal of Consulting and Clinical Psychology, 70*, 179-194.
- Muller, S.D., & Madsen, Jr., C.H. (1970). Group desensitization for "anxious" children with reading problems. *Psychology in the Schools, 7*, 184-189.
- Oden, S., & Asher, S.R. (1977). Coaching children in social skills for friendship making. *Child Development, 48*, 495-506.
- Pepler, D.J., King, G., & Byrd, W. (1991). A social-cognitively based social skills training program for aggressive children. In D. J. Pepler & K. H. Rubin (Eds.), *The Development and Treatment of Childhood Aggression* (pp. 361-379). Hillsdale, NJ: Lawrence Erlbaum.
- Possel, P., Horn, A.B., Goren, G., Hautzinger, M. (2004). School-based prevention of depressive symptoms in adolescents: a 6-month follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 1003-1010.
- Prinz, R.J., Blechman, E.A., & Dumas, J.E. (1994 patterns). An evaluation of peer coping-skills training for childhood aggression. *Journal of Clinical Child Psychology, 23*, 193-203.
- Quinn, M.M. (2002). Changing antisocial behavior in young boys: A structured cooperative learning approach. *Education and Treatment of Children, 25*, 380-395.
- Roberts, C., Kane, R., Thomson, H., Bishop, B., & Hart, B. (2003). The prevention of depressive symptoms in rural school children: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 71*, 622-628.
- Stark, K.D., Reynolds, W.M., & Kaslow, N.J. (1987). A comparison of the relative efficacy of self-control therapy and a behavioral problem-solving therapy for depression in children. *Journal of Abnormal Child Psychology, 15*, 91-113.
- Sukhodolsky, D.G., Solomon, R.M., & Perine, J. (2000). Cognitive-behavioral, anger-control intervention for elementary school children: A treatment outcome study. *Journal of Child and Adolescent Group Therapy, 10*, 159-170.
- Tiffen, K., & Spence, S.H. (1986). Responsiveness of isolated versus rejected children to social skills training. *Association for Child Psychology and Psychiatry, 27*, 343-355.
- Tobias, A.K., & Myrick, R.D. (1999). A peer facilitator-led intervention with middle school problem-behaviors students. *Professional School Counseling, 3*, 27-33.
- Tremblay, R.E., Viatro, F., Bertrand, L., LeBlanc, M., Beauchesne, H., Boileau, H., et al. (1992). Parent and child training to prevent early onset of delinquency: The Montréal longitudinal-experimental study. In J. McCord & R. E. Tremblay (Eds.), *Preventing antisocial behavior: Interventions from birth through adolescence*. NY: Guilford.
- Verduyn, C.M., Lord, W., & Forrest, G.C. (1990). Social skills training in schools: An evaluation study. *Journal of Adolescence, 13*, 3-16.
- Walker, H.M., Golly, A., McLane, J.Z., & Kimmich, M. (2005). The Oregon First Step to Success replication initiative: Statewide results of an evaluation of the program's impact. *Journal of Emotional and Behavioral Disorders, 13*, 163-172.
- 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*, 66-80.
- Weisz, J.R., Thurber, C.A., Sweeney, L., Proffitt, V.D., & LeGagnoux, G.L. (1997). Brief treatment of mild-to-moderate child depression using primary and secondary control enhancement training. *Journal of Consulting and Clinical Psychology, 65*, 703-707.
- Wilson, N.H. (1986). Anxiety management training and study skills counseling for students on self-esteem and test anxiety and performance. *The School Counselor, 34*, 18-31.
- Winer-Elkin, J.I., Weissberg, R.P., & Cowen, E.L. (1988). Evaluation of a planned short-term intervention

for schoolchildren with focal adjustment problems. *Journal of Clinical Child Psychology*, 17, 106-115.

Yu, D.L., & Seligman, M.E.P. (2002). Preventing depressive symptoms in Chinese children. *Prevention and Treatment*, 5, 1-31.



Appendix C: Bibliography of Reviewed After-School Studies

- Astroth, K.A. & Haynes, G.W. (2002). More than cows and cooking: newest research shows the impact of 4-H. *Journal of Extension*, 40, 1-10.
- Baker, D., & Witt, P.A. (1996). Evaluation of the impact of two after-school programs. *Journal of Park and Recreation Administration*, 14, 60-81.
- Baker, K., Pollack, M., & Kohn, I. (1995). Violence prevention through informal socialization: An evaluation of the South Baltimore Youth Center. *Studies on Crime and Prevention*, 4, 61-85.
- Belgrave, F.Z., Chase-Vaughn, G., Gray, F., Addison, J.D., & Cherry, V.R. (2000). The effectiveness of a culture- and gender-specific intervention for increasing resiliency among African American preadolescent females. *Journal of Black Psychology*, 26, 133-147.
- Bergin, D.A., Hudson, L.M., Chryst, C.F., & Resetar, M.J. (2002). An afterschool intervention program for educationally disadvantaged young children. *The Urban Review*, 24, 203-217.
- Bissell, J. Dugan, C., Ford-Johnson, A., Jones, P., & Ashurst, J. (2002). *Evaluation of the YS-CASE after school program for California Work Opportunity and Responsibility to Kids (CalWORKS)*. Department of Education, University of California, Irvine and Research Support Services.
- Brooks, P.E., Mojica, C.M., & Land, R.E. (1995). *Final evaluation report: Longitudinal study of LA's VBEST after school education and enrichment program, 1992-1994*. Los Angeles: University of California, Graduate School of Education & Information Studies, Center for the Study of Evaluation.
- Chase, R.A. (2000). *Hmong-American partnership: 2HTN final report*. St. Paul, JN: Wilder Research Center.
- Dynarski, M., James-Burdumy, S., Moore, M., Rosenberg, L. Deke, J., & Mansfield, W. (2004). *When schools stay open late: The national evaluation of the 21st Century Community Learning Centers Program: New findings*. U.S. Department of Education, National Center for Education Evaluation and Regional Assistance. Washington, DC: U.S. Government Printing Office. Retrieved June 25, 2005, from <http://ies.ed.gov/ncee/pubs/cle2004.asp>.
- Fabiano, L., Pearson, L.M., & Williams, I.J. (2005). *Putting students on a pathway to academic and social success: Phases III findings of the Citizen Schools evaluation*. Washington, DC: Policy Studies Associates.
- Foley, E.M., & Eddins, G. (2001). *Preliminary analysis of Virtual Y after-school attendance and academic performance: Final evaluation report program year 1999-2000*. NY: National Center for Schools and Communities, Fordham University.
- Fuentes, E.G. (1983). A primary prevention program for psychological and cultural identity enhancement: Puerto Rican children in semi-rural northeast United States (doctoral dissertation, Boston University, 1983). *Dissertation Abstracts International*, 44(05), 1578B.
- Gottfredson, D.C., Soulé, D.A., & Cross, A. (2004). *A statewide evaluation of the Maryland After School Opportunity Fund Program*. Department of Criminology and Criminal Justice, University of Maryland.
- Grenawalt, A., Halback, T., Miller, M., Mitchell, A., O'Rourke, B., Schmitz, T., et al. (2005). *4-H animal science program evaluation: Spring 2004-what is the value of the Wisconsin 4-H animal science projects?* Madison, WI: University of Wisconsin Cooperative Extension. Retrieved June 25, 2005, from <http://www.uwex.edu/ces/pdande/evaluation/evalustudies.html>.
- Hahn, A., Leavitt, T., & Aaron, P. (1994). *Evaluation of the Quantum Opportunities Program (QOP): Did the program work?* Waltham, MA: Brandeis University, Heller Graduate School, Center for Human Resources.
- Huang, D. (2004). *Exploring the long-term impact of LA's BEST on students' social and academic development*. National Center for Research on Evaluation, Standards, and Student Testing (CRESST) Center, Center for the Study of Evaluation (CSE), Graduate School of Education and Information Studies, University of California, Los Angeles.
- Hudley, C. (1999). *Problem behaviors in middle childhood: Understanding risk status and protective factors*. Montreal, Quebec, Canada: California Wellness Foundation. (ERIC Document Reproduction Service No. ED 430-066).
- James-Burdumy, S., Dynarski, M., Moore, M., Deke, J., & Mansfield, W. (2005). *When schools stay open late: The national evaluation of the 21st Century Community Learning Centers Program*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Educa-

- tion Evaluation and Regional Assistance. Retrieved June 27, 2005, from www.ed.gov/rschstat/eval/other/learningcenters/index.html.
- Kam, C., Greenberg, M.T., & Walls, C. (2003). Examining the role of implementation quality in school-based prevention using the PATHS curriculum. *Prevention Science, 41*(1), 55-63.
- LaFrance, S., Twersky, F., Latham, N., Foley, E. Bott, C., Lee, L., et al. (2001). *A safe place for healthy youth development: A comprehensive evaluation of the Bayview Safe Haven*, San Francisco, CA: BTW Consultant and LaFrance Associates.
- Lauver, S.C. (2002). Assessing the benefits of an after-school program for urban youth: an impact and process evaluation (doctoral dissertation, University of Pennsylvania, 2002). *Dissertation Abstracts International, 63*(02), 553A.
- LoSciuto, L., Hilbert, S.M., Fox, M.M., Porcellini, L., & Lanphear, A. (1999). A two-year evaluation of the Woodrock Youth Development Project. *Journal of Early Adolescence, 19*, 488-507.
- Mahoney, J.L., Lord, H., & Carryl, E. (2005). Afterschool program participation and the development of child obesity and peer acceptance. *Applied Developmental Science, 9*, 202-215.
- Mason, M.J., & Chuang, S. (2001). Culturally-based after-school art programming for low-income urban children: Adaptive and preventive effects. *Journal of Primary Prevention, 22*, 45-54.
- Maxfield, J., Schirm, A., & Rodríguez-Planas, N. (2003). *The Quantum Opportunity Program demonstration: Implementation and short-term impacts*. Washington, DC: Mathematical Policy Research (ERIC Document Reproduction Service No. ED481809).
- McClanahan, W.S., Sipe, C.L., & Smith, T.J. (2004). *Enriching summer work: An evaluation of the summer career exploration program*. Philadelphia, PA: Public/Private Ventures.
- Monsaas, J. (1994). *Evaluation report-final validation: Project EMERGE, Crisp County*. Atlanta, GA: Emory University.
- Morrison, G.M., Storino, M.H., Robertson, L.M., Weissglass, T., & Dondero, A. (2000). The protective function of after-school programming and parent education and support for students at risk for substance abuse. *Evaluation and Program Planning, 23*, 365-371.
- Neufeld, J., Smith, M.G., Estes, H., & Hill, G.C. (1995). Rural after school child care: A demonstration project in a remote mining community. *Rural Special Education Quarterly, 14*, 12-16.
- Oyserman, D., Terry, K., & Bybee, D. (2002). A possible selves intervention to enhance school involvement. *Journal of Adolescence, 25*, 313-326.
- Philliber, S., Kaye, J., & Herrling, S. (2001). *The national evaluation of the Children's Aid Society Carrera Model program to prevent teen pregnancy*. Accord, NY: Philliber Research Associates. Retrieved June 16, 2006, from <http://www.childrensaidsociety.org/press/releasearchive/article/33441>.
- Phillips, Rugby S.C. (1999). *Intervention with siblings of children with developmental disabilities from economically disadvantaged families*. *Families in Society, 80*, 569-577.
- Pierce, L.H., & Shield, N. (1998). The Be A Star community-based after-school program: Developing resiliency in high-risk preadolescent youth. *Journal of Community Psychology, 26*, 175-183.
- Prenovost, J.K.E. (2001). A first-year evaluation of after school learning programs in four urban middle schools in the Santa Ana Unified school district (doctoral dissertation, University of California, Irvine, 2001). *Dissertation Abstracts International, 62*, 03A.
- Ross, J.G., Saavadra, P.J., Shur, G.H., Winters, F., & Felner, R.D. (1992). The effectiveness of an after-school program for primary grade latchkey students on precursors of substance abuse. *Journal of Community Psychology, OSOAP Special Issue, 22*-38.
- Rusche, S., Kemp, P., Krizmanich, J., Bowles, E., Moore, B., Craig, Jr., H.E., et al. (1999). *Helping everyone reach out: Club hero, final report*. Atlanta, GA: National Families in Action & Emstar Research.
- Schinke, S.P., Orlandi, M.A., Botvin, G.J. Gilechrist, L.D., Trimble, J.E., & Locklear, V.S. (1988). Preventing substance abuse among American-Indian Adolescents: A bicultural competence skills approach. *Journal of Counseling Psychology, 35*, 87-90.
- Schinke, S.P. Orlandi, M.A., & Cole, K.C. (1992). Boys & Girls Clubs in public housing developments: Prevention services for youth at risk. *Journal of Community Psychology, OSAP Special Issue, 188*-128.
- Smith, R.E., Smoll, F.L., & Curtis, B. (1979). Coach effectiveness training: A cognitive-behavioral approach to enhancing relationship skills in youth sport coaches. *Journal of Sport Psychology, 1*, 59-75.
- Smoll, F.L., Smith, R.E., Barnett, N.P., & Everett, J.J. (1993). Enhancement of children's self-esteem through social support training for youth sport coaches. *Journal of Applied Psychology, 78*, 602-610.



- St. Pierre, T.L., Kaltreider, D.L. (1992). Drug prevention in a community setting: A longitudinal study of the relative effectiveness of a three-year primary prevention program in Boys & Girls clubs across the nation. *American Journal of Community Psychology*, 20, 673-706.
- St. Pierre, T.K., Mark, M.M., Kaltreider, D.L., & Aikin, K.J. (1997). Involving parents of high-risk youth in drug prevention: A three-year longitudinal study in Boys & Girls Clubs. *Journal of Early Adolescence*, 17, 21-50.
- St. Pierre, T.L., Mark, M.M., Kaltreider, D.L., & Campbell, B. (2001). Boys and Girls Clubs and school collaborations: A longitudinal study of a multicomponent substance abuse prevention program for high-risk elementary school children. *Journal of Community Psychology*, 29, 87-106.
- Tucker, C.M., & Herman, K.C. (2002). Using culturally sensitive theories and research to meet the academic needs of low-income African American children. *American Psychologist*, 57, 762-773.
- Vandell, D.L., Reisner, E.R., Brown, B.B., Dadisman, K., Pierce, K.M., & Lee, D. (2005). *The study of promising after-school programs: Descriptive report of the promising programs*. University of Wisconsin, Madison: Wisconsin Center for Education Research. Retrieved June 16, 2006, from <http://www.wcer.wisc.edu/childcare/statements.html>.
- Vincent, V. & Guinn, R. (2001). Effectiveness of a Colonia educational intervention. *Hispanic Journal of Behavioral Sciences*, 23, 229-238.
- Weisman, S.A., Soulé, D.A., & Womer, S.C. (2001). *Maryland After School Community Grant Program report on the 1999-2000 school year evaluation of the phase I after-school programs*. University of Maryland, College Park.
- Weisman, S.A., Womer, S.C, Kellstrom, M., Bryner, S. Kahler, A., Slocum, L.A., et al. (2003). *Maryland After School Grant Program part I: Report on the 2001-2002 school year evaluation of the phase 3 after school programs*. University of Maryland, College Park.
- Zief, S.G. (2005). A mixed methods study of the impacts and processes of an after-school program for urban elementary youth (doctoral dissertation, University of Pennsylvania, 2005). *Dissertation Abstracts International*, 66(02), 447A

References

- Association for Supervision and Curriculum Development. (2007). *The learning compact redefined: A call to action — A report of the Commission on the Whole Child*. Alexandria, VA: Author.
- Benson, P.L., Scales, P.C., Leffert, N., & Roehlkepartain, E.G. (1999). *A fragile foundation: The state of developmental assets among American youth*. Minneapolis, MN: Search Institute.
- Blum, R.W., & Libbey, H.P. (2004). School connectedness — Strengthening the health and education outcomes for teenagers. *Journal of School Health*, 74(4), 229-299.
- Centers for Disease Control and Prevention. (2008). Youth risk behavior surveillance — United States, 2007. *MMWR*, 57(No. SS-4).
- Collaborative for Academic, Social, and Emotional Learning. (2005). *Safe and Sound: An Educational Leader's Guide to Evidence-Based Social and Emotional Learning (SEL) Programs, Illinois Edition*. Chicago, IL: Author.
- Devaney, E., O'Brien, M.U., Resnik, H., Keister, S., & Weissberg, R.P. (2006). *Sustainable schoolwide social and emotional learning: Implementation guide and toolkit*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.
- Diekstra, R.F.W. (2008). Effectiveness of school-based social and emotional education programmes worldwide. In *Social and emotional education: An international analysis* (pp. 255-312). Santander, Spain: Fundación Marcelino Botín.
- Dryfoos, J.G. (1997). The prevalence of problem behaviors: Implications for programs. In R.P. Weissberg, T.P. Gullotta, R.L. Hampton, B.A. Ryan, & G.R. Adams (Eds.), *Healthy children 2010: Enhancing children's wellness* (pp. 17-46). Thousand Oaks, CA: Sage.
- DuBois, D.L., Holloway, B.E., Valentine, J.C., & Cooper, H. (2002). Effectiveness of mentoring programs for youth: A meta-analytic review. *American Journal of Community Psychology*, 30, 157-198.
- Durlak, J.A. & Dupre, E.P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology*, 41, 327-350.
- Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D., & Schellinger, K.B. (2008). *Enhancing students' social and emotional learning promotes success in school: A meta-analysis*. Manuscript submitted for publication.
- Durlak, J.A., Weissberg, R.P., & Pachan, M. (in press). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*.
- Durlak, J.D. & Wells, A.M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology*, 25, 15-152.
- Elias, M.J., Zins, J.E., Weissberg, R.P., Frey, K.S., Greenberg, M.T., Haynes, N.M., Kessler, R. Schwab-Stone, M.E., & Shriver, T.P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum.
- Greenberg, M.T., Weissberg, R.P., O'Brien, M.U., Zins, J.E., Fredericks, L., Resnik, H., & Elias, M.J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58, 466-474.
- Haney, P. Durlak, J. A. (1998). Changing self-esteem in children and adolescents: A meta-analytical review. *Journal of Clinical Child & Adolescent Psychology*, 27, 424-433.
- Hedges, L.V., & Olkin, I. (1985). *Statistical methods for meta-analysis*. New York: Academic Press.
- Hill, J.C., Bloom, H.S., Black, A.R., & Lipsey, M.W. (2007). *Empirical Benchmarks for Interpreting Effect Sizes in Research*. Retrieved December 6, 2007, from <http://www.mdrc.org/publications/459/full.pdf>.
- Horowitz, J.L., & Garber, J. (2006). The prevention of depressive symptoms in children and adolescents: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 74, 401-415.
- Kirk, R.E. (1996). Practical significance: A concept whose time has come. *Educational and Psychological Measurement*, 56, 746-759.
- Klem, A.M., & Connell, J.P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74, 262-273.
- Learning First Alliance. (2001). *Every child learning: Safe and supportive schools*. Washington, DC: Author.
- Lipsey, M.W., & Wilson, D.B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.



- Lösel, F., & Beelman, A. (2003). Effects of child skills training in preventing antisocial behavior: A systematic review of randomized evaluations. *Annals of the American Academy of Political and Social Science*, 587, 84-109.
- Vacha-Haase, T., & Thompson, B. (2004). How to estimate and interpret effect sizes. *Journal of Counseling Psychology*, 51, 473-481.
- Weissberg, R.P., Kumpfer, K., Seligman, M.E.P. (Eds.). (2003). Prevention that works for children and youth: An introduction. *American Psychologist*, 58, 425-432.
- Wilson, D.B., Gottfredson, D.C., & Najaka, S.S. (2001). School-based prevention of problem behaviors: A meta-analysis. *Journal of Quantitative Criminology*, 17, 247-272.
- Wilson, S.J., & Lipsey, M.W., (2007). School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. *American Journal of Preventive Medicine*, 33 (Suppl. 2S), 130-143.
- Wilson, S.J., Lipsey, M.W., Derzon, J.H. (2003). *Journal of Consulting Clinical Psychology*, 71, 136-149.
- Zins, J.E., Weissberg, R.P., Wang, M.C., & Walberg, H.J. (Eds.). (2004). *Building academic success through social and emotional learning: What does the research say?* New York: Teachers College Press.
- Zins, J.E., & Elias, M.J. (2006). Social and emotional learning. In G.G. Bear & K.M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 1-13). Bethesda, MD: National Association of School Psychologists.