



# HHS Public Access

Author manuscript

*J Fam Psychol.* Author manuscript; available in PMC 2017 December 01.

Published in final edited form as:

*J Fam Psychol.* 2016 December ; 30(8): 944–954. doi:10.1037/fam0000204.

## Randomized Trial of Parent Training to Prevent Adolescent Problem Behaviors During the High School Transition

**W. Alex Mason,**

Boys Town National Research Institute for Child and Family Studies

**Charles B. Fleming,**

University of Washington, Social Development Research Group, School of Social Work

**Thomas J. Gross,**

Tennessee State University, Department of Psychology

**Ronald W. Thompson,**

Boys Town National Research Institute for Child and Family Studies

**Gilbert R. Parra,**

University of Nebraska-Lincoln, Department of Child, Youth and Family Studies

**Kevin P. Haggerty, and**

University of Washington, Social Development Research Group, School of Social Work

**James J. Snyder**

Wichita State University, Department of Psychology

### Abstract

This randomized controlled trial tested a widely used general parent training program, Common Sense Parenting (CSP)<sup>®</sup>, with low-income 8th graders and their families to support a positive transition to high school. The program was tested in its original 6-session format and in a modified format (*CSP-Plus*), which added 2 sessions that included adolescents. Over 2 annual cohorts, 321 families were enrolled and randomly assigned to either the CSP, *CSP-Plus*, or minimal-contact control condition. Pretest, posttest, 1-year follow-up, and 2-year follow-up survey data on parenting as well as youth school bonding, social skills, and problem behaviors were collected from parents and youth (94% retention). Extending prior examinations of posttest outcomes, intent-to-treat regression analyses tested for intervention effects at the 2 follow-up assessments, and growth curve analyses examined experimental condition differences in yearly change across time. Separate exploratory tests of moderation by youth gender, youth conduct problems, and family economic hardship also were conducted. Out of 52 regression models predicting 1- and 2-year follow-up outcomes, only 2 out of 104 possible intervention effects were statistically significant. No statistically significant intervention effects were found in the growth curve analyses. Tests of moderation also showed few statistically significant effects. Since CSP already is in widespread use, findings have direct implications for practice. Specifically, findings suggest that the program may not be efficacious with parents of adolescents in a selective prevention

context and may reveal the limits of brief, general parent training for achieving outcomes with parents of adolescents.

### Keywords

Parent Training; Adolescence; Problem Behaviors; High School; Transition

The transition from middle school to high school presents challenges to youth and their families, especially those from low-income backgrounds. Changing schools can be a significant stressor (Benner & Graham, 2009; Isakson & Jarvis, 1999). It is common for middle school and high school students to experience decreased school bonding (Benner & Graham, 2009; Simons-Morton, Crump, Haynie, & Saylor, 1999). If problems emerge and persist, then risk for more serious difficulties, such as school disciplinary actions (e.g., suspensions), increases (Benner & Graham, 2009). It is during this time that the rate of substance use also begins to rise dramatically (Miech, Johnston, O'Malley, Bachman, & Schulenberg, 2015) and conduct problems peak (Farrington, 1986; Loeber et al., 2015). However, many youth experience success during this critical period, often with support from parents (Isakson & Jarvis, 1999).

Although the end of middle school can provide a window of opportunity for preventive intervention, parenting and family-focused interventions designed to improve the transition to high school among at-risk youth are generally lacking (Gonzales, Dumka, Deardorff, Carter, & McCray, 2004). Such interventions hold promise for reducing the personal and social costs associated with school problems and related outcomes, but only if they are efficacious, disseminated on a large scale, and implemented with fidelity. Many existing evidence-based programs lack a delivery vehicle and are not being disseminated broadly (Klesges, Estabrooks, Dzewaltowski, Bull, & Glasgow, 2005). Rotherham-Borus and Duan (2003) suggested that one strategy for dealing with this science-to-practice gap is to rigorously test, sometimes in adapted formats, promising interventions already in use. Mason, Fleming, Thompson, Haggerty, and Snyder (2014) provided a framework for guiding tests of widely used but understudied programs. The current study examined the degree to which a widely used parent training program, in its original format and in a modified format that involves youth, improves parenting, family interaction, and youth school bonding and social skills, and reduces problem behaviors.

Theory and research highlight the central importance of the family in children's development and psychosocial functioning (Kumpfer & Alvarado, 2003). Parenting and family factors have been shown to have associations with a broad array of child problem behaviors (Galambos, Barker, & Almeida, 2003), and a rich body of research indicates that general parent training can improve parenting, family interaction, and child outcomes. For example, many parent training programs have demonstrated improvements in family management practices and parent-child relationship quality as well as reductions in family conflict (Kaminski, Valle, Filene, & Boyle, 2008; Leijten, Raaijmakers, de Castro, & Matthys, 2013; Lundahl, Risser, & Lovejoy, 2006). These programs often are based on social learning principles (Bandura, 1977), and are designed to enhance competencies in

families (Forehand & McMahon, 1981; Webster-Stratton & Hancock, 1998), usually targeting those with preschool- and elementary school-age children.

Many parents report low perceived efficacy for influencing whether or not their adolescent children engage in problem behaviors, such as substance use (Center on Addiction and Substance Abuse, 1997). However, studies have shown that parents continue to influence teens' attitudes and behaviors (Fleming, Catalano, Haggerty, & Abbott, 2010; Galambos et al., 2003; Pardini, Fite, & Burke, 2008). Although general parent training has demonstrated considerable success for parents of young children, there are few tests of this intervention approach for parents of adolescent-aged children, particularly in support of key developmental transitions.

Most evidence-based interventions for families with adolescents target specific problem behaviors and combine parent training with additional family intervention and youth skills training components (e.g., Fosco, Frank, Stormshak, & Dishion, 2013). Several such programs have been shown to prevent and reduce, for example, substance use (Fosco et al., 2013; Mason, Kosterman, Hawkins, Haggerty, & Spoth, 2003; Haggerty, Skinner, MacKenzie, & Catalano, 2007; Spoth, Trudeau, Gyll, Shin, & Redmond, 2009) and delinquency (Henggeler, Melton, & Smith, 1992; Mason et al., 2003; Spoth, Redmond, & Shin, 2000). The Bridges to High School program combines a parenting intervention with family strengthening programming and adolescent coping skills training, and is designed to support a positive transition to high school among Mexican American youth (Gonzales et al., 2004). A randomized controlled trial of the program demonstrated improvements in parenting as well as in youth coping skills and academic engagement, and longer term reductions in substance use, conduct problems, and other problem behaviors (Gonzales et al., 2012; Gonzales et al., 2014).

To address gaps in research and practice, the current study tests the Common Sense Parenting<sup>®</sup> (CSP; Burke, Schuchmann, & Barnes, 2006) parent training program with a low-income sample of eighth-grade students and their families prior to the transition to high school. CSP was developed by Boys Town, an established service provider with a national reach. Preliminary research, which has included single group pretest-posttest evaluations and a quasi-experimental study, has provided positive support for the program (e.g., decreased child problem behaviors; Thompson, Ruma, Schuchmann, & Burke, 1996; Thompson, Ruma, Brewster, Besetsney, & Burke, 1997; Thompson, Grow, Ruma, Daly, & Burke, 1993). Based on this research, CSP currently is in widespread use. The program now reaches over 6,000 children in more than 3,000 families each year across Boys Town sites in 10 states. Further dissemination occurs outside of the organization via national and international training activities.

This study represents the first experimental test of CSP, evaluating the program in its standard six-session, group workshop-based format as well as in a modified format, known as *CSP-Plus*, which adds two parent and adolescent sessions adapted from the *Stepping Up to High School* curriculum (Brown, Catalano, Fleming, Haggerty, & Abbott, 2005). A prior analysis from this trial examined short-term effects of CSP and *CSP-Plus* on proximal parenting behaviors and youth emotion regulation (Mason et al., 2015). Intent-to-treat,

pretest-posttest group comparisons over a 6-month time frame, when student participants were still in the eighth grade, found no evidence for effects of either program on parenting, but did show increased parent reports of youth emotion regulation for both CSP and CSP-*Plus*.

The current paper reports results from primary intervention outcome analyses at 1-year and 2-year follow-up assessments, which occurred as targeted participants progressed through the first 2 years of high school. These analyses are important because prior research has demonstrated that family intervention effects on parenting may take time to emerge (Reed et al., 2013) and that intervention effect sizes on youth problem behaviors are often larger at follow-up assessments (Hale, Fitzgerald-Yau, & Viner, 2014), perhaps because it takes time for parents and youth to internalize and consolidate news skills. Positive support from this trial would increase the evidence base for CSP, potentially providing opportunities to expand the program's reach by capitalizing on and growing the existing dissemination infrastructure (Mason et al., 2014).

Based on prior research in support of parent training, it was expected that CSP and CSP-*Plus* would be associated with improvements in parenting and family interaction as well as youth school bonding and social skills (e.g., emotion regulation) at the follow-up assessments. Reductions in adolescent risk-related attitudes and behaviors, including substance use and conduct problems, also were hypothesized. Analyses addressed point-in-time differences at the two follow-up assessments and continuous yearly change in outcomes over all four waves of the study. Moderation analyses explored potential differences in intervention effects by youth gender, youth conduct problems, and family economic hardship, based on relevant prior research showing differential family-focused intervention effects by gender (e.g., Mason et al., 2009) and risk status (e.g., Conduct Problems Prevention Research Group, 2011).

## Method

### Setting, Recruitment, Assignment, and Participants

All study procedures, including those for obtaining consent/assent, were approved by the human subjects review committees at the University of Washington, Father Flanagan's Boys' Home (aka Boys Town), and the participating school district. The diagram in Figure 1 summarizes participant flow through all phases of the study. Each family included a target parent and an eighth-grade student who attended one of five middle schools in the Pacific Northwest. Most students at the schools were from low-income families and were at elevated risk for high school dropout. At all five schools, just over 70% of the students in sixth through eighth grade received free or reduced-price school lunch in the 2010/2011 school year. Three of the five schools fed into a high school with a 5-year graduation rate of 52% for the class of 2010.

Research staff presented information about the study during core classes and distributed permission-to-contact forms for the students to take home to their parents. Schools aided the recruitment effort by disseminating notices of the study (e.g., emails, automated phone reminders). Schools also mailed a copy of the permission-to-contact forms directly to

families who had not responded to initial recruitment efforts. Families who were interested in learning more about the project returned a signed form agreeing to release their contact information. A list of 658 interested families was compiled from the returned forms. These families were assigned identification numbers by the order in which permission slips were returned and then blocked by school and student gender. Within the blocks, families were sequentially assigned to one of three experimental conditions: CSP, CSP-*Plus*, or a minimal-contact control (i.e., received general newsletters) condition. Families were then contacted by data collection staff, who were blind to condition assignment, to schedule times to obtain parental consent and youth assent to participate in the research project and conduct a pretest interview. Families were informed of their condition assignment after consent for participation was granted and the pretest interview was completed.

Three hundred and twenty-one families were enrolled in the project in two cohorts, including 122 families in the 2010/2011 school year, and 199 families in the 2011/2012 school year. One hundred and eighteen families were assigned to the CSP program condition (cohort 1 = 45, cohort 2 = 73), 95 were assigned to the CSP-*Plus* program condition (cohort 1 = 36, cohort 2 = 59), and 108 were assigned to the control condition (cohort 1 = 41, cohort 2 = 67). Sample size was based on the expectation of small to medium intervention effect sizes. Participating parents were 48% Caucasian, 26% African American, 4% Asian American, 4% Pacific Islander, 2% Native American, and 16% mixed or “other”; 14% of parents reported they were Hispanic. Eighty-three percent of the parents were female; of these, 73% were the biological mothers of the eighth-grade student. Sixty percent reported living with a spouse or significant other (46% married). Parent average age was 40.21 years ( $sd = 7.49$ ). Forty-two percent of the parents reported annual incomes below \$24,000 for their households. Forty-four percent of the parents were employed full time, 15% part time, 13% considered themselves unemployed, and 28% were not in the labor force. Most (92%) of the parents were high school graduates or had a GED; 18% had a Bachelor’s or more advanced degree. Just over half (52%) of the eighth-grade students in the study were female, and their mean age at enrollment was 13.41 years ( $sd = 0.52$ ). Comparisons of the sample with the population of eighth-grade families in participating schools, based on district data, indicated similarities for percentages receiving free or reduced-price school lunch and special education status, and a slightly lower proportion of Hispanic students.

### Data Collection and Attrition

All pretest and most follow-up interviews were conducted with parents and youth in families’ homes. The surveys were self-administered on laptop computers with a researcher present to provide assistance. A small number of interviews at the last two follow-up time points (< 6%) were done over the internet due to families having moved out of the local area. Enrollment and baseline interviews began in November/December (middle of eighth grade) and were completed before April. Posttest (end of 8th grade), 1-year follow-up (end of 9th grade), and 2-year follow-up (end of 10th grade) interviews began in May/June and were completed by September. Participants were offered small monetary incentives on a graduated schedule over the assessment time points. Numbers of completed surveys by condition are shown in Figure 1. Completion rates were high and did not differ significantly by condition at any time point. Although at posttest the parent survey completion rate for

families of boys was significantly higher than for families of girls (Mason et al. 2015), by the 2-year follow-up, parent and youth survey completion rates were similar and above 93% for families of boys and girls. Completion rates at 2-year follow-up also did not differ significantly by cohort, race/ethnicity of youth or parents, age of parent, marital status of parent, and whether families had an annual household income below \$24,000 prior to baseline.

## Interventions

**Common Sense Parenting**—Common Sense Parenting® (CSP; Burke et al., 2006) was developed from the teaching family model (Wolf et al., 1976) and was informed by social interaction theory (Patterson, Reid, & Dishion et al., 1992), positing that behavior modification within a family environment promotes skills development for youth socialization. CSP is manualized and has multiple overlapping facets with many existing parenting programs (Kaminski et al., 2008), including content related to providing positive parenting, correcting misbehavior, and teaching self-control and problem-solving skills. CSP has six weekly 2-hour sessions, where a group of 6 to 10 parents meet with a facilitator who guides them through sequential lessons. CSP was designed for parents of children age 6 to 16 years and consists of three primary components: (a) instruction in parenting skills related to discipline, praise, rationales, coping, problem solving, and anger management; (b) discussions of short videos where actors model the parenting skills; and (c) guided practice of parenting skills. Sessions 2 – 6 begin with a review of the previous session, and Sessions 1 – 5 conclude with a summary and homework assignments, including at-home skills practice.

**Common Sense Parenting-Plus**—Common Sense Parenting-*Plus* (CSP-*Plus*) expands CSP to an eight-session program that adds one beginning and one ending session to CSP based on materials from *Stepping Up To High School* (SUTHS). SUTHS is a curriculum designed to prepare families for a successful transition to high school and the move toward independence, and was developed originally as a booster session for the Raising Healthy Children project (Brown et al., 2005). The added sessions include both parents and their middle school children, and instruction is focused on the transition to high school and increased independence (e.g., building trust; negotiating autonomy; and handling opportunities for risky behaviors, such as substance use). The added sessions adopt the CSP session structure and incorporate components regarding instruction in goal setting for the high school years, and guided skills practice for family communication and decision making related to the transition to high school.

**Implementation fidelity and participant attendance**—Workshop leaders delivered the interventions to 213 families over the course of 144 sessions of CSP ( $n = 48$ ) and CSP-*Plus* ( $n = 96$ ). Each workshop leader provided either CSP or CSP-*Plus*, but not both. All sessions were videotaped; 20 CSP and 18 CSP-*Plus* sessions, or 38 (26%) total sessions were randomly selected for treatment fidelity and quality assessments after blocking by session and by each of the 10 workshop leaders. Two independent raters assessed fidelity by indicating the presence of core intervention components within all sampled session videos. As reported in detail elsewhere (Oats et al., 2014), results indicated that 95% of the core

intervention components were present across observed sessions (inter-observer agreement = 96%). The independent raters also rated session implementation quality and facilitator program delivery quality to provide an overall quality score, which could range from 1 (poor quality) to 5 (high quality). The mean quality score across observed sessions was 4.06 (SD = 0.63), with highly correlated inter-rater scores ( $r = .70, p < .001$ ), and high internal consistency ( $\alpha = .96$ ).

As described in Mason et al. (2015), a lottery system was used to provide a program participation incentive. There were similar rates of participation across intervention conditions ( $M_{CSP} = 72\%$  and  $M_{CSP Plus} = 70\%$ ). However, initial engagement (attending at least one of the first two sessions) was slightly higher in the CSP-Plus condition (76%) than in the CSP condition (69%). Both conditions had 20% of participants who never attended any sessions. More information on intervention participation is found in Fleming et al. (2015).

## Measures

Most measures were scales that have been used extensively in studies of youth development (e.g., Alabama Parenting Questionnaire, Social Competence Scale) and have shown evidence of validity in psychometric work (e.g., Goodman, 1997) and in longitudinal analyses (e.g., Spoth, Redmond, & Shin, 1998). Parents and adolescents completed corresponding forms related to parenting skills, family interactions, and youth outcomes. Wording for corresponding parent and youth-report items was the same with the exception of references to the parent for youth items (e.g., “you” versus “your parent”). In example items given below, exact wording is based on the parent form. Some youth outcome measures were based on only youth self-report. All item coding was such that higher scale scores reflected more of the labeled construct.

**Parenting skills**—We used four measures of parenting skills, all of which were based on items with a 5-point scale ranging from 1 (*Never*) to 5 (*Always*). Three of these measures were from the Alabama Parenting Questionnaire (APQ; Elgar, Waschbusch, Dadds, & Sigvaldason, 2007; Shelton, Frick, & Wootton, 1996). The APQ short-form Positive Parenting scale is the sum of scores on three items ( $\alpha = .81 - .89$  for parent-report scales;  $\alpha = .81 - .84$  for youth report; e.g., “How often do you let your child know when he/she is doing a good job with something?”). The APQ three-item short form (Elgar et al., 2007) and six-item full form (Shelton et al., 1996) were used to assess inconsistent discipline. The short form of the Inconsistent Discipline scale was used at baseline and posttest, and was also used in growth model analyses of change across all four time points ( $\alpha = .61 - .69$  for parent report;  $\alpha = .53 - .62$  for youth report; e.g., “How often do you threaten to punish your child and then do not actually punish him/her?”). Because of the low internal consistency at the first two time points, the full forms for parents and youth were used at the follow-up periods ( $\alpha = .70$  at both time points for parent report;  $\alpha = .67$  and  $.65$  for youth report). The APQ three-item short form (Elgar et al., 2007) and nine-item full form (Shelton et al., 1996) were used to assess poor supervision. Again, the short-form scale ( $\alpha = .63 - .76$  for parent report;  $\alpha = .50 - .57$  for youth report; e.g., “How often does your child go out with friends you don’t know?”) was used at baseline and posttest and in growth model

analyses. The full forms for parents and youth were used at the follow-up periods ( $\alpha = .70$  and  $.78$  for parent report;  $\alpha = .75$  and  $.76$  for youth report). A Rationales scale was created for this study and is the mean of two items regarding the frequency of parents providing rationales for decisions and consequences: “When your child doesn’t know why you make certain rules, how often do you explain the reasons?” and “How often do you give reasons to your child for your decisions?” ( $\rho = .52 - .65$  for parent report;  $\rho = .53 - .66$  for youth report).

**Family interaction**—The APQ Parent Involvement scale (Shelton et al., 1996) was used to assess the frequency that parents interact with their child across home, school, and social activities. The scale is the sum of scores on 10 items, all of which offered 1 (*never*) to 5 (*always*) response options ( $\alpha = .80 - .86$  for parent report;  $\alpha = .83 - .87$  for youth report; e.g., “How often do you have friendly talks with your child?”). The Parent-Child Affective Quality (PCAQ; Spoth et al., 1998) scale is based on the mean of six items, all of which used a 5-point rating scale ranging from 1 (*Always*) to 5 (*Never*). For parents, there are scales for both Parent Affective Quality (e.g., “During the past month, how often did you let your child know you really care about him/her?”;  $\alpha = .74 - .81$ ) and Child Affective Quality (e.g., “During the past month, how often did your child let you know he/she really cares about you?”;  $\alpha = .77 - .81$ ). Youth reported only on parent affective quality ( $\alpha = .81 - .84$ ). An adaptation of the Family Conflict subscale from the Family Environment Scale (Moos & Moos, 1994) was used to rate the frequency of family conflict ( $\alpha = .58 - .64$  for parent report,  $\alpha = .67 - .77$  for youth report; e.g., “Family members often criticize each other”). It is based on the mean of four items with 5-point response options ranging from 1 (*Strongly Agree*) to 5 (*Strongly Disagree*).

**Youth outcomes**—Social Competence Scale (Conduct Problems Prevention Research Group, 1998) subscales were used to assess youth social engagement and empathy (prosocial) and youth coping and response regulation (emotion regulation). Youth prosocial skill is the sum of six items ( $\alpha = .85$  to  $.92$  for parent report;  $\alpha = .85$  to  $.87$  for youth report; e.g., “Your child is very good at understanding other people’s feelings”) rated on a 5-point scale ranging from 0 (*Not at All*) to 4 (*Very Well*). Youth emotion regulation is also the sum of six items with the same 5-point response options ( $\alpha = .86 - .90$  for parent report;  $\alpha = .78 - .80$ ; e.g., “Your child copes well with failure”). The Strengths and Difficulties Questionnaire (SDQ) Conduct Problems Scale (Goodman, 1997) is based on the sum of five items ( $\alpha = .66 - .73$  for parent report;  $\alpha = .58 - .63$  for youth report; e.g., “Your child often loses temper”), each of which offer a 3-point scale ranging from 0 (*Not True*) to 2 (*Certainly True*).

The remaining measures were based on youth-report items with a “past year” time frame and were available at pretest and 1- and 2-year follow-up. School bonding came from items used in the Seattle Social Development Project (Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999) and is the mean of six items ( $\alpha = .80 - .82$ ; e.g., “How often do you feel that the schoolwork you are assigned is meaningful and important?”) that offered response options from 1 (*never, not at all important or very dull*) to 5 (*almost always, very important, or very interesting*). Interaction with antisocial peers is the mean of eight items ( $\alpha = .90 - .92$ ; e.g.,



“During the past 12 months, how many of your close friends have stolen something worth less than \$25?”) with response options ranging from 0 (*none*) to 4 (*most of them*). School discipline problems is the mean of nine items related to the frequency that students were caught and reprimanded for delinquent behaviors at school (e.g., cheating, skipping class). Response options ranged from 0 (*never*) to 7 (*40+ times*) ( $\alpha = .84$  at all three time points). A measure of substance use was based on past-year use of alcohol or marijuana and past-month use of cigarettes. Due to the relatively low prevalence rates among the early adolescent participants, responses to these questions were coded to create dichotomous measures of any substance use (1 = any use, 0 = no use). At pretest and the 1-year and 2-year follow-up assessments, adolescents were asked to indicate the frequency of being suspended from school for disciplinary reasons in the past year. To create the school suspension variables, responses to each question were dichotomized to indicate having at least one suspension (coded 1) versus no suspensions (coded 0).

**Covariates and moderators**—The covariates in the analyses included cohort (cohort 1 = 1; cohort 2 = 0), youth gender (boy = 1; girl = 0), parent race (Caucasian = 1; non-Caucasian = 0), and parent ethnicity (Hispanic = 1; non-Hispanic = 0). Measures used in moderation analyses included youth gender, the SDQ Conduct Problems Scale at enrollment, and a five-item scale of parent-reported economic hardship at enrollment ( $\alpha = .87$ ; e.g., “We have enough money to afford the kind of food we should have”).

## Analysis

Baseline differences between the three experimental conditions were examined using t-tests and crosstabs. Intervention tests were conducted with Mplus 7.11 (Muthén & Muthén, 1998–2015) and used an intent-to-treat approach, including data on all enrolled families in the analysis and using maximum likelihood missing data procedures that allowed for inclusion of cases with partially missing data. We used two modeling approaches to test for main effects of the intervention. First, we ran a separate regression model for each outcome at both 1-year and 2-year follow-up. In these models, each criterion variable was regressed on seven predictor variables. Specifically, intervention condition was represented with two dummy variables for the CSP and CSP-*Plus* conditions, each coded 0/1, with the control condition as a reference category. Each regression model also included the baseline measure of the given outcome. In the case of the two APQ scales where we had longer versions available at 1- and 2-year follow-up, we used the corresponding short-form scale at baseline as the covariate. Finally, regression models also included the four sociodemographic covariates. All outcomes were treated as continuous and normally distributed, with the exception of dichotomous measures of substance use and school suspension, for which a probit regression model was used.

The second approach to assessing intervention effects utilized latent growth models (LGM; Mason, Brown, Fleming, & Haggerty, 2015). In these models, linear growth was estimated across the data collection time points. For most outcomes, four time points of data were used, although five youth-report outcomes had three time points because measures were not available at posttest. For each growth model, the intercept was set to the first time point, with loadings on a linear growth slope factor of 0.5, 1.5, and 2.5 at the posttest, 1-year follow-up,

and 2-year follow-up time points, respectively. We first estimated an unconditional model with no predictors of variance in growth factors. If variance in the slope factor was significantly different from zero, we then ran a conditional model in which the slope factor was regressed on the two intervention condition dummy variables and the four sociodemographic covariates. The slope was also regressed on the intercept to adjust for baseline level of the outcome measure.

We also conducted a separate series of analyses to assess whether intervention effects were moderated by youth gender, baseline youth conduct problems, or baseline family economic hardship. Potential moderators and interaction terms between the potential moderators and intervention condition dummy variables were added to the models described above.

## Results

Unadjusted means or prevalence rates on measures at all time points are shown by experimental condition in Appendix Tables A1 (parent-report outcomes) and A2 (youth-report outcomes). Out of the 11 parent-report measures, only 2 showed statistically significant baseline differences by condition: inconsistent discipline and parent affective quality. In both cases, CSP parents had the worst scores. Out of the 15 youth-report measures, only 1 difference emerged, indicating a lower prevalence of school suspensions in the CSP-*Plus* condition.

As reported in Tables A1 and A2, the unadjusted means and prevalence rates at follow-up time points do not show evidence of a clear pattern of differences between conditions. Most differences at follow-up time points were small ( $d < .20$ ) and varied in direction across outcomes. Turning to the regressions, out of 52 models predicting 1- and 2-year follow-up outcomes, only 2 out of 104 possible intervention dummy-variable effects were statistically significant. None of the 44 possible effects on parent-report outcomes were significant (see Table 1). The two dummy-variable effects that were significant for student-report outcomes involved parent use of inconsistent discipline and youth school bonding at 1-year follow-up. CSP youth reported more inconsistent discipline and less school bonding than control youth (see Table 2).

In the unconditional growth models, 8 out of 11 parent-report outcomes showed evidence of between-individual variation in yearly change. For these eight measures, none of the estimates of intervention effects were statistically significant (see Table 1). All 10 of the youth-report outcomes for which there were repeated measures at all four time points and 2 of 5 measures available at three time points showed statistically significant variance in the slope growth factor. Conditional models indicated no significant intervention effects (see Table 2).

In the final set of analyses, there also were few statistically significant moderation effects. For tests of moderation of parent-report outcomes, there were 180 moderator-by-intervention condition terms tested and only 5 were statistically significant. For tests of moderation of youth-report outcomes, 4 out of 252 moderator-by-intervention interaction terms were statistically significant. Due to the small number of significant interactions and lack of a

consistent pattern to the findings, no further probing or interpretation of moderation is provided.

## Discussion

This randomized controlled trial tested a widely used parent training program, Common Sense Parenting (CSP), in its original format and in a modified format (*CSP-Plus*) that includes youth, for supporting a positive transition to high school among low-income eighth-grade students and their families. In this context, analyses of experimental condition differences at 1 and 2 years post-intervention, as well as growth curve models conducted using all available data over the duration of the study, did not support the efficacy of the tested interventions. Moreover, exploratory analyses provided no consistent evidence that intervention effects were moderated by youth gender, baseline youth conduct problems, or baseline family economic hardship. Prior non-experimental and quasi-experimental studies have provided positive support for CSP (Thompson et al., 1993; Thompson et al., 1996), showing, for example, significant pretest-posttest increases in family relationship satisfaction and decreases in child problem behaviors (Thompson et al., 1997). A unique feature of the current trial is that it tested a program that, based on positive preliminary support, is already being disseminated by a large service provision organization. As such, findings can have direct implications for current practice, although not without considering potential explanations for the null effects.

There are a number of possible reasons why CSP and *CSP-Plus* were not supported. Of course, it is always possible that the study was flawed in some way and provided an inadequate test of the interventions. This seems unlikely in that the trial was rigorous and successful by currently accepted standards (Schulz, Altman, & Moher, 2010). A reasonably powered experimental design was implemented, with evidence of baseline equivalence across conditions. Over the course of the study, retention was very high, with no consistent evidence of either differential or selective attrition. Care was taken in the hiring and training of workshop leaders, and the programs were implemented with fidelity (Oats et al., 2014). Engagement was variable, but we generally matched or exceeded participation rates reported in the literature (Fleming et al., 2015). Standard survey data collection procedures were implemented, drawing on measures from similar trials. On balance, it is reasonable to conclude that the methodology did not contribute to a failure to detect the presence of intervention effects.

Instead, the tested interventions likely did not produce effects under the particular conditions of this trial. One important aspect of the study is its focus on brief, general parent training with parents of adolescents. A rich tradition of research and practice supports the use of parent training (Kaminski et al., 2008; Leijten et al., 2013; Lundahl et al., 2006), typically administered with parents of preschool- and elementary school-age children. A non-experimental study of CSP implemented in routine practice tested age effects, finding that an adolescent group was less responsive to the intervention than middle and early childhood groups (Ruma, Burke, & Thompson, 1996). A prior analysis from this trial reported no statistically significant intervention effects on parenting over the short term, when adolescent participants were completing their eighth-grade year (Mason et al., 2015). It is possible that

findings from the current study document the limits of general parent training. Brief, general parenting programs may be less relevant and impactful for families of adolescents, where patterns of parenting and family interactions have become entrenched over several years. Instead, programs with more specific content focused on the emerging concerns of adolescence may be needed to effectively prevent problem behaviors and promote positive development during the teen years. Indeed, such programs, which typically combine parent training with other family intervention components and youth skills training activities, have been shown to be efficacious for targeting outcomes, such as substance use (Mason et al., 2003; Haggerty et al., 2007; Spoth et al., 2009) and delinquency (Henggeler et al., 1992; Mason et al., 2003; Spoth et al., 2000; Vitaro et al., 2001).

Another unique aspect of this trial is the focus on interventions to support the move to high school. This transition presents challenges to youth, particularly those from low-income backgrounds, providing opportunities for positive development as well as for problem outcomes. Few psychosocial programs have been designed or tested for the purpose of targeting the transition to high school. The Bridges to High School program has been shown to improve parenting as well as youth coping skills and academic engagement in Mexican American students; the program also has demonstrated reductions in targeted problem behaviors, including substance use and conduct problems (Gonzales et al., 2012; Gonzales et al., 2014). Bridges to High School is a family-focused program that blends parent training with other family intervention components as well as skills training with adolescents. In the current study, *CSP-Plus* was developed to expand the focus of CSP by integrating materials from the *Stepping Up to High School* curriculum (Brown et al., 2005) and by creating two new sessions in which parents attend with their adolescent-aged children. These modifications were based on prior research of similar programs with combined parent and child training (e.g., Fosco et al., 2013), but were balanced against the desire to introduce minimal adaptations to the widely used CSP program. Had *CSP-Plus* garnered positive support, it could have been implemented on a large scale relatively quickly by using, with minimal changes, the existing infrastructure for CSP program delivery. Current results, however, indicate that additional curriculum enhancements are needed.

Guided by considerations outlined in Mason et al. (2014), attempts were made to test CSP in a way that provided as much verisimilitude with routine practice as possible. For example, certified Boys Town staff members trained workshop leaders, who were subjected to the same type of educational and experiential standards as required in practice. Still, certain decisions diverged from standard practice. In particular, CSP commonly is implemented as an indicated prevention program or even a treatment intervention with parents who are already having difficulties with their (typically young) children. For example, an early study of CSP indicated that children of parents attending sessions presented clinically significant behavior problems and were not significantly different from children served in outpatient behavioral clinics (Friman, Soper, Thompson, & Daly, 1993). Such parents usually reach out for support when problems have reached a crisis level; therefore, they are often motivated to seek out and engage in parent training, and their children may be more likely to show improvements.

Consistent with Boys Town's current strategic initiative to increase prevention services, CSP and CSP-*Plus* were implemented in this trial as selective preventive interventions that targeted participants at elevated risk for problems, in this case, students in poor-performing middle schools and from low-income family backgrounds. Families targeted for selective prevention efforts still reflect the full range of risk statuses. Thus, a challenge for this type of intervention is to motivate and engage participants, many of whom may not perceive a need for parent training. It is possible that stronger intervention effects would have been observed if the trial had tested CSP and CSP-*Plus* as more targeted interventions with families in need.

There are some noteworthy study limitations. The sample was recruited from one location in Western Washington State. Participating families were generally representative of families of eighth graders in the targeted middle schools with one exception: A lower proportion of Hispanic families participated in the study because of the requirement to be proficient in English. Due to logistical and budgetary constraints, intervention workshops could be offered only in English. Reliabilities of certain measures (e.g., short-form APQ) were low, and participants' responses could not be examined for correspondence with data collected from other methods, such as behavioral observations. Analyses did not account for potential workshop leader effects or the nesting of program participants within workshops, although the structured format of the CSP program and demonstrated adherence likely mitigated these concerns.

Findings have practice implications and suggest avenues for future research. An obvious challenge in testing interventions already in use is that they might not be supported. Of course, no single study can provide a definitive program test. For this reason, it would go too far to suggest that the current study indicates that CSP does not work. A test conducted under different conditions might provide support for the program. Because CSP already is being disseminated, ensuring that it works as designed is an efficient and cost-effective way to help bridge the science-to-practice gap (Mason et al., 2014). That being said, it would be important to know if the program potentially does not work under other conditions, in which case resources would be better invested in programs with demonstrated efficacy and effectiveness. These observations would suggest that additional trials of CSP that more closely match its use in practice settings (e.g., when delivered as an indicated prevention program or treatment intervention with parents of younger children) as well as additional program modifications related to adolescent risk factors may be warranted. The current trial does suggest that CSP, in either its original or modified CSP-*Plus* format, may not be efficacious for low-income parents of adolescent-age children, especially when implemented as a preventive intervention, and that such use in practice is not recommended. More broadly, the current project may document the limits of brief, general parent training by suggesting that it may have relatively little impact for parents of adolescents.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

## Acknowledgments

The project described was supported by National Institute on Drug Abuse Grant R01DA025651. Additional support was provided by the Institute of Education Sciences, U.S. Department of Education, through Grant R324B110001. The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies or the National Institutes of Health or the U.S. Department of Education.

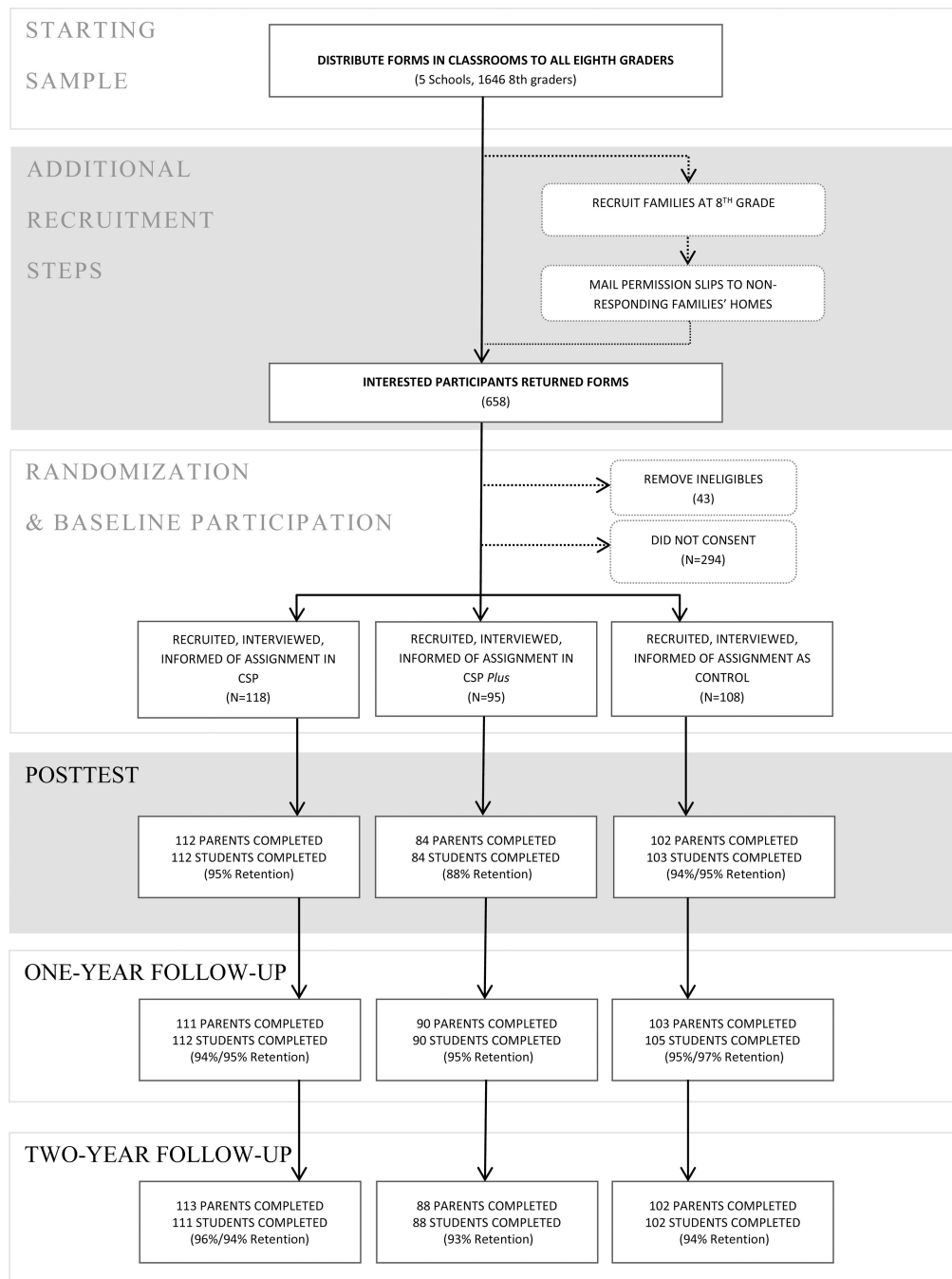
## References

- Benner AD, Graham S. The transition to high school as a developmental process among multiethnic urban youth. *Child Development*. 2009; 80:356–376. [PubMed: 19466997]
- Brown EC, Catalano RF, Fleming CB, Haggerty KP, Abbott RD. Adolescent substance use outcomes in the Raising Healthy Children Project: A two-part latent growth curve analysis. *Journal of Consulting and Clinical Psychology*. 2005; 73:699–710. [PubMed: 16173857]
- Burke, R.; Schuchmann, LF.; Barnes, BA. *Common Sense Parenting Trainer Guide*. Boys Town, NE: Boys Town Press; 2006.
- Center on Addiction and Substance Abuse. *Teens and their parents. News release from CASA 1997 Back to School Teen Survey*. New York: Columbia University; 1997.
- Conduct Problems Prevention Research Group. *Technical reports for the Fast Track assessment battery. Unpublished technical reports*. 1998
- Conduct Problems Prevention Research Group. The effects of the Fast Track preventive intervention on the development of conduct disorder across childhood. *Child Development*. 2011; 82:331–345. [PubMed: 21291445]
- Elgar FJ, Waschbusch DA, Dadds MR, Sigvaldason N. Development and validation of a short form of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies*. 2007; 16:243–259.
- Farrington, DP. Stepping stones to adult criminal careers. In: Olweus, D.; Block, J.; Radke-Yarrow, M., editors. *Development of antisocial and prosocial behavior: Research, theories, and issues*. Orlando, FL: Academic Press; 1986. p. 359–384.
- Fleming CB, Catalano RF, Haggerty KP, Abbott RD. Relationships between level and change in family, school, and peer factors during two periods of adolescence and problem behavior at age 19. *Journal of Youth and Adolescence*. 2010; 39:670–682. [PubMed: 20352311]
- Fleming CB, Mason WA, Haggerty KP, Thompson RW, Fernandez K, Casey-Goldstein M, Oats RG. Predictors of participation in parenting workshops for improving adolescent behavioral and mental health: Results from the Common Sense Parenting trial. *The Journal of Primary Prevention*. 2015; 36:105–118. [PubMed: 25656381]
- Forehand, RL.; McMahon, RJ. *Helping the noncompliant child: A clinician's guide to parent training*. New York: Guilford Press; 1981.
- Fosco GM, Frank JL, Stormshak EA, Dishion TJ. Opening the "Black Box": Family-Check-Up intervention effects on self-regulation that prevents growth in problem behavior and substance use. *Journal of School Psychology*. 2013; 51:455–468. [PubMed: 23870441]
- Friman PC, Soper SH, Thompson RW, Daly DL. Do children from community-based parent training programs have clinically significant behavior problems? *Journal of Community Psychology*. 1993; 21:56–63.
- Galambos NL, Barker ET, Almeida DM. Parents do matter: Trajectories of change in externalizing and internalizing problems in early adolescence. *Child Development*. 2003; 74:578–594. [PubMed: 12705574]
- Gonzales NA, Dumka LE, Deardorff J, Carter SJ, McCray A. Preventing poor mental health and school dropout of Mexican American adolescents following the transition to junior high school. *Journal of Adolescent Research*. 2004; 19:113–131.
- Gonzales NA, Dumka LE, Millsap RE, Gottschall A, McClain DB, Wong JJ, Kim SY. Randomized trial of a broad preventive intervention for Mexican American adolescents. *Journal of Consulting and Clinical Psychology*. 2012; 80:1–16. [PubMed: 22103956]

- Gonzales NA, Wong JJ, Toomey RB, Millsap R, Dumka LE, Mauricio AM. School engagement mediates long-term prevention effects for Mexican American adolescents. *Prevention Science*. 2014; 15:929–939. [PubMed: 24398825]
- Goodman R. The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*. 1997; 38:581–586. [PubMed: 9255702]
- Haggerty KP, Skinner ML, Mackenzie EP, Catalano RF. A randomized trial of Parents Who Care: Effects on key outcomes at 24-month follow-up. *Prevention Science*. 2007; 8:249–260. [PubMed: 17987388]
- Hale DR, Fitzgerald-Yau N, Viner RM. A systematic review of effective interventions for reducing multiple health risk behaviors in adolescence. *American Journal of Public Health*. 2014; 104:19–41.
- Hawkins JD, Catalano RF, Kosterman R, Abbott R, Hill KG. Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatrics and Adolescent Medicine*. 1999; 153:226–234. [PubMed: 10086398]
- Henggeler SW, Melton GB, Smith LA. Family preservation using multisystemic therapy: An effective alternative to incarcerating serious juvenile offenders. *Journal of Consulting & Clinical Psychology*. 1992; 60:953–961. [PubMed: 1460157]
- Isakson K, Jarvis P. The adjustment of adolescents during the transition into high school: A short-term longitudinal study. *Journal of Youth and Adolescence*. 1999; 28:1–26.
- Kaminski JW, Valle LA, Filene JH, Boyle CL. A meta-analytic review of components associated with parent training program effectiveness. *Journal of Abnormal Child Psychology*. 2008; 36:567–589. [PubMed: 18205039]
- Klesges LM, Estabrooks PA, Dzewaltowski DA, Bull SS, Glasgow RE. Beginning with the application in mind: Designing and planning health behavior change interventions to enhance dissemination. *Annals of Behavioral Medicine*. 2005; 29:66–75. [PubMed: 15921491]
- Kumpfer KL, Alvarado R. Family-strengthening approaches for the prevention of youth problem behaviors. *American Psychologist*. 2003; 58:457–465. [PubMed: 12971192]
- Leijten P, Raaijmakers MA, de Castro BO, Matthys W. Does socioeconomic status matter? A meta-analysis on parent training effectiveness for disruptive child behavior. *Journal of Clinical Child & Adolescent Psychology*. 2013; 42:384–392. [PubMed: 23461526]
- Loeber R, Farrington DP, Hipwell AE, Stepp SD, Pardini D, Ahonen L. Constancy and change in the prevalence and frequency of offending when based on longitudinal self-reports or official records: Comparisons by gender, race, and crime type. *Journal of Developmental and Life-Course Criminology*. 2015; 1:150–168. [PubMed: 27610337]
- Lundahl B, Risser HJ, Lovejoy MC. A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review*. 2006; 26:86–104. [PubMed: 16280191]
- Mason, WA.; Brown, EC.; Thompson, RW.; Haggerty, KP.; Snyder, JJ. Growth redefined in terms of preventing drug use and delinquency. In: Scheier, LM., editor. *Handbook of drug prevention*. Washington DC: American Psychological Association; 2015. p. 479-497.
- Mason WA, Fleming CB, Ringle JL, Thompson RW, Haggerty KP, Snyder JJ. Reducing risks for problem behaviors during the high school transition: Proximal outcomes in the Common Sense Parenting trial. *Journal of Child and Family Studies*. 2015; 24:2568–2578. [PubMed: 26508822]
- Mason WA, Fleming CB, Thompson RW, Haggerty KP, Snyder JJ. A framework for testing and promoting expanded dissemination of promising preventive interventions that are being implemented in community settings. *Prevention Science*. 2014; 15:674–683. [PubMed: 23807241]
- Mason WA, Kosterman R, Haggerty KP, Hawkins JD, Redmond C, Spoth RL, Shin C. Gender moderation and social developmental mediation of the effect of a family-focused substance use preventive intervention on young adult alcohol abuse. *Addictive Behaviors*. 2009; 34:599–605. [PubMed: 19398279]
- Mason WA, Kosterman R, Hawkins JD, Haggerty KP, Spoth RL. Reducing adolescents' growth in substance use and delinquency: Randomized trial effects of a parent-training prevention intervention. *Prevention Science*. 2003; 4:203–212. [PubMed: 12940470]

- Miech, RA.; Johnston, LD.; O'Malley, PM.; Bachman, JG.; Schulenberg, JE. Monitoring the Future national survey results on drug use, 1975–2014: Volume I, Secondary school students. Ann Arbor: Institute of Social Research, The University of Michigan; 2015.
- Muthén, LK.; Muthén, BO. Mplus user's guide. 7th. Los Angeles, CA: Muthén & Muthén; 1998-2015.
- Oats RG, Cross WF, Mason WA, Casey-Goldstein M, Thompson RW, Hanson K, Haggerty KP. Implementation assessment of widely used but understudied prevention programs: An illustration from the Common Sense Parenting trial. *Evaluation and Program Planning*. 2014; 44:89–97. [PubMed: 24632185]
- Pardini DA, Fite PJ, Burke JD. Bidirectional associations between parenting practices and conduct problems in boys from childhood to adolescence: The moderating effect of age and African-American ethnicity. *Journal of Abnormal Child Psychology*. 2008; 36:647–662. [PubMed: 17899362]
- Patterson, GR.; Reid, JB.; Dishion, TJ. A social interactional approach, Volume 4: Antisocial boys. Eugene, OR: Castalia; 1992.
- Reed A, Snyder JJ, Staats S, Forgatch MS, DeGarmo DS, Patterson GR, Schmidt N. Duration and mutual entrainment of changes in parenting practices engendered by behavioral parent training targeting recently separated mothers. *Journal of Family Psychology*. 2013; 27:343–354. [PubMed: 23750517]
- Rotheram-Borus MJ, Duan N. Next generation of preventive interventions. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2003; 42:518–526. [PubMed: 12707555]
- Ruma PR, Burke RV, Thompson RW. Group parent training: Is it effective for children of all ages? *Behavior Therapy*. 1996; 27:159–169.
- Schulz KF, Altman DG, Moher D. CONSORT 2010 statement: Updated guidelines for reporting parallel group randomised trials. *BMC Medicine*. 2010; 340:c332.
- Shelton KK, Frick PJ, Wootton J. Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychology*. 1996; 25:317–329.
- Simons-Morton BG, Crump AD, Haynie DL, Saylor KE. Student-school bonding and adolescent problem behavior. *Health Education Research*. 1999; 14:99–107. [PubMed: 10537951]
- Spoth R, Redmond C, Shin C. Direct and indirect latent-variable parenting outcomes of two universal family-focused preventive interventions: Extending a public health-oriented research base. *Journal of Consulting and Clinical Psychology*. 1998; 66:385–399. [PubMed: 9583342]
- Spoth R, Trudeau L, Guyll M, Shin C, Redmond C. Universal intervention effects on substance use among young adults mediated by delayed adolescent substance initiation. *Journal of Consulting & Clinical Psychology*. 2009; 77:620–632. [PubMed: 19634956]
- Spoth RL, Redmond C, Shin C. Reducing adolescents' aggressive and hostile behaviors: Randomized trial effects of a brief family intervention 4 years past baseline. *Archives of Pediatrics & Adolescent Medicine*. 2000; 154:1248–1257. [PubMed: 11115311]
- Thompson R, Ruma PR, Schuchmann LF, Burke RV. A cost-effectiveness evaluation of parent training. *Journal of Child and Family Studies*. 1996; 5:415–429.
- Thompson RW, Ruma PR, Brewster AL, Besetsney LK, Burke RV. Evaluation of an Air Force child physical abuse prevention project using the reliable change index. *Journal of Child and Family Studies*. 1997; 6:421–434.
- Thompson RW, Grow CR, Ruma PR, Daly DL, Burke RV. Evaluation of a practical parenting program with middle- and low-income families. *Family Relations: Interdisciplinary Journal of Applied Family Studies*. 1993; 42:21–25.
- Webster-Stratton, C.; Hancock, L. Training for parents of young children with conduct problems: Content, methods, and therapeutic processes. In: Briesmeister, JM.; Schaefer, CE., editors. *Handbook of parent training: Parents as co-therapists for children's behavior*. New York: John Wiley & Sons; 1998. p. 98-152.
- Wolf MM, Phillips EL, Fixsen DL, Braukmann CJ, Kirigin KA, Willner AG, Schumaker J. Achievement place: The Teaching-Family Model. *Child Care Quarterly*. 1976; 5:92–103.





**Figure 1.** Participation summary for the experimental conditions.

**Table 1**  
Main Effects of Intervention Conditions on Parent-report Outcomes at 1- and 2-year Follow-up and on Yearly Change

| Outcomes                 | Effects on 1-year follow-up |                        |                   | Effects on 2-year follow-up |                        |                   | Effects on yearly change |                   |                        |
|--------------------------|-----------------------------|------------------------|-------------------|-----------------------------|------------------------|-------------------|--------------------------|-------------------|------------------------|
|                          | CSP<br>Coef. (SE)           | CSP-Plus<br>Coef. (SE) | CSP<br>Coef. (SE) | CSP<br>Coef. (SE)           | CSP-Plus<br>Coef. (SE) | CSP<br>Coef. (SE) | CSP-Plus<br>Coef. (SE)   | CSP<br>Coef. (SE) | CSP-Plus<br>Coef. (SE) |
| Parenting skills         |                             |                        |                   |                             |                        |                   |                          |                   |                        |
| Positive parenting       | -0.17 (0.23)                | -0.18 (0.24)           | -0.14 (0.26)      | 0.09 (0.28)                 | -0.05 (0.10)           | 0.00 (0.10)       |                          |                   |                        |
| Inconsistent parenting   | -0.64 (0.46)                | 0.16 (0.49)            | -0.46 (0.47)      | -0.61 (0.50)                | <i>a</i>               | <i>a</i>          |                          |                   |                        |
| Poor supervision         | 0.26 (0.59)                 | 0.09 (0.63)            | 0.37 (0.74)       | -0.01 (0.79)                | 0.03 (0.11)            | -0.08 (0.12)      |                          |                   |                        |
| Rationales               | -0.06 (0.10)                | 0.03 (0.10)            | 0.14 (0.11)       | 0.07 (0.11)                 | <i>a</i>               | <i>a</i>          |                          |                   |                        |
| Family interaction       |                             |                        |                   |                             |                        |                   |                          |                   |                        |
| Parent involvement       | -0.75 (0.63)                | -0.32 (0.67)           | -0.61 (0.79)      | 0.14 (0.84)                 | -0.24 (0.30)           | 0.00 (0.32)       |                          |                   |                        |
| Parent affective quality | -0.07 (0.06)                | -0.03 (0.07)           | 0.00 (0.07)       | 0.00 (0.07)                 | <i>a</i>               | <i>a</i>          |                          |                   |                        |
| Child affective quality  | -0.11 (0.08)                | 0.01 (0.09)            | -0.17 (0.09)      | -0.02 (0.09)                | -0.07 (0.04)           | -0.01 (0.04)      |                          |                   |                        |
| Family conflict          | 0.09 (0.08)                 | 0.09 (0.08)            | 0.08 (0.08)       | 0.02 (0.08)                 | 0.03 (0.03)            | 0.01 (0.03)       |                          |                   |                        |
| Youth outcomes           |                             |                        |                   |                             |                        |                   |                          |                   |                        |
| Youth prosocial skill    | -0.17 (0.55)                | 0.52 (0.58)            | -0.39 (0.63)      | -0.56 (0.67)                | -0.20 (0.24)           | -0.11 (0.25)      |                          |                   |                        |
| Youth emotion regulation | -0.63 (0.56)                | -0.11 (0.60)           | -0.75 (0.61)      | -0.36 (0.65)                | -0.36 (0.24)           | -0.16 (0.25)      |                          |                   |                        |
| Conduct problems         | 0.10 (0.23)                 | 0.02 (0.24)            | 0.17 (0.26)       | 0.06 (0.28)                 | 0.06 (0.10)            | 0.00 (0.11)       |                          |                   |                        |

Note. Analyses of yearly change represent intervention condition effects on the linear slope of each outcome variable conducted via latent growth curve modeling.

<sup>a</sup>Values are not reported because there was statistically nonsignificant variance in yearly change.

Main Effects of Intervention Conditions on Student-report Outcomes at 1- and 2-Year Follow-up and on Yearly Change

Table 2

| Outcomes                          | Effects on 1-year follow-up |                        |                   | Effects on 2-year follow-up |                        |                   | Effects on yearly change |                        |                   |
|-----------------------------------|-----------------------------|------------------------|-------------------|-----------------------------|------------------------|-------------------|--------------------------|------------------------|-------------------|
|                                   | CSP<br>Coef. (SE)           | CSP Plus<br>Coef. (SE) | CSP<br>Coef. (SE) | CSP<br>Coef. (SE)           | CSP Plus<br>Coef. (SE) | CSP<br>Coef. (SE) | CSP<br>Coef. (SE)        | CSP Plus<br>Coef. (SE) | CSP<br>Coef. (SE) |
| Parenting skills                  |                             |                        |                   |                             |                        |                   |                          |                        |                   |
| Positive parenting                | -0.08 (0.35)                | 0.37 (0.37)            | 0.03 (0.35)       | 0.21 (0.37)                 | 0.01 (0.14)            | 0.12 (0.14)       |                          |                        |                   |
| Inconsistent discipline           | 0.67* (0.29)                | 0.49 (0.31)            | -0.10 (0.31)      | -0.29 (0.33)                | 0.07 (0.12)            | -0.03 (0.12)      |                          |                        |                   |
| Poor supervision                  | 0.40 (0.30)                 | 0.30 (0.32)            | 0.49 (0.30)       | -0.08 (0.32)                | 0.23 (0.12)            | 0.01 (0.12)       |                          |                        |                   |
| Rationales                        | -0.05 (0.13)                | 0.00 (0.14)            | 0.06 (0.15)       | -0.15 (0.15)                | 0.01 (0.05)            | -0.05 (0.05)      |                          |                        |                   |
| Family interaction                |                             |                        |                   |                             |                        |                   |                          |                        |                   |
| Parent involvement                | -0.62 (0.93)                | -0.23 (0.99)           | -1.77 (1.01)      | -0.69 (1.07)                | -0.68 (0.40)           | -0.25 (0.42)      |                          |                        |                   |
| Parent affective quality          | -0.16 (0.09)                | -0.06 (0.10)           | -0.02 (0.10)      | -0.10 (0.11)                | -0.03 (0.04)           | -0.04 (0.04)      |                          |                        |                   |
| Family conflict                   | 0.13 (0.09)                 | 0.04 (0.10)            | 0.12 (0.11)       | -0.04 (0.12)                | 0.06 (0.04)            | -0.01 (0.05)      |                          |                        |                   |
| Youth outcomes                    |                             |                        |                   |                             |                        |                   |                          |                        |                   |
| Youth prosocial skill             | -0.93 (0.56)                | 0.30 (0.60)            | -0.42 (0.57)      | 0.13 (0.61)                 | -0.22 (0.22)           | 0.17 (0.24)       |                          |                        |                   |
| Youth emotion regulation          | -0.67 (0.53)                | 0.59 (0.56)            | 0.19 (0.52)       | -0.05 (0.55)                | -0.01 (0.20)           | 0.14 (0.22)       |                          |                        |                   |
| Conduct problems                  | 0.40 (0.22)                 | 0.20 (0.24)            | 0.07 (0.22)       | 0.35 (0.24)                 | 0.08 (0.08)            | 0.13 (0.10)       |                          |                        |                   |
| School bonding                    | -0.19* (0.10)               | -0.10 (0.10)           | -0.06 (0.09)      | -0.09 (0.10)                | -0.03 (0.04)           | -0.04 (0.04)      |                          |                        |                   |
| Interaction with antisocial peers | 0.19 (0.10)                 | 0.16 (0.10)            | 0.07 (0.09)       | 0.13 (0.10)                 | <i>a</i>               | <i>a</i>          |                          |                        |                   |
| School discipline problems        | 0.10 (0.10)                 | 0.08 (0.10)            | 0.02 (0.10)       | -0.04 (0.11)                | <i>a</i>               | <i>a</i>          |                          |                        |                   |
| Any substance use                 | 0.07 (0.18)                 | -0.07 (0.18)           | -0.09 (0.17)      | -0.11 (0.18)                | 0.03 (0.07)            | 0.00 (0.08)       |                          |                        |                   |
| School suspensions                | 0.17 (0.18)                 | -0.03 (0.21)           | 0.08 (0.18)       | 0.16 (0.21)                 | <i>a</i>               | <i>a</i>          |                          |                        |                   |

Note. Analyses of yearly change represent intervention condition effects on the linear slope of each outcome variable conducted via latent growth curve modeling.

<sup>a</sup>Values are not reported because there was statistically nonsignificant variance in yearly change.

\* p < .05.