Community Preventive Services Task Force

Substance Use: Family-based Interventions to Prevent Substance Use among Youth, Updated 2026

Community Preventive Services Task Force
Finding and Rationale Statement
Ratified June 2023

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CPSTF Finding and Rationale Statement

Context

Youth substance use is associated with increased risk for delinquency, academic underachievement, teen pregnancy, sexually transmitted infections, perpetrating or experiencing violence, injuries, and mental health problems (U.S. Department of Health and Human Services 2016). Preventing or delaying substance use initiation among youth (defined in this review as children and adolescents ages 10-17) reduces later risk for substance use, substance use disorders, and overdose (U.S. Department of Health and Human Services 2016).

In 2021, substance use was common among United States (U.S.) high school students and varied by substance. Approximately one-third of students (30%) reported current use of alcohol or marijuana, or prescription opioid misuse (Hoots et al. 2023). In 2022, more than 3 million middle and high school students reported using a commercial tobacco product (Park-Lee et al. 2022) and 11% of 8th graders reported lifetime use of marijuana (Miech et al. 2023).

Substance use trends in the U.S. have changed in recent years. There have been increases in the availability of illicit fentanyl and other synthetic opioids, misuse of prescription drugs, and popularity of e-cigarettes and vaping products, and changes in the legal and regulatory landscape for cannabis (Hoots et al. 2023).

Intervention research highlights parenting as a key protective factor that can be enhanced through skill-based training interventions (Ladis et al. 2019, U.S. Department of Health and Human Services 2016). Interventions designed to strengthen preventive skills and practices among parents and caregivers such as communication, positive relationship interactions, monitoring and control have the potential to protect youth from initiation of substance use and other risk behaviors (Stockings et al. 2016, U.S. Department of Health and Human Services 2016).

Intervention Definition

Family-based interventions provide instruction or training to parents and caregivers to enhance substance use preventive skills and practices for children and adolescents. Interventions include individual or small group sessions, web-based modules, printed instruction manuals and workbooks, or a combination of formats.

Content may address parent-child communication, rule-setting, and monitoring. Interventions may be delivered or supported by health professionals or trained family providers in home, school, or community settings. Interventions may include additional substance use prevention activities for children and adolescents.

CPSTF Finding (June 2023)

The Community Preventive Services Task Force (CPSTF) recommends family-based interventions that train parents and caregivers in preventive skills and practices based on strong evidence of effectiveness in preventing substance use among youth. Evidence indicates that interventions, primarily delivered to families of youth ages 10-14 years, were effective in reducing initiation and use of cannabis, alcohol, tobacco, illicit substances, and misuse of prescription drugs. A subset of studies also found improvements in sexual risk behaviors, mental health symptoms, and school-related outcomes among youth.

The CPSTF finds that economic benefits exceed the cost of family-based interventions to prevent substance use among youth.

Rationale

Basis of Finding

The CPSTF recommendation is based on evidence from a systematic review of 60 studies conducted in the United States.

Studies were identified from a published systematic review (Allen et al. 2016, 39 studies; search period inception through March 2015) and an updated search that added additional search terms to capture vaping and prescription drug misuse (21 studies; search period January 2015 to July 2022).

The systematic review team evaluated substance use measures reported in the included studies for the following outcome categories:

1. Initiation of use for one or more substances (29 studies)
2. Prevalence, amount, or frequency of use for one or more substances (56 studies)

Within each category, the review team considered evidence by type of substances evaluated (e.g., cannabis, prescription drugs, alcohol, tobacco, illicit substances). The review team calculated relative change estimates and overall summary effect measures for the subset of studies providing changes in outcome data for each substance type. For study outcomes that could not be converted into relative change estimates, results for each study were summarized and grouped for a narrative assessment.

CPSTF findings are based on both summary effect estimates and narrative assessments for each outcome category and substance type. Evidence showed family-based interventions lead to reductions in both initiation (Table 1) and use (Table 2) for cannabis, prescription drug misuse, alcohol, tobacco, and illicit substances. Only four studies examined differences in the development of substance use disorders and narrative results were inconsistent (Table 3). A subset of studies included in this review also examined intervention effects on improving sexual risk behavior, mental health, and school-related outcomes (Table 4).

Table 1. Effects of Interventions on Initiation of Substance Use

Substance Type	Relative Change in Initiation of Use (%) Median Study Effect Estimate	Narrative Evidence on Initiation of Use Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Cannabis	4 studies (5 estimates): -36.6% (IQI: -52.8% to -17.1%)	1 study significant and favorable	Favors the intervention
Prescription drug misuse	3 studies (5 estimates): -58.1% (IQI: -96.3% to -36.9%)	N/A	Favors the intervention
Alcohol	7 studies (8 estimates): -12.1% (IQI: -17.7% to -7.8%)	3 studies: 1 significant and favorable, 1 study favorable, and 1 study no change	Favors the intervention

Substance Type	Relative Change in Initiation of Use (%) Median Study Effect Estimate	Narrative Evidence on Initiation of Use Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Tobacco	7 studies (12 estimates): -12.1% (IQI: -35.5% to 1.7%)	4 studies significant and favorable	Favors the intervention
Illicit Substances*	4 studies: -13.8% (IQI: -28.5 to -0.5)	1 study no change	Favors the intervention
One or more substances including alcohol or tobacco and other illicit substances*	-28.6% 1 study	3 Studies, 4 estimates 2 significant and favorable, 1 favorable and 1 no change (3 studies, 4 estimates)	Favors the intervention
Methamphetamine	N/A	1 study favorable	Favors the intervention

IQI: Interquartile Interval

* Findings from studies that measured self-reported initiation of use of one or more substances selected from a list (for example, "use of one or more illicit drugs such as marijuana, cocaine, amphetamines, methamphetamines, barbiturates, inhalants, opioids, etc.").

Table 2. Effects of Interventions on Substance Use

Outcome	Relative Change in Use (%) Median Study Effect Estimate	Narrative Evidence Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Cannabis	13 studies (14 estimates): -39.0% (IQI: -68.4% to +1.6%)	13 studies (14 estimates): 4 significant and favorable, 4 favorable, 5 no change, 1 unfavorable and significant	Favors the intervention
Prescription drug misuse	6 studies: -91.4% (IQI: -100.0% to -31.4%)	2 studies significant and favorable	Favors the intervention
Alcohol	22 studies (23 estimates): -33.8% (IQI: -52.3% to -13.8%)	19 studies (22 estimates): 7 significant and favorable, 4 favorable, 10 no change, 1 unfavorable	Favors the intervention
Tobacco	9 studies: -40.8% (IQI: -50.0% to -17.8%)	9 studies: 4 significant and favorable, 3 favorable, 1 no change, 1 unfavorable	Favors the intervention
Illicit substances*	3 studies: -76.7% (Range: -85.1% to -28.1%)	6 studies: 3 significant and favorable and 3 no change	Favors the intervention
One or more substances including alcohol or tobacco and other illicit substances*	2 studies (3 estimates): -61.8%, (Range: -75.6% to -39.6%)	6 studies (8 estimates): 2 significant and favorable, 2 favorable, 3 no change, and 1 unfavorable	Favors the intervention

Outcome	Relative Change in Use (%) Median Study Effect Estimate	Narrative Evidence Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Inhalant	N/A	4 studies: 3 significant and favorable, 1 study (2 arms) both unfavorable	Favors the intervention
Methamphetamine	N/A	4 studies: 3 significant and favorable, 1 no change	Favors the intervention
Cocaine	N/A	2 favorable	Favors the intervention

IQI: Interquartile Interval

* Findings from studies that measured self-reported use of one or more substances selected from a list (for example, "use of one or more illicit drugs such as marijuana, cocaine, amphetamines, methamphetamines, barbiturates, inhalants, opioids, etc.").

Table 3. Effects of Interventions on Substance Use Disorders

Outcome	Number of Studies (Estimates)	Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Substance use disorders*	4 (5 estimates)	2 significant and favorable, 1 favorable, 1 no change, and 1 unfavorable	Inconsistent results

*Substance use disorder defined using diagnostic criteria (e.g., Diagnostic Interview Schedule for Children [DISC] predictive) (Lucas et al. 2001)

Table 4. Effects of Interventions on Sexual Risk Behavior, Mental Health, and School-related Outcomes

Outcome	Number of Studies (Estimates)	Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Sexual Risk Behavior Outcomes			
Initiation of sexual actvity	5 (13 estimates)	4 significant and favorable, 3 favorable, 3 no change, and 3 unfavorable	Inconsistent results
Condom use	11 (15 estimates)	3 significant and favorable, 5 favorable, 5 no change, 1 unfavorable, and 1 significant and unfavorable	Inconsistent results
Sex under the influence of drugs and alcohol	5 (8 estimates)	6 significant and favorable and 2 no change	Favors the intervention
Number of partners	4 (5 estimates)	4 significant and favorable, 1 favorable	Favors the intervention
Recent intercourse	2 (7 estimates)	3 significant and favorable, 2 favorable and 2 unfavorable	Favors the intervention
Other*	2 (10 estimates)	4 significant and favorable, 5 favorable, and 1 no change	Favors the intervention

Outcome	Number of Studies (Estimates)	Direction and Reported Statistical Significance of Study Outcomes	Overall Direction of Effect
Morbidity associated with sexual risk behaviors	3 (3 estimates)	3 significant and favorable	Favors the intervention
Mental Health Outcomes			
Depression symptoms**	10 (15 estimates)	9 significant and favorable, 3 favorable, and 3 no change	Favors the intervention
Antisocial behavior***	3 (6 estimates)	1 significant and favorable and 5 favorable	Favors the intervention
Diagnosed mental disorders	1 study (2 arms with 2 estimates)	1 significant and favorable and 1 favorable	Favors the intervention
Symptoms of impairment	1 study (2 arms with 2 estimates)	2 significant and favorable	Favors the intervention
School-related Outcomes			
School disciplinary actions****	5 (10 estimates)	5 significant and favorable, 3 favorable, 1 no change and 1 unfavorable	Favors the intervention
School suspension	3 (6 estimates)	3 significant and favorable, 1 favorable, 1 no change, and 1 unfavorable	Favors the intervention
Grade Point Average (GPA)	3 (3 estimates)	3 significant and favorable	Favors the intervention

*Other: intercourse frequency, pregnancy, birth control, partner notification, etc.

**Depression Symptoms: Most studies used a survey tool to assess depression symptoms

***Antisocial Behavior: includes conduct problems

****School disciplinary actions: typically included combined or singular reporting for school attendance, engagement, suspension, truancy, dropout status

Eight studies (9 estimates) examined differences in recent or concurrent use of more than one substance (polysubstance use) and showed inconsistent results (5 favorable and significant, 1 favorable, and 3 no change). Seven studies evaluated additional measures of alcohol use. Six studies (7 estimates) examined differences in binge or heavy drinking and found inconsistent results (3 favorable, 1 no change, 1 significant and unfavorable, 2 unfavorable). The remaining study found no change in self-reported past year driving after drinking.

Studies had a median of 346 participants and included fewer than 100 participants (6 studies), 100 to 500 participants (31 studies), 501 to 2,000 participants (18 studies) or more than 2000 participants (4 studies). One study did not report the number of participants. The median duration of intervention activities was 2.2 months, with interventions delivered over 3 months or less (38 studies), 4 to 6 months (3 studies), 7-12 months (3 studies), or greater than 12 months (6 studies); 10 studies did not report on intervention duration. The median duration of follow-up for study outcomes, defined as the last time point after baseline assessment, was 24 months with studies conducted for 12 months or less (18 studies), 12.1 to 24 months (11 studies), 24.1 to 48 months (12 studies), or more than 48 months (16 studies). Three studies did not report the duration of follow-up.

Applicability and Generalizability Considerations

Intervention Settings

The CPSTF finding is applicable to the use of interventions in community, school, and home settings in urban, suburban, and rural communities in the United States. Included studies were all conducted in the United States (60 studies). Almost half of the study interventions were implemented in urban or suburban areas (25 studies) with remaining studies conducted in rural communities (12 studies) or a mix of communities (6 studies); 17 studies did not report this information. Interventions were delivered in community (12 studies), home (10 studies) and school (6 studies) settings, or in multiple locations (29 studies). Evidence of effectiveness was similar across all settings and locations. Only one study evaluated effectiveness of family-based interventions when implemented in Indian Country.

Population Characteristics

The CPSTF finding is applicable to families of school-age children and adolescents (ages 10-14 years at the time of intervention) in the United States.

Information on demographic characteristics primarily focused on youth whose parents and caregivers participated in the study. The median age of study youth was 12.7 years (49 studies) and gender distribution was equal (56 studies). Interventions were delivered to parents and caregivers of youth in grades 6-8 (44 studies), grades 9-12 (12 studies), and a mix of grades (4 studies). Interventions were effective when delivered to families of youth in grades 6-8 (ages 11-14). Evidence of effectiveness was inconsistent for interventions delivered to families of youth ages 15 years or older, indicating a concern about applicability to older youth and a need for additional studies.

Study youth identified as White (median 64%; 31 studies), Black or African American (median 40.8%; 32 studies; 8 studies reporting 100%), Hispanic or Latino (31.0%, 34 studies; 13 studies reporting 100%), Asian (4.8%, 11 studies; 1 study reporting 100%) American Indian (2.4%, 7 studies; 1 study reporting 100%), or other (8.0%, 19 studies).

Based on studies focused on specific populations, interventions were effective for youth who identified as Black or African American and Hispanic or Latino. Few studies provided focused or stratified evidence on effectiveness for youth who identified as American Indian, Alaskan Native, Native Hawaiian, Pacific Islander, or Asian. Although overall evidence indicates effectiveness in a wide range of communities, additional studies are needed to determine the content and effectiveness of family-based interventions in these populations. None of the included studies evaluated effectiveness of interventions for families of youth who identify as a sexual or gender minority.

Demographic information on recruited parents and caregivers was frequently incomplete and limited specific conclusions on applicability. Only 27 (45%) studies provided ages for parents and caregivers (median 40.4 years).

Twenty-one studies identified parents' and caregivers' gender and reported participants were primarily female (median 87.1%). Twenty-three studies measured parent status in the home and reported a median of 60.3% had two-parent households and 39.7% had one-parent households.

Studies infrequently reported parents' and caregivers' race and ethnicity. Participants identified as White (median 84%, 10 studies), Black or African American (median 39.6%, 12 studies), Hispanic or Latino (74.2%, 15 studies), Asian (range: 0.01% to 0.8 %; 4 studies), or other (4.3%, 5 studies). Studies did not stratify outcomes by parents' race or ethnicity.

Household income was reported in only 19 (32%) studies. In the 11 studies that reported parents' and caregivers' annual household income, 55.7% had a median or mean total income of less than $35,000 per year. Five studies reported a median income of $1,655 per month. Three studies reported a mean total income of less than $35,000 per year, with a

median of $21,681). None of these studies examined intervention effectiveness based on household income. Twenty-two studies from communities identified as lower income reported interventions were generally effective, although results were smaller in magnitude.

Intervention Characteristics

The CPSTF finding is applicable to interventions delivered in multiple sessions or modules in group or individual sessions led by trained implementers or through printed, web, or digital modules.

Studies primarily evaluated interventions delivered face-to-face in group settings (27 studies), individual settings (3 studies), or both (16 studies).

In 13 studies, intervention content was delivered primarily through printed workbooks, websites, or digital modules with 4 of these studies also including some interpersonal contact through periodic telephone calls.

The median number of sessions (or modules) for participants was 8, the median number of hours per session or module was 1.7, and the median number of total hours for the intervention was 15.5. Evidence of effectiveness was similar across these characteristics.

Most interventions included content for both adults and youth (54 studies). Evidence of effectiveness for interventions focused entirely on parents and caregivers (6 studies) was inconsistent, indicating a need for additional studies.

Most studies described training of implementers to deliver the intervention and lead family sessions. Few studies described implementers' background experience providing family-based interventions especially for implementers recruited from the community (e.g., health educator, peer parents; 21 studies) and from school staff (e.g., teachers, counselors, other paraprofessionals; 9 studies). In seven studies, implementers from the community were supported by family therapy professionals (3 studies), or research staff (4 studies). Some interventions were delivered by health professionals (e.g., nurse, psychologist; 9 studies) or by research staff (8 studies). Overall, interventions were generally effective across the range of described implementers.

Data Quality Issues

Study designs used to evaluate family-based interventions were restricted to randomized controlled trials (60 studies) in this review. Study quality was assessed using Cochrane risk of bias tools (Higgins et al. 2011). No studies were excluded from assessment of effectiveness based on risk of bias evaluations. Limitations commonly identified included high or unclear risk of bias from randomization procedures, absent or incomplete blinding of participants, personnel, and outcomes assessors, and incomplete or selective reporting of outcomes.

Interventions evaluated families recruited to participate in the intervention. Families interested in training on parenting skills and practices might differ from the general population of families at risk for youth substance use. Outcomes were based primarily on self-reported substance use and other risk behaviors among participating youth which introduced potential bias in these measures.

Important demographic characteristics were infrequently reported for participating parents and caregivers (e.g., income, education) which limited stratified assessments on effectiveness for these factors. In addition, studies differed in the substances and risk behavior outcomes considered, the measures used to evaluate change, and the reporting of results. These issues limited the review teams' ability to compare study findings, consolidate effect estimates, and calculate summary effect estimates for the outcomes of interest.

Indigenous Knowledge [https://www.whitehouse.gov/wp-content/uploads/2022/12/OSTP-CEQ-IK-Guidance.pdf] was not explicitly incorporated within this systematic review. Only one study incorporated elements of indigenous knowledge in intervention development and evaluation on tribal lands (Tingey et al. 2021).

Potential Benefits

Studies included in the review described several additional benefits of family-based interventions. Parents and caregivers reported improvements in family life and behaviors towards other members of the family (Dembo et al. 2002, Riesch et al. 2012), enhanced social connections through group activities (Martinez et al. 2005), and greater awareness of their child's activities, such as school assignments (Martinez et al. 2022). Two studies reported reductions in self-reported alcohol use by parents and caregivers (Williams et al. 2015, Schinke et al. 2009). None of the studies evaluated intervention effects on reducing stress and anxiety among parents and caregivers.

Potential Harms

CPSTF did not postulate any potential harms of family-based interventions to prevent substance use among youth. One included study postulated that aggregating high-risk youth into groups could increase substance use and behavior problems (Dishion et al. 1995). No harms were identified in the broader literature.

Economic Evidence

The economic evidence shows benefits exceed the cost for family-based interventions to prevent substance use among youth.

The search of literature covered the period from inception of databases through October 2023. The economic review included 11 peer-reviewed studies and two government reports, one from the Washington State Institute for Public Policy (WSIPP) and the other from the Substance Abuse and Mental Health Services Administration (SAMHSA 2008). Fourteen programs evaluated by WSIPP and eight programs evaluated in SAMHSA 2008 were included in the economic review. All monetary values are in 2023 U.S. dollars.

Peer-reviewed studies were conducted in the United States (10 studies) and United Kingdom (1 study). All programs evaluated by WSIPP were modeled for the state of Washington and those in SAMHSA 2008 were modeled for the United States. The CPSTF considered the peer-reviewed studies, WSIPP, and SAMHSA 2008 as separate sources of evidence, and as such the estimates from these sources are not combined in the economic review. The peer-reviewed studies provided 14 intervention cost, four benefit, one cost-effectiveness, and five cost-benefit estimates. WSIPP provided 14 estimates for intervention cost, intervention benefit, and cost-benefit. SAMHSA 2008 provided eight estimates for intervention cost, intervention benefit, cost-benefit, and cost per quality-adjusted life year (QALY) gained. Seven of the eight programs evaluated in SAMHSA 2008 were also evaluated by WSIPP.

The interventions were delivered when children in the families were in transition from elementary to middle school (15.6%), in middle school (59.4%), in transition from middle to high school (15.6%), or in high school (9.3%). Alcohol appeared most frequently among the substances of focus for interventions in peer reviewed studies (83.8%), among WSIPP programs (100%), and SAMHSA 2008 programs (100%). This was followed by tobacco: peer-reviewed studies (26.7%), WSIPP (71.4%), SAMHSA 2008 (75.0%), and by cannabis: peer-reviewed studies (51.4%), WSIPP (71.4%), SAMHSA 2008 (62.5%).

The economic review assessed the quality of estimates based on how well the estimates captured the main drivers of costs and benefits and the appropriateness of methods used in their estimation. Drivers of intervention cost were

deemed to be staff wages, staff training, and compensation for parent or caregiver time. Drivers of intervention benefit were averted costs or losses from:

- Healthcare
- injury, death, or property loss
- justice system
- education, and productivity

Quality was assessed as good, fair, or limited, and limited quality estimates were removed from the review. An estimate for benefit and an estimate for cost-benefit from one peer-reviewed study were excluded from the review because they were of limited quality for the purpose of this review.

Intervention Cost

Peer-reviewed studies

- Median per family $1,672 (IQI: $1,279 to $2,322), 6 estimates from 5 studies
- Median per participant or youth $753 (IQI: $569 to $1,316), 7 estimates from 4 studies
- Compensation per family for participation time $812 (McCollister et al. 2014)

WSIPP

- Median per family $655 (IQI: $241 to $808), 5 programs
- Median per participant or youth $680 (IQI: $119 to $888), 9 programs

SAMHSA 2008

- Mean per family $988 (Min $271, Max $1,490), 3 programs
- Median per participant or youth $677 (IQI: $677 to $2,032), 5 programs

The most frequently assessed limitations for intervention cost estimates (17 good quality and 19 fair quality out of 36 estimates) were missing cost of compensation for parent or caregiver time and inadequate reporting in SAMHSA 2008.

Intervention Benefit

Peer-reviewed

- $11,336 per case of averted misuse of opioids (Crowley et al. 2014)
- $147,412 per case of averted methamphetamine use (Guyll et al. 2011)
- $6,064 per youth lifetime benefits from averted tobacco, alcohol, and delinquency (Kuklinski et al. 2015)
- $259,818 lifetime cost averted per case of alcohol disorder (Spoth et al. 2002)

WSIPP

- Median per family $2,211 (IQI: $2,022 to $2,372), 5 programs
- Median per participant or youth $2,510 (IQI: $366 to $3,994), 9 programs

SAMHSA 2008

- Mean per family $9,767 (Min $4,234, Max $16,937), 3 programs
- Median per participant or youth $8,299 (IQI: $6,944 to $11,687), 5 programs

The most frequently assessed limitations for intervention benefit estimates were lack of information about uncertainty of estimates and inadequate reporting in SAMHSA 2008, though all 26 estimates of intervention benefit were of good quality.

Cost-Effectiveness

Peer-reviewed

- Dominated (not cost-effective) – reduced QALY and higher cost compared to control (Segrott et al. 2022)

SAMHSA 2008

- Cost-saving for four programs
- Median $21,426 per QALY gained (IQI: $14,058 to $92,308), 4 programs

The cost-effectiveness estimates from SAMHSA 2008 indicate the intervention is cost-effective based on a conservative benchmark of $50,000 per QALY gained. However, the CPSTF chose not to issue a cost-effectiveness finding based on the SAMHSA 2008 report because:

- All the favorable estimates were from a single report and model
- Data used for evaluation were ≥ 15 years old

The most frequently assessed limitations for the cost-effectiveness estimates (2 good quality and 7 fair quality out of 9 estimates) were lack of information on uncertainty of the estimates and inadequate reporting in estimates from SAMHSA 2008.

Cost-Benefit

Peer-reviewed

- Median benefit to cost ratio 5.8 (IQI: 3.8 to 8.1), 5 estimates from 3 studies

WSIPP

- Median benefit to cost ratio 3.9 (IQI: 1.6 to 8.4), 14 programs

SAMHSA 2008

- Median benefit to cost ratio 8.9 (IQI: 3.9 to 12.5), 8 programs

Of the 27 cost-benefit estimates, 13 were of good quality and 14 were of fair quality.

The systematic economic review finds economic benefits exceed the cost for family-based interventions to prevent substance use among youth.

Considerations for Implementation

The following considerations for implementation are drawn from studies included in the existing evidence review, the broader literature, and expert opinion, as noted below.

Studies used several strategies to increase family recruitment and retention. These included community engagement to tailor intervention content and recruitment (Allen et al. 2017, Hadley et al. 2016) and enhanced social and peer support through group meals, babysitting services for families with younger children, and ongoing telephone contact (Martinez et al. 2022). Studies broadly defined and encouraged participation of families, parents, and caregivers and further worked to engage fathers and male caregivers and involve both parents, regardless of marital status (Chaplin et al.

2021). The National Center on Substance Abuse and Child Welfare [https://ncsacw.acf.hhs.gov/topics/family-centered-approach/fca-modules.aspx] offers additional guidance on family-centered approaches that incorporate a broad definition of families and caregivers.

A subset of studies (Fang et al. 2010, Mason et al. 2021, O'Donnell et al. 2010, Schinke et al. 2004, Schinke et al. 2009a, Schinke et al. 2009b, Schinke et al. 2009c, Schinke et al 2011, Scull et al. 2017) included in this review found less-intensive remote interventions were effective. Interventions used printed materials or web and digital modules that were developed using content from group sessions. Some of the interventions also included telephone calls from program staff. It was noted that web-based and digital interventions require internet access and equipment which could be a barrier to participation (Estrada et al. 2019, Fang et al. 2020).

None of the included studies addressed the increasing influence of social media on youth (U.S. Department of Health and Human Services 2023). Messages promoting substance use are commonly posted on social media (Rutherford et al. 2023) making this an important subject for parent communication and monitoring skills and practices. Future interventions may also want to use social media to promote prevention messaging (Evans et al. 2020).

CPSTF recommends person-to-person interventions intended to modify adolescents' risk behaviors by improving caregivers' parenting skills [https://www.thecommunityguide.org/media/pdf/Adolescent-Health-Person-to-Person.pdf]. A 2007 review of 12 studies found sufficient evidence that person-to-person interventions to improve parenting skills were effective in reducing a range of adolescent risk behaviors including sexual risk behaviors and alcohol, tobacco, and other drug use, and violence, delinquency, suicide, and self-harm (Burrus et al. 2012).

CPSTF also recommends intervention approaches related to the following:

- Preventing Excessive Alcohol Use [https://thecommunityguide.org/topics/excessive-alcohol-consumption.html]
- Reducing Tobacco Use [https://thecommunityguide.org/topics/tobacco.html]

Several organizations offer implementation guidance for family-based prevention strategies and interventions to address substance use.

University of Colorado, Blueprints for Healthy Youth Development [https://www.blueprintsprograms.org/] is a registry of scientifically rigorous and accessible prevention and intervention programs aimed at addressing youth health and behavior issues.

Office of Juvenile Justice and Delinquency Prevention's (OJJDP's) Model Programs Guide [https://ojjdp.ojp.gov/model-programs-guide/all-mpg-programs] offers a database of evidence-based juvenile justice and youth prevention, intervention, and reentry programs that cover issues including substance abuse, mental health, and trauma.

California Evidence-Based Clearinghouse [https://www.cebc4cw.org/program/] is a registry tool that can help organizations identify, select, and implement interventions for children and families affected by the child welfare system.

Prevention Technology Transfer Center (PTTC) Network [https://pttcnetwork.org/centers/global-pttc/products-and-resources] provides technical assistance resources to improve implementation and delivery of effective substance abuse prevention interventions.

SAMHSA's National Youth Substance Use Prevention Campaign [https://www.samhsa.gov/talk-they-hear-you] provides resources for parents and caregivers, educators, and community members to prevent substance use.

The following resources address issues that may be useful for implementing these interventions for specific communities:

Tribal families

- Tribal Training and Technical Assistance Center | SAMHSA [https://www.samhsa.gov/tribal-ttac]
- Tribal Youth Resource Center - Resource Library [https://www.tribalyouth.org/resources/resource-library/?_sft_resource_issues=evidence-based-practices,intervention,prevention,substance-misuse]

Military families

- Clearinghouse Continuum of Evidence (Continuum) [https://www.continuum.militaryfamilies.psu.edu/]

Foster families

- Title IV-E Prevention Services Clearinghouse [https://preventionservices.abtsites.com/]

The following resources address specific substance use issues:

- Preventing Marijuana Use Among Youth | samhsa.gov [https://store.samhsa.gov/sites/default/files/pep21-06-01-001.pdf]
- Opioid Prevention Programs & Tools | HHS.gov [https://www.hhs.gov/opioids/prevention/prevention-programs-tools/index.html]
- E-Cigarette Resources | American Lung Association [https://www.lung.org/quit-smoking/e-cigarettes-vaping/e-cigarette-resources]
- Reducing Vaping Among Youth and Young Adults | samhsa.gov [https://store.samhsa.gov/sites/default/files/pep20-06-01-003.pdf]
- Tobacco Prevention Program Resources | ncdhhs.gov [https://tobaccopreventionandcontrol.dph.ncdhhs.gov/youth/Documents/TobaccoPreventionCessationProgramResources-for-YoungPeople.pdf]
- Stop Alcohol Abuse Resources (Communities Talk Meetings) | stopalcoholabuse.gov [https://www.stopalcoholabuse.gov/communitiestalk/tips-resources/]

Evidence Gaps

CPSTF identified several areas that have limited information. Additional research and evaluation could help answer the following questions and fill remaining gaps in the evidence base.

CPSTF identified the following questions as priorities for research and evaluation:

- How effective are interventions for families of American Indian, Alaskan Native, Native Hawaiian, Pacific Islander, and Asian youth?
- How effective are interventions for families of youth who identify as a sexual or gender minority?
- How effective are interventions in reducing development of substance use disorders?

- How effective are interventions for families of adolescents ages 15 years and older?

Remaining questions for research and evaluation identified in this review include the following:

- How effective are interventions in reducing vaping initiation and use?
- How effective are interventions in reducing polysubstance use among youth?
- How effective are interventions when focused just on parents and caregivers?
- Does intervention effectiveness differ by household income or parents' and caregivers' educational attainment or race/ethnicity?
- Does intervention effectiveness differ based on characteristics of implementers recruited from the community or schools?
- How can interventions improve recruitment and retention of fathers and male caregivers?

Economic Evidence Gaps

The following question is proposed as a priority for economic research and evaluation:

- What are economic outcomes for programs implemented for historically disadvantaged populations, particularly American Indian or Alaska Native populations?

Remaining question for research and evaluation identified in the economic review includes the following:

- What are the economic outcomes in urban areas?
- Is the intervention cost-effective based on more recent data?

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Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. Task Force evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

Document last updated July 30, 2026

Appendices of Supporting Documents

Substance Use: Family-based Interventions to Prevent Substance Use among Youth

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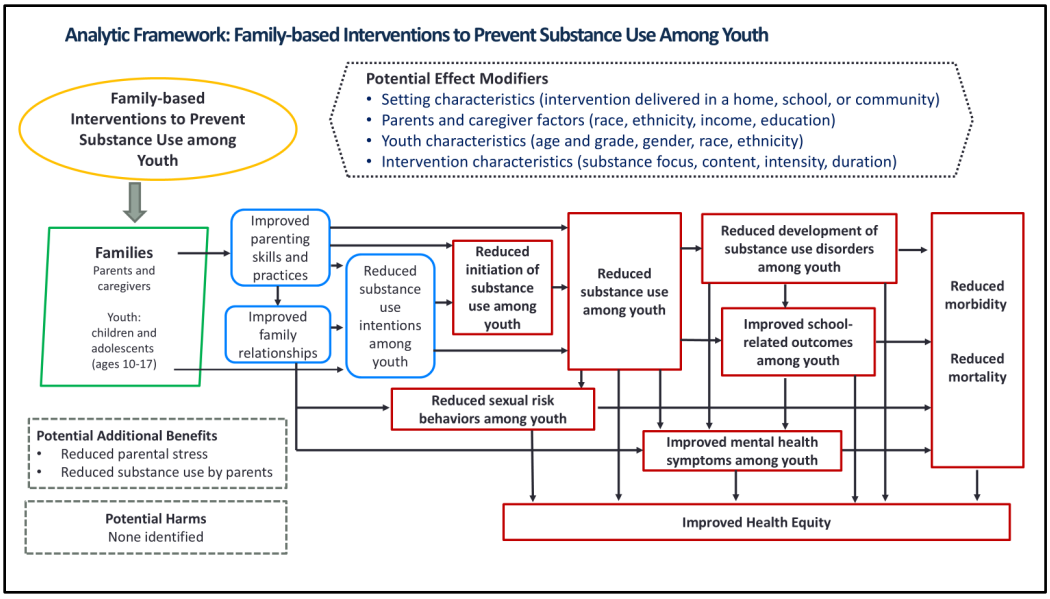
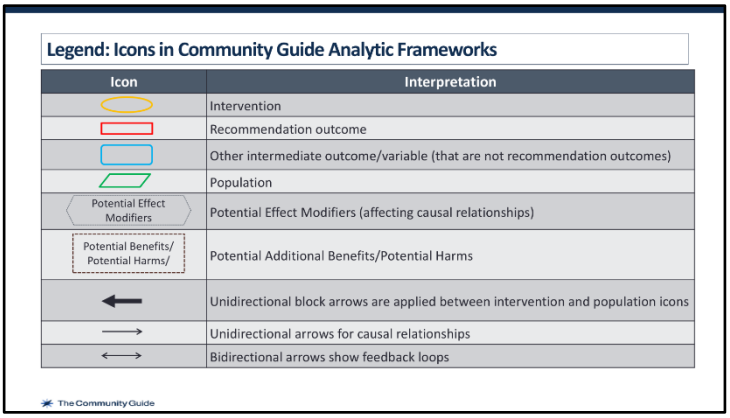
Appendix H: Summary Evidence Table (Economic Review) 329

Appendix A
Analytic Framework (Effectiveness Review)
Substance Use: Family-based Interventions to Prevent Substance Use among Youth



Analytic Framework Text Description



The analytic framework depicts postulated pathways through which family-based interventions may reduce substance use among youth and improve other risk behavior and school-related outcomes. The diagram identifies families as the focus for the interventions. Families include parents, caregivers, and youth (children and adolescents ages 10-17 years). Participation in family-based interventions is postulated to influence three intermediate outcomes depicted in the diagram: improved parenting skills and practices, improved family relationships, and reduced intentions to use substances among youth. All three intermediate outcomes are postulated to reduce the initiation of substance use among youth, with downstream reductions in substance use and the number of youths who develop substance use disorders.

Reductions in substance use outcomes among youth are postulated to improve school-related outcomes. Improved family relationships and reductions in substance use outcomes are also postulated to improve mental health symptoms among youth and reduce the number of youths who engage in sexual risk behaviors. The combination of reductions in substance use, substance use disorders, sexual risk behaviors, and improvements in mental health symptoms and school-related outcomes are postulated to reduce outcomes related to morbidity and mortality. The use of family-based interventions for historically disadvantaged and lower income populations at high risk for substance use among youth is postulated to improve these outcomes and health equity.

Potential additional benefits of family-based interventions include reductions in stress and anxiety among parents and caregivers and reductions in substance use among parents and caregivers. Family-based interventions are not postulated to cause harms to participating parents, caregivers, or youth.

Potential effect modifiers include characteristics of settings, parents and caregivers, youth, and differences in the interventions. Setting characteristics include intervention delivery to families at home, at school, or in community-based locations. Parent and caregiver factors include race, ethnicity, household income, and educational attainment. Youth characteristics include age and grade, gender, race, and ethnicity. Intervention characteristics include substance focus, content, intensity, and duration of the intervention.
.

Appendix B
Search Strategy (Effectiveness Review):

Substance Use: Family-based Interventions to Prevent Substance Use among Youth

The CPSTF finding is based on a systematic review of 60 studies (published through July 2022). The review combined 39 studies of family-based interventions identified from a published systematic review (Allen et al. 2016; search period from database inception through March 2015) with 21 studies identified in an updated search that included the same search terms and added additional terms to capture prescription drug misuse and vaping (search period January 2015 to July 2022).

Databases searched for this review included PubMed, ERIC, CINAHL, PSYCINFO, and the Cochrane Library.

Database: Medline (OVID)

1 Adolescent/ 2181449

2 (adolescen* or teen* or youth).ti,ab. 389971

3 1 or 2 2281382

4 exp family/ or exp parents/ or family relations/ or parent-child relations/ or parenting/ 354978

5 (family or families or parent*).ti,ab. 1432228

6 4 or 5 1601091

7 ((parent adj2 training) or (clinical adj2 trials) or intervention*).mp. 1692029

8 ((alcohol* or drug or prescription or opiate* or substance) adj2 (abuse or misuse)).ti,ab. 67277

9 (marijuana or smoking or opiate* or vaping or tobacco or marijuana or cocaine or heroin or methamphetamine or amphetamine).ti,ab. 424613

10 exp Alcoholism/ or exp Illicit Drugs/ or exp Tobacco Smoking/ or exp Substance-Related Disorders/ 312055

11 exp animals/ not humans.sh. 5025441

12 (Andorra* or Antigua or Aruba or Australia or Austria or Bahamas or Bahrain or Barbados or Barbuda or Belgium or Bermuda or Brunei or Caicos or Canada or Cayman Islands or Channel Islands or Chile or Croatia or Curacao or Cyprus or Czech Republic or Darussalam or Denmark or England or Equatorial Guinea or Estonia or Faeroe Islands or Finland or France or French Polynesia or Germany or Greece or Greenland or Guam or Hong Kong or Iceland or Ireland or (Isle adj2 Man) or Israel or Italy or Japan or Korea or Kuwait or Latvia or Liechtenstein or Lithuania or Luxembourg or Macao or Macau or Malta or Monaco or Netherlands or Netherlands Antilles or Nevis or New Caledonia or New Zealand or Northern Ireland or Northern Mariana Islands or way or Oman or Poland or Portugal or Puerto Rico or Qatar or (Republic adj2 Korea) or Russia or Russian

Federation or Saint Kitts or Saint Maarten or Saint Martin or San Marino or Saudi Arabia or Scotland or Singapore or Saint Maarten or Slovak Republic or Slovakia or Slovenia or Spain or (St adj2 Kitts) or (St adj2 Martin) or Sweden or Switzerland or Tobago or Trinidad or Turks or United Arab Emirates or United States or Uruguay or Wales).mp. 3682786

13 (lmic or (low* adj3 middle income countr*) or Afghanistan or Afghani or Algeria* or Angola* or "Guinea-Bissau" or Somalia or Bangladesh* or Belize or Benin or Bhutan or Bhutanese or Bolivia* or "Burkina Faso" or Burundi or "Central African Republic" or "Cabo Verde" or "Cape Verde" or Cambodia* or Cameroon or Chad or Tchad or Comoros or Congo or "Cote d Ivoire" or "Ivory Coast" or Djibouti or Egypt* or "El Salvador" or Salvadoran or Eritrea* or Eswatini or Ethiopia* or Gambia or Gaza or Ghana or Guinea or Haiti or Honduras* or India or Indonesia or Iran or Kenya or Kenyan or Kiribati or Kyrgyz or Laos or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Micronesia or Mongolia or Morocco or Mozambique or Myanmar or Nepal or Nepalese or Nicaragua* or Niger or Nigeria or "North Korea" or "Papua New Guinea" or Pakistan or Philippines or Principe or "Sierra Leone" or "South Sudan" or Sudan or Syria or Syrian or Rwanda* or Samoa* or "Sao Tome" or Senegal* or "Solomon Islands" or "Sri Lanka" or Tanzania or Tajikistan or "Timor-Leste" or Togo or Tunisia or Uganda or Ukraine or Uzbekistan or Vanuatu or Vietnam or "West Bank" or Yemen or Zambia or Zimbabwe).mp. 904403

14 6 and 7 141401

15 8 or 9 or 10 692892

16 3 and 15 115299

17 14 and 16 4599

18 17 not 11 4597

19 12 and 18 1530

20 19 not 13 1503

21 limit 20 to (english language and yr="2015 -Current") 562

Database: ERIC (ProQuest)

noft((parent* OR famil*)) AND noft((“Clinical Trials+” OR Randomized OR “Parenting Education” OR “parent education”)) AND noft((Adolescen* OR teen* OR youth*)) AND noft((tobacco OR smok* OR alcohol OR substance OR marijuana OR cocaine OR heroin OR methamphetamine OR amphetamine OR prescription OR drug* OR vaping OR opioid))

Database: CINAHL (EbscoHost)

S1 TI (parent* or family*) OR AB (parent* or family*)

S2 TI ((“Clinical Trials” OR Randomized OR “Parenting Education” OR “parent education”)) OR AB ((“Clinical Trials” OR Randomized OR “Parenting Education” OR “parent education”))

S3 TI ((tobacco or smok* or alcohol OR substance or marijuana or cocaine or heroin or methamphetamine or amphetamine or prescription or drug* or vaping or opioid)) OR AB ((tobacco or smok* or alcohol OR substance or marijuana or cocaine or heroin or methamphetamine or amphetamine or prescription or drug* or vaping or opioid))

S4 ((Adolescen* OR teen* OR youth*)) OR ((Adolescen* OR teen* OR youth*))

S5 S1 AND S2

S6 S3 AND S4

S7 S5 AND S6

S8 (MH "Animals+") NOT (MH "Humans+")

S11 S7 NOT S8 Limiters - English Language; Peer Reviewed; Exclude MEDLINE records

S12 TX (Andorra* or Antigua or Aruba or Australia or Austria or Bahamas or Bahrain or Barbados or Barbuda or Belgium or Bermuda or Brunei or Caicos or Canada or Cayman Islands or Channel Islands or Chile or Croatia or Curacao or Cyprus or Czech Republic or Darussalam or Denmark or England or Equatorial Guinea or Estonia or Faeroe Islands or Finland or France or French Polynesia or Germany or Greece or Greenland or Guam or Hong Kong or Iceland or Ireland or (Isle N2 Man) or Israel or Italy or Japan or Korea or Kuwait or Latvia or Liechtenstein or Lithuania or Luxembourg or Macao or Macau or Malta or Monaco or Netherlands or Netherlands Antilles or Nevis or New Caledonia or New Zealand or Northern Ireland or Northern Mariana Islands or way or Oman or Poland or Portugal or Puerto Rico or Qatar or (Republic N2 Korea) or Russia or Russian Federation or Saint Kitts or Saint Maarten or Saint Martin or San Marino or Saudi Arabia or Scotland or Singapore or Saint Maarten or Slovak Republic or Slovakia or Slovenia or Spain or (St N2 Kitts) or (St N2 Martin) or Sweden or Switzerland or Tobago or Trinidad or Turks or United Arab Emirates or United States or Uruguay or Wales)

S13 (TX ((Andorra* or Antigua or Aruba or Australia or Austria or Bahamas or Bahrain or Barbados or Barbuda or Belgium or Bermuda or Brunei or Caicos or Canada or Cayman Islands or Channel Islands or Chile or Croatia or Curacao or Cyprus or Czech Republic or Darussalam or Denmark or England or Equatorial Guinea or Estonia or Faeroe Islands or Finland or France or French Polynesia or Germany or Greece or Greenland or Guam or Hong Kong or Iceland or Ireland or (Isle N2 Man) or Israel or Italy or Japan or Korea or Kuwait or Latvia or Liechtenstein or Lithuania or Luxembourg or Macao or Macau or Malta or Monaco or Netherlands or Netherlands Antilles or Nevis or New Caledonia or New Zealand or Northern Ireland or Northern Mariana Islands or way or Oman or Poland or Portugal or Puerto Rico or Qatar or (Republic N2 Korea) or Russia or Russian Federation or Saint Kitts or Saint Maarten or Saint Martin or San Marino or Saudi Arabia or Scotland or Singapore or Saint Maarten or Slovak Republic or Slovakia or Slovenia or Spain or (St N2 Kitts) or (St N2 Martin) or Sweden or Switzerland or Tobago or Trinidad or Turks or United Arab Emirates or United States or Uruguay or Wales))) AND (S11 AND S12)

S14 TX ((lmic or (low* N3 middle income countr*) or Afghanistan or Afghani or Algeria* or Angola* or "Guinea-Bissau" or Somalia or Bangladesh* or Belize or Benin or Bhutan or Bhutanese or Bolivia* or "Burkina Faso" or Burundi or "Central African Republic" or "Cabo Verde" or "Cape Verde" or Cambodia* or Cameroon or

Chad or Tchad or Comoros or Congo or "Cote d Ivoire" or "Ivory Coast" or Djibouti or Egypt* or "El Salvador" or Salvadoran or Eritrea* or Eswatini or Ethiopia* or Gambia or Gaza or Ghana or Guinea or Haiti or Honduras* or India or Indonesia or Iran or Kenya or Kenyan or Kiribati or Kyrgyz or Laos or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Micronesia or Mongolia or Morocco or Mozambique or Myanmar or Nepal or Nepalese or Nicaragua* or Niger or Nigeria or "North Korea" or "Papua New Guinea" or Pakistan or Philippines or Principe or "Sierra Leone" or "South Sudan" or Sudan or Syria or Syrian or Rwanda* or Samoa* or "Sao Tome" or Senegal* or "Solomon Islands" or "Sri Lanka" or Tanzania or Tajikistan or "Timor-Leste" or Togo or Tunisia or Uganda or Ukraine or Uzbekistan or Vanuatu or Vietnam or "West Bank" or Yemen or Zambia or Zimbabwe)

S15 S13 NOT S14 170

Database: PsycINFO (OVID) 1806-2022

1 (adolescen* or teen* or youth).ti,ab. 329575

2 exp family/ or exp parents/ or family relations/ or parent-child relations/ or parenting/ 332706

3 (family or families or parent*).ti,ab. 588607

4 2 or 3 674898

5 ((parent adj2 training) or (clinical adj2 trials) or intervention*).mp. 498544

6 exp Parent Training/ or exp clinical trials/ or exp Family Intervention/ or exp Intervention/ 145285

7 ((alcohol* or drug or prescription or opiate* or substance) adj2 (abuse or misuse)).ti,ab. 60823

8 (marijuana or smoking or opiate* or vaping or tobacco or marijuana or cocaine or heroin or methamphetamine or amphetamine).ti,ab. 117482

9 exp Alcoholism/ or exp Drug Abuse/ or exp Tobacco Smoking/ or exp "Substance Use Disorder"/ 169757

10 exp animals/ not humans.sh. 368483

11 (Andorra* or Antigua or Aruba or Australia or Austria or Bahamas or Bahrain or Barbados or Barbuda or Belgium or Bermuda or Brunei or Caicos or Canada or Cayman Islands or Channel Islands or Chile or Croatia or Curacao or Cyprus or Czech Republic or Darussalam or Denmark or England or Equatorial Guinea or Estonia or Faeroe Islands or Finland or France or French Polynesia or Germany or Greece or Greenland or Guam or Hong Kong or Iceland or Ireland or (Isle adj2 Man) or Israel or Italy or Japan or Korea or Kuwait or Latvia or Liechtenstein or Lithuania or Luxembourg or Macao or Macau or Malta or Monaco or Netherlands or Netherlands Antilles or Nevis or New Caledonia or New Zealand or Northern Ireland or Northern Mariana Islands or way or Oman or Poland or Portugal or Puerto Rico or Qatar or (Republic adj2 Korea) or Russia or Russian Federation or Saint Kitts or Saint Maarten or Saint Martin or San Marino or Saudi Arabia or Scotland or Singapore or Saint Maarten or Slovak Republic or Slovakia or Slovenia or Spain or (St adj2 Kitts) or (St adj2

Martin) or Sweden or Switzerland or Tobago or Trinidad or Turks or United Arab Emirates or United States or Uruguay or Wales).mp. 780084

12 (lmic or (low* adj3 middle income countr*) or Afghanistan or Afghani or Algeria* or Angola* or "Guinea-Bissau" or Somalia or Bangladesh* or Belize or Benin or Bhutan or Bhutanese or Bolivia* or "Burkina Faso" or Burundi or "Central African Republic" or "Cabo Verde" or "Cape Verde" or Cambodia* or Cameroon or Chad or Tchad or Comoros or Congo or "Cote d Ivoire" or "Ivory Coast" or Djibouti or Egypt* or "El Salvador" or Salvadoran or Eritrea* or Eswatini or Ethiopia* or Gambia or Gaza or Ghana or Guinea or Haiti or Honduras* or India or Indonesia or Iran or Kenya or Kenyan or Kiribati or Kyrgyz or Laos or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Micronesia or Mongolia or Morocco or Mozambique or Myanmar or Nepal or Nepalese or Nicaragua* or Niger or Nigeria or "North Korea" or "Papua New Guinea" or Pakistan or Philippines or Principe or "Sierra Leone" or "South Sudan" or Sudan or Syria or Syrian or Rwanda* or Samoa* or "Sao Tome" or Senegal* or "Solomon Islands" or "Sri Lanka" or Tanzania or Tajikistan or "Timor-Leste" or Togo or Tunisia or Uganda or Ukraine or Uzbekistan or Vanuatu or Vietnam or "West Bank" or Yemen or Zambia or Zimbabwe).mp. 107084

13 4 and (5 or 6) 113745

14 7 or 8 or 9 250053

15 1 and 14 34728

16 13 and 15 3099

17 16 not 10 3095

18 11 and 17 689

19 18 not 12 676

20 limit 19 to (english language and yr="2015 -Current") 220

Database: Cochrane

1 (adolescen* or teen* or youth):ti,ab 36562

#2 (family or families or parent*):ti,ab 76885

#3 (("parent training") or intervention*):ti,ab 472271

#4 #2 OR #3 507387

#5 ((alcohol* or drug or prescription or opiate* or substance) NEAR/2 (abuse or misuse)):ti,ab 6952

#6 (marijuana or smoking or opiate* or vaping or tobacco or marijuana or cocaine or heroin or methamphetamine or amphetamine):ti,ab 43076

#7 #5 OR #6 48488

#8 #1 AND #4 AND #7 1955

#9 (Andorra* or Antigua or Aruba or Australia or Austria or Bahamas or Bahrain or Barbados or Barbuda or Belgium or Bermuda or Brunei or Caicos or Canada or Cayman Islands or Channel Islands or Chile or Croatia or Curacao or Cyprus or Czech Republic or Darussalam or Denmark or England or Equatorial Guinea or Estonia or Faeroe Islands or Finland or France or French Polynesia or Germany or Greece or Greenland or Guam or Hong Kong or Iceland or Ireland or (Isle Near/2 Man) or Israel or Italy or Japan or Korea or Kuwait or Latvia or Liechtenstein or Lithuania or Luxembourg or Macao or Macau or Malta or Monaco or Netherlands or Netherlands Antilles or Nevis or New Caledonia or New Zealand or Northern Ireland or Northern Mariana Islands or way or Oman or Poland or Portugal or Puerto Rico or Qatar or (Republic Near/2 Korea) or Russia or Russian Federation or Saint Kitts or Saint Maarten or Saint Martin or San Marino or Saudi Arabia or Scotland or Singapore or Saint Maarten or Slovak Republic or Slovakia or Slovenia or Spain or (St Near/2 Kitts) or (St Near/2 Martin) or Sweden or Switzerland or Tobago or Trinidad or Turks or United Arab Emirates or United States or Uruguay or Wales):ti,ab,kw 195209

#10 #8 AND #9 534

#11 (lmic or (low* Near/3 middle income countr*) or Afghanistan or Afghani or Algeria* or Angola* or "Guinea-Bissau" or Somalia or Bangladesh* or Belize or Benin or Bhutan or Bhutanese or Bolivia* or "Burkina Faso" or Burundi or "Central African Republic" or "Cabo Verde" or "Cape Verde" or Cambodia* or Cameroon or Chad or Tchad or Comoros or Congo or "Cote d Ivoire" or "Ivory Coast" or Djibouti or Egypt* or "El Salvador" or Salvadoran or Eritrea* or Eswatini or Ethiopia* or Gambia or Gaza or Ghana or Guinea or Haiti or Honduras* or India or Indonesia or Iran or Kenya or Kenyan or Kiribati or Kyrgyz or Laos or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Micronesia or Mongolia or Morocco or Mozambique or Myanmar or Nepal or Nepalese or Nicaragua* or Niger or Nigeria or "North Korea" or "Papua New Guinea" or Pakistan or Philippines or Principe or "Sierra Leone" or "South Sudan" or Sudan or Syria or Syrian or Rwanda* or Samoa* or "Sao Tome" or Senegal* or "Solomon Islands" or "Sri Lanka" or Tanzania or Tajikistan or "Timor-Leste" or Togo or Tunisia or Uganda or Ukraine or Uzbekistan or Vanuatu or Vietnam or "West Bank" or Yemen or Zambia or Zimbabwe):ti,ab,kw 48593

#12 #10 NOT #11 with Cochrane Library publication date Between Jan 2015 and Jul 2022 306

Appendix C
Included Studies (Effectiveness Review):
Substance Use: Family-based Interventions to Prevent Substance Use among Youth

The number of studies and publications do not always correspond (e.g., a publication may include several studies, or one study may be explained in several publications).

Allen ML, Hurtado GA, Garcia-Huidobro D, et al. Cultural contributors to smoking susceptibility outcomes among Latino youth: the Padres Informados/Jovenes Preparados Participatory Trial. *Family & Community Health* 2017;40(2):170–9.

Bauman KE, Foshee VA, Ennett ST, et al. The influence of a family program on adolescent tobacco and alcohol use. *American Journal of Public Health* 2001;91(4):604–10.

Becker SJ, Marceau K, Hernandez L, et al. Is it Selection or socialization? Disentangling peer influences on heavy drinking and marijuana use among adolescents whose parents received brief interventions. *Substance Abuse: Research and Treatment* 2019;13:1178221819852644.

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Appendix D

Summary Evidence Table (Effectiveness Review): Substance Use: Family-based Interventions to Prevent Substance Use among Youth

This table outlines information from the studies included in the Community Guide systematic review of Family-based Interventions to Prevent Substance Use Among Youth. It details study quality, population and intervention characteristics, and study outcomes considered in this review. Complete references for each study can be found in the Included Studies section of the review summary.

Abbreviations Used in This Document:

- Intervention components
  - TIS: trauma-informed schools
  - SEL: social-emotional learning
  - CBITS: Cognitive Behavioral Intervention for Trauma in Schools
- Measurement terms
  - CI: confidence interval
  - OR: Odds Ratio
  - IRR: Incidence rate ratio
  - RRR: Relative risk reduction or relative risk ratio
- Study design
  - RCT: randomized trial
  - ROB2: Cochrane risk of bias tool 2.0
- Other terms:
  - NA: not applicable
  - NR: not reported
  - NS: not significant
  - SES: socioeconomic status
  - Int: Intervention
  - Cont: Control
  - pct pts: percentage points
  - m: months
  - hr: hours
  - min: minutes

Notes:

- Suitability of design includes three categories: greatest, moderate, or least suitable design. Read more >>
- Quality of Execution – Studies are assessed to have good, fair, or limited quality of execution. Read more >>
- Race/ethnicity of the study population: The Community Guide only summarizes race/ethnicity for studies conducted in the United States.
- Population characteristics were reported if a study reported intervention and control separately.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Author (Year): Allen et al. (2017) **Location:** USA, Minnesota **Years for Study:** July 2011 - May 2014 **Period for Study:** 8 months from baseline to 6-month post intervention follow-up **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Low b) Deviations – Some concerns c) Missing data - Some concerns d) Outcome measurements - Low e) Selective- Low Overall bias: Some concerns	**Setting:** Community settings: 2 primary care clinics, 4 social-service agencies, and 1 public school **Urbanicity**: Urban and rural **Eligibility:** At least one Spanish-speaking immigrant Latino families of adolescents (Latino youth 10 to 14 years) **Recruitment:** Community presentations, local radio and TV advertisements, information on websites and professional email lists **Inclusion:** Above **Exclusion:** Families who participated in pilot study Sample size: Baseline 352 (6 families were ineligible & dropped) Int 174 families Control 172 families	**Brief description of intervention and content:** Community-based participatory, family-focused tobacco prevention intervention targeting parenting skills, and positive parent youth relationships Active learning methods, such as role-play, skill practice, and small group discussions 8 parent and 4 youth (combined) sessions; for combined sessions parents and youth initially met separately then came together for skill building. **Intervention/program name:** *Padres Informados/ Jovenes Preparados (PIJP)* **Substance(s) focused*** General (skill-building exercises largely use tobacco and other substance use as examples, thus infusing all sessions with practical means for preventing substance use) **Format:** Small group sessions face-to-face **Intervention intensity:** Weekly	**Brief description:** Youth self-reported tobacco use intentions based on responses to questions on susceptibility to smoking and baseline status Baseline 6 months post intervention Tobacco use intentions: Questions 1) Do you think you will try a cigarette soon? (not asked of puffers), 2) Do you think you will be smoking cigarettes one year from now? 3) If one of your best friends were to offer you a cigarette, would you smoke it? A never-smoker was considered non-susceptible if answer to the first question was 'No' and answers to both questions 2 and 3 were 'Definitely not'; a puffer was considered non-susceptible if answers to questions 2 and 3 were 'Definitely not'. Baseline smoking status: questions: 1) Have you ever smoked a cigarette, 2) Have you ever tried or experimented with cigarette smoking even a few puffs, and 3) Have you smoked at least 100 cigarettes in your life (only asked if answered yes to question 1)?	Intention to treat, tests for differences at baseline, and baseline indicators were similar between intervention and control groups. Multiple imputation methods in SAS used to generate a random sample of missing values that represents uncertainty due to missing data. Basic logistic regression model investigated intervention effect on youth smoking susceptibility. **Outcome: Tobacco use intentions** (susceptibility to smoking) Measure: scaled, proportion Baseline Int (n=174): 30.6% Comp (n=172): 38.5% Follow-up (in months): 6 months Int (n=174): NR Comp (n=172): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Intervention group did not predict smoking susceptibility at 6 months follow up OR =0.66 (95%CI 0.40, 1.10), p = 0.115 Favorable (Yes/No/No effect): Yes Statistical significance: No Subset Analyses: Intervention youth of parents having lower parental

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	6 month post-baseline Follow-up 87% (307/352) Int 152 families Control 155 families 6 month loss to f/u 13% (45/352) **Study population: Parents and Caregivers** Age: 38.2 Sex: 92.5% female (91.4% mothers), 7.5% male Race/ethnicity: 100% Latino by study criteria Education: 73.8% high school or higher Employment: 39.0% Employed or Independent worker Income: 61.1% earned more than $1,000 per month Marital status: 63.8% married **Study Population: Youth** Age: 12.3 years (range: 10 – 14) Grade level(s): NR	Number of sessions: 8 parent sessions with 4 of these sessions including youth and parent + youth content Number of hours per session: 2.5 hours Total hours of intervention: 20 for parents; 10 for youth Additional components: Yes Community-based participatory research was used to develop the intervention and identify and train facilitators Babysitting was offered at sessions **Implementer(s):** Trained facilitators from community partner organizations (two clinics, one school system, and four social service agencies) participated in three days of group training **Intervention duration:** 8 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No	Participants categorized: never-smokers (no to 1 and no to 2), puffers (no to 1 and yes to 2), experimenters (yes to 1 and no to 3), smoking habit (yes to 1 and yes to 3) **Substance(s)*** tobacco Polysubstance measures? No **Outcome types** Intentions? YES Initiation? NO Use? NO SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES Other outcomes? Parenting behaviors - Monitoring knowledge, Personal involvement, Consistent discipline, Self-efficacy, Social Support	adherence to traditional Latino values as measured by self-reported MACVS (Mexican American Cultural Values Scale) were significantly less likely to report high smoking susceptibility OR=0.35 (95%CI 0.16, 0.75), p=0.007 Favorable (Yes/No/No effect): Yes Significant: Yes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: 49.4% female, 50.6% male Race/ethnicity: 100% Latino by study criteria Other 77.6% U.S. born, 89.2% never smoked, 30.6% susceptible to smoking, 77.5% smoking not allowed in home **Community characteristics**: Study region has economic and racial segregation with risks of concentrated poverty	**Comparison group:** Usual care-delayed intervention group		
Author (Year): Bauman et al. (2001) **Location:** Contiguous USA (excluding Alaska and Hawaii) **Years for Study:** Baseline to last follow-up: June 1996 - January 1999 **Period for Study:** 32 months (intervention + f/u months)	**Setting:** Home; booklets delivered to home of intervention families; telephone interviews with family units **Urbanicity:** Mixed **Eligibility:** Families with at least one 12-14 year old living in continental USA **Recruitment:** 64,811 telephone numbers selected to be	**Brief description of intervention and content:** Within a month after the baseline interview, treatment group parents were mailed booklet 1 of 4. The first booklets were sent in July 1996, and the final parent–adolescent pair completed the program in September 1997 Four booklets sent during course of program; each booklet had activities for the families Telephone sessions: 2 weeks after each booklet was sent, a health educator contacted a	**Brief description:** Initiation of tobacco, both smoking and non-smoking, and alcohol Substance(s)* Tobacco (cigarettes and chewing tobacco) and alcohol Polysubstance measures? No Outcome types Intentions? NO Initiation? YES Use? YES SU disorder? NO	All outcomes had zero use at baseline for participants. Alcohol use onset sample was substantially smaller than smoking onset sample. There were fewer nonusers of alcohol than nonusers of cigarettes at baseline **Outcome: Tobacco use initiation – cigarettes** Measure: Self-reported from adolescents; answers to question: How much have you ever smoked cigarettes in your life? Answers were collapsed into never used ("none at all, not even a puff") or had used (1 puff to multiple cigarettes in life)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Study Design: Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization b) Concealment c) Blinding d) Outcomes e) Selective	representative of US population; 2395 estimated to have age-appropriate adolescents; 1326 completed baseline telephone interview; 1316 included in study, then randomly assigned to intervention or control group **Inclusion/Exclusion:** Household included an eligible parent–adolescent pair with at least one adolescent living in the household. Sample size: 1198 of 2395 adolescent-parent pairs eligible for program; assumed to be randomized Intervention: 549 families began program; 407 completed it Baseline: 1316 pairs interviewed; 1198 families randomized	parent by telephone to discuss booklet, answer questions, and record information. New booklet sent when health educator determined the prior booklet was completed **Intervention/program name:** Family Matters Substance(s) focused*: Tobacco (cigarettes and chewing) and alcohol **Format:** Remote Mailed booklets plus telephone calls **Intervention intensity:** Number of sessions or modules: maximum 4 booklets + 4 phone calls Number of hours per session: NR Total hours of intervention: NR **Implementer(s)** Health educators called families after each booklet was mailed **Intervention duration:** July 1996 - September 1997 15 months **Focus of intervention activities:**	Educational outcomes? NO Morbidity? NO Mortality? NO Equity? Yes Other outcomes? NO	Baseline: 0% for both intervention and control 12 months follow-up Int (n=400): 26% (estimated from figure 1) Comp (n=428): 31% (estimated from figure 1) **Absolute change:** -5 pct pts **Relative change:** 16.4% (fewer adolescents smoking initiators at second follow up compared with control group) **Narrative results:** Odds ratio: 1.30, P=.037 Favorable (Yes/No/No effect): Yes Statistical significance: p=0.037 Stratified analysis, Health Equity: program appears to have influenced smoking initiation for non-Hispanic Whites but not for the other racial/ethnic group. These reductions translate into effect sizes of 0.15 for the total sample and 0.25 for non-Hispanic Whites OR, white: 1.61, p=0.007 OR, other: 0.66, NS **Outcome: Tobacco use – chewing tobacco** Measure: Self-reported from adolescents; answers to question Have you ever tried chewing tobacco or snuff? Response categories were Yes or No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Intervention: 549/1198 = 45.8% parent–adolescent pairs started Control: 649/1198 Follow-up Interview: 1135/1316 (86.2%) adolescents baseline pairs completed either the first follow-up or the second follow-up, and 1014 (77.1%) completed both follow-up interviews Intervention: 407/549 (74.1%) completed Loss to f/u: 142/549 = 25.9% **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Income: NR **Study Population: Youth**	Both parents/caregivers and youth: No Parents only: Yes **Comparison group:** No intervention Control group was contacted only for data collection.		Overall: No statistically significant program effect was seen for onset of smokeless tobacco or alcohol use. Sample size inadequate for assessing program effects Int (n= 505): 6% (estimated from figure 1) Comp (n=570): 4% (estimated from figure 1) **Absolute change:** +2 pct pts **Relative change** +50% **Narrative result:** OR: 0.78; NS Favorable (Yes/No/No effect): No Statistical significance: NS **Outcome: Alcohol use initiation** Measure: Self-reported from adolescents; answers to question: How much alcohol have you ever had in your life? Answers collapsed into never used ("none at all, not even a sip") or had used (1 sip to multiple drinks in life) Overall conclusion: No statistically significant program effect was seen for onset of alcohol use Baseline: 0% for both intervention and control Int (n=193): 39% (estimated from figure 1) Comp (n=223): 44% (estimated from figure 1)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Age: 12 to 14 Grade level(s): NR Sex: NR Race/ethnicity: fewer non-Hispanic Whites were in the treatment group (70.6%) than in the control group (76.1%) **Community characteristics:** NR			**Absolute change:** -5 pct pts **Relative change:** -11% **Narrative results:** OR=1.26, P=.100 11.1% lower for the program group than for the control group at the second follow-up Favorable (Yes/No/No effect): Yes Statistical significance: p=0.1 **Outcome: Alcohol and smoking frequency of use** Measure: self-reported; smoking or drinking 6 or more days out of the past 30 days **Absolute change:** NR **Relative change:** NR **Narrative results:** No statistically significant program effects were seen for frequency of use Favorable (Yes/No/No effect): can't determine Statistical significance: NS
Author (Year): Becker et al. (2021) **Location:** USA, New England and Midwest **Years for Study**: NR **Period for Study:** 6 months **Study Design:**	**Setting:** Mix - community (coaching at treatment facility) and home (online website) **Urbanicity**: Mixed (two treatment facilities in different states)	**Brief description of interventions and content:** Parent SMART+TAU *Parent SMART:* multi-component technology-assisted intervention started after admission and post-discharge (a) at home, online parenting program, Parenting Wisely (PW), videos demonstrating parenting skills, (b) up to 4, one-on-one, in-person or remote coaching	**Brief description:** Substance-related problems = 5 items like DSM diagnostic criteria Global Appraisal of Individual Needs-Q3 (GAIN-Q3): briefer 30–45-min version of comprehensive 90–120-min GAIN interview. Includes 8 domains: SU, mental health, physical health, risk behaviors, school, work, crime and violence, and stress sources	Missing data analyses examined if missingness systematically associated with condition, site, or outcome variables. Percentages may not sum to 100 on some variables, reflecting missing data. Proportion of days used variables highly zero-inflated/specified with zero-inflated negative binomial distribution. 2 outcomes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization – Some concerns b) Deviations – Low c) Missing outcomes – Low d) Outcome measurements – Low e) Selective – High Overall bias: High	**Eligibility:** Adolescents at one of included facilities **Recruitment:** Recruited from short-term and long-term residential treatment facility (37 dyads from short-term [i.e., 6–10 day] and 24 dyads from long-term [i.e., 30–45 day] facility) **Inclusion:** Parents: (1) legal guardian of a 12–17-year-old admitted to residential treatment due to problems related to SU; (2) would remain custodial guardian of adolescent post-discharge; (3) English or Spanish fluency; (4) willing and able to complete baseline assessment prior to adolescent's discharge; (5) reliable access to phone to receive text messages and internet-capable device to receive TAI.	sessions on PW skills, (c) web/app parent networking forum (for connectivity and clinical extender) PW: 6-month subscription, 10 common family problem videos and workbook (finding drugs, schoolwork, sibling conflict). Video/workbook components: family problem short clip; 1 of 3 possible problem solutions, with selected solution re-enactment (pros and cons) TAU: at residential facility (described below in control section) **Intervention/program name:** Parent SMART (Substance Misuse in Adolescents in Residential Treatment) +TAU (treatment-as-usual) Substance(s) focused* General **Format:** Both (face-to-face or remote one-on-one, printed and online materials) **Intervention intensity:** Parent SMART+TAU:	Proportion of days used = number of days substances used divided by number of days spent outside of a controlled environment, rounded to nearest integer. School related problems = being late or tardy, cutting class, absenteeism, trouble with grades Substance(s)* alcohol, cannabis, and any substance Polysubstance measures? No Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? YES, substance-related problems Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? YES, school related problems Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO	Focal effect: time*condition interaction in count distribution, i.e., effect of condition (Parent SMART vs. TAU) over time on predicting proportion of days used > than 0. Data below based on only count analyses results for number# of days used variables. Full results, including zero-inflated component, in Supplemental Table 1. (For Tables 3 and 4, RR: change in rate, negative coefficients indicate a reduction in days of use or problem behavior; therefore, a negative coefficient on the time*condition interaction favors the experimental condition.) **Short-term residential** **Outcome: Alcohol use** Measure: proportion of days used (count distribution), last 90 days Baseline Int (n=18): 12% (0.3) Comp (n=19): 6% (0.1) Follow-up (in months): 6 Int (n=13): 2% (.02) Comp (n=16): 3% (.05) **Absolute change:** -7 pct pts **Relative change:** -66.7% **Narrative results**: Significant time*condition interaction: intervention adolescents showed decline in count

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Adolescents: Had a parent who met above criteria, and if they confirmed recent SU during the baseline assessment (i.e., alcohol or other drug use, past 90 days). **Exclusion:** No history of substance use Not returning home Unable to complete assessment Sample size: Baseline 61 *Int 30* ST= 18 LT = 12 *Control 31* ST = 19 LT = 12 6m-Follow-up *Int 79% (23/30)* ST = 72% (13/18) LT = 83% (10/12) *Control 87% (27/31)* ST = 84% (16/19) LT = 92% (11/12) 6m-Loss to f/u *Int 20% (6/30)* ST = 22% (4/18)	One-on-one coaching= up to 4 sessions TAU parent groups= ST: 1 discharge planning session on average; LT: periodic (e.g., weekly to monthly) Number of sessions or modules: Parent SMART: 10 video modules, 4 coaching sessions Number of hours per session: Parent SMART Coaching: 60–75 min (1st), 45–60 min (2nd – 4th) Total hours of intervention: Parent SMART (PW+Coaching) +TAU: PW = 3-5 hour average Coaching = 195 – 255 mins TAU, at both sites = ~ 20–25 hours per week Additional components (things outside the sessions/modules): After randomization, all families received a Parent Resource Guide developed for study: it contained information on different drugs and treatment approaches from the NIDA (National Institute on Drug Abuse) website for teens and information on how to find a therapist, including a list of local referral options developed in partnership with programs.	Equity (stratified analysis; focused on one historically disadvantaged group)? NO Other outcomes: externalizing behavior, criminal (crime and violence) behavior, feasibility (e.g., parental effectiveness), acceptability (e.g., parental satisfaction, willingness to recommend the intervention)	distribution compared to control (RR = 0.69, b= -0.37, 95% CI = 0.49–0.97). Favorable (Yes/No/No effect): Yes Statistical significance: p = .034 **Outcome: cannabis use** Measure: proportion of days used (count distribution), last 90 days Baseline Int (n=18): 29% (0.4) Comp (n=19): 52% (0.4) Follow-up (in months): 6 Int (n=13): NR Comp (n=16): NR **Absolute change: NR** **Relative change: NR** **Narrative results:** no significant time or time*condition interactions (b=0.15, p=0.20 RR=1.16, 95%CI: 0.93 – 1.44) Favorable (Yes/No/No effect): No/No effect Statistical significance: No **Outcome: Any substance use** Measure: proportion of days used (count distribution), last 90 days Baseline Int (n=18): 41% (0.4) Comp (n=19): 57% (0.4) Follow-up (in months): 6 Int (n=13): NR Comp (n=16): NR **Absolute change:** NR **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	LT = 17% (2/12) *Control 13% (4/31)* ST = 16% (3/19) LT = 8% (1/12) **Study population: Parents and Caregivers** Age: 44.3 mean (ST, n=18), 43.3 mean (LT, n=12), Sex: *Total intervention only (n=30)* 87% female, 13% males ST - 83% female, 17% males LT - 92% female, 8% males Race/ethnicity: *Total intervention (n=30*): 87% white, 10% Black, 3% multiracial/prefer not to answer; 27% Hispanic/Latinx *ST* - 89% white, 6% Black, 6%multiracial/prefer not to answer; 17% Hispanic/Latinx *LT* - 83% white, 17% Black, 42% Hispanic/Latinx	**Implementer(s):** BA or MA educated and trained coaches, at least one fluent in Spanish + 2 hour training Reviewed Parent SMART manual, completed 2 PW online modules, visited parenting networking forum, listened to 2 pre-recorded coaching sessions **Intervention duration**: NR (up to 6 months) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes (online activity) **Comparison group:** Treatment as usual **(TAU)-only,** adolescent residential treatment-as-usual; traditional, office-based continuing care		**Narrative results:** No significant time or time*condition interactions (b=0.12, p=0.15, RR=1.13, 95%CI= 0.96 – 1.33) Favorable (Yes/No/No effect): No/No effect Statistical significance: No **Outcome: SU disorder (substance-related problems)** Measure: scale, past month in means (SD) Baseline Int (n=18): 1.72 (1.74) Comp (n=19): 1.58 (1.50) Follow-up (in months): 6 Int (n=13): NR Comp (n=16): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** No significant time or time*condition interactions (b= −0.17, p=0.19 RR=0.13, 95%CI = −0.43 – 0.08) Favorable (Yes/No/No effect): No/No effect Statistical significance: No **Outcome: Educational outcomes** (school related problems) Measure: scale, past 30 days in means (SD) Baseline Int (n=18): 1.83 (1.34)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Education: 13.6 mean (ST, n=18), 14.8 mean (LT, n=12), Employment (FT work) 63% (Total intervention, n=30) 61% (ST), 67% (LT) Income: NR Marital status: NR Other from total sample Biological parent – 95% (58/61) Other blood relative – 5% (3/61) **Study Population: Youth** Age: 15.4 mean (ST), 16.3 mean (LT), range: 13–18 Grade level(s): 9th or 10th Sex: *Total intervention (n=30)* 47% female, 43% males, 10% non-binary ST - 50% female, 33% males, 17% non-binary LT - 42% female, 58% males Race/ethnicity: *Total intervention (n=30*): 70% white,			Comp (n=19): 1.16 (1.30) Follow-up (in months): 6 Int (n=13): 1.17 (1.47) Comp (n=16): 1.75 (1.00) **Absolute change:** +1.25 pts **Relative change:** +90.9% **Narrative results**: Table 4, significant time*condition interaction = intervention adolescents showed decline over past month compared with control (b = − 0.27, 95% CI = −0.53−0.01, RR: 0.13). Favorable (Yes/No/No effect): Yes Statistical significance: p = .042 **Long-term residential** **Outcome: Alcohol use** Measure: proportion of days used (count distribution), last 90 days Baseline Int (n=12): 22% (0.3) Comp (n=12): 16% (0.3) Follow-up (in months): 6 Int (n=10): NR Comp (n=11): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** significant time effects = intervention adolescents experienced significant reductions regardless of condition; time*condition: RR: 0.39, b= -0.93, 95%CI: 0.19-0.80, p=.01 Favorable (Yes/No/No effect): Yes Statistical significance: Yes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	10% Black, 13% multiracial, 10% prefer not to answer; 30% Hispanic/Latinx *ST* - 78% white, 11% Black, 17% multiracial, 11.1% prefer not to answer; 28% Hispanic/Latinx *LT* - 58% white, 17% Black, 8.3% multiracial, 8.3% prefer not to answer; 33% Hispanic/Latinx Other (years of education) 9.0 mean (ST), 9.9 mean (LT), **Community characteristics** NR			**Outcome: Cannabis use** Measure: proportion of days used (count distribution), last 90 days Baseline Int (n=12): 65% (0.3) Comp (n=12): 63% (0.4) Follow-up (in months): 6 Int (n=10): NR Comp (n=11): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: No significant time or time*condition interactions (b= 0.15, p=0.67 RR= 1.16, 95%CI= 0.58 – 2.32) Favorable (Yes/No/No effect): No/No effect Statistical significance: No **Outcome: Any substance use** Measure: proportion of days used (count distribution), last 90 days Baseline Int (n=12): 79% (0.2) Comp (n=12): 67% (0.4) Follow-up (in months): 6 Int (n=10): NR Comp (n=11): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: Significant time effects = intervention adolescents

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				experienced significant reductions regardless of condition (RR: 0.61, 95%CI: 0.44-0.86, p=.005). time*condition: b=0.36, p=0.11, RR=1.44, 95%CI= 0.93 – 2.23 Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: SU disorder (substance-related problems; Table 1)** Measure: scale, past month Baseline Int (n=12): 2.75 (2.05) Comp (n=12): 2.42 (1.88) Follow-up (in months): 6 Int (n=10): NR Comp (n=11): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: no significant time or time*condition interactions (b= −0.07, p=0.79, RR=0.27, 95%CI= −0.60 – 0.46) Favorable (Yes/No/No effect): No/No effect Statistical significance: No **Outcome: Educational outcomes (school related problems)** Measure: scale, past 30 days Baseline Int (n=12): 1.00 (1.41) Comp (n=12): 0.92 (1.24)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up (in months): 6 Int (n=10): NR Comp (n=11): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** no significant time or time*condition interactions (b=0.07, p=0.67, RR=0.17, 95%CI =− 0.25 – 0.39) Favorable (Yes/No/No effect): No/No effect Statistical significance: No **Pooled full sample analysis (Table 3):** no significant time*condition interactions for any variable. All time effects had negative coefficients and several had p-values < .10, evidence that days of substance use and substance-related problems generally declined over time, regardless of treatment condition Time effect (use decreasing over time) significant for days of cannabis use (b= -0.14, RR: 0.87, 95% CI: 0.77- 0.98, p= .03), and days of "Any substance" use (b= -0.17, RR: 0.84, 95%CI: 0.76-0.94, p=.002). time*condition interaction, while not significant for any variable, had negative coefficients for proportion days used alcohol (b = − 0.11, RR =0.89, P=0.49) substance-related

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				problems (b=− 0.13, RR=0.13, p=0.34), and school-related problems (b=− 0.14, RR=0.10, p=0.19)
Author (Year): Brody et al. (2010) Related paper: Brody et al. (2006) **Location:** USA, Georgia (9 rural counties; 2 small and contiguous counties with similar income and percent of African American residents) **Years for Study**: Started in February 2002; intervention lasted 29 months. Last follow-up 5.4 years after pretest, June 2007. **Period for Study:** Brody et al. (2006): 29 months Brody et al. (2010): 65 months (intervention + f/u months) **Study Design:**	**Setting:** Community; intervention conducted in community facilities **Urbanicity:** Rural **Eligibility:** African American primary caregivers who were living in one of the 9 selected counties in Georgia and had an 11-year-old attending local school **Recruitment:** All schools within the 8 county units provided lists of 11-year-old African American students 521 families contacted and 332 families completed pretest Similar refusal rates across intervention and control counties	**Brief description of interventions and content:** Program content can be found in Figure 1 Program adapted to Black community by creating appropriate materials through research SAAF program implemented regulated communicative parenting to enhance youths' development of proximal protective processes. Parents taught involved-vigilant methods (consistent use of nurturant-involved parenting practices; high levels of monitoring/control; adaptive racial socialization strategies; sex communication strategies, and establishment of clear expectations about alcohol use. Children learned adaptive behaviors when encountering racism, similarities and differences between themselves and their age-mates who use alcohol, prevalence of	**Brief description:** All families finishing pretest, posttest, and long-term follow-up included in analysis, including 24 primary caregivers and 22 youths who didn't attend any prevention sessions but finished all 3 assessments Substance(s)* Alcohol Polysubstance measures? No Outcome types Intentions? No Initiation? Yes Use? Yes SU disorder? No Educational outcomes? No Morbidity? No Mortality? No Equity? Yes Other outcomes? Mediators Mediating effect of intervention-induced changes in youth protective factors on alcohol use from pre to	Intervention and control groups are comparable at county and family level. One factor, youths' reports of negative attitudes towards alcohol, was higher in control group than in prevention group; this was controlled for in later analysis. Each outcome below included as a measure "Intervention-targeted youth protective factors" which has four variables: future-oriented goals, resistance efficacy, negative images of drinkers, and negative attitudes toward alcohol use. **Outcome: Alcohol use initiation** Measure: new user proportions, using z tests Baseline (Pretest) Int (n=181): NR Comp (n=149): NR Follow-up: Posttest: 8 months Longest follow up: 29 months Int (n=172): M = .19 Comp (n=133): M = .29 Z = 2.16, p < .05 Absolute change: NR Relative change: NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment (Brody et al., 2010)** a) Randomization – Unclear b) Concealment – Unclear c) Blinding – High d) Outcomes – Low e) Selective – Low	University staff member administered pretest assessment in family's home. Recruitment incentive: paid $100 at each assessment. **Inclusion/Exclusion:** willingness to participate, informed consent **Sample size:** 330 families in 8 county units Baseline Intervention: 181 enrolled but only 157 received intervention, 4 county units Control: 149 enrolled, 4 count units Follow-up 92% completed pretest, posttest, long-term follow-up Loss to f/u Overall: 25/330=7.6% Intervention: 9/181=5.0% Control: 16/149=10.7%	alcohol/other substance use data, resistance strategies, forming future goals and plans to attain them, having/abiding household rules. **Intervention/program name:** Strong African American Families Program (SAAF) Substance(s) focused* Alcohol **Format:** face-to-face group sessions, with videotapes, role-playing, discussion, and other activities Separate, concurrent training sessions for parents and children, followed by joint parent–child session where families practiced skills they learned in separate sessions. **Intervention intensity:** Number of sessions or modules: 7 consecutive weekly meetings Number of hours per session: 1 Total hours of intervention: 21; 7 for parents, 7 for youth, and 7 for families **Implementer(s)**	posttest; factors included future-oriented goals, resistance efficacy, negative images of drinkers, and negative attitudes toward alcohol use	Narrative results: At both f/u periods, new user proportions (proportions of adolescents reporting initiating alcohol use since pretesting) were significantly lower among SAAF adolescents when compared with control group Favorable: Yes Statistically significance: significant; p<0.05 **Outcome: Alcohol use.** Measure: Alcohol composite index, 3 items, ever consumed an entire alcoholic drink in lifetime; consumed an entire alcoholic drink in past 30 days; ever had 3 or more alcoholic drinks at one time (binge drinking); responses scored 1 (affirmative) and 0 (negative) and summed, a scale of 0 to 3) Latent growth models used (for intervention effects and rate of growth) Baseline (Pretest) Int (n=181): NR Comp (n=149): NR Follow-up: 29 months Int (n=172): Comp (n=133): **Absolute change:** NR **Absolute change:** NR **Relative change:** -17.4%; intervention participants experienced

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and Caregivers Age: Mothers: 38.1 mean years; fathers: 39.4 mean years Sex: NR Race/ethnicity: African American families Education: 78.7% of mothers completed high school Employment: primary caregivers work an average of 39.4 hours per week Income: median household income = $1,655 per month; 46.3% of participants were living below federal poverty standards, 50.4% were living within 150% of the poverty threshold Marital status, mother: Single: 33.1% Married (living w/husbands): 23.0% Married (separated): 33.9%	Trained community members, all African Americans Sessions led by AA group leaders. 10 teams, each including 3 people, minimum high school graduation, African American, underwent 3 training sessions over 4 days Interview completed by pre-trained (~27 hours of training) African American students and community members. **Intervention duration**: 7 weeks Posttest: ~3 months after prevention programming end **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Control families received 3 leaflets via postal mail, with		17.4% less growth in alcohol use for each unit increase to control group **Narrative results:** Assignment to intervention associated w/ significantly slower rate (ß= -0.18, p<.05) of increase in alcohol use across the 29 months between the pretest and long-term f/u Results are the same when controlled for pretest levels of alcohol use, gender, and primary caregivers' educational attainment Follow-up: 65 months after pretest Relative change: this is post only Intervention: 0.68 times a person drank in past month Control: 1.41 times a person drank in past month **Absolute change:** NR **Relative change:** -51.8% in drinking **Narrative results:** Assignment to SAAF condition associated with significantly slower rate (ß= -.23, p<.05) of increase in alcohol use across the 65 months between the pretest and the last assessment Favorable: yes Statistical significance: significant; p<0.05 Outcome: Mediational effects of intervention-induced changes in youth protective factors on alcohol use

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Living with partners and not married: 7.0% Other Family structure: among 2-parent households, 93.0% had both biological parents Study Population: **Youth** Age: 11 (at pretest), 13.5 (at study end) Grade level(s): NR Sex: 53.6% female Race/ethnicity: African American Education: NR Income: NR Other NR **Community characteristics:** poverty rates among highest, unemployment rates above national average	topics including stress management, early adolescence development, and suggestions for encouraging children to exercise.		Measure: mediating effect examined using structural equation modeling (SEM) with latent variables Consistent with the developmental mediational hypothesis, changes in youth alcohol use from the pretest to the long-term follow-up were mediated through SAAF's enhancement of youth protective processes from pretest to posttest
Author (Year): Brody et al. (2012) Related paper: Chen et al. (2017) **Location:** Georgia, location not specified	**Setting:** Communities; sessions held in community facilities **Urbanicity:** Rural **Eligibility:** Families in rural Georgia with a 16 year	**Brief description of interventions and content:** Intervention goal to deter substance use; conduct problems; depressive symptoms across adolescents Parents: protective parenting processes training (setting limits,	**Brief description:** Self-report Chen et al. 2017 data: Cotinine (smoking) data from blood samples when youth 20 years. Budgetary constraints reduced sample size	Intent-to-treat analysis Analysis methods: Zero-Inflated Poisson (ZIP) regression model. All models controlled for socioeconomic risk, adolescent gender, and pretest levels of the outcome being examined. **Outcome: Substance use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Years for Study: NR **Period for Study:** 22 months **Study Design**: Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Unclear b) Concealment – Unclear c) Blinding – High d) Outcomes – Low e) Selective – Unclear	old at recruitment (based on data from primary caregiver) **Recruitment:** Schools in 6 counties provided list of 10th grade students and participants randomly chosen. Received $100 at each assessment **Inclusion/Exclusion:** NR Sample size: Baseline: 502 families Intervention: 252 families Control: 250 families Follow-up Intervention: 237 families provided data at 22 months follow-up Control: 241 families Loss to f/u Intervention: 1 – (237/252) = 6.0% Control: 1 – (241/250) = 3.6% No demographic differences between families who stayed and families lost to follow-up	strategies for dealing with discrimination and increasing racial pride, supporting academic achievement etc.) Children: self-regulatory skills (following household rules, academic success; goal formation etc.) Separate skill-building curricula for caregivers, adolescents, and family **Intervention/program name:** Strong African American Families-Teen (SAAF-T) Same intervention as Brody et al. 2006 and Brody et al. 2010 Substance(s) focused* Alcohol, cigarettes, and marijuana **Format:** face-to-face group sessions **Intervention intensity:** consecutive meetings Number of sessions or modules: 5 Number of hours per session: 1-hour concurrent sessions for caregivers and adolescents followed by 1-hour family session	Cotinine = half-life of ~15 to 40 hours, assess recent smoking. Quantitative measure more reliable than counting number of cigarettes smoked per day. Substance(s)* Alcohol, cigarettes, and marijuana Polysubstance measures? Yes Combined alcohol, cigarettes, and marijuana Outcome types Intentions? No Initiation? No Use? Yes SU disorder? Yes Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? No Mental health (depressive symptoms; anxiety; etc.) Yes Morbidity? Mortality? Equity (stratified analysis; focused on one historically disadvantaged group)? Other outcomes? Conduct problems,	Measure: Composite score with alcohol, cigarette, and marijuana use within past 3 months Alcohol: on a scale from 0 (none) to 6 (30 or more times), how often adolescents consumed a drink of alcohol or 3 or more drinks at one time during the past 3 months Marijuana: on a scale from 0 (none) to 6 (30 or more times), how often they smoked marijuana during the past 3 months Cigarettes: on a scale from 0 (none) to 6 (about 2 packs/day), how often/how many? smoked cigarettes in past 3 months Baseline Int (n=): M = 0.74; SD = 1.67 Follow-up: authors only reported from pretest to longest follow-up; 22 months **Absolute change**: NR **Relative change:** Author translated coefficient to relative change -32% in substance use (100*[1 – e-0.637]) **Narrative results:** Participants in intervention had less frequent substance use Favorable (Yes/No/No effect): Yes Statistical significance: P<0.001 **Outcome: Substance use problems**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study Population: Parents and Caregivers Age: NR Sex: NR Race/ethnicity: NR Education: NR Income: mean monthly household gross income of $1482.50, 63.8% below federal poverty line; 18% within 150% of FPL Employment: average of 41.5 hours per week Other **Study Population: Youth** Age: 16 at recruitment Grade level(s): 10th grade Sex: 51% female Race/ethnicity: African American 100% Other **Community characteristics:** NR	where caregivers and adolescents practiced what they learned in the previous hour Total hours of intervention: 15; 5 for caregivers; 5 for students; 5 for families **Implementer(s)** Authors stated black intervention leaders were trained to deliver the intervention and control content **Intervention duration:** 5 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Attention control group 5 sessions, 10-hour group prevention program designed to promote good nutrition, exercise, and informed consumer behavior among adolescents	incarceration rates	Measure: Only adolescents who were using substances at baseline included in analysis Number of times during the past 12 months used substances in hazardous situations; failed to fulfill role obligations because of substance use; experienced legal, social, or interpersonal problems because of substance use; ranging from 0 (none) to 6 (11 or more) Used 10-item Minnesota Survey of Substance Use Problems Baseline Int (n=NR): M = 0.52; SD = 1.80 Follow-up: 22 months **Absolute change**: NR **Relative change**: Author translated coefficient to relative change -47% in substance use problems (100*[1 – e-0.442]) **Narrative results:** participants in intervention had fewer substance use problems Favorable (Yes/No/No effect): Yes Statistical significance: P<0.001 **Outcome: Conduct problems** Measure: frequency during past 6 months adolescents self-reported to have fought, stolen, been truant from school, or been suspended from school 14 question survey; score summed

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
		Program: adapted school-based FUEL program into Fuel for Families (FF) program.		Baseline Int (n=NR): M = 6.16, SD = 13.27 **Absolute change:** NR **Relative change:** author translated coefficient to relative change -36% (100*[1-e-0.442]) in frequency of conduct problems **Narrative results:** participants in intervention had fewer conduct problems Favorable (Yes/No/No effect): Yes Statistical significance: P<0.001 **Outcome: Mental health, adolescent depressive symptoms** Measure: self-reported depressive symptoms during the previous week; ranging from 0 (rarely or none of the time, less than 1 day) to 3 (most of the time, 6-7 days) 20-item Center for Epidemiologic Studies Depression Scale; validated Baseline Int (n=NR): M = 13.80; SD = 8.69 **Absolute change:** NR **Relative change:** Author translated coefficient to relative change -4.5% in depressive symptoms **Narrative results**: Participants in intervention had fewer depressive symptoms Favorable (Yes/No/No effect): Yes Statistical significance: P<0.01

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Chen et al. 2017 data: No differences at baseline between those providing cotinine data and those who did not. Intent-to-treat analysis. **Outcome: Cotinine levels (smoking) at youth age 20** Measure: mean nanograms per milliliter of serum, ng/mL Baseline Int (n=369): NR Comp (n=298): NR Follow-up (in months): 108 Int (n=257): M = 0.672, SD = 0.048 Comp (n=167): M = 0.824, SD = 0.059 **Absolute change:** -0.15 pts **Relative change:** -18.45% pts **Narrative results**: Intervention program significantly lower cotinine levels than control, F (1,416) =4.013, Cohen's d = −0.200. Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p = .046
Author (Year): Chaplin et al. (2021) **Location:** USA, mid-Atlantic **Years for Study**: 2014–2015/2016	**Setting:** Community **Urbanicity** (rural, urban, or mixed; mixed for state-wide or nation-wide studies): Suburban	**Brief description of interventions and content:** Mindfulness intervention for parents Parent only: formal (meditation or gentle yoga) and informal mindfulness (present focus while eating) practices, parenting, parenting	**Brief description:** Polysubstance: adolescent reported (+urinalysis) 11 substances, summed scores for YRBS 2011; lifetime SU frequency variable (combo of days used/substance & number of substances used). For each substance,	ITT main analysis, 'per protocol' secondary analyses with mothers who attended at least 50% of intervention sessions

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Period for Study:14 months (2 months intervention+ 12-month f/u) **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Some b) Deviations – Some/Low c) Missing data- Low d) Outcome measurement – Low e) Selective – Low Overall bias: Some concerns	**Eligibility:** Primary caregivers of 11–17 year olds who reported having moderate to elevated stress **Recruitment:** Fliers posted/distributed at two community behavioral health services providers, mailings to households with 11–16 year old children in local county. Recruitment materials targeted parents with high stress. **Inclusion** Screened by phone for inclusion criteria: adolescent between 11–17 years old, adequate English proficiency to complete questionnaires, and elevated mother stress levels (mean score of at least 3 [on a 1–5 scale] for two questions adapted from perceived stress and parenting stress scales: "In the last month, how often have you felt	interactions homework (30 min formal, 15–30 min informal) mindfulness practice in, 6 days/week. Parent + Adolescents: meditation and practiced present-focused awareness during parent-adolescent discussion PM did not include explicit parent training beyond practicing present-focused awareness and reflecting on parents' own parenting values. **Intervention/program name**: Parenting Mindfully [PM] Substance(s) focused* General **Format:** face-to-face group sessions (10-16 parents per group) **Intervention intensity:** 1 session each week Number of sessions or modules: 8 Number of hours per session: 2 Total hours of intervention: 16 Additional components (things outside the sessions/modules):	youth reported if they had never used it (scored a 0), used 1–2 days (scored 1), 3–9 days (scored 2), 10–19 days (scored 3), 20–39 days (scored 4), or 40 or more days (scored 5). Internalizing Symptoms: Adolescent-reported (Int Sx (AR))**:** self-report, past 2-week depressive and current anxiety symptoms; z-scored summed scales composite of the CSI Major Depressive Disorder subscale and Generalized Anxiety Disorder subscale. Externalizing Symptoms: Mother-reported (Ext. Sx (MR)): composite z-scored summed scales - on adolescent defiant/conduct disorders, delinquency, antisocial, & current clinical psychological symptoms Externalizing Symptoms: Adolescent-reported (Ext Sx (AR))do y: composite z-scored summed scales - defiant/conduct disorders & current symptoms of clinical diagnoses Substance(s)*	Intervention group differences: no significant differences on demographic variables, therapy status, or outcome variables at pre-intervention. Follow-up: significant effects of group on slope of SU/symptoms = proportion of variance in slope explained by group. f^2 effect size (small=0.02, medium=0.15, and large=0.35). ANCOVAs examining intervention group effects on SU/ symptoms at each time-point, covarying pre-intervention SU/symptoms. Cohen's *d* effect sizes = small (0.20), medium (0.50), and large (0.80). HLMs predicted change in outcome variables over time. Intervention group (PM = 1 vs. PE = 0) and covariates (Adolescent Age and Therapy Status = 0/1) effects on intercept and slope. **Outcome: Substance Use (Polysubstance)** Measure: scale, frequency lifetime SU by number of days Baseline Int (n=48): 1.87 (4.33) Comp (n=48): 1.92 (4.09) Follow-up (in months): 12 Int (n=42): 2.04 (5.49) Comp (n=40): 2.51 (4.33) **Absolute change:** -0.42 pts

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	stressed?" and "In the last month, how often have you felt stressed by parenting your teenager or worried about your teenager?"). **Exclusion:** Families in which the child was diagnosed with an intellectual disability or psychotic disorder Sample size: Baseline 96 Int 48 Control 48 Follow-up (1-year) 85% (82) Int 43/48 Control 40/48 Loss to f/u (1-year) 15% Int 5/48 Control 8/48 **Study population: Parents and Caregivers (Total)** Age: 47.23 mean Sex: 100% female Race/ethnicity:	homework (30 min formal, 15–30 min informal) mindfulness practice 6 days/week. **Implementer(s)** PM Groups co-led by study co-Investigator (co-I) and one doctoral student in clinical psychology or by two doctoral students. Leaders received 16 hours of training and weekly supervision by study co-I or PI **Intervention duration:** 8 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group**: parent education [PE] control group, met 3 times for 30 min each time (fewer sessions than PM). Each meeting, group leader (trained, clinical psychology doctoral student) handed out	11 substances (e.g., alcohol, marijuana, cocaine, inhalants) Polysubstance measures? Yes Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? YES (Adolescent Internalizing Symptoms), Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? NO Other outcomes? Externalizing Symptoms AR & MR (clinical psychological symptoms of conduct/antisocial disorders) Mother-report Internalizing Symptoms, Mother Mindfulness, Mother–Adolescent Relationship Quality	**Relative change: -**16.12% pts **Narrative results:** covarying preintervention SU trend, intervention group difference = medium effect size, $F[1,73] = 3.57$, $p = 0.06$. $d = -0.43$, PM youth lower SU than PE youth. Intervention effects on lower SU stronger results at 12-month f/u than immediately post-intervention Using untransformed SU scores, estimated marginal mean SU scores were 1.72 (*SE* = 0.45) for PM and 2.83 (*SE* = 0.45) for PE (1 = 1–2 days, 2 = 3–9 days, and 3 = 10–19 days in lifetime SU). Favorable (Yes/No/No effect): Yes, Statistical significance: Yes $p = 0.06$ (Note: paper used 0.10 for significant) **Over time analysis** *Table 2 (HLM)*- intervention had a growth rate 0.02 units lower than control. Intervention SU remained same but grew in control. Significant effect of intervention group on slope of adolescent SU ($b = -0.02$, *SE* = 0.01, $t[92] = -2.27$, $p = 0.03$); small effect size $f^2 = 0.07$ Fig. 2. - trend for intervention group difference, covarying preintervention SU, a medium effect size, $F[1,73] = 3.57$, $p = 0.06$. $d = -0.43$). Intervention lower SU than control

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Education: 90% college graduate Employment Income: 64% Income >100k Marital status: 78% married Other: 94% biological mothers, 4% adoptive mothers, 2% grandmothers **Study Population: Youth (Total)** Age: 13.98 mean (Range: 11–17) Grade level(s): Sex: 51% male, 49% female Race/ethnicity: 64.6% Non-Hispanic White, 9.4% Hispanic White, 11.5% more than one race (e.g., Black and White), 5.2% Other Race, 4.2% Asian (with 1 Asian Hispanic), 4.2% Black, 1.0% Native American Hispanic **Community characteristics:** local	informational packet, provided a power-point presentation, and answered parent questions. Content: 1. Adolescent physical and social development, 2. Changes in family and peer relations in adolescence, and 3. Adolescent risk behaviors	.	**Outcome: Int Sx (AR) - (Internalizing Symptoms Adolescent- reported)** Measure: scale, z-scored and summed into composite score, mean Baseline Int (n=48): 0.09 (1.79) Comp (n=48): -0.08 (1.99) Follow-up (in months): 12 Int (n=42): -0.002 (1.74) Comp (n=40): 0.002 (2.03) **Absolute change:** -0.17 **Relative change:** -11.1% **Narrative results:** HLM analysis did not find a significant effect of intervention group on growth Favorable (Yes/No/No effect): Absolute favorable Statistical significance: No **Secondary analyses (Adolescent Reported)**: *Substance Use* PM did not prevent adolescent substance use. SU increased in control more than intervention adolescents. But, effect of intervention group on slope of adolescent SU no longer significant (*b* = -0.01, *SE* = 0.01, *t*[44] = -0.60, *p* = .55). Effect size remained "small," (fell from f^2 = .07 (small) to f^2 = .02 (small). *Internalizing Symptoms*

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	community similar to adolescent race composition			HLM analysis did not find a significant effect of intervention group on growth in mother- or adolescent-reported internalizing symptoms (see Table 2). *Externalizing* mother reported items (significant effects) but not on youth reported. *Sex Interactions* Intervention X adolescent sex interaction effects on growth in SU and symptoms not significant and so moderation by sex not supported.
Author (Year): Connell et al. (2007) Connell et al. (2006) Related papers: Véronneau et al. (2016) Kuo et al. (2019) Connell et al., 2007: TOT analysis reported results using only the portion of intervention group who actively participated; authors selected comparable families from the control group for their analysis	**Setting:** Universal: school (3 middle schools) Selective: home and school Indicated: home or community **Urbanicity:** Urban **Eligibility:** families of high-risk youth offered intervention each year of study if they were assigned randomly to the intervention group **Recruitment:** All parents with children in 6th grade at the 3 participating schools	**Brief description of interventions and content:** Adolescent Transition Program (ATP): assigned in 6th grade, adaptive, multi-level intervention designed for delivery in public schools Universal, selected, and indicated family interventions, titrating to the needs and motivation of family Universal: established a Family Resource Center (FRC); support positive parenting practices; feedback to parents on their children's behavior at school; engage parents of high-risk youth for the selected intervention; can enter selective	**Brief description:** In the spring semester, from 6th to 9th grade, and again in 11th grade, students were surveyed using a validated instrument Students were followed to their new school if they moved out of their original schools Substance(s)* Alcohol, tobacco, or marijuana Polysubstance measures? No Outcome types Intentions? NO Initiation? NO Use? YES	**Outcome: Tobacco use** Measure: self-reported frequency of smoking in the previous 30 days Follow-up duration: intervention period was 2 years, followed up to age 17, assuming 4 years between intervention ending to assessment **Narrative results:** ITT, using overall sample: no difference between treatment and control group As treated (AT): within the engagers class, family participation in the FCU inhibited growth in tobacco use from ages 12 to 17 years Favorable (Yes/No/No effect): Yes Statistical significance: p<0.5 **Outcome: Alcohol use** Measure: Self-reported frequency of alcohol use in the previous 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Only the selective intervention was evaluated All numbers and study descriptions from Connell et al. 2007 **Location:** Northwestern US **Years for Study:** NR **Period for Study:** 10-year follow-up from baseline (Veronneau et al., 2016) **Study Design**: RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Unclear b) Concealment – Unclear c) Blinding – Low d) Outcomes – Low e) Selective – Low	were contacted and 90% consented to participate **Inclusion/Exclusion:** sixth grade students from 3 middle schools in an ethnically diverse metropolitan community in northwestern US Sample size: Baseline: 998 Intervention: 500 Control: 498 Follow-up Approximately 80% of youth were retained across the study span (Veronneau 2016) age 13, n = 857 age 14, n = 829 age 15, n = 820 age 17, n = 794 age 19, n = 735 age 22, n = 818 age 23, n = 839 Loss to f/u: by age 18-19 Intervention: 106/500 = 21.2%	intervention after a year of the universal intervention Selective, Family Check-Up (FCU): motivational interviewing Families of high-risk youths, determined by teacher ratings, specifically offered FCU in 7th and 8th grades 3 sessions: an initial interview, video recorded family assessment, and a feedback session to explore potential indicated interventions Indicated, Family management treatment: Services could be behaviorally oriented parent group intervention, individually based behavior family therapy, and multisystemic family therapy; few families chose to do these more involved interventions **Intervention/program name:** Selective, Family Check-Up (FCU) NR for others Substance(s) focused* General (Smoking) Substance (Alcohol, tobacco, or marijuana) **Format:**	SU disorder? YES Educational outcomes? NO Mental health? NO Morbidity? NO Mortality? NO Equity? YES Other outcomes? Yes Antisocial behavior Subset analyses of intervention effects on AD-GPS genotype and alcohol dependence for two groups (European-American and African-American participants) (Kuo 2019) Subset: European American Finding: Intervention moderated the association between alcohol dependence polygenic scores and lifetime alcohol dependence diagnosis in young adulthood. Subset: African-American Finding: For intervention participants there was no association between AD-GPS and alcohol dependence diagnosis. Among African American participants, there was no evidence of AD-GPS by	Follow-up duration: assuming 4 years **Narrative results:** ITT, using overall sample: no difference between treatment and control group As treated (AT): within the engagers class, family participation in the FCU inhibited growth in alcohol use from ages 12 to 17 years Favorable (Yes/No/No effect): Yes Statistical significance: p<0.5 **Outcome: Marijuana use** Measure: Self-reported frequency of marijuana use in the previous 30 days Follow-up duration: assuming 4 years **Narrative results:** ITT, using overall sample: no difference between treatment and control group As treated (AT): within the engagers class, family participation in the FCU inhibited growth in marijuana use from ages 12 to 17 years Favorable (Yes/No/No effect): Yes Statistical significance: p<0.5 **Outcome: Problem behavior** Measure: engagement in problem behavior measured averaging across six items; # of times in previous 30 days teens reported having engaged in following behaviors: lying to parents; skipping school; staying out all night without permission; stealing; panhandling; carrying a weapon

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Control: 99/498 = 19.9% **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Income: NR Other Single parent household: 58.6% with father present; 41.4% as single mother household **Study Population: Youth** Age: 11 followed up to age 18-19 Grade level(s): recruited at 6th grade, ended in 12th Sex: 472 (47.3%) female, 526 (52.7%) male Race/ethnicity: 42.3% Caucasians; 29.1% African American; 6.8% Latinos; 5.2% Asian American; 16.4% with other, including biracial	Universal: Face-to-face and remote Telephone consultations for parents; access to videos and books 6 in-class lessons for students; life skills lessons to deal with stress and conflicts Brief parent-student activities designed to motivate family management Selective: face-to-face and remote Face-to-face interview Remote video NR for follow-up discussion Indicated: NR **Intervention intensity:** Number of sessions or modules: Universal: 6 sessions Selective: 3 sessions Indicated: NR Number of hours per session: Universal: NR Selective: NR Indicated: NR Total hours of intervention: NR **Implementer(s)** Services provided by Parent Consultants; 2 master level	intervention status on alcohol dependence diagnosis. Mediators: Deviant peer affiliation: whether students spent time in past week with peers who had discipline issues; reported in 6th grade Parental monitoring: measured across 5 items to determine if parents are aware of their children's activities etc.	6-point scale: 1, never; 6, more than 20 times Follow-up duration: assuming 4 years **Narrative results:** Within the engagers class, family participation in the FCU reduced the risk for problem behaviors from ages 12 to 17 years; p<0.5 Favorable (Yes/No/No effect): Yes Statistical significance: p<0.5 **Outcome: Total number of arrests** Measure: court records; arrest was defined as a police contact for problem behavior regardless of adjudication Follow-up duration: assuming 4 years **Narrative results:** Throughout study, 31.3% of youths were arrested one or more times (range: 1–38 arrests) Author stated, but without data, the intervention led to significant reductions in the rate of arrest across adolescence Favorable: Yes Statistical significance: stated as significant; no data **Outcome: Substance use disorder diagnoses** Measure: Composite International Diagnostic Interview (at 19 years) Follow-up duration: assuming 4 years **Narrative results:** Positive for lifetime diagnoses: 193 (24.3%) of alcohol abuse or dependence, 76 (9.6%)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Other **Community characteristics:** ethnically diverse metropolitan community	therapists and 1 with BS; ethnicity closely matched that of the participating families Universal: FRC parent consultant Selected: therapist Indicated: NR Trained using a combination of strategies, including didactic instruction, role-playing, and videotaped supervision throughout the 2 years of intervention activity **Intervention duration:** 2 years **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** No intervention		nicotine dependence or withdrawal, 181 (22.8%) cannabis abuse or dependence ITT, using overall sample: preliminary analyses indicated no significant differences found for any substance use abuse/dependence AT, using engagers: author stated, but without data, the intervention led to significant reduction in the likelihood of being diagnosed with an alcohol, tobacco, or marijuana use disorder by late adolescence Among engagers, alcohol and marijuana use diagnoses more common in Caucasian than in ethnic minority youths, cannabis abuse/dependence more common in boys than in girls Favorable (Yes/No/No effect): Yes Statistical significance: stated as significant; no data **Subset comparisons:** Generally, less growth shown in ethnic minority youths than in Caucasian youths in alcohol, tobacco, and marijuana use across adolescence. Intention to treat analyses (ITT) Intervention vs control

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				As treated analysis based on engagement/nonengagement with Family Check-Up (selected) component Complier Average Causal Effect (CACE) analysis: identify the optimal comparison group from the control condition for observed treatment-compliers in the intervention condition 10-year (age 23) outcomes (Veronneau 2016) - Intention to treat analyses revealed that randomization to the FCU was associated with reduced growth in marijuana use ($p < .05$), but not alcohol and tobacco use As treated analyses (engaged with FCU) Engagement in the FCU services predicted reductions in alcohol, tobacco, and marijuana use by age 23. In comparing FCU engagers with nonengagers: 69.9% versus 94.7% showed signs of alcohol abuse or dependence, 27.6% versus 60.9% showed signs of tobacco dependence, 59.3% versus 84.4% showed signs of marijuana abuse or dependence.
Author (Year): Curry et al. (2003)	**Setting:** Mix (Health system + Home)	**Brief description of interventions and content:** Intervention was a 5-6 component intervention:	**Brief description**: Child surveys at 20-month f/u. (study used a subset cohort of 540 families who provided full	20-month survey (post-only comparison of tobacco use outcomes-baseline rates presumed to be very low)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Location: USA, Seattle Washington and Portland Oregon **Years for Study:** NR **Period for Study:** 20 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– High e) Selective– Low	Interventions implemented by by 2 health maintenance organizations for home use by patients' families Group Health Cooperative in Seattle, WAKaiser Permanente NW Division in Portland,OR **Urbanicity:** NR (Mixed) **Eligibility/ Recruitment**: Families with child 10-12 years old randomly identified through HMO records for recruitment and randomly assigned to intervention or control group as participants **Inclusion/Exclusion:** Excluded families planning on disenrolling HMO within 6m Sample size: Children Bsline: Inter: 2016 Cont: 1998	Mailed parent information Mailed child information Health educator telephone sessions (1+14m contact) Provider prompts for brief primary care provider advice prompts Access to website content Parent newsletter **Intervention/program name:** Steering Clear Project Substance(s) focused* Tobacco **Format:** Printed materials, videos, and web content for home use by parents and child Telephone counseling calls x 2 delivered by a health educator Sessions or modules: Printed guide with 12 chapters 2 videos to watch Two telephone counseling calls Brief provider discussion Access to website content Newsletter for parents at 14m **Implementer(s)** Health educators for telephone counseling calls	surveys and assessments at baseline, 6m, 12m, 20m) Substance(s)* Tobacco Polysubstance measures? No Outcome types Intentions? Yes Initiation? Yes Use? Yes SU disorder? No Educational outcomes? No Morbidity? No Mortality? No Equity? No Other outcomes? Yes Parent-child discussions about tobacco use	**Outcome: Tobacco use susceptibility (intentions)** Measure: Child self-report survey Baseline Int (n=NR): NR Comp (n=NR): NR 20-month follow-up Int (n=1749): 20.2% Comp (n=1814): 19.9% **Change in proportion:** +0.3 pct pts (95% CI NR) p=NR Adjusted OR=1.01 p=0.95 **Outcome: Tobacco use experimentation (initiation)** Measure: Child self-report survey Baseline Int (n=): NR Comp (n=): NR 20-month follow-up Int (n=1749): 13.6% Comp (n=1814): 12.1% **Change in proportion:** +1.5 pct pts (95% CI NR) p=NR Adjusted OR=1.13 p=0.25 **Outcome: Tobacco use** Measure: Child self-report any 30-day use Baseline Int (n=): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Follow-up Inter: 1749 Cont:1814 Loss to f/u: 10.5% for child responses **Study population: Parents and Caregivers** Intervention group Age: mean 41.2 years Sex: female 72% male:28% Race/ethnicity: White-non Hispanic 84% Education: Some post-HS 77% Income: Household income greater than $45,000 68% Other: Single-parent household 10% Employed full or part 80% **Study Population: Youth** Age: 10-12 at baseline 11-14 at 20-m f/u Grade level(s): NR Sex: NR Race/ethnicity: NR	Clinic chart prompts to Primary care provider for brief provider advice **Intervention duration:** Parent and child materials at start of intervention Telephone contact Telephone contact at 14m Website access at 14m Newsletter at 14m Additional components as described above **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** No additional interventions (considered usual care)		Comp (n=): NR 20-month follow-up Int (n=1749):2.4% Comp (n=1814): 2.3% **Change in proportion:** +0.1 pct pts (95% CI NR) p=NR Adjusted OR=1.06 p=0.80 Effect modification analyses for child gender, child age, assessment or regular follow-up cohort, site, if index parent smokes, and if there are any adult smokers in the household indicated no variation in treatment effect by subgroup on any of the three primary outcome measures

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: NR			
Author (Year): DeGarmo et al. (2009) **Location:** USA, Lane County, Oregon **Years for Study:** Recruitment 1991-1993 End of study: NR **Period for Study:** 7 years (Grade 5 to Grade 12) **Study Design:** Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization –Low b) Concealment –Low c) Blinding –High d) Outcomes– Low e) Selective –Low	**Setting:** School **Urbanicity:** NR (Small metro area-Mixed) **Eligibility/ Recruitment:** 12 elementary schools in neighborhoods with higher than median number of police contacts were randomly selected for recruitment and randomized to condition LIFT: 6 schools Services as usual: 6 schools 88% of families agreed to participate (671 of 762) Study subset of schools delivered intervention to 5th grade classes (the focus of this study) LIFT: 3 schools Services as usual: 3 schools	**Brief description of intervention and content:** Intervention is a multimodal universal prevention program Parent management training Child social and problem-solving skills training and school recess intervention Teacher-Parent communication **Intervention/program name:** Linking the Interests of Teachers and Families (LIFT) Substance(s) focused* General behavior skills **Format:** Group delivered (10-15 parents and caregivers) parent management training delivered at school. Content was designed to improve parent skills in consistent and effective positive reinforcement, discipline, and monitoring Sessions or modules: Parents: Weekly x 6 weeks Children: 10 weeks **Implementer(s):** Parents: Trained research staff Children: Trained teachers	**Brief description** Youth self-reported substance use questionnaires (annual grades 5 through 12) Substance(s)* Tobacco Alcohol Illicit drugs Polysubstance measures? No Simple frequency count of: Any tobacco use, Any alcohol use Any illicit drug use (e.g., marijuana, amphetamines, heroine, cocaine) Frequency scale "1" (once or twice), "2" (once every 2 to 3 months), "3" (once a month), "4" (every 2 to 3 weeks), "5" (once a week), "6" (2 to 3 times a week), "7" (once a day), and "8" (2 to 3 times a day or more). Outcome types	Substance Use Initiation Model These effects translated to odds ratios of a 10%, 7%, and 9% reduction in risk, respectively, for tobacco use, alcohol use and illicit drug use for the LIFT intervention youth relative to the controls **Outcome: Tobacco use initiation** Measure: Survival analysis of initiation Baseline Int (n=NR): NR Comp (n=NR): NR Up to 7-year follow-up Int (n=NR): NR Comp (n=NR): NR **Relative change estimate:** -10% **Narrative:** Controlling for parental drinking and deviant peer association, the intervention was associated with reduced risk in initiation of tobacco use ß=-0.10, p<.01) **Outcome: Alcohol use initiation** Measure: Survival analysis initiation Baseline Int (n=NR): NR Comp (n=NR): NR Up to 7-year follow-up Int (n=NR): NR Comp (n=NR): NR **Relative change estimate:** -7%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Inclusion: Families of 5th grade students agreeing to participate Sample size: 5th grade subset Baseline: 361 families Intervention: 247 families Comparison: 147 families Follow-up: 351 families Loss to f/u: 2.8% Study population: Characteristics for the overall sample (671 families) not for the study subset (371 families) with 5th graders **Study Population: Parents and Caregivers** Intervention group Age: Mothers - <25 4% 25-50 96% >50 0% Sex: NR Race/ethnicity: Mothers European American 94%	**Intervention duration:** Parents: Weekly x 6 weeks Children: 10 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No For Child? Yes Class-room delivered social and problem-solving skills training: 20 1-hour group sessions School playground delivered recess intervention (Good behavior game) Other? Yes. parent-teacher communication aids such as a weekly newsletter for parents and the "LIFT Line, **Comparison group:** Families in study schools which received services as usual	Intentions? No Initiation? Yes Use? Yes SU disorder? No Educational outcomes? Morbidity? No Mortality? No Equity? No	**Narrative:** Controlling for parental drinking and deviant peer association, the intervention was associated with reduced risk in initiation of alcohol use ß=-0.07, p<.05) **Outcome: Illicit drug use initiation** Measure: Survival analysis initiation Baseline Int (n=NR): NR Comp (n=NR): NR Up to 7-year follow-up Int (n=NR): NR Comp (n=NR): NR **Relative change estimate:** -9% **Narrative:** Controlling for parental drinking and deviant peer association, the intervention was associated with reduced risk in initiation of illicit drug use ß=-0.09, p<.10) Growth in Substance Use **Outcome: Tobacco use** Measure: Overall average use over time Baseline Int (n=NR): NR Comp (n=NR): NR Up to 7-year follow-up Int (n=NR): NR Comp (n=NR): NR **Narrative:** The intervention had a significant beneficial impact on overall

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	African American 0.5% American Indian 2.5% Asian/Pacific Islander 0.5% Hispanic 1.9% Other: 0.5% Education: Father <HS 13% HS 40% Some college 33% College graduate 10% Postgraduate 4 Income: Intervention arm <$15,000 21% $15,000-$30,000 33% $30,000-$50,000 37% >$50,000 10% Other: NR **Study Population:** **Youth** in both study arms Age: NR (Grade 5 students) Grade level(s): Grade 5 at baseline Sex: 51% female; 49% male Race/ethnicity:			average use for tobacco over time (ß=-0.10 p<0.05) **Outcome: Alcohol use** Measure: Overall average use over time Baseline Int (n=NR): NR Comp (n=NR): NR Up to 7-year follow-up Int (n=NR): NR Comp (n=NR): NR **Narrative:** The intervention had a significant beneficial impact on overall average use for alcohol over time (ß=-0.15 p<0.001) **Outcome: Illicit drug use** Measure: Overall average use over time Baseline Int (n=NR): NR Comp (n=NR): NR Up to 7-year follow-up Int (n=NR): NR Comp (n=NR): NR **Narrative:** The intervention had a significant beneficial impact on overall average use for illicit drugs over time (ß= -0.12 p<0.05)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	European-American 85% Latino-American 4% Asian-American 4% Native American 3% African American 1% Multi-racial 2% Education: NA Income: NA Other: Two-parent biological family 57% Single-parent family 22% Stepfamily 20% **Community characteristics**: Average free lunch rate 43.3%			
Author Year Dembo et al. (2002) **Location:** USA; Hillsborough County, Florida (Tampa) **Years for Study:** Recruitment: 1994-1998 Total: 1994-2001 **Period for Study:** 38 months (10week intervention + 12-36m f/u)	**Setting:** Home (of families) **Urbanicity:** NR (Mixed) **Eligibility:** Youth **Recruitment:** Recruited families of youth processed at the Hillsborough County Juvenile Assessment Center (informed consent)	**Brief description of intervention and content:** Family Empowerment Intervention with up to 30 home-based sessions on family communication and rules from a clinician-trained paraprofessional Family communication Parenting and problem-solving skills Family limits, expectations, and rules Substance(s) focused* Not reported (General)	**Brief description:** Paper focuses on heavy drinking (alcohol) as the outcome measure, but it is unclear if other substances were evaluated Substance(s)* Alcohol Polysubstance measures? No Outcome types Intentions? No Initiation? No Use? Yes	Raw data is not reported in the paper. **Overall results** The difference between Intervention (FEI) and comparison (ESI) was not significant at 12-36m f/u (record as 12m) **Subset results** The reported frequency of getting very high or drunk on alcohol declined more over time for FEI completers than FEI non-completers. **Outcome: Change in use of alcohol to get high or drunk**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Study Design: Individual RCT **CG Suitability**: Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– High e) Selective– Low	Families were randomly assigned to treatment FEI or comparison ESI as intervention slots became available **Inclusion:** Youths processed at the Hillsborough County Juvenile Assessment Center who were arrested on misdemeanor or felony charges Sample size: Total Bsline: 315 youth + family Follow-up: 278 (87%) with at least one f/u survey (12-36 months f/u) Loss to f/u: 13% for minimum f/u of 12months Total study population: N=278 families (Intervention + Control) **Study Population: Parents and Caregivers** Age: NR	**Format:** Family sessions (Parent + child) including all members face-to-face group **Intervention intensity:** Sessions or modules 30 sessions Number of hours per session: 1 hour (3 times a week) Total hours of intervention: 30 hours **Implementer(s)** Paraprofessionals trained by clinicians **Intervention duration:** 10 weeks Additional components: Staff available for information and referrals for other services (parent and child) Program implementation and family activities manuals **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No	SU disorder? No Educational outcomes? No Mental health (depressive symptoms; anxiety; etc.) No Morbidity? No Mortality? No Equity? No Other outcomes? No	Measure: Frequency of getting high or drunk on alcohol in the preceding 12 months Baseline Int (n=NR): NR Comp (n=NR): NR 12–36-month follow-up Int (n=NR): NR Comp (n=NR): NR Change in mean difference or proportion: NR (95% CI NR) p=NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: NR Race/ethnicity: NR Education: NR Income: NR Employment Executve/admin/manag r 11% Technical/sales/support 13% Skilled 5% Unskilled-semi-skilled 37% Public assistance 8% Not reported 25% **Study Population: Youth** Age: mean 14.5 years Grade level(s): NR In school 88% Not in school 12% Sex: 44%female; 56% male Race Anglo 56% African-American 41% Other 3% Ethnicity: Latino 26% Non-Latino 74% Education: NR Income: NR Other: Living situation Biological parents 17% Mother 51%	Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group**: Extended Services Intervention (ESI) with monthly contact phone calls and provision of information and referrals for other services		

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Father 3% Guardian 3% Multiple other: 26% **Community characteristics:** Study attempted to oversample on female gender and Latino ethnicity			
Author (Year): Dishion & Andrews et al. (1995) **Location:** USA, Oregon **Years for Study:** 1988-1991 **Period for Study**: 15 months **Study Design:** Individual RCT **CG Suitability**: Greatest **Risk of Bias Assessment** a) Randomization – Low b) Concealment – High c) Blinding – High d) Outcomes – High e) Selective – High	**Setting:** School and Home (mixed) **Urbanicity:** Suburban **Eligibility:** Families with a youth 10-14 years old meeting risk criteria on screening (screening excluded 50% of families) **Recruitment:** Families self-referred responding to newspapers, flyers, school counselors **Inclusion/Exclusion:** Family with child meeting 4 of 10 dimensions of childhood risk (substance use, stress)	**Brief description of intervention and content:** Multi-arm study of parent and youth-focused interventions Four intervention arms and a control arm 1 Parent-focus Parent only weekly group meetings and therapist, parent co- leaders. Initial home visit by therapist 2 Teen-focus Teen only weekly group meetings and therapist, peer co leaders. Initial home visit by therapist 3 Parent-focus and teen-focus (as above) Parent weekly group Youth weekly group Initial home visit by therapist 4 Self-directed Received intervention materials (no weekly group meetings or therapist)	**Brief description** Structure interviews with youth on self-reported tobacco use frequency in the prior 3 months Substance(s)* Tobacco (self-report with carbon monoxide test) Polysubstance measures (Yes/No)? No Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcome: Yes Mental health: NO Morbidity? NO Mortality? NO Equity)? NO Other outcomes? YES	**Outcome: Tobacco use** Parent-focused intervention vs Control Measure: Mean self-reported frequency of tobacco use in the past 3 months Baseline Int (n=26): 0.91 Comp (n=39): 0.88 Follow-up (in months): 15 Int (n=21): 0.63 Comp (n=36): 1.19 **Absolute change: NR** **Relative change: NR** **Narrative results:** Mean frequency difference -0.59 Favorable (Yes/No/No effect): Yes Statistical significance: p=0.20 NS **Outcome: Tobacco use** Parent-focused+ Teen-focused intervention vs Control Measure: Mean self-reported frequency of tobacco use in the past 3 months Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sample size: 158 families (119 intervention arms +39 control) Baseline 158 Follow-up 141 Loss to f/u 10.7% Overall study population: Parents and Caregivers Age: NR Sex: NR Race/ethnicity: European ancestry 90% Education: Not a high school graduate Mother 14%, Father 21.4% Some college Mother 50%; Father 45% Employment NR Income: median income range 15000 to $19999; 25% <$10,000k year On financial assistance 58% Family status: Single parent 43.3% Two parent 56.7% Other:	Parent content - Family management and communication skills Youth content- Self regulation and prosocial behavior Additional Interventions (all intervention arms): Printed materials: 6 newsletters Videos: 5 **Intervention/program name:** Adolescent Transitions Program Substance(s) focused General prevention **Format:** Face-to-face; group sessions supplemented by three sessions with individual families **Intervention intensity:** Number of sessions: 12 weekly Number of hours per session: 1.5 hrs. (90 min) Total hours of intervention: 18 hrs. **Implementer(s)** Therapist Co-leaders (parents and teens) **Intervention duration:** 3-4 months	Externalizing behaviors based on mother and teacher surveys (includes undefined school behavior problems)	Int (n=31): 0.95 Comp (n=39): 0.88 Follow-up (in months): 15 Int (n=29): 2.09 Comp (n=36): 1.19 **Absolute change:** NR (1.14-0.31) = +0.83 **Relative change:** NR **Narrative results:** Mean frequency difference =+0.83 F(1,133)=4.0 p<0.05 Favorable (Yes/No/No effect): No Statistical significance: Yes; p < 0.05 Figure 3. 1 year follow up showed increased smoking behavior in teen focused interventions F (1,133) = 4.40 p< 0.05 (Post hoc analysis)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Children in home 2.2 Study Population: Youth Age: mean 12.4 years Grade level(s): 6th-8th Sex: Female 47.5% Male 52.5% Race/ethnicity: European ancestry: 95% Other: NR **Community characteristics:** NR	**Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group**: Received no intervention.		
Author (Year): Estrada et al. (2015) **Location:** USA, Florida (Miami Dade) **Years for Study:** 2011 - 2013 **Period for Study:** 24 months (baseline, 6 months post baseline, 12 months post baseline, 24 months post baseline) **Study Design:** Individual RCT	**Setting:** Mix (data collected at schools, 1 session at home, other sessions maybe at school) **Urbanicity:** Urban and suburban **Eligibility:** Latino youth with at least one caregiver, youth must provide assent **Recruitment:** four Miami-Dade County public high schools **Inclusion:** above	**Brief description of intervention and content:** (1) 5 parent group sessions (2) 3 parent-homework assignments (3) 1 parent-adolescent communication family visits Sessions = parent centered, with adolescents' participation in intervention activities limited to family visit. topics = enhancing communication and managing adolescent peer pressure **Intervention/program name:** Brief Familias Unidas	**Brief description:** T1, baseline T2, 6 months T3, 12 months T4, 24 months Substance use: questions regarding recent (past 90 days) and lifetime use of cigarettes, alcohol, or illicit drugs Binary use variable = any substance use (i.e., cigarettes, alcohol, or illicit substances) in the 90 days before each assessment Binary initiation variables no substance use at baseline but used at f/u	Tests intervention effects on preventing/reducing each outcome variables conducted using growth curve modeling. Growth curve analyses used to estimate individual trajectories of change and to test for differences between conditions over time (b-intercept). For substance use outcomes, tested intervention effects on overall substance use and substance use initiation (i.e., any use of cigarettes, alcohol, or illicit drugs) during the past 90 days. Then, cigarette use, alcohol use, and illicit drug use separately. Chi-square tests examined if significant differences existed in substance use

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
CG Suitability: Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Some concerns b) Deviations - Some c) Missing data - Low d) Outcome measurements - Low e) Selective - Low Overall: Some concerns .	**Exclusion:** If adolescent did not give assent, family informed that they did not meet study criteria Sample size: Baseline 160 Int 72 Control 88 24 mo Follow-up 93% (148) Int (66) Control (82) 24 mo Loss to f/u 7% (12) Int (6) Control (6) Note: *study reported intervention and control separately, reported intervention population characteristics* **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: 100% Latino	Substance(s) focused* General - substance use and sexual risk behavior sessions were combined into one **Format:** face-to-face (group and family visits) **Intervention intensity:** weekly Number of sessions or modules: 6 Number of hours per session: 2h (parent group session), 1h (family visit) Total hours of intervention: 11h (5 * 2h + 1h) **Implementer(s):** NR **Intervention duration:** 6-week intervention **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Community practice (CPC) school-based HIV risk-reduction intervention.	Youth who indicated having used illicit substances were also asked about dosage, type, and source. Sexual risk behavior: had ever had sex (including vaginal, anal, or oral sex) in their lifetime and in the 90 days before assessment Adolescents who reported having had sex in past 90 days asked how often they had vaginal or anal sex without a condom, range = 0 (Never) to 4 (Always). Substance(s)* Tobacco (smoking), alcohol, illicit substances Polysubstance measures? YES Outcome types Intentions? NO Initiation? YES Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? NO	and sex initiation rates by condition for each follow-up. Moderating effects of age (15, >15 years) and gender **Outcome: substance use initiation** Measure: rate (proportion) Baseline Int (n=72): NR Comp (n=88): NR Follow-up (in months): 24 Int (n=66): 35.0% Comp (n=82): 49.0% **Absolute change:** -0.14 **Relative change:** -28.57% **Narrative results:** Intervention youth had lower overall substance use initiation rate compared to control, difference not statistically significant Favorable (Yes/No/No effect): Yes Statistical significance: No, p = .19 Moderation analyses (Gender): significant moderation effect of gender on overall substance use initiation (p= .04). Intervention efficacious in preventing substance use initiation among girls (28.6% vs. 65.2% for brief Familias Unidas and CPC, respectively; p = .02,), but not for boys (42.1% vs. 34.6% for brief Familias Unidas and CPC, respectively; p = .61). **Outcome: Any substance use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Education: NR Employment NR Income: median household income between $10,000 and $15,000; $0-$9,999 = 38.0% $10,000-$19,999 = 32.4 $20,000-$29,999 = 18.3 >$30,000 = 11.3 Marital status: NR **Study Population: Youth** Age: 15.3 years Grade level(s): 9th Sex: 51.4% female, 48.6% male Race/ethnicity: 100% Latino Other US Born – 61.1% foreign-born – 38.9% (Primarily Cuba) living U.S. 16.7% <3 years, 18.1% 3 - 9 years 65.3% >9 years **Community characteristics:** NR	Delivered by MDCPS health science teachers in classroom format and uses portions of evidence-based curriculum. No contact with intervention staff.	Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES Other outcomes? family functioning variables (i.e., parental involvement, positive parenting, parent adolescent communication	Measure: past 90 days, growth curve Baseline Int (n=72): NR Comp (n=88): NR Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Nonsignificant difference in between Intervention and control (b =.24) Favorable (Yes/No/No effect): NR Statistical significance: No, p = .37 **Outcome: Tobacco (smoking) - cigarette use** Measure: past 90 days Baseline Int (n=72): 0% Comp (n=88): 4.6% Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Intervention not significantly efficacious in reducing cigarette use (b =.09) Favorable (Yes/No/No effect): No Statistical significance: No, p = .85 **Outcome: Alcohol use initiation**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=72): NR Comp (n=88): NR Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: Moderation analyses revealed intervention significantly associated with decreased alcohol use initiation among girls (30.4% vs. 64.0%, respectively; p = .02), but not boys (28.0% vs. 26.7%, respectively; p = .91). Favorable (Yes/No/No effect): Yes Statistical significance: Yes, for girls, not for boys **Outcome: Alcohol use** Measure: past 90 days Baseline Int (n=72): 4.2% Comp (n=88): 4.7% Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Intervention not significantly efficacious in reducing alcohol use (b =.17) Favorable (Yes/No/No effect): No Statistical significance: No, p = .51

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: illicit drug use Measure: past 90 days Baseline Int (n=72): 1.4% Comp (n=88): 2.3% Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Intervention not significantly efficacious in reducing illicit drug use (b = .03) Favorable (Yes/No/No effect): No Statistical significance: No, p = .93 **Outcome: Sex initiation** (oral, vaginal, or anal) Measure: rate (proportion) Baseline Int (n=72): NR Comp (n=88): NR Follow-up (in months): 24 Int (n=66): 34.0% Comp (n=82): 55.0% **Absolute change:** -0.21 **Relative change:** -38.18% **Narrative results**: At 24 months, Intervention youth had a significantly lower sexual initiation rate. Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p = .028

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Any sex (oral/vaginal/anal) Measure: past 90 days Baseline Int (n=72): 12.5% Comp (n=88): 13.6% Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** A total of 65 youth reported being sexually active, during any of the assessment time points participants who did not engage in sex during the previous 90 days counted as part of not engaging in risky sex Favorable (Yes/No/No effect): NR Statistical significance: NR **Outcome: Unsafe vaginal/anal sex** (i.e., risky sex, inconsistent condom use) Measure: past 90 days, Growth curve analyses Baseline Int (n=72): 77.8% Comp (n=88): 58.3% Follow-up (in months): 24 Int (n=66): NR Comp (n=82): NR **Absolute change:** NR **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: no significant differences in unsafe sexual intercourse, between intervention and control (b = .26) Favorable (Yes/No/No effect): NR Statistical significance: No, p = .25 *Moderation analyses (Age):* significant moderation effect of age on unsafe sex (b =1.12; p = .02). Intervention significantly associated with reduced unsafe sex among adolescents aged 15 years or less (p < .001), but not among older adolescents (p = .37).
Author (Year): Estrada et al. (2017) **Location:** USA, Florida (Miami–Dade County) **Years for Study**: September 2010 through June 2014 **Period for Study** 30 months (also 6 months, 18 months) **Study Design:** Individual RCT **CG Suitability:** Greatest	**Setting:** School **Urbanicity:** Urban and suburban **Eligibility:** 1. be of Hispanic origin, 2. attend eighth grade at the time of the baseline assessment, 3. live with an adult primary caregiver who was willing to participate, 4. live within the catchment areas of the participating middle schools 5. plan to live in South Florida for the duration of the study.	**Brief description of intervention and content**: Parent-centered preventive intervention program in preventing risky behaviors **Intervention/program name:** Familias Unidas Substance(s) focused* General **Format:** Group-based in person (8 multiparent sessions and 4 family sessions) Youth components Parents teach youth the skills necessary to effectively manage peer pressure to engage in substance use. Parents guide their adolescent in	**Brief description:** Substance(s)* Alcohol and illicit drug use (e.g., marijuana, LSD, cocaine Baseline only mean data: Alcohol use in lifetime Alcohol use in the past 90 d Illicit drug use in lifetime Illicit drug use in the past 90 d Polysubstance measures (Yes/No)? Yes, illicit drugs Outcome types Intentions? No Initiation? No Use? Yes SU disorder? No Educational outcomes? No	Addressed missing data for the repeated measures by using full information maximum likelihood Based all other analyses on intent-to-treat ITT except past-90-day sex without a condom **Outcome: Alcohol use** Measure: during the previous 90 days. Growth curve model Baseline No. (%) Int (n=376): 26 (6.9) Comp (n=379): 22 (5.9) Follow-up: NR or 30 months or unclear Int (n=NR): NR Comp (n=NR: NR **Absolute change:** NR **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment (ROB2) a) Randomization – Low b) Deviations – Some concerns c) Missing data – Some concerns d) Outcome measurements – Low e) Selective – Low Overall: Some concerns	**Recruitment:** 18 middle schools with letters that were sent home with students Sample size: Baseline: 746 Int 376; Cont 370 Follow-up: Attrition rates 13.3% and 12.2% for Familias Unidas and prevention as usual (from study) From assessment: 257/376 = 68.4% 274/370 = 74.0% **Study population: Parents and Caregivers** Age: 41 years Sex: female 83 male17 Race/ethnicity: NR Education: NR Employment: NR Income: $0–9999 26.6% $10 000–19000 25.0% $20 000–29000 14.4% >$30 000 35.8% Marital status: NR Other:	developing safety and communication skills. Parent-focused group sessions; goal to bring parents together to practice and learn skills to improve family functioning in order to prevent drug use and risky sexual behaviors (skills to improve family functioning in order to prevent drug use and risky sexual behaviors) **Intervention intensity:** Number of sessions: 12 (8 parent group, 4 family including parent and youth) Number of hours per session: group sessions were 2 hours and family sessions were 1 hour each? Total hours of intervention: NR **Implementer(s):**Master's level social workers and mental health counselors (n=27) Fluent in Spanish. Facilitators received training for 4 days and 2-hour, weekly face-to face group supervision for 12 weeks. Facilitators were compensated **Intervention duration:** 3 months total (8 parent + 4 family)	Mental health? No Morbidity? No Mortality? No Equity? No Other outcomes? Yes Past-90-day sex without a condom Family functioning and parental monitoring	**Narrative results**: b= 0.075; 95% confidence interval [CI] = –0.142, 0.291; P = .499; d = 0.24 Favorable (Yes/No/No effect): No effect Statistical significance: P = 0.499 **Outcome: illicit drug use (e.g., marijuana, LSD, cocaine**) Measure: during the previous 90 days Zero-inflated Poisson growth models Baseline No. (%) Int (n=376): 12 (3.2) Comp (n=370): 18 (4.9) Follow-up: NR or 30 months or unclear Int (n=): NR Comp (n=: NR **Absolute change:** NR **Relative change**: NR **Narrative results:** b = –0.20; 95% CI= –0.298, –0.105; P < .001; d = 0.27 Favorable (Yes/No/No effect): Yes Statistical significance: P < .001 **Zero-inflated growth models** **Drug-use trajectories for multigroup analysis:** Familias Unidas: Mean trajectory=0.176; 95% CI= –0.001, 0.354; P=0. 201 Prevention-as-usual youths: Mean trajectory=0.184; 95% CI=0.064, 0.304; P < .01 Unstandardized coefficients are presented in Table 2 (not shown)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study Population: Youth Age: mean 13.88 years Grade level(s): 8th grade Sex: female 48.1; male 51.9 Race/ethnicity: Black 0 Hispanic 100% White 0 Asian or other 0 Other: 0 53.2% US born **Community characteristics:** NR	**Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** Prevention-as usual group consisted of the HIV risk reduction intervention provided by the MDCPS system to students. Science teachers delivered the MDCPS intervention in a classroom setting and it consisted of 6 lessons designed to decrease HIV/AIDS and other sexually transmittable diseases via a science-based education.		likelihood of using drugs: −0.836.25 (log) **Past-90-day sex without a condom** For sex without a condom, adolescents asked if they had engaged in sex (vaginal, anal, or oral) in the previous 90 days and how often they had sex without a condom (vaginal or anal), rated on a 5-point scale: 0 = never; 1= less than half of the time; 2 = about half of the time; 3 = not always, but more than half the time; and 4= always For past-90-day sex without a condom, the analyses only included participants who reported being sexually active. Familias Unidas was effective in preventing drug use from increasing and prevented greater increases in sex without a condom 30 months after baseline, relative to prevention as usual. There were increases in sex without a condom from baseline levels to 30 months after baseline for both groups, these differences were statistically greater for prevention as usual. The trajectories for past-90-day sex without a condom among participants who reported being sexually active (n = 130) between Familias Unidas and prevention as usual were statistically

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				different (b = 0.093; 95% CI = 0.024, 0.162; P < .01; d = 0.98). Multigroup analysis (i.e., Familias Unidas and prevention as usual) showed that the trajectory of sex without a condom among prevention-as-usual youths (mean trajectory = 0.24; 95% CI= 0.154, 0.281; U = 3.197; P < .001; d = 0.280) increased more than those of Familias Unidas youths (mean trajectory = 0.14; 95% CI= 0.078, 0.207; P < .001).
Author (Year): Estrada et al. (2019) **Related studies:** Perrino et al., 2018, Estrada et al., 2017a International Journal of Environmental Research and Public Health **Location**: USA, Florida (Miami-Dade County) **Years for Study:** April 2014 to October 2016 **Period for Study:** 12 months **Study Design:** Individual RCT	**Setting:** School (Miami-Dade County Public Schools MDCPS) **Urbanicity**: Urban and suburban **Eligibility:** (a) adolescents of Hispanic origin; (b) adolescents in the eighth grade at enrollment; (c) adolescents living with a primary caregiver who was willing to participate in the study; (d) families living within the catchment area of a MDCPS school at baseline; (e) access to the Internet	**Brief description of intervention and content**: Intervention consisted of (1) online recorded, e-parent group sessions that were accessed via the Internet and (2) parent-adolescent family sessions delivered by a facilitator via web-based video conferencing software. Differences between Familias Unidas and eHealth Familias Unidas No group of parents meeting with a facilitator Parents logged on to the eHealth Familias Unidas website to access prerecorded e-parent group sessions, interactive exercises, etc	**Brief description**: How many times he or she had used a particular substance during the last 90 days assessed with items from Monitoring the Future survey Substance(s)* Drug (marijuana, cocaine, inhalants, and other drugs), prescription, cigarette, and alcohol Polysubstance measures (Yes/No)? Yes - Combined drug use (marijuana, cocaine, inhalants, and other drugs) Outcome types Intentions? No Initiation? No Use? Yes SU disorder? No	Missing data for the repeated measures were addressed using full information maximum likelihood (FIML). Descriptive statistics for mean use (Supplementary Table 4) **Narrative results** (Table 1): Zero-inflated Poisson growth models to estimate longitudinal changes on past 90-day drug use, prescription drug use, cigarette use, and alcohol use 2 study conditions on the frequency of use as well as the likelihood of use **Outcome: Any drug** Measure: Mean (SD) and Trajectories for the past 90-day drug use summed from four different types of drugs (i.e., marijuana, inhalants, cocaine, and other drugs).

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
CG Suitability: Greatest **Risk of Bias Assessment (ROB2)** a) Randomization – Some concerns b) Deviations – Low c) Missing data – Low d) Outcome measurement – Low e) Selection – Low Overall: Some concerns	and (f) adolescents exhibiting a level I, II, or III behavior problem as defined by MDCPS. **Recruitment:** From 18 middle schools in the MDCPS with letters that were sent home with students and through referrals from school counselors Sample size: Total 230 Baseline: eHealth Familias Unidas int. 113 Prevention as usual cont. 117 Follow-up: e Health Familias Unidas int. 74/113 Attrition: 34.6% Prevention as usual cont. 99/117 Attrition: 15.4% **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR	**Intervention/program name:** eHealth Familias Unidas Substance(s) focused* General **Format:** Website based group format for parents Youth components: Tailored based on the goals and needs of each individual family in each session (e.g., communication skills, behavior management), Parent components: e-parent web-based video sessions consisted of simulated parent group discussions, a culturally syntonic telenovela series (i.e., soap opera), and interactive exercises. **Intervention intensity:** Number of modules: 12 total sessions e-parent group video sessions: 8 Family Sessions with adolescent: 4 Number of hours per session: e-parent group video sessions: 30min Family Sessions with adolescent: 45min Total hours of int	Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity? Yes (100% Hispanic) Other outcomes? Family functioning (parent-adolescent communication, parental monitoring of peers, and positive parenting), **condomless sex**	 Baseline Int (n=113): 3.49 (33.87) Comp (n=117): 0.35 (2.68) Follow-up: 12m Int (n=82): 0.35 (1.63) Comp (n=98): 4.68 (31.93) **Absolute change:** -7.4 times in last 90 days **Relative change:** -99.2% **Narrative results:** eHealth Familias Unidas vs prevention as usual were statistically different (b = − 1.16, 95% CI = − 1.33, −1.00, p < .001) Favorable (Yes/No/No effect): Yes Statistical significance: Yes For modelled results p < .001. **Outcome: Marijuana use** Measure: Mean (SD) and Trajectories for the past 90-days for Marijuana use Baseline Int (n=113): 1.01 (8.52) Comp (n=117): 0.20 (1.27) Follow-up: 12m Int (n=82): 0.24 (1.27) Comp (n=98): 2.17 (11.85) **Absolute change:** -2.74 times in the last 90 days **Relative change: -**97.8% **Narrative results**: = −0.52, 95% CI = − 0.90, − 0.15, p < .01 Favorable (Yes/No/No effect): Yes Statistical significance: Yes For modeled results p < .01

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Income: yearly household incomes (55.7%) were below US$20,000. Marital status: NR **Study Population: Youth** Age: mean 13.6 years (SD = 0.7 Grade level(s): 8th grade Sex: female 37%; male 63% Race/ethnicity: 100% Hispanic Black 0 Hispanic 0 White 0 Asian or other 0 Other: 0 56.5% were born in the US 20% born in Cuba; 6% born in Honduras, 3% born in Columbia **Community characteristics**: NR	ervention: 7 hours (e parent group: 4 hours, family session 3 hours) **Implementer(s):** eHealth (pre-recorded); 16 mental health professionals, all with master's level degrees in their fields (e.g., mental health counseling, social work). 3 days of training included didactic instruction, role-plays, and group discussion of recorded sessions. Facilitators received four 2-h supervision sessions delivered throughout the course **Intervention duration:** 3 months **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** Prevention as usual consisted of the HIV prevention curriculum provided by MDCPS via health and science classes. This curriculum has six lessons delivered in a classroom setting and aim to provide information about		**Outcome: Inhalant use** Measure Mean (SD) and Trajectories for the past 90-days for Inhalant use Baseline Int (n=113): 0.85 (8.51) Comp (n=117): 0.07 (0.83) Follow-up: 12m Int (n=82): 0.07 (0.56) Comp (n=98): 0.82 (7.68) **Absolute change:** -1.53 times in last 90 days **Relative change:** -98.8% **Narrative results:** b = −1.19 95% CI = −1.64, − 0.75, p < .001 Favorable (Yes/No/No effect): Yes Statistical significance: Yes for modeled results p < .01 **Outcome: Cocaine use** Measure: Mean (SD) and Trajectories for the past 90-day for Cocaine use Baseline Int (n=113): 0.82 (8.50) Comp (n=117): 0.07 (0.83) Follow-up: 12m Int (n=82): 0.01 (0.11) Comp (n=98): 0.83 (7.68) **Absolute change:** -1.57 times in last 90 days **Relative change:** -99.8% **Narrative results**: b = −0.11 95% CI = −0.59, 0.37, NS (but p not shown)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
		HIV/AIDS and other sexually transmitted infections Note: experimental group probably received this since current community prevention activities are offered to all students.		Favorable (Yes/No/No effect): Yes for mean, No effect for modeled Statistical significance: No **Outcome: Drug use** Measure: Mean (SD) and Trajectories for the past 90-days for other drug use Baseline Int (n=113): 0.82 (8.50) Comp (n=117): 0.00 (0.00) Follow-up: 12m Int (n=82): 0.02 (0.15) Comp (n=98): 0.84 (7.68) **Absolute change:** -1.64 times in last 90 days **Relative change:** NA denominator is 0 **Narrative results:** b = +0.06 95% CI = − 1.76, 0.40, NS (but p not shown) Favorable (Yes/No/No effect): Yes for mean, no effect for modeled Statistical significance: No **Outcome: Prescription drug use** Mean (SD) and Trajectories for the past 90-days for Prescription drug use Baseline Int (n=113): 0.04 (0.31) Comp (n=117): 0.86 (9.23) Follow-up: 12m Int (n=82): 0.00 (0.15) Comp (n=98): 0.97 (7.76) **Absolute change:** -0.15 times in last 90 days **Relative change:** -100%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: b = −1.34, 95% CI = − 2.33, − 0.35, p < .01 Favorable (Yes/No/No effect): Yes Statistical significance: Yes for modeled results p < .01 **Outcome: Cigarette use** Measure Mean (SD) and Trajectories for the past 90-days for cigarette use Baseline Int (n=113): 0.53 (4.80) Comp (n=117): 0.87 (9.23) Follow-up: 12m Int (n=82): 0.00 (0.24) Comp (n=98): 0.81 (4.55) **Absolute change:** -0.47 times in last 90 days **Relative change:** -60.9% **Narrative results:** b = −1.05, 95%CI = − 1.72, − 0.39, p < .01 Favorable (Yes/No/No effect): Yes Statistical significance: Yes for modeled results p < .01 **Outcome: Alcohol use** Measure Mean (SD) and Trajectories for the past 90-days for alcohol use Baseline Int (n=113): 0.25 (1.46) Comp (n=117): 1.02 (9.24) Follow-up: 12m Int (n=82): 0.37 (1.55) Comp (n=98): 0.39 (1.12)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Absolute change: +0.75 times in last 90 days **Relative change:** +287.1% **Narrative results**: b = +0.02, 95% CI = − 0.25, .28, p = .623, NS Favorable (Yes/No/No effect): No Statistical significance: No Post hoc test, drug use was split into 4 specific drug categories (i.e., marijuana, cocaine, inhalants, and other drugs) to test condition effects separately for each of these outcome variables using multi-group tests. Marijuana use in the past 90 days among eHealth Familias Unidas youth decreased across time points (mean trajectory = − 0.83, 95% CI = −1.03, − 0.64, p < .001) whereas it increased over time (mean trajectory = 1.04, 95% CI = 0.76, 1.33, p < .001) among prevention as usual youth. Inhalant use in the past 90 days among eHealth Familias Unidas youth was stable across time points (mean trajectory = − 0.69, 95% CI = − 1.73, .34, p = .19) whereas it increased over time (mean trajectory = 0.97, 95% CI = 0.61, 1.33, p < .001) among prevention as usual youth. Prescription drug use in the past 90 days among eHealth Familias Unidas youth decreased across time points

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				(mean trajectory = − 1.70, 95% CI = − 2.94, − 0.46, p < .01) whereas it was stable over time (mean trajectory = 0.03, 95% CI = − 0.01, .07, p = .215) among prevention as usual youth. Cigarette use in the past 90 days among eHealth Familias Unidas youth decreased across time points (mean trajectory = − 2.39, 95% CI = − 3.71, − 1.06, p < .001), whereas the trajectory of the past 90-day cigarette use in prevention as usual youth was stable over time (mean trajectory = 0.02, 95% CI = − 0.10, .13, p = .775). **Condomless sex ehealth to prevention as usual** For past 90-day condomless sex, we found no statistically significant intervention effects (b = 0.02, 95% CI = − 0.31,.35, p = .89, effect size= .11). At the 12-month post baseline assessment follow- up, we did not find main effects for condomless sex. Not favorable, NS. **Condomless sex current ehealth vs previous study face to face:** At the 12-month post baseline assessment follow- up, the current study had a similar effect size for condomless sex trajectories (b [SE] = − 0.11, p = .55, effect size d = 0.11) compared to the

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				face-to-face trial (b [SE] = − 0.02, p = .79, effect size d = 0.12). Significant results on condomless sex found for the 30-month post baseline in the face-to-face trial;
Author (Year): Fang et al. (2010) **Location**: USA (19 states) **Years for Study**: 2007 **Period for Study:** 12 months (average length of time between baseline and post intervention survey completion was 6.25 months) **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Low b) Concealment – Low c) Blinding – High d) Outcomes – Low e) Selective – Low	**Setting:** Digital - Web-based (mostly home or other convenient locations) **Urbanicity:** NR **Eligibility/ Recruitment:** advertisements on craigslist.org and in mailings to Asian community service agencies **Inclusion/Exclusion:** Girls needed to be Asian, be aged between 11 and 14 years, have private access to a computer, and have mothers' active participation. Sample size: 108 mother child dyads (208 dyads screened) Bsline 108 Follow-up 104 Loss to f/u 3.7%	**Brief description of intervention and content**: Family interaction theory Family interaction (web based) with mother daughter Dyads Delivered by voiceover narration, animated graphics, and games, session content involved skill demonstrations and interactive exercises that required the joint participation of mothers and daughters. Substance(s) focused General substance use prevention **Format:** Web content delivered by a narrator for joint mother-daughter review including content on: Mother–daughter relationship skills Conflict management Substance use opportunities Body image activities Stress management Problem solving skills Self-efficacy	**Brief description:** Substance(s)* Alcohol Cigarettes Marijuana Illicit Prescription drugs Polysubstance measures? No Outcome types Intentions? Yes Initiation? No Use? Yes 30-Day SU disorder? No Educational outcomes? No Morbidity? No Mortality? No Equity? Yes Targeted intervention to Asian-Americans Other outcomes? Yes Depression Parenting practices Communication Youth refusal skills	For each outcome Generalized estimating equations (GEE) tested between-arm differences Occasions of use in the past 30 days reported as coefficients **Outcome: Alcohol use** Measure: 30-day substance use Baseline Int (n=54): .06 Comp (n=50): .26 Mean follow-up: 6.25 months Int (n=54): .07 Comp (n=50): .74 **Absolute change:** NR **Relative change:** NR **Narrative results**: Favorable (significant) Wald x2=5.85 (95% CI NR) p= .016 **Outcome: Cigarette use** Measure: 30-day substance use Baseline Int (n=54): .13 Comp (n=50): .06 Mean follow-up: 6.25 months Int (n=54): .02

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and caregivers: Age: 39.4 years Sex: Female 100% (mother dyad) Race/ethnicity: Asian American 100% Education: High school 22.2% College 24.6% Graduate school 35.2% Income: NR Other Single parent, 13.0% **Study Population: Youth** Age: 12.9 years Grade level(s): NR but age range = 6-9th grade Sex: Female 100% Race/ethnicity: Asian American 100% Education: NR Income: NR Other NR **Community characteristics:** NR	**Intervention intensity:** Number of sessions or modules:9-session web-based, each session 45 minutes Number of hours per session: NR Total hours of intervention: NR **Implementer(s)** Web content **Intervention duration:** 9 weeks or 4 months (Sept. 2007 to Dec. 2007) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** Control-arm dyads received no intervention		Comp (n=50): 1.84 **Absolute change:** NR **Relative change:** NR **Narrative results:** Favorable (marginal significance) Wald x2=3.54 (95% CI NR) p= .06 **Outcome: Marijuana use** Measure: 30-day substance use Baseline Int (n=54): .001 Comp (n=50): .004 Mean follow-up: 6.25 months Int (n=54): 0 Comp (n=50): .01 **Absolute change:** NR **Relative change:** NR **Narrative results**: Favorable but effect size unclear Wald x2=6.84 (95% CI NR) p= .009 **Outcome: Illicit Prescription drug use** Measure: 30-day substance use Baseline Int (n=54): .06 Comp (n=50): .03 Mean follow-up: 6.25 months Int (n=54): .01 Comp (n= 50): .14 Change in mean difference or proportion: NR **Absolute change:** NR **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: Favorable (significant) Wald x2=5.73 (95% CI NR) p= .017 **Outcome: Intention to use in the future** Measure: intention to use any substance(s) in the future Baseline Int (n=54): 2.70 Comp (n=50): 3.04 Mean follow-up: 6.25 months Int (n=54): 2.11 Comp (n= 50): 3.70 **Absolute change:** NR **Relative change:** NR **Narrative results:** Favorable (significant) Wald x2=8.10 (95% CI NR) p= .004 **Outcome: Depression** Measure: Scores are from 5-point scales; lower scores are better. Outcome variables Depression (SE)d Baseline Control (n ¼ 50) Intervention (n ¼ 54) 1.62 (.57) 1.41 (.88) Posttest Control (n ¼ 50) Intervention (n ¼ 54) 1.68 (.71) 1.26 (.73) Intervention by time interaction effect Wald c2 3.97 P= .045

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Author (Year): Fernandez et al. (2021) Related paper: Prado et al., 2020 Additional details on recruitment, randomization (St. George et al., 2018) **Location:** USA, Florida, Miami (Miami-Dade County) **Years for Study:** 2015 (recruitment/data collection) 2019 analysis **Period for Study** 3 month intervention with f/u at 6 months, 12 months, and 24 months post-baseline Study Design: Individual RCT CG Suitability: greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Low b) Deviations - Low c) Missing data - Low	**Setting:** Community **Urbanicity** Urban (Miami-Dade County) **Eligibility:** overweight/obese Hispanic 7th/8th grade adolescents, one adolescent per family and their primary caregiver eligible to participate **Recruitment:** Study staff recruited participants beginning in 2015. **Inclusion:** a BMI ≥ 85th percentile adjusted for age and sex, lived with an adult primary caregiver willing to participate in 2-year study, and had plans to remain a resident of geographic study catchment area during study period. **Exclusion:** (1) adolescents had a BMI <85th percentile adjusted for age and sex and (2) parent	**Brief description of intervention and content**: Healthy lifestyle family-based intervention Parent-only group sessions: healthy lifestyle behaviors, risky behaviors, and positive-parenting behaviors discussion. Adolescent not present, instead participated in outdoor physical activities. Parent homework assignments focused on physical activity and healthy dietary behaviors instead of substance use and sexual risk behaviors, as in original Familias Unidas. Adapted intervention had large portion of substance use and sexual risk behavior content condensed or removed. Parent and adolescent group sessions: joint nutritional and physical activities (e.g., cooking classes, yoga). Family sessions**:** facilitators guided parent and adolescent in practicing skills parents learned in parent-only group sessions (e.g., role-playing activities). **Intervention/program name:** Familias Unidas for Health and Wellness (FUHW)	**Brief description**: Timepoint 1: Baseline Timepoint 2: 6 months Timepoint 3: 12 months Timepoint 4: 24 months post-baseline Substance use: self-reported from Monitoring the Future during past 90 days - whether and how many times they used a particular substance (e.g., "On how many occasions have you taken a prescription drug without a prescription or taken more than what was prescribed, in the past 3 months?") Sexual Risk Behaviors: self-reported, condomless sex from Sexual Behavior Instrument: "In the past 3 months, about how often have you had vaginal or anal sex without using a condom?" Responses: 0 = *Never*, 1 = *Less than half of time*, 2 = *About half of time*, 3 = *Not always, but more than half of time*, and 4 = *Always* Substance(s)* alcohol use, marijuana use, and non-prescription drug use	Linear latent growth curve analyses to examine intervention effects on outcomes over 2 years, adolescent BMI percentiles (continuous) as a control variable Pooled incidence rate ratio (IRR) = used as intervention effects for count variables and calculated by taking the exponent of the regression coefficient, i.e., unstandardized *b*. **Outcome: Alcohol** Measure: mean (SD) past 90 days Baseline Int (n=140): 0.05 (0.38) Comp (n=140): 0.03 (0.17) Follow-up (in months): 24 Int (n=140): 0.22 (1.23) Comp (n=140): 0.40 (1.82) **Absolute change:** -0.20 score pts **Relative change:** NA **Narrative results**: effects of intervention compared with prevention as usual over time were significantly different. IRR = 0.69 (*b* = − 0.37, 95% CI = [− 0.49, − 0.26]) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p value < 0.001 **Outcome: Marijuana** Measure: mean (SD) past 90 days Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
d) Outcome measurements - Low e) Selective - Low Overall bias: Low	responses on a PA readiness questionnaire indicated a serious health issue (e.g., a heart condition that requires physician approval before engaging in PA, general chest pain, dizziness or loss of consciousness, bone or joint issues) for either parents or adolescents. If a serious health issue was reported, physician approval was needed to participate. Sample size Baseline 280 Int (FUHW) *n* = 140 Control *n* = 140 Follow-up 89% (250) Int 121 Control 129 Loss to f/u 11% (30/280) Int = 19 Control = 11 **Study population: Parents and Caregivers (Int)** Age: 42.09 years	Substance(s) focused* General **Format:** face-to-face group **Intervention intensity:** Number of sessions or modules: 8 group sessions and 4 family sessions Number of hours per session: 2.5h (1.5h parent only 1h parent+ adolescent) Total hours of intervention: 24h (8 * 2.5h + 4 * 1h) **Implementer(s)** 2 bilinguals' facilitators trained in problem-posing, participatory learning **Intervention duration:** 12-weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes	Polysubstance measures? No Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES Other outcomes? sexual risk behaviors	Int (n=140): 0.05 (0.42) Comp (n=140): 0.01 (0.08) Follow-up (in months): 24 Int (n=140): 0.46 (2.83) Comp (n=140): 0.71 (3.48) **Absolute change:** -0.29 score pts **Relative change:** NA **Narrative results:** effects of intervention compared with prevention as usual over time were significantly different. IRR = 0.37 (*b* = − 1.00, CI = [− 1.22, − 0.78]), Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p value < 0.001 **Outcome: Non-prescription drug use** Measure: mean (SD) past 90 days Baseline Int (n=140): 0.38 (4.27) Comp (n=140): 0.01 (0.08) Follow-up (in months): 24 Int (n=140): 0.11 (1.05) Comp (n=140): 0.06 (0.51 **Absolute change:** -0.32 score pts **Relative change:** NA **Narrative results:** effects of intervention compared with prevention as usual over time were significantly different. IRR = 0.02 (*b* = − 3.77, CI = [− 6.49, − 1.05]) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p value < 0.01

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: 87.1% female, 12.9% male Race/ethnicity: NR (assumed to be 100% Hispanic) Education: NR Employment NR Income: 52.1% Less than $25,000 43.6%, $25,000 or more Marital status: 57.1% Married 10% Living with someone, 12.9% Separated 12.1% Divorced 7.9% Never married and not living with someone Other Country of origin 90% Foreign, 10% US **Study Population: Youth (Int)** Age: 13.04 years Grade level(s): 7th/8th grade (baseline) - 9th/10th (last f/u) Sex: 49.3% female, 50.7% male Race/ethnicity: 100% Hispanic adolescents Country of origin	**Comparison group:** prevention as usual, no active intervention from study staff Referred to community services (local health department resources) for physical activity and nutrition information offered for overweight and/or obese adolescents and their families		**Outcome: Sexual risk** Measure: scale, mean (SD) past 90 days Baseline Int (n=140): 0.50 (0.58) Comp (n=140): 0.67 (0.58) Follow-up (in months): 24 Int (n=140): 0.11 (0.31) Comp (n=140): 0.19 (0.40) **Absolute change:** +0.09 score pts **Relative change:** NA **Narrative results:** No significant intervention effects found for adolescent sexual risk behaviors, b =0.18 [95% CI: − 0.10, 0.46] Favorable (Yes/No/No effect): Yes, Relative change decreased Statistical significance: No, p value = 0.21

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	39.3% Foreign, 60.7% US **Community characteristics:** NR			
Author (Year): Forman et al. (1990) **Location:** Southeastern metropolitan area, USA **Years for Study** (actual years): NR, assume pre-1990 **Period for Study** (total time in months): 14.5 months (1 year + 2.5 months) **Study Design:** Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Unclear b) Concealment – Unclear c) Blinding – High Risk d) Outcomes – Low risk e) Selective – Low risk	**Setting:** Mix (school and home) **Urbanicity:** Urban **Eligibility:** Students who attended one of the secondary schools (N=30) in a seven-school district, two-county, southeastern metropolitan area **Recruitment:** School staff referral for students. Each parent received $5/each session, plus $25 if attended all sessions (total: $50) **Inclusion/Exclusion:** Inclusion: school staff referral on two or more high-risk characteristics: (a) high # disciplinary incidents, (b) low grades, (c) high #	**Brief description of interventions and content:** Personal and social coping skills training, with generalization programming to prevent substance use in high-risk adolescents. (a) Coping Skills School Intervention only included student training in coping skills, school staff training (b) School+ Parent Intervention: student training in coping skills, school staff training, and parent training Student and school staff topics: behavioral self-management, emotional self-management, decision-making, and interpersonal communication Parent topics: coping skills and behavior management; also group participation/ sessions create parent support system **Intervention/program name:**	**Brief description:** Substance(s)* Tobacco (cigarette), alcohol, cannabis Polysubstance measures: No Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? YES Mental health (depressive symptoms; anxiety; etc.)? YES (Coping skills acquisition - anxiety management Table 2) Morbidity? NO Equity (stratified analysis; focused on one historically disadvantaged group)? NO Other outcomes? Substance knowledge and attitudes	Not intent to treat since only complete data included in analysis. Below outcomes reported on: School Intervention only (SI), and School + Parent (SI-P) who attended sessions. Overall, no significant difference found amongst interventions. Narrative (overall): Increases in coping skills ability and positive changes in personality/behavioral mediating variables, did not correspond to changes in substance use **Outcome: Tobacco use** Measure: Self-reported frequency cigarette use (lifetime incidence, monthly recall, weekly recall, and 24-hr recall) Means (SD): Baseline (Pretest) SI (n=67): 2.90 (1.49) SI-P (n=21) = 2.81 (1.44) Comp (n=57): 2.83 (1.65) Follow-up (in months): 12 SI (n=67): 3.02 (1.48) SI-P (n=21): 2.95 (1.47) Comp (n=57): 2.93 (1.53) **Absolute change:**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	unexcused absences (d) drug or alcohol use by most friends or (e) family members, (f) low self-esteem (g) social withdrawal (h) experimental alcohol or drug use. Sample size: Baseline (Pretest total sample): 327 Posttest completion: 279/327 = 85.3% Student intervention = 91 Student+ parent = 86 Control = 102 booster 1-yr f/u: 201/279 = 72.0% Loss to f/u: Posttest completion: 48/327 = 14.7% booster 1-yr f/u: 78/279 = 28.0% (Study population data taken from Table 1-School Plus Parent Intervention, *N*=86) **Study population: Parents and Caregivers**	(a) Coping Skills School Intervention (b) Coping Skills School + Parent Intervention Substance(s) focused* Focused on General substance use prevention **Format:** Face-to-face group w/printed materials (for both intervention programs) **Intervention intensity:** weekly (for both intervention programs) Number of sessions or modules: School only: students (10) School + Parent: parents (5), students (10) Number of hours per session: 2hrs (for both intervention programs) Total hours of intervention: School only: 20-hr (students) School + Parent: 10-hr (parents), 20-hr (students) Interventions and control had two 2hr booster session 1-yr post initial intervention. **Implementer(s)** Project personnel (w/ master's degrees in a human service	Mediators Personality measures Behavior ratings Use of cigarettes, alcohol, and marijuana were measured with four dichotomous self-report items: lifetime incidence, monthly recall, weekly recall, and 24-hr recall. Frequency of use of each substance was assessed, and for alcohol use, additional items assessed amount consumed per occasion and frequency of drunkenness. Outcome scaled means: Frequency of cigarette use: Never = I, used to but quit = 2, a few a month — 3, a few a week = 4, every day = 5. Frequency of alcohol use: Never — l, a few drinks a year = 2, a few drinks a month — 3, a few drinks a week = 4, every day = 5. Drinking quantity per occasion: 1 drink = 1, 2 drinks — 2, 3—6 drinks — 3, more than 6 drinks 4, till I get "high" or drunk — 5. The N for this analysis includes only those students reporting use of alcohol in the previous 30 days.	SI (0.12 - 0.10) = +0.02 score points SI-P (0.14 -0.10) = +0.04 score points **Relative change:** NA **Narrative results:** Conditions by time did not yield significant main effects or interactions on measures Favorable (Yes/No/No effect): No effect Statistical significance: NS **Outcome: Alcohol use** Measure: self-reported frequency (lifetime incidence, monthly recall, weekly recall, and 24-hr recall) Means (SD): Baseline (Pretest) SI (n=67): 2.22 (0.92) SI-P (n=21) = 2.00 (0.95) Comp (n=57): 2.21 (1.00) Follow-up (in months): 12 SI (n=67): 2.39 (0.95) SI-P (n=21) = 2.33 (0.91) Comp (n=57): 2.32 (0.99) **Absolute change:** SI (0.17 - 0.11) = +0.06 score points SI-P (0.33 - 0.11) = +0.22 score points **Relative change:** NA **Narrative results:** Significant increase over time in frequency of use but means showed changes were very small. Increase was due to those who "never" used alcohol at pretest but later did

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Age: NR Sex: NR Race/ethnicity: NR Education: High school or less (Mother – 37%, father – 33%) College (Mother – 23%, father – 23%) Graduate school (Mother – 14%, father – 11%) Not sure (Mother – 26%, father – 33%) Employment: NR Income: NR Marital status: NR Other (Family Living Arrangement) Mother and father – 57% Mother only – 33% Father only – 8% Neither – 2% **Study Population: Youth** Age: average 14.39 Grade level(s): NR Sex: NR Race/ethnicity: white: 71% Black: 28% Other: 1%	discipline and experience working w/youth) **Intervention duration:** 10 weeks for students (in both interventions) 5 weeks for parents **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? No **Comparison group**: Not usual care, received part of the treatment, Students attended a structured group that provided attention and focused on self-awareness and building a support group. Participated in 10 small-group sessions conducted once a week, 2 hr per day as well as 2 2-hr booster sessions, during the school day.	Frequency of drunkenness: Never — l, once or twice a year — 2, once or twice a month — 3, once or twice a week — 4, several times a week — 5, almost every day — 6. The N for this analysis includes only those students reporting use of alcohol in the previous 30 days. Cannabis: Never — 1, a few times a year — 2, a few times a month — 3, a few times a week 4, every day — 5.	Favorable (Yes/No/No effect): No, but modest increase given high-risk population Statistical significance: [F(2, 352) = 3.20, p < .05 **Outcome: Cannabis use** Measure: Self-reported frequency (lifetime incidence, monthly recall, weekly recall, and 24-hr recall) Means (SD): Baseline (Pretest) SI (n=63): 1.75 (0.90) SI-P (n=21): 1.43 (0.60) Comp (n=57): 1.53 (0.85) Follow-up (in months): 12 SI (n=63): 1.97 (1.02) SI-P (n=21): 1.83 (1.08) Comp (n=57): 1.83 (1.26) **Absolute change:** SI (0.22 - 0.30) = -0.08 score points SI-P (0.40 - 0.30) = +0.10 score points **Relative change:** NA **Narrative results:** Significant main effects for time were found for frequency for interventions and control Favorable (Yes/No/No effect): No Statistical significance: [F(2, 340) = 7.96, p < .001] with small increases for all groups **Outcome: Coping Skills Acquisition (assertiveness, social skills,**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: NR			**communication skills, decision-making, and anxiety management)** Measure: means from scale based on coping skills acquisition test Overall coping skills means not reported in study. Only individual variables included in coping skills assessment. Baseline (Pretest) Int (n=21): Comp (n=57): Follow-up (in months): 12 Int (n=21): Comp (n=57): **Absolute change:** NR **Relative change:** NR **Narrative results:** Overall coping skill scores resulted in significant multivariate effects. SI-P improved skills significantly more from pretest to follow-up, and control condition declined slightly. Anxiety management and social skills contributed most on multivariate effects. Despite significant increases in coping skills ability there were not corresponding patterns of change in substance use Favorable (Yes/No/No effect): No Statistical significance: Yes **Condition** [Wilks's lambda = .819, F(15, 768) = 3.83, p < *00011]; **Time** [Wilks's lambda = *874, F(10, 558) = 3.87, p < .00011]; **Condition x Time**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				interaction [Wilks's lambda .836, F(30, 14) = 1.70, P < .01] **Outcome: Substance knowledge** Measure: knowledge assessed on 30 true-false assessment; attitudes used three parallel scales Baseline (Pretest) Int (n=86): Comp (n=102): Follow-up (in months): 12 Int (n=NR): Comp (n=NR): **Absolute change:** NR **Relative change:** NR **Narrative results:** For substance knowledge, significant gains in knowledge over time for SI and SI-P but no significant main effects or interactions for attitudes toward substance use Favorable (Yes/No/No effect): Yes, for substance knowledge but no effect for attitudes Statistical significance: p < .001 (for each smoking, alcohol, cannabis knowledge) **Outcome: School Achievement** Measure: School archival data - GPA from grading period immediately prior to each assessment, school attendance (# of classes skipped and tardies) Disruptive behavior (frequency of detentions, suspensions, expulsion)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline (Pretest) Int (n=86): Comp (n=102): Follow-up (in months): 12 Int (n=): NR Comp (n=): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Intervention condition - no differential effects. Disruptive behavior - no significant change over time but GPA increased from pretest to follow-up Favorable (Yes/No/No effect): No effect Statistical significance: F(2, 364) = p < .001) **Outcome: Personality measures** (Assertiveness, social anxiety, self-esteem, self-confidence, self-satisfaction, influenceability (smoking and general); rebelliousness, valuing of school, and perceptions of teacher support) Measure: self-reported testing instruments combining a 20-question version of the Assertion Inventory; 5-point Likert-type items; Student Attitudinal Inventory Baseline (Pretest) Int (n=86): Comp (n=102): Follow-up (in months): 12 Int (n=NR): Comp (n=NR):

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Absolute change: NR **Relative change:** NR **Narrative results**: Significant main effects for Condition on social anxiety and school value. Means indicate that SI was lower in reported social anxiety but SI-P lower on school value. No Condition by Time interactions, so intervention conditions did not differentially affect self-reports of personality and social behavior Favorable (Yes/No/No effect): No effect Statistical significance: SI: social anxiety [F(3, 180) — 3.10, p < .03] SI-P: school value [F(3, 181) = 2.61, p < .05] **Outcome: Behavior ratings** Measure: School Child Behavior Checklist (CBCL) completed by teacher Baseline (Pretest) Int (n=86): Comp (n=102): Follow-up (in months): 12 Int (n=NR): Comp (n=NR): **Absolute change:** NR **Relative change:** NR **Narrative results**: Overall no significant Condition x Time effects. But, over time, males had significant declines in Immaturity, Self-Destructive, inattentive, and Aggressive. Over time females had no

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				significant interaction effects or changes, but there were significant condition effects on Delinquency and Aggressive subscales with those in the School+Parent intervention being significantly higher. Favorable (Yes/No/No effect): No effect Statistical significance: Females condition effects: Delinquency ($p < .04$), aggressive ($p < .02$)
Author (Year): Gonzales et al. (2012) (1-yr data) Gonzales et al. (2014) Gonzales et al. (2018) (5-year data) **Location:** USA, Phoenix, Arizona **Years for Study**: 2003-2004; 2004-2005, 2005-2006; post-test 2009-2014 **Period for Study** (total time in months): 17 months (9-week intervention, follow-up 12 months and 5 years) Beginning fall 7th grade – ending spring 8th grade (recruitment - fall 7th grade,	**Setting:** mix (school and home) **Urbanicity:** urban **Eligibility:** MA families with 7th grade student attending one of four urban schools, adolescent was Mexican descent, at least one caregiver of Mexican descent interested in participating, and family willing to be randomly assigned to 9-week intervention or a brief workshop (control group). Urban schools: (a) high proportion of MA students (69% to	**Brief description of interventions and content:** separate simultaneous groups for adolescents and parents, then conjoint family session (a) parenting - effective parenting practices, family cohesion, promotion of school engagement. (b) adolescent coping - coping efficacy, academic engagement, family cohesion (c) conjoint family strengthening sessions - family cohesion, opportunities to practice skills Evening group sessions at adolescents' schools and 2 home visits (pre-intervention & mid-program). Families introduced to school liaison (SL) during 3rd family	**Brief description**: W1 – baseline, prior to intervention W2 – post-test, immediately after intervention W3- 1 year f/u after the intervention Self-reported, scaled adolescence substance use (tobacco, alcohol, marijuana, other illegal substances), 6 questions, including lifetime use (0 = no use, and 1 = use), total # of substances ever used School district data, scaled disciplinary actions - total # of disciplinary actions (e.g., suspension, detention) across 9 categories: substance use, fighting, assault, gang-related, weapons, harassment,	Intent to treat analyses, no differences between intervention conditions on mediators or outcomes at W1. ANCOVAS (Table 6) and path models to test mediated intervention effects on W3 outcomes (Table 7). Three sets of data analyzed by reporter: adolescents (n=516), mothers (n=494), and fathers (n=288). Table 4 Outcome results, only reported for overall sample and not intervention/control. **Outcome: substance use** Measure: scaled, Adolescent Sample Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 12 Int (n=338): NR Comp (n=178): NR **Absolute change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
enrollment/intervention – spring (9 weeks) 7th grade, f/u in spring 8th grade) **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Low c) Blinding - Low d) Outcomes - Low e) Selective - High	82%); (b) English and Spanish speaking family's availability (25% enrolled in Limited English Proficiency classes); (c) similar size (982 to 1141 students) and structure (served 7th and 8th graders only); (d) 75% to 85% students eligible for free or reduced lunches. **Recruitment:** 3 cohorts - 1st semester of each school year, Hispanic 7th graders randomly selected from school rosters. A phone call described intervention and determined eligibility. Parents opted in, indicated language preference **Inclusion/Exclusion:** above Sample size: (based on 2012 paper) Baseline 516 Int 338 Control 178	group session. Instructed SL available outside of sessions to help families apply program skills to address school related problems **Intervention/program name:** Bridges to High School Program / Projecto Puentes a la Secundária (Bridges/Puentes) Substance(s) focused* Program content did not specify if substance focus was included. **Format:** face-to-face group **Intervention intensity:** weekly Number of sessions or modules: 9 Number of hours per session: 2hrs (1.25-hour individual (adolescents/parents), 0.75-hour – family) Total hours of intervention: 18h (9 sessions * 2h) Additional components (things outside the sessions/modules) School liaison (SL) - Latino, bilingual masters level prevention expert, experience working in schools. Families self-referred or referred by group leaders if they needed SL help to address a specific school concern, e.g.,	property, disorderly conduct, other events. school district data, scaled grades - separate letter grades, 0 (F) to 4 (A+), for four classes required for all students (Language Arts, Math, Social Studies, Science), averaged for overall GPA Internalizing and externalizing symptoms assessed, scaled separately: -*adolescent reported* - Youth Self Report (YSR), -*mothers and fathers reported* - Child Behavior Checklist Parent Form (CBCL-PF), -average of two *teacher reports* - Child Behavior Checklist Teacher Report Form (CBCL-TRF). <u>Gonzales 2014</u> High school dropout: self-reported Students responded to the following item, "Are you currently attending school, like a high school, college, vocational or technical school, etc.?" (responses included 0 "No, I stopped attending, did not graduate" and 1 "Yes/No, I graduated or obtained a GED"),	**Relative change:** NR **Narrative results:** significant program effect (d=3.65), lower in intervention than control for those who engaged in high levels (85th percentile) of baseline SU (Table 6). Those who experimented with at least 1 substance at baseline, the estimated lifetime use at 12-month f/u was 1.1 substances (intervention) compared to 2.18 (control). Favorable (Yes/No/No effect): Yes Statistical significance: Yes (Table 6) significant for intervention X baseline (full sample) **Outcome: School disciplinary actions** Measure: scale, total # of disciplinary actions, adolescent sample Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 12 Int (n=338): NR Comp (n=178): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** significant main effect (d=0.34), with fewer Disciplinary Actions in intervention than control (Table 6) Favorable (Yes/No/No effect): Yes Statistical significance: Yes (Table 6) only for intervention (full sample)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	1-yr Follow-up 85% (439) Int 83% (282) Control 88% (157) 1-yr Loss to f/u 15% (77) Int 17% (56) Control 12% (21) 5 yr follow-up 81% (420) Int 82% (276) Control 81% (144) 5-yr Loss to f/u 19% Int 18% Control 19% **Study population: Parents and Caregivers (Int + cont.)** Age: NR Sex: NR Race/ethnicity: 100% Mexican American (MA) Education: NR Employment NR Income: 99% low-income ($42,090.40 (English), $32,359.22 (Spanish) mean annual household income)	class grades, school disciplinary actions, bullying. SL hired/paid hourly to work across schools with all families wanting additional help. SL not meant to intervene for families, but rather to increase parents' and adolescents' efficacy by coaching on using skills taught in intervention. **Implementer(s)** Trained group leaders (GLs) led parent or teen sessions in two-person teams (69% Latino/a (predominantly MA), 65% bilingual) Training comprehensive program manual, 45 hours of pre-service training, 3 hours of weekly training, and 2 hours of weekly supervision during the intervention. Across cohorts, GLs received a median score of 90% correct on tests of session content prior to each session. **Intervention duration:** 9-week **Focus of intervention activities:** Both parents/caregivers and youth: Yes	<u>Gonzales 2018</u> Scale Lifetime AUD (0, no diagnosis; 1, yes diagnosis) from Diagnostic Interview Schedule for Children (DSM-IV) Below responses range: 0 (0 days in the past year) to 9 (every day in the past year). Alcohol Use: self-reported During the past year, on how many days did you have at least 1 drink of alcohol? Drunkenness: self-reported During the past year, on how many days did you drink enough to feel pretty high/ drunk? Binge Drinking: self-reported During the past year, how often did you have 4 [girls] or 5 [boys] or more drinks containing any kind of alcohol in a 2-hour period? Substance(s)* tobacco, alcohol, marijuana, and other illegal substances Polysubstance measures? Yes	**Outcome: GPA** Measure: scaled, Adolescent Sample Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 12 Int (n=338): NR Comp (n=178): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** significant intervention effect (d=2.97, Table 6), adolescents with low baseline GPAs (1.3 (D-) average), had higher GPAs at follow-up (2.39 (C+) average) compared to the control (1.53 (D) average) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, (Table 6) marginal significance for intervention X baseline (full sample) **Outcome: Internalizing (mental health)** Measure: scaled Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 12 Int (n=338): NR Comp (n=178): NR **Absolute change:** NR **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Marital status: NR Other 83.5% two-parent families *Caregiver participation* 55.0% Mothers & fathers 40.7% mothers only 0.8% fathers only 3.5% unknown caregiver Caregiver participation overall 95.7% Mothers (57.5% w/fathers & 42.5% only caregivers). 55.8% Fathers (98.6% w/mothers & 1.4% only caregivers). *Primarily language* 47% English 53% Spanish **Study Population: Youth** Age: 12.3 years Grade level(s): 7th grade Sex: 50.8% females, 49.2% males Race/ethnicity: 100% Mexican American (MA)	Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Low dosage workshop Parents and adolescents jointly attended a single 1.5-hour evening workshop at the school on a different night and by different GLs than intervention. Content: handouts on school resources, discussed barriers to school success, and developed their own family plan to support middle school success. Workshop did not teach specific parenting or coping skills.	Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? YES (Gonzales 2018 only) Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? YES (GPA, disciplinary actions, dropouts (grade retention in Gonzales 2014)) Mental health (depressive symptoms; anxiety; etc.)? YES (Internalizing and externalizing symptoms, reported separately from adolescents, parents, teachers) Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES Other outcomes? School Engagement, Mediators (Effective parenting, Family cohesion, Adolescent coping efficacy, School engagement)	**Narrative results**: ANCOVAs (Table 6) did not reveal any intervention effects on adolescent or mother reports of Internalizing. Marginally significant (d=0.26) intervention effect on father report (intervention group lower than control). Significant (d=2.35) Intervention x Baseline interaction for teacher reporting on child; intervention group with high baseline was lower than control at follow-up Favorable (Yes/No/No effect): No effect Statistical significance: somewhat (Table 6) Not for adolescent or mother, but for father report by intervention (full sample). Significant for teacher report by intervention X baseline (full sample) **Outcome: Externalizing (mental health)** Measure: scaled Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 12 Int (n=338): NR Comp (n=178): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: ANCOVAs (Table 6) mother report - main effect significantly (d=0.32) lower in intervention.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: high proportion families eligible for free or reduced-price lunch			father report - significant (d=3.49) Intervention x Baseline interaction; fathers reported lower for intervention adolescents with low baseline than control. Significant 3-way (intervention x baseline x language) interaction: adolescent report - Spanish adolescents with higher baseline, intervention group (d=2.96) had higher levels than control. teacher report - English adolescents in intervention group with low baseline significantly (d=3.13) higher than control. Favorable (Yes/No/No effect): No Statistical significance: Yes (Table 6) for intervention X baseline, adolescent (significant, Spanish sample), father (significant, full sample), and teacher (marginally significant, English sample). Intervention only - mother (full sample) **Effect sizes (Table 6)** Although small at one-year follow-up, several effects moderated by baseline risk and substantially stronger for high-risk adolescents. **Mediation path modeling at W3 (Table 7)**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Substance use - 3 significant mediators for decreased use in intervention group: *Mother Positive Reinforcement* (full sample), those w/low baseline Positive Reinforcement, *Mother Harsh Parenting* (Spanish subsample) those w/high baseline Harsh Parenting & w/low baseline SU, *Coping Efficacy* (Spanish subsample) with low baseline Coping Efficacy. **GPAs** - 3 significant mediators of Intervention effects for Spanish sample (intervention and control group combined): *Mother Harsh Parenting* (for adolescents w/ high Harsh Parenting & for those w/low GPAs at baseline), *Father Monitoring* (for adolescents w/high baseline Monitoring), *School Engagement* (for adolescents low on baseline School Engagement). **School Disciplinary Actions** mediated effect in full sample (intervention and control group combined): *Mother Positive Reinforcement* (for adolescents whose mothers reported low baseline Positive Reinforcement, w/intervention group having fewer School Disciplinary Actions than control group).

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				5-year post-test data (data from 2018 paper) **Outcome: alcohol use** Measure: Alcohol use disorder Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 60 months Int (n=276): NR Comp (n=144): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: adjusted beta: -0.93 (0.47) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, 0.047 **Outcome: alcohol use** Measure: past year alcohol use Baseline Int (n=338): 8.9% Comp (n=178): 6.7% Follow-up (in months): 60 months Int (n=276): NR Comp (n=144): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** adjusted beta –0.16 (0.19) Favorable (Yes/No/No effect): Yes Statistical significance: No, 0.40 **Outcome: alcohol use** Measure: past year drunkenness

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=338): 3.3% Comp (n=178): 1.7% Follow-up (in months): 60 months Int (n=276): NR Comp (n=144): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: adjusted beta –0.17 (0.17) Favorable (Yes/No/No effect): Yes Statistical significance: No, 0.54 **Outcome: alcohol use** Measure: past year binge drinking Baseline Int (n=338): NR Comp (n=178): NR Follow-up (in months): 60 months Int (n=276): NR Comp (n=144): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: adjusted beta –0.04 (0.15) Favorable (Yes/No/No effect): Yes Statistical significance: No, 0.79 **Substance use general;** Data from Gonzalez 2014 paper presented narratively The program significantly increased school engagement, with school

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				engagement mediating intervention effects on internalizing symptoms, adolescent substance use, and school dropout in late adolescence when most adolescents were in the 12th grade. Effects on substance use were stronger for youth at higher risk based on pretest report of substance use initiation. There were no direct or indirect intervention effects on externalizing symptoms.
Author (Year): Guilamo-Ramos et al. (2010) **Location:** USA, Bronx and Harlem, New York City, New York **Years for Study:** 2004-2007 **Period for Study** (total time in months): 15months **Study Design:** Individual RCT **CG Suitability**: Greatest **Risk of Bias Assessment** a) Randomization– Low	**Setting:** school classrooms during non-school hours **Urbanicity:** Urban **Eligibility:** Mother-adolescent dyads recruited from 6 middle schools in the Bronx and Harlem communities of NYC **Recruitment:** Telephone recruitment of Mother-adolescent dyads from school lists **Inclusion/Exclusion:** African American or Latino adolescents in grades 6 or 7 (a small number of 8th graders were accepted)	**Brief description of intervention and content:** Intervention combined a parenting component with a youth prevention component Intervention name: Linking Lives Health Education Program (which included Parent component "Raising Smoke-free Kids" and modified student component based on Toward No Tobacco Use [TNT] school program) Substance(s) focused* Tobacco- cigarette smoking Format: Intervention components tailored to ethnicity and urban context of study population Parent components	**Brief description:** Smoking behavior. Adolescents were askedif they had ever smoked cigarettes. If they responded "Yes," they were asked if they had ever smoked cigarettes regularly, i.e., every day for at least 30 days Substance(s)* Tobacco-cigarette smoking Polysubstance measures? No Outcome types Intentions? No Initiation? No Use? Yes SU disorder? No Educational outcomes? No Mental health? No Morbidity? No Mortality? No	Logistic regression analysis of smoking change Analyses focused on posttest-only mean and percentage differences between the 2 groups because covariates (maternal marital status, maternal education, and adolescent gender, grade, and ethnicity) were not significant Not Intention to treat analyses **Outcome: Ever smoked cigarettes** Measure: Self-report on scale form Baseline Int (n=NR): 5.4% Comp (n=NR): 5.4% Follow-up: 15 months Int (n=NR): 5% Comp (n=NR): 10% **Absolute change:** -5 percentage points **Relative change:** -42% from OR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
b) Concealment– Low c) Blinding– High d) Outcomes– Low e) Selective –Low	Sample size: N=1386 dyads participated Baseline: 1386 15m f/u - Inter: 695 dyads 542 Comp: 691 dyads 554 Follow-up(15m): 1096 Loss to f/u: 22-23% by arm **Study population: Parents and caregivers** Age: mean 40.1 years Sex: 100% female (mother) Race/ethnicity: Latino 74.2% African American 24% Education: Some HS without graduating 24.6% Employment: NR Income: NR Marital status: NR single head of household 46.9% Other: Born in US: 32.9% **Study Population: Youth** Age: mean 12.1 years Grade level(s): 6th ,7th, 8th	Tailored parent group sessions (2) held in school classrooms and followed written manual Written manual that focused on effective communication and parental monitoring strategies for preventing adolescent tobacco use. The manual was written at 4th grade reading level and consisted of 9 short modules written at a fourth grade reading level and 2 tobacco related homework activities for parents to use at home with their adolescent. Booklet for parents to give to their adolescents to work on Youth components Tailored youth group tobacco prevention sessions modified from TNT school-based program held in school classrooms (focus on self-esteem, communications, refusal skills, tobacco) Youth activity workbook **Intervention intensity:** Number of sessions or modules: Parents: 2 sessions Youth: 2 sessions Number of hours per session: Parents 2.5 hrs. Youth 2.5 hrs.	Equity: Yes. Study focused on Latino and African American mother-adolescent dyads Other outcomes? Yes parental practices and communication outcomes	**Narrative results:** Odds Ratio ever smoked = 0.58 (95%CI 0.36, 0.94) Favorable: Yes Statistical significance: Yes Differences by ethnicity and gender were not statistically significant

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: female 50.4% male 49.6% Race/ethnicity: NR Other: Born in US 75.4% **Community characteristics:** NR	Total hours of intervention: 5 hrs. parent, 5 hrs. child Parent Manual had 9 modules and 2 homework assignments Telephone booster contacts were made at 1 month and 6 months **Implementer(s)** Not reported for sessions (researchers) Telephone boosters delivered by trained parent volunteers **Intervention duration:** 2 days plus booster telephone calls **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** Parents received sessions about choosing high schools + Youth received the same 2 day tailored modified TNT prevention intervention.		
Author (Year): Hadley et al. (2016) **Location:** USA, Philadelphia, Pennsylvania and	**Setting:** Home **Urbanicity:** Urban **Eligibility:** African-American adolescents and their caregivers	**Brief description of intervention and content**: Family-based HIV prevention Parent–Child Communication/Monitoring DVD and workbook intervention specifically designed for African	**Brief description:** Youth and caregiver self-reported behaviors on standard instruments	Continuous measures were scale variables that were analyzed using independent samples t-tests, with effect sizes calculated using Cohen's d (small = 0.20, medium = 0.50, and 0.80 = large).

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Providence, Rhode Island **Years for Study:** NR **Period for Study** (total time in months): 1 session or 2 within 0.5 months **Study Design:** RCT Individual **CG Suitability:** Greatest Risk of Bias Assessment a) Randomization– High b) Deviations– Some c) Missing data– Some d) Outcome measurements– Some e) Selective– High Overall: High	recruited from low-income neighborhoods and community-based organizations (CBOs) **Recruitment:** Fliers and presentations at local CBOs were the primary means of recruitment. **Inclusion:** Family with adolescent 13-18 years age Identified as African American Able to speak English **Exclusion** Declined to participate Self-reported HIV infection Cognitive or behavioral inability to give consent Sample size: Approached: 237 adolescent-caregiver dyads Baseline: 170 adolescent-caregiver dyads 3-month Follow-up: 160 (94%) Loss to f/u: 6%	American parents and adolescents **Intervention/program name:** "Work it Out Together" Substance(s) focused* General. Primary focus was parenting and family practices with content on sexual health promotion and sexual risk behavior reduction **Format:** Interactive DVD and printed workbook for adolescents and their parents targeted adolescent risk-reduction, improved communication, and parental monitoring -One DVD for adolescents -One DVD for parents/caregiver Workbook provided specific activities for parents and teens to practice skills taught within the DVD and joint activities designed to improve communication, parental monitoring and reduce adolescent risk taking. **Intervention intensity:** Number of sessions: 1 or 2 Number of hours per session: 3 hours (one) or 1.5 hours (2)	Measures at baseline, end of intervention, and 3-month follow-up Primary instrument Adolescent Risk Behavior Assessment (ARBA): computer-assisted structured interview designed specifically for use with adolescents to assess their self-reported sexual and drug behaviors associated with HIV infection. Substance(s)* Alcohol-lifetime use Marijuana-lifetime use Polysubstance measures? No Outcome types (Type YES or NO next to each outcome) Intentions? No Initiation? No, but 3m lifetime use change approximates initiation Use? Yes-lifetime SU disorder? No Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity? Yes (intervention and study population specific to African-American adolescents and caregivers)	Dichotomous measures were analyzed using Chi square tests for independence and effect sizes were calculated using r (small = 0.10, medium = 0.30, and large = 0.50). Effect sizes >0.30 for Cohen's d and >0.20 for r were considered meaningful **Outcome: Adolescent alcohol use** Measure: Self-reported lifetime use Baseline Int (n=83): 39% Comp (n=87): 45% Follow-up (in months): 3 months Int (n=80): 44% Comp (n=82): 49% **Absolute change:** -1 percentage points **Relative change:** +3.6% **Narrative results**: No significant difference in alcohol use at the 3-month follow-up. 3-month t/Chi-square=0.40 effect size 3 month d/r=-0.05 Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Adolescent marijuana use** Measure: Self-reported lifetime use Baseline Int (n=83): 24%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and Caregivers Age: 45.18 years Sex: Female 81.7%; Male 18.3% Race Black/African-American: 85.4% More than one race: NR (presumed 14.6%) Ethnicity: Latino 2.4% Education: High school graduate: 93.9% Employment: NR Income: Household income (% ≤$30,000): 32.9% (significantly lower than comparison group) **Study Population: Youth** Age: 15.46 years Grade level(s): Sex: Female 53% Male 47% Race: Black/African-American: 73.5% More than one race: 26.5% Ethnicity: Latino 3.6%	Total hours of intervention: 3 h of total time, which included DVD viewing time, individual workbook activities, and joint workbook activities **Implementer(s):** Not reported (researchers) DVD and workbook Program was delivered with minimal staff support (some assistance with setting up the DVD player and managing occasional DVD player malfunctions) **Intervention duration: 2** weeks or less **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes (both separate and joint activities) **Comparison group**: DVD on general health promotion: psychoeducational only and did not contain information on monitoring or parent–child communication about sexual and substance use risk but did	Other outcomes? Sexual risk behaviors HIV Knowledge and Sexual Risk Cognitions parental monitoring, parent-adolescent sexual communication, and lower acceptance of adolescent sexual behavior	Comp (n=87): 33% Follow-up (in months): 3 months Int (n=80): 24% Comp (n=82): 40% **Absolute change:** -7 percentage points **Relative change:** -17.5% **Narrative results**: A lower proportion of youth randomized to the Work It Out Together intervention reported marijuana use at the 3 month follow-up, chi-square = 6.45, $p < 0.05$ Favorable: Yes Statistical significance: Yes Outcome: Adolescent sexual activity Measure: Self-report vaginal, anal, oral sex Baseline Int (n=83): 41% Comp (n=87): 41% Follow-up (in months): Int (n=80): 45% Comp (n=82): 44% **Absolute change:** +1 percentage point **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): No Statistical significance: No Subset analyses of adolescents who reported sexual activity Among adolescents who reported sexual activity, intervention adolescents reported greater self-

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: Population: Urban low income communities in Philadelphia and Providence	contain segment on tobacco use "This is Your Brain on Tobacco"		efficacy for using condoms, t (64) = 2.06, $p < 0.05$. A small to medium effect size (r = 0.21) was found for the comparison of sexually active youth reporting sex in the last 90 days, $\chi 2$ [2] = 3.04, $p < 0.10$. There were no other differences in the percentage of youth who reported having engaged in any type of sex
Author (Year): Haggerty et al. (2007) **Location:** USA, Seattle, Washington **Years for Study** (actual years): NR **Period for Study** (total time in months): 26.5 months (2.5 months + 24 months) **Study Design:** individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment**	**Setting:** Home + Community (SA intervention); Mixed School (PA intervention) **Urbanicity:** urban **Eligibility:** Families w/an African American (AA) or European American (EA) 8th grader at home, English primary language **Recruitment:** Families with students in the Seattle Public Schools were sent an informational letter. Paid for completing study interviews and	Universal prevention program includes parenting, youth, and family components designed to prevent substance use and other problem behaviors in teens transitioning into high school **Two Intervention Arms: Self-administered with Telephone Support (SA) –** Workbook (printed materials/activities) and videos to complete as family Telephone support provided by trained family consultant for motivation and problem-solving services Parent and Adolescent Group (**PA**) -	Brief description Youth self-reported outcomes for initiation of cigarette, alcohol, marijuana and other illegal drug use and sexual activity Substance(s)* cigarette, alcohol, marijuana, other illegal drug use Polysubstance measures (Yes)? Combined initiation of cigarettes, alcohol, marijuana, other illegal drugs AND sexual activity Outcome types Intentions? NO Initiation? YES Use? NO SU disorder? NO Educational outcomes? NO	Two interventions with each intervention having separate analyses for African-American and European-American families. Intent to treat analysis, the rate of change as mean-level differences at 24 months post-test. Overall results indicated no main effects for either intervention method, but marginally significant interactions with race for both intervention methods (SA p=0.06, PA p=0.08). Results below are stratified post hoc analyses for both interventions **Intervention #1: Self-Administered with telephone (SA)** **Outcome: Combined initiation of substance use (cigarettes, alcohol, marijuana, other illegal drugs) or sexual activity**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
a) Randomization– Unclear b) Concealment – Unclear c) Blinding– High d) Outcomes– Low e) Selective –Unclear	programs (surveys- $15, video observations - $50 and programs up to $100) **Exclusions:** Families not planning to live in area for the next 6 months Sample size Baseline: 331 families Intervention: 107 SA, 118 PA Control: 106 Started SA program: 99/107 (92.5%) Started PA program: 92/118 (77.9%) Follow-up at 2 years Total 92% (AA 92% EA 92%) Intention to treat analysis **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: African American 49.2%	Group face-to-face sessions led by trained group leaders included both family, parent-only, and youth-only meetings Workbook and other printed materials for home activities Telephone reminder each week from group leader **Intervention/program name:** Parents Who Care (PWC) Substance(s) focused* General (one workbook chapter involved family rules for drug, alcohol, and tobacco use) **Format:** SA- Printed materials w/ activities checklist, video, telephone support calls PA- face-to-face group, video, printed materials w/ activities, telephone reminders **Intervention intensity:** SA-weekly, consultants made 16.9 call attempts resulting in 9.7 completed calls. PA- consecutive weekly Number of sessions or modules: SA-62 key activities to complete PA- 7 sessions plus home activities	Mental health? NO Morbidity? NO Mortality? NO Equity? YES, stratified analyses for all outcomes for recruited African-American youth Other outcomes? Yes Initiation of sexual activity Deliquent and violent behavior Perceptions of drug use harm, Favorable attitudes drug use,	Measure: Odds ratio Analysis group: African-American youth Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) NR estimated from plot at 32% Comp (n=37) NR estimated from plot at 60% **Absolute:** NR estimated from plot at -28 pct pts **Relative:** -46.7% **Narrative:** Odds ratios indicated the chances of initiating sex or substance use were reduced by almost 70% (OR=0.31) for AA teens in the SA compared to controls. Favorable: Yes Statistically significant: Yes but measure NR Analysis group: European-American youth Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) NR estimated from plot at 57% Comp (n=42) NR estimated from plot at 54%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	European American 50.8% Education: *Parent high school diploma* Total-86.6% (AA 78.9% EA 94.0%) *Parent college grad* Total-37.6% (AA-13% EA-61.4%) Employment Income (*Mean per capita):* Total-$15,042 (AA-$7,807 EA-$21,970) Marital status (*Single parent)* Total-40.3% (AA-56.8% EA-24.4%) Other: Mean household members 4.6 **Study Population: Youth** Age: mean 13.7 Grade level(s): 8th grade (baseline), 10th longest f/u Sex: 48.6% female; 51.4% male Race/ethnicity: African American 49.2% European American 50.8% Other	Number of hours per session: SA- average phone calls lasted ~10.5 min/week PA- 1st, 4th, 7th sessions = 2.5 h; remaining = 2h Total hours of intervention: SA- 1hr 45mins (105 mins) PA- 15.5 hr Additional components (things outside the sessions/modules) Childcare reimbursement and transportation (cab fare) were provided when needed **Implementer(s)** SA- trained family consultant (prior clinical experience with families with adolescents) PA- 2 trained group leaders (Typically, one European American and one African American, prior experience conducting parent or teen workshops) **Intervention duration:** SA - 10 weeks; PA – 7 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No		**Absolute:** NR estimated +3 pct pts **Relative:** NR estimated +5.2% **Narrative:** NR Favorable: No Statistically significant: NR presumed NS **Outcome: Cigarette use initiation** Measure: Proportions (frequencies) from post-test Analysis group: African American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 3.1% Comp (n=37) 10.8% **Absolute difference:** -7.7 pct pts NS **Relative difference:** -71% **Narrative:** NR Favorable: Yes Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) 17.1% Comp (n=42) 19.0% **Absolute difference**: -1.9 pct pts NS **Relative difference:** -10% **Narrative:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: NR	Parent and child in the same session/activity? (Yes) **Comparison group:** no-treatment control		Favorable: Yes Statistical significance: No **Outcome: Alcohol use initiation** Measure: Proportions (frequencies) from post-test Analysis group: African-American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 12.1% Comp (n=37) 24.2% **Absolute difference:** -12.1 pct pts NS **Relative difference**: -50% **Narrative:** NR Favorable: Yes Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) 45.9% Comp (n=42) 41.0% **Absolute difference:** +4.9 pct pts NS **Relative difference:** +11.9% **Narrative:** NR Favorable: No Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Marijuana use initiation Measure: Proportions (frequencies) from post-test Analysis group: African-American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) % 22.6% Comp (n=37) 27.9 % **Absolute difference:** -5.3 pct pts NS **Relative difference:** -18.9% **Narrative:** NR Favorable: Yes Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) % 25.6 Comp (n=42) 27.9% **Absolute difference:** -2.3 pct pts NS **Relative difference:** -8.24% **Narrative:** NR Favorable: Yes Statistical significance: No **Outcome: Other illegal drug use initiation** Measure: Proportions (frequencies) from post-test

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Analysis group: African-American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 4.5% Comp (n=37) 2.2 % **Absolute difference:** +2.3 pct pts NS **Relative difference:** +104% **Narrative:** NR Favorable: No Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) 7.0% Comp (n=42) 14.0% **Absolute difference:** -7.0 pct pts NS **Relative difference:** -50% **Narrative:** NR Favorable: Yes Statistical significance: No **Intervention#2: Parent and Adolescent Group (PA)** Outcome: Combined initiation of substance use (cigarettes, alcohol, marijuana, other illegal drugs) or sexual activity

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: Odds ratio Analysis group: African-American youth Baseline Int (n=42) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=42) NR estimated from plot 31% Comp (n=37) NR estimated from plot 60% **Absolute:** NR estimated -29 pct pts Significant **Relative:** -48.3% **Narrative**: Odds ratios indicated the chances of initiating sex or substance use were reduced by 75% (OR=0.25) for the AA teens in the PA compared to controls. Favorable: Yes Statistically significant: Yes Analysis group: European-American youth Baseline Follow-up: 24 months Int (n=42) NR estimated from plot 53% Comp (n=42) NR estimated from plot 54% **Absolute:** NR estimated -1 pct pts **Relative:** Yinan –1.852% **Narrative:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Favorable: No effect Statistically significant: NR presumed NS **Outcome: Cigarette use initiation** Measure: Proportions (frequencies) from post-test Analysis group: African-American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 11.9% Comp (n=37) 10.8% **Absolute difference:** +1.1pct pts NS **Relative difference:** +10.2% **Narrative:** NR Favorable: No Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) 16.7% Comp (n=42) 19.0% **Absolute difference:** -2.3 pct pts NS **Relative difference:** -12.1% **Narrative:** NR Favorable: Yes Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Alcohol use initiation Measure: Proportions (frequencies) from post-test Analysis group: African-American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 22% Comp (n=37) 24.2% **Absolute difference:** -2.2 pct pts NS **Relative difference: -**9.1% **Narrative:** NR Favorable: Yes Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) 36.4% Comp (n=42) 41.0% **Absolute difference:** -4.6 pct pts NS **Relative difference:** -11.2% **Narrative:** NR Favorable: Yes Statistical significance: No **Outcome: Marijuana use initiation** Measure: Proportions (frequencies) from post-test

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Analysis group: African-American Baseline Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 13.3% Comp (n=37) 27.9% **Absolute difference:** -14.6 pct pts NS **Relative difference:** -52.3% **Narrative:** NR Favorable: Yes Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% omp (n=42) 0% Follow-up: 24 months Int (n=41) % 34.0% Comp (n=42) 27.9% **Absolute difference:** +6.1 pct pts NS **Relative difference:** +21.9% **Narrative:** NR Favorable: No Statistical significance: No **Outcome: Other illegal drug use initiation** Measure: Proportions (frequencies) from post-test Analysis group: African-American Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=32) 0% Comp (n=37) 0% Follow-up: 24 months Int (n=32) 1.9% Comp (n=37) 2.2% **Absolute difference:** -0.3 pct pts NS **Relative difference:** -13.6% **Narrative:** NR Favorable: Yes Statistical significance: No Analysis group: European-American Baseline Int (n=41) 0% Comp (n=42) 0% Follow-up: 24 months Int (n=41) 7.5% Comp (n=42) 14.0% **Absolute difference:** -6.5 pct pts NS **Relative difference:** -46.4% **Narrative:** NR Favorable: Yes Statistical significance: No
Author (Year): Komro et al. (2008) also Komro et al. (2006) **Location:** USA, Chicago, Illinois **Years for Study**: 2002-2005	**Setting:** School, home, and community (mix) **Urbanicity:** Urban (city-wide) **Eligibility:** Schools: Chicago schools with grades 5–8, relatively low mobility rates <25%), and 30 or	**Brief description of interventions and content:** - Original Project Northland intervention was adapted for an urban, low-income and multi-ethnic population in Chicago Parent and Family Family education—four home-based remote sessions per year	**Brief description:** Yearly classroom-based surveys to measure alcohol use and intentions, and risk and protective factors T1 6th grade (baseline) 2002 T2 6th grade, spring 2003 T3 7th grade spring 2004 T4 8th grade spring 2005	Analysis sample included survey responses from 5698 students Mixed-effects regression models for repeated measures were used to test for differences between the intervention and control conditions over time, with regard to the student survey, employing a three-level random coefficients regression model Adjusted for race and gender

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Period for Study: 3.5 years (30 months or 42 months) **Study Design**: group RCT **CG Suitability**: Greatest **Risk of Bias Assessment** a) Randomization - Unclear b) Concealment – Unclear c) Blinding – High d) Outcomes– Low e) Selective– Low	more students per grade. Students and family: Participating students and families in recruited study schools in Chicago **Recruitment:** Schools 66 schools were recruited and grouped by proximity into study units. Units were matched on ethnicity, poverty, mobility and reading and mathematics test scores for randomization Inter: 10 units, 29 schools Comp: 12 units, 32 schools Students and families: All students and families in study schools were included with consent **Inclusion/Exclusion:** Students who moved between intervention and control schools	for parents and youth activity packets to be completed by youth with their parents) Family fun events 6th and 7th grade for parents and youth Parent postcards (5 in 7th grade and 8 in 8th grade) for parents Youth Classroom curricula Peer leadership trainings Youth-planned community service projects Community-wide Community organizing and environmental neighborhood change **Intervention intensity:** consecutively from 6th to 8th grade Number of sessions: Classroom curricula: 6-10 sessions/year x 3 years=18-30 Parent education: 4 thirty-minute home-based assignments per year x 3 years = 12 sessions (6 hours) Total hours **Intervention/program name:** Project Northland Chicago Substance(s) focused* Alcohol	Substance(s)* Alcohol Polysubstance measures: Yes (multiple drug use including alcohol, marijuana and tobacco) Outcome types Intentions? Yes for alcohol Initiation? No Use? Yes SU disorder: No Educational outcomes: No Mental health: No Morbidity? No Mortality? No Equity: Yes Tailored and targeted content modified for urban, low-income, multi-ethnic population Other outcomes? Yes Limited access to alcohol Parental involvement Norms .	Intention to treat analyses Over the three follow-up periods, there were no statistically significant differences in the growth rate of the drug use, alcohol use and alcohol intentions scales between the intervention and control groups, evidenced by an examination of the slopes of these trajectories in each study condition **Outcome: Alcohol Use** Measure: Scale; Baseline score and growth rate Baseline Int (n=2501–2538): Comp (n=3079–3147): Follow-up (in months): Up to 30 months Int (n=NR): NR growth rate=0.02 Comp (n=NR): NR growth rate=0.03 **Absolute change:** NR **Relative change:** NR **Narrative results**: Growth rates compared Favorable (Yes/No/No effect): No effect Statistical significance: X2 = 0.07 p=0.80 NS **Outcome: Drug use (including alcohol, tobacco, and marijuana)** Measure: Scale; Baseline score and growth rate

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sample size: Student cohorts Schools Students 6th Grade 61 4259 8th Grade 59 3802 The cohort follow-up rate from baseline to third follow-up was 61%. **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: NR **Study Population: Youth** Age: 12 Grade level(s): 6th grade Sex: female 50% male 50% Race/ethnicity: White 13% Black 43% Hispanic 29% Other 15%	**Implementer(s)** Teachers were trained by university-based project staff to implement the classroom curricula Trained student peer-leaders Research staff Recruited community organizers **Intervention duration**: 3 years **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes **Comparison group:** No project interventions, however during the 3 years of the study, 69%, 50% and 39% of the control schools reported implementing an alcohol and/or drug prevention curriculum during the 6th-, 7th- and 8th grade years, respectively		Baseline Int (n=2501–2538): 9.28 Comp (n=3079–3147)): 9.48 Follow-up: up to 30 months Int (n=NR): NR growth rate =0.05 Comp (n=NR): NR growth rate=0.05 **Absolute change:** NR **Relative change:** NR **Narrative results**: Growth rates compared Favorable (Yes/No/No effect): No effect Statistical significance: X2=0.06 p=0.82 NS **Outcome: Alcohol intentions of use** Measure: Scale: Baseline score and growth rate Baseline Int (n=2501–2538): Comp (n=3079–3147): Follow-up: Up to 30 months Int (n=NR): NR growth rate=0.05 Comp (n=NR): NR growth rate=0.05 **Absolute change:** NR **Relative change:** NR **Narrative results:** Growth rates compared Favorable (Yes/No/No effect): No effect Statistical significance: X2=0.03 p=0.86 NS **Secondary analyses** Subset of students present during all three intervention years (n=2465):

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Other: Free or reduced-price lunch 72% **Community characteristics:** Population in Chicago, IL Described as Urban, low-income and multi-ethnic population			there was no statistically significant difference in the growth rate of alcohol use or drug use between the intervention and control groups. Intervention components Association between level of participation in home program and trajectory of drug use statistically significant with higher participation in home programs associated with a lower rate of growth in drug use over time [mean=0.049,(SE) 0.019, Z=-2.45, P= 0.01]. The association between level of participation in the home programs and trajectory of alcohol use approached statistical significance, with higher participation in the home programs associated with a lower rate of growth in alcohol use over time (mean=-0.024,SE 0.013, Z=1.86, p=0.06).
Author (Year): Lavner et al. (2020) Barton et al. (2018) Beach et al. (2016) Barton et al. (2017) **Location:** USA, Georgia **Years for Study**: 2013 - 2017 (Initial enrollment to 25 f/u)	**Setting**: home **Urbanicity:** rural **Eligibility:** African American couples (two-parent) in a relationship for 2 years or more, living together, and coparenting African American child (age 9-	**Brief description of interventions and content:** Each session, couples first, then child, then family: *Couple-facilitator*: First 60 min couple relationship, next 30 min parenting topics Content: specific stressor couples experience (e.g., work, racism, finances, extended family).	**Brief description** Wave 1: baseline Wave 2: 9-month f/u Wave 3: 17-month f/u Wave 4: 25-month f/u **Substance use —**youth reported (Monitoring the Future Study) past 3-month frequencies of cigarette smoking, alcohol use, heavy drinking, and marijuana.	ITT analysis Beach 2016 **Outcome: Substance use initiation** Measure self-reported use of cigarettes, alcohol, and marijuana, use of any substance in lifetime). **Absolute change:** NR **Relative change:** NR **Narrative**: b=−2.25 (SE= 0.64), t=3.54, $p \leq .01$; Youth in the ProSAAF group also reported significantly

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
2013–2015 enrollment 2015–2017 f/u periods **Period for Study**: 50 months (from start of intervention to last follow-up 25 months) **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Some concern b) Deviations- Low c) Missing data- Low d) Outcome measurements- Low e) Selective - Low	14 years) for at least 1 year. Also, willing to spend 6 weeks engaged in program and not planning to move out of study area during period. Target child must be African American, but not both parents. **Recruitment:** from rural, low-income communities by mail and phone via ads distributed and lists that local (16 counties) schools provided for grades 4 -6. Inclusion see above **Exclusion** sibling/stepsibling in same grade, family enrolled in another program Sample size: Baseline 346 Int 172 Control 174 Follow-up 87% (301/346) Int 79% (136/172)	Facilitator guided DVD presentations of program content, modeling, structured activities, and discussions of specific topics. *Youth-facilitator*: 15-min individual activity with couple in different room. *Youth-couple-facilitator:* 15-min joint activity (discussion or game). **Intervention/program name:** Protecting Strong African American Families (ProSAAF) Substance(s) focused* General **Format:** face-to-face, DVD **Intervention intensity**: 1 session/ week Number of sessions or modules: 6+ 2 booster session Number of hours per session: 2h Total hours of intervention: 12h **Implementer(s)** 28 trained facilitators (African American community members) **Intervention duration:**	Summed responses - substance use composite from cigarette smoking (0 (not at all) to 6 (> 2 packs a day); alcohol use, heavy drinking, and marijuana use (0 (none) to 6 (30 or more times). **Depressive symptoms —** Youths reported (20-item Center for Epidemiological Studies-Depression scale (CES-D) sample: "how often did you feel depressed?" in past week). Summed responses - 0 (Rarely or none of the time [0-1 days]) to 3 (Most or all of the time [6-7 days]). higher scores indicating more depressive symptoms (α = .79). Substance(s)* cigarette smoking, alcohol and marijuana Polysubstance measures? YES Outcome types (Type YES or NO next to each outcome) Intentions? NO Initiation? NO Use? YES SU disorder? NO	greater declines in conduct problems and lower levels of substance use initiation than did youth in the control group. Equivalence analyses (Table 2)- no differences between ProSAAF and control conditions at W1 Table 3 (Mediated effects - three models results below) Model 1, no significant direct effects of intervention on child outcomes. Youth whose families participated in intervention did not differ from control at Wave 4. Model 2: postintervention couple functioning at Wave 2 not significantly associated with child outcomes at Wave 4. Model 3: Wave 3 parent-child relations predicted several child outcomes at Wave 4. Positive parent-child relations predict lower levels of youths' substance use (B(β) = −.02(−.11), se = 01., p = .02), but not significantly associated with youth depressive symptoms (B(β) = −.09(−.08), se = .06, p = .15). Supplemental Tables S2 (Indirect effect (IE) analyses):

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Control 95% (165/174) **Study population: Parents and Caregivers (Total)** Age: 36.6 years women, 39.9 years men (mean) Sex: Females - 94% biological mothers Men - 49% biological fathers, 38% stepfathers Race/ethnicity: 99.4% African American, 0.6% (2 caregivers (from different families) not African American) Education: Women - Median some college or trade school (< 9 grade - master's degree) Men - Median high school or GED (< 9 grade - doctorate or professional degree) Employment Women: 45% FT, 61% total Men: 65% FT, 74% total Income: 51% below 100% federal poverty level,	6 consecutive weeks+2 booster sessions **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Couples mailed book and accompanying workbook of reasons for enhancing the couple's relationship, guidelines, examples of communication and problem-solving strategies, and exercises designed to enrich relationships.	Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? Yes, depressive symptoms Morbidity? NO Mortality? NO Equity (focused on one historically disadvantaged group)? YES, African American Other outcomes? conduct problems, affiliation with deviant peers, sexual onset, self-control	significant IEs linking intervention to lower levels of substance use (std IE = −.003, 95% CI [−.010, −.001]), through intervening pathways of positive changes in couple functioning and more positive parent-child relations.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	17% between 100% and 150% of level Median monthly income: Women - $1,220 (SD = $1,440; range $1-$10,000) Men - $1,375 (SD = $1,375; range $1-$7,500) Marital status: 63% married, 9.8 years mean marriage, 6.7 years mean living unmarried Other # children in home - 3 median (range 1 to 8, mode of 2) **Study Population: Youth (Total)** Age: 10.9 mean (range 9–14) Grade level(s): 4 -6 Sex: 47% female (161/346) 53% male (185/346) Race/ethnicity: 100% African American **Community characteristics**: rural, low-income communities; poverty			

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	rates are among the highest in nation and unemployment rates above national average			
Author (Year): Lei et al. 2022 Related papers: Brody et al., 2015a (subsample analyses) Brody et al., 2021/ Brody et al., 2012 (28 month f/u) Brody et al., 2010 (17 month f/u) **Location:** USA, Georgia **Years for Study**: 2006 – 2010 2006-2007 (Recruitment) + 2008 (Baseline/intervention) + 28-month follow-ups **Period for Study**: ~52 months 24 months recruitment + 28 months (baseline/intervention/ follow-up) **Study Design:** Individual RCT	**Setting:** community **Urbanicity: r**ural **Eligibility:** African American 11th- and 12th- grade secondary schools' student in 6 rural counties in Georgia **Recruitment:** school lists and advertisements in rural parts of Georgia **Exclusion**: not within the specified age range or the child was not African American *Initial study* Sample size: Baseline 367 Int = 187 Control = 180 28-mo f/u: 89% (327/367)	**Brief description of interventions and content:** Each meeting: separate, concurrent training sessions for parents and youths, joint parent–youth session practicing learned skills Parents: taught to provide developmentally appropriate emotional and instrumental support, ongoing racial socialization that included strategies for dealing with discrimination, occupational and educational mentoring, autonomy and adult responsibility, and to encourage responsible decisions about risk behaviors. Content: curriculum, organized role-playing activities, guided discussions, answered parents' questions, narrators on videotapes (family interactions of targeted behaviors) Youths: develop a future orientation, to plan to meet goals, to identify people in their communities who could help	**Brief description** Baseline/pretest - age 17 (2.5 mo preintervention) 28 mo f/u (ages 18 to 19) 60 mo f/u (age 22, blood for methylation analysis) Lei 2022 Substance use — youth reported "In the past month, how many days have you: drunk beer, wine, wine coolers, whiskey, gin, or other liquor; had three or more drinks of alcohol at one time; smoked cigarettes, smoked marijuana?" 4 items rated on 6-point scale; responses summed to form past-month substance use index. Averaged scores between ages 18 and 19 to form a substance use composite at 60-month follow-up. *Full study sample:* *Brody 2021* *Adolescent Mental Health* In SAAF–T, depressive symptoms assessed using	Intent-to-treat analysis - Family and youth demographic characteristics did not differ between the intervention and control groups at any assessment point Lei 2022 ONLINE SUPPLEMENT contains Means, standard deviations, and t values for study variables by time and condition (N = 216). **Outcome: Substance use** Measure: mean (Table S2) Baseline Int (n= 114): 4.40 Comp (n= 102): 4.48 Follow-up (in months): 60 Int (n= 114): 5.19 Comp (n= 102): 5.23 **Absolute change:** +0.04 pts **Relative change:** +1.06% **Narrative results**: No significant direct association of AIM intervention with substance use Favorable (Yes/No/No effect): No Statistical significance: t-value = -0.543 **Outcome: DNAm-based aging, Methylation (GrimAge Index) from subset sample**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
CG Suitability: Greatest **Risk of Bias Assessment (ROB2)** a) Randomization – Some concerns b) Deviations – Some concerns/low c) Missing data – Some concerns/low d) Outcome measurements – Low e) Selective – Low Overall bias: Some concerns	28-mo Loss to f/u 11% *Lei 2022/Brody 2015 (subsample)* 60 mo Follow-up 216 Int = 114 Control = 102 60 mo Loss to f/u (58 unreachable, 92 refused participation) **Study population: Parents and Caregivers** Age: 44 Sex: NR Race/ethnicity: NR Education: mothers, 78.7%, completed high school or (GED) Employment: average of 38.5 work hours per week Income: median $1,948.25 per month Marital status: 46.5% single mothers, 33.2% married parents, 17.1% separated mothers, 3.2% cohabiting partners headed **Study Population: Youth**	them attain goals, coping with barriers and racial discrimination, self-care strategies. Content: Videotapes, structured activities, role-playing, and group discussions. **Intervention name:** Adults in the Making (AIM) program Substance(s) focused* General Format (face-to-face [one-on-one; group], remote [printed materials; telephone; email; etc.], or both): face-to-face, group Intervention intensity: weekly Number of sessions or modules: 6 Number of hours per session: 2h Total hours of intervention: 12h (6*2h) **Implementer(s)** Group leaders AIM group leaders took part in three training sessions over a 4-day period **Intervention duration:** 6 weeks	adolescents' reports on the Center for Epidemiologic Studies–Depression scale, long-term follow-up). In AIM, parents reported on youths' depression or anxiety symptoms with the Child Behavioral Checklist (baseline, α = .83; long-term follow-up, α = .86). *Brody 2012* *Alcohol use, self-report,* scale - 1 (zero) to 7 (40 or more) # of times in past 3 months drank alcohol *Substance use problems,* 10-item Minnesota Survey of Substance Use Problems. # of times in past 6 months experienced problems with substance use. Summed scale - 0 (zero) to 6 (11 or more) *Susceptibility cognitions,* Combined measure for behaviors and intentions to use alcohol or other substances, and peers who use alcohol and other substances. Substance(s)* Alcohol, tobacco (smoking), cannabis	Measure: mean (Table S2) Baseline Int (n= 114): NR Comp (n= 102): NR Follow-up (in months): 60 Int (n= 114): Comp (n= 102): **Absolute change: NR** **Relative change: NR** **Narrative results:** no significant direct association of AIM intervention with AgeAccelGrim Favorable (Yes/No/No effect): No Statistical significance: t-value = -.543 Brody et al 2012 (at 27.5-month follow-up) **Alcohol use** **Narrative results**: Found no statistically significant difference between participants in the treatment group and participants in the comparison group in alcohol use **Substance use problems** **Narrative results:** No statistically significant difference between participants in treatment group and in the comparison group in substance use problems **Susceptibility cognitions** **Narrative results:** No statistically significant difference between

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Age: 17.7 Grade level(s): 11th/12th Sex: 59% female, Race/ethnicity: 100% African American **Community characteristics:** Sample representative of community: median family income of $1,948.25 per month; working poor, 42% of participants lived below federal poverty standards, and another 15% lived within 150% of the poverty threshold.	**Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** No intervention	Polysubstance measures? Yes Outcome types Intentions? Brody 2012 has a composite measure for youth intention to use and peers using substances Initiation? NO Use? YES, Brody 2012 (Alcohol Use, Substance Use Problems) SU disorder? NO Educational outcomes? NO Mental health (depressive symptoms; anxiety; etc.)? YES, Brody 2021 Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES Other outcomes? Brody 2010 - Risk (combined sexual behavior and substance use) Behaviors, Impact of Life Stress on Risk Behaviors Lei 2022 - Self-control, GrimAge	participants in treatment group and participants in comparison group in susceptibility cognitions, or behavioral willingness and intentions to engage in risky behavior
Author (Year): Loveland-Cherry et al. (1999) **Location:** USA, three Midwestern school districts	**Setting:** Home **Urbanicity:** Mixed **Eligibility:**	**Brief description of interventions and content:** Universal intervention, family folder of info covered during the intervention (general parenting skills, family functioning, factors specific to alcohol use/misuse)	**Brief description:** Youth self-reported alcohol initiation, use, and misuse Alcohol use (based on Table 2, total sample alcohol use index)	Not intent to treat analysis, used only complete data from 428 adolescents. **Outcome: Alcohol use** Measure: Scale, self-reported total frequency/quantity

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Years for Study (actual years): Total: mid-January 1992 to spring 1996 Pretest/intervention: mid-January 1992 to mid-March 1992 Posttest I: January to March 1993 Booster: in fall 1995 Posttest 4: in spring 1996 **Period for Study**: 60 months (methods stated 5 years) **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Unclear b) Concealment – Unclear c) Blinding – High d) Outcomes – Unclear e) Selective – High	Child attending 1 of 21 selected elementary schools **Recruitment:** class lists of all grade 4th students in the selected schools **Inclusion/Exclusion:** Inclusion: students reach age 9 by specified date in first half of school year Sample size Baseline: 892 Follow-up Posttest 4: 81% (723/892) Loss to f/u Posttest 4: 19% (169/892) **Study population: Parents & Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment Income: NR Marital status: NR Other	7th grade booster sessions revised previous components used for middle adolescents and families, with interactive activities and less didactic material; discussed changes associated with school transition and normal adolescent development. **Intervention/program name:** Child and Parent Relations (CAPR) Substance(s) focused* Alcohol **Format:** Face-to-face with printed materials **Intervention intensity:** booster in 7th grade Number of sessions or modules: 3 Number of hours per session: 3hr Total hours of intervention: 9hr Additional components (things outside the sessions/modules) 2 parent-led family only meetings before next session, follow-up telephone calls, newsletter	Measure: Scale, self-reported total frequency/quantity indicating # of drinks (beer, wine and liquor) consumed per week over last 12 months 7-point scale ranging from no drinking (0) to 10 or more drinks per week (6) Substance(s)* Alcohol Polysubstance measures? No Outcome types (Type YES or NO next to each outcome) Intentions? NO Initiation? YES Use? YES, including misuse SU disorder? NO Educational outcomes? NO Mental health? NO Morbidity? NO Mortality? NO Equity? NO Other outcomes? Yes adolescent perceptions of parenting behaviors, parents' disapproval of adolescent alcohol use, adolescent attitudes	Baseline (pretest), Mean (± SD) Int (n=90): 0.2 ± 0.43 scale points Comp (n=338): 0.2 ± 0.65 scale points Follow-up (in months): 60 months Int (n=90): 0.7 ± 1.58 scale points Comp (n=338): 0.8 ± 1.44 scale points **Absolute change:** -0.1 scale points **Relative change:** NA **Narrative results:** Time = (F = 21.72, 4/421 df,p < .001) Time x Condition (F = 4.31 4/421 df, p < .01) Condition X Time X Prior Drinking (F = 5.16, 4/421 df, p < .001) *Mann-Whitney test* prior drinkers = 212.5, asymptotic p = .21 (not significant) Favorable (Yes/No/No effect): Yes, for no prior drinking, pronounced differences in less alcohol use if their parents in intervention group than control Statistical significance: Yes Time x Condition - (p < .01), Condition X Time X Prior Drinking (no prior drinking) - (p < .001) **Outcome: Alcohol initiation** Measure: scale self-reported frequency/quantity Baseline (pretest), Mean (± SD) Int (n=79): 0.0 ± 0.19 scale points Comp (n=238): 0.1 ± 0.23 scale points Follow-up (in months): 60 months Int (n=79): 0.4 ± 1.11 scale points

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study Population: **Youth** Age: 9 at pretest Grade level(s): 4th grade (pretest), 8th grade (posttest 4) Sex: 54% female, 46% male Race/ethnicity: 86% European American Other *Parents marital status* mother & father (70%) mother only (14%) mother & stepfather (11%) father & stepmother (3%) father only (1.6%) other individuals (1.4%) Community characteristics: NR	**Implementer(s)** Family intervener **Intervention duration:** NR (initial intervention - elementary school (4th grade), no specific timeframe reported. booster sessions – middle/junior high school (7th grade)) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes Comparison group: No comparison		Comp (n=238): 0.8 ± 1.44 scale points **Absolute change:** -0.3 scale points **Relative change:** NA **Narrative results:** *Mann-Whitney test* No prior drinkers = 9617.5, asymptotic p = .01 (significant) Favorable (Yes/No/No effect): Yes, reduces initiation Statistical significance: Yes **Outcome: Alcohol misuse** Measure: index score, mean of 8 self-reported items (overindulgence, trouble with family, peers, police, or at school due to use during previous 12 months) Baseline (pretest), Mean (± SD) Int (n=90): 0.1 ± 0.68 score points Comp (n=338): 0.2 ± 0.69 score points Follow-up: 60 months Int (n=90): 0.6 ± 1.53 score points Comp (n=338): 0.7 ± 1.48 score points **Absolute change:** 0 score points **Relative change:** NA **Narrative results:** Time: (F = 17.00, 4/421 df, p < .001), Time x Condition: (F = 3.22, 4/421 df, p < .05) Condition x Time x Prior Drinking (F = 3.08, 4/421 df, p < .05) *Mann-Whitney test* No prior drinkers = 10070.5, asymptotic p = .04 (significant)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Prior drinkers = 213.5, asymptotic p = .16 (not significant) Favorable (Yes/No/No effect): Yes, for no prior drinkers, intervention group students reporting minimally lower rates of misuse than control. Mann-Whitney test confirmed intervention group misused alcohol less than control Statistical significance: Yes, significant interactions: (p < .05)
Author (Year): Mahabee-Gittens et al. (2008) **Location:** USA, Ohio (Cincinnati) **Years for Study** (actual years): May 2003 - May 2004 **Period for Study** (total time in months): 1 month (1 Day intervention + 1 month f/u) **Study Design:** Individual RCT **CG Suitability:** Greatest	**Setting:** Community (hospital/emergency department) **Urbanicity:** Urban **Eligibility:** Child subjects with a non-urgent triage complaint (e.g., cough, rash, ear pain) as defined by ED nurses. **Recruitment:** Participants identified and approached by trained clinical research coordinator (CRC) or by Principal Investigator **Exclusion:** No working telephone number, not willing to provide follow-up, no	**Brief description of interventions and content:** While child and parent waiting to receive further care in ED, two components delivered in 15-20 minutes: (1) verbal instructions on why and how to deliver effective anti-tobacco messages to child (2) written instructions on a colorful 4x6 inch magnet card including five key steps for discussing smoking, and key phrases to start conversations **Intervention/program name:** NR, but pediatric emergency department (ED)-based intervention Substance(s) focused* Tobacco **Format**: Parent only	**Brief description:** Self-reported: "never-smokers" = had never smoked. "regular smokers" = at least one cigarette in past week. "experimenters" = ever smoked at least one puff of a cigarette "susceptible to smoking" = not answering "definitely not" to: "Do you think you will smoke a cigarette in the next 6 months?" Substance(s)* Tobacco Polysubstance measures? NO Outcome types (Type YES or NO next to each outcome) Intentions? YES Initiation? YES Use? YES	No intent to treat analyis Chi-Square test or Fisher's Exact test for categorical outcome variables, T-test or ANOVA for continuous outcome variables **Outcome: Tobacco (future intentions to not smoke)** Measure: proportion (next six months) Baseline Int (n=266): 89.5% Comp (n=264): 89.0% Follow-up (in months): 1 Int (n=189): 96.3% (182) Comp (n=189): 88.4% (167) **Absolute change:** +7.40 pct pts **Relative change:** +8.37% **Narrative results:** Intervention Group more likely to report they would definitely **not** smoke (OR: 3.4, 95% CI: 1.4-8.2) Favorable (Yes/No/No effect): Yes Statistical significance: p = 0.008

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment a) Randomization - High b) Deviation- High c) Missing data- Low d) Outcome measurements - Low e) Selective - Low	permanent mailing address, or had been previously enrolled; also, excluded child subjects who triaged in urgent or critically ill category, unable to complete baseline survey because of illness, injury, severe developmental delay or mental retardation Sample size: Baseline 540 Int 268 Control 272 Follow-up (1-month) 70% (378/540) Int 71% (189/268) Control 69% (189/272) Loss to f/u (1-month) 30% (162/540) Int 29% (79/268) Control 31% (83/272) **Study population: Parents and Caregivers** (Calculated from Table 1 Intervention Data) Age: 37.9 mean Sex: 47% female, 53% male	**Intervention intensity:** Number of sessions or modules: 1 session Number of hours per session: 15-20 minutes Total hours of intervention: 15-20 minutes **Implementer(s)** Pediatric health care workers **Intervention duration:** 1 day **Focus of intervention activities:** Both parents/caregivers and youth: No Parents only: Yes Parent and child (either in the same session or not)? No Parent and child in the same session/activity? No **Comparison group:** Parents received no specific instructions regarding parent-child tobacco communication.	SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? NO Other outcomes? Parent-Child Tobacco Communication (child-initiated and parent to child); Parents have specific anti-smoking rules	**Outcome: Tobacco smoking (initiation)** Measure: proportion (1-month)-never smoked Baseline Int (n=261): 81.2% Comp (n=267): 82.4% Follow-up (in months): 1 Int (n=189): 78.3% Comp (n=189): 80.4% **Absolute change:** -0.90 pct pts **Relative change:** -1.16% **Narrative results: NR** Favorable (Yes/No/No effect): No effect Statistical significance: p=0.3 **Outcome: Tobacco Use** Measure: Proportion (1-month)-regular smokers and experimenters (calculated/estimated from never smokers) Baseline Int (n=261): 18.8% Comp (n=267):17.6% Follow-up (in months): 1 Int (n=189): 21.7% Comp (n=189): 19.6% **Absolute change:** +0.90 pct pts **Relative change:** +3.90% **Narrative results:** NR Favorable (Yes/No/No effect): No Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Race/ethnicity: 54.5% (144/264) African American, 45.4% (120/264) Caucasian Education: 47.2% (125/265) completed high school Employment NR Income: NR Marital status: NR **Study Population:** **Youth** (Taken from text combines Int+ Cont) Age: 12.7 mean (range: 9-16) Grade level(s): NR Sex: 48% female, 52% male Race/ethnicity: 53.3% African American, 45.4% Caucasian **Community characteristics:** NR			
Author (Year): Marsiglia et al. 2019a Related papers: Marsiglia et al., 2019 Journal of Substance Abuse Treatment	**Setting:** School **Urbanicity:** Urban and Suburban **Eligibility:** Number (over 100 students in	**Brief description of intervention and content:** 1) parent-youth condition (PY) vs. the comparison condition (C), (2) parent-only condition (PO) and C, and (3) PY vs. PO.	Adolescents reported the amount and frequency of the use of alcohol, inhalants, cigarettes, and marijuana in the last 30 days	Missingness in the data controlled with multiple imputation (MI) method A generalized estimating equation (GEE) model examined the longitudinal data. Parent only (PO) vs control (C)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Marsiglia et al., 2019 Journal of Prevention & Intervention in the Community **Years for Study**: 2013–2015 school years **Period for Study**: 20 months **Study Design:** Group (Cluster) RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization – Some concerns b) Deviations - Low c) Missing outcome - Some concerns d) Outcome measurements - Low e) Selective - Some concerns Overall bias: Some concerns	the 7th grade) and proportion of Latino students (over 60%) in school, the location (within the county boundary of a major metropolitan area in the Southwest of USA), and Title 1 funding status (federal financial assistance program) **Recruitment:** With coordination from school staff, the community partner focused recruitment and enrollment efforts on Latino families in each of the school. Parents were invited by telephone and invitational flyer to attend an introductory parent information session 54 eligible schools 21 schools agreed to participate in the Study 9 schools in C, 5 schools in PY, and 7 schools in PO. Sample size:	kiR (youth) culturally-based program to encourage preadolescents and their classmates to adopt anti-drug attitudes and norms and to expand communication skills related to effectively resisting alcohol and drugs using the acronym REAL – Refuse, Explain, Avoid, and Leave. Complementary parenting program to kiR (youth). FPNG (parent only) empowers parents to assist their youth using the REAL strategies, to strengthen family functioning and communication skills, to build a parental support network, and to integrate culture into parenting practices FPNG (parent only) provides opportunities to learn from other parents through a variety of activities, including role playing, small group discussion, and reflection exercises **Intervention/program name:** Families Preparing the New Generation (FPNG), and a youth curriculum, keepin' it REAL (kiR) Substance(s) focused*	Substance(s)* Cigarette smoking, alcohol and marijuana and inhalants Polysubstance measures? Yes - any substance Outcome types (Type YES or NO next to each outcome) Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO Equity (focused on one historically disadvantaged group)? YES, Latino/Hispanic Other outcomes? Substance use norms: Personal disapproval of substance use Peer disapproval of substance use Parental disapproval of substance use Substance use norms outcomes in Marsiglia 2018 Journal of substance abuse treatment	**Outcome: Any substance use** Measure: frequency of the use of any substance (alcohol, inhalants, cigarettes, and marijuana in the last 30 days) Baseline Int (n=152): 8% Comp (n=176): 10.9% Follow-up (in months): 20 months Int (n=72): 8.6% Comp (n=70): 20% **Absolute change:** -8.5pct pts **Relative change: -**41.4% **Narrative results:** The predicted probability of using substances at wave 4 (20 months f/u) was significantly higher in the C condition compared to the PO condition (contrast = 0.127; 12.7% higher; Cohen's h = 0.369) Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Alcohol use** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 6% Comp (n=176): 8% Follow-up (in months): 20 months Int (n=72): 5.3 % Comp (n=70): 16.2% **Absolute change**: -8.9 pct pts **Relative change:** -56.4%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Baseline Total 532 24 participants who did not receive a free lunch at baseline were excluded from the sample leaving 508 total participants Baseline (Wave 1) Int PY 180 Int PO 152 Control 176 Loss to f/u Wave 4 (20 months) Total 55.1% (280/508) **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment NR Income: NR Marital status NR Other NR **Study Population: Youth** Age: 12.6 mean Grade level(s): 7th Sex: 43.9% female, 56.1% male	General **Format:** Group face-to-face **Intervention intensity:** Weekly Number of sessions or modules: Youth kIR 10 lessons Parent FPNG 8 lessons Number of hours per session: NR Total hours of intervention: NR **Implementer(s)** For youth, regular teachers delivered kiR in the school classroom Trained bi-lingual facilitators delivered the manualized curriculum **Intervention duration:** 2 to 2.5 months **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? No **Comparison group:** Only parents received a comparison curriculum designed by the community partner	Anti-Drug norms provided in Marsiglia 2019 Journal of Substance Abuse Treatment	**Narrative results**: Predicted probability of using alcohol at wave 4 was significantly higher in the C condition compared to the PO condition (contrast = 0.102; 10.2% difference; Cohen's h = 0.36) Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Inhalant use** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 4.6% Comp (n=176): 4.6% Follow-up (in months): 20 months Int (n=72): 2.8% Comp (n=70): 2.3% **Absolute change: +**0.5 pct pts **Relative change:** +21.7% **Narrative results:** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: Cigarette use** Measure: frequency of use in the last30days Baseline Int (n=152): 3.3% Comp (n=176): 1.7% Follow-up (in months): 20 months Int (n=72): 2.2% Comp (n=70): 1.5% **Absolute change:** -0.9 pct pts

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Race/ethnicity: 100% Latino Hispanic Other NR **Community characteristics:** Free lunch program but no %	without an alcohol and other drugs prevention focus		**Relative change:** **Narrative results:** For cigarette use, there was no significant difference at any wave Favorable (Yes/No/No effect): No effect Statistical significance: NS **Outcome: Marijuana use** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 3.9% Comp (n=176): 1.1% Follow-up (in months): 20 months Int (n=72): 3.9% Comp (n=70): 5.1% **Absolute change:** -4.0 pct pts **Relative change:** -78.4 **Narrative results:** For marijuana use, there was no significant difference at any wave Favorable (Yes/No/No effect): Yes Statistical significance: NS Parent-youth condition (PY) vs. the comparison condition (C) **Outcome: Any substance use** Measure: frequency of the use of any substance (alcohol, inhalants, cigarettes, and marijuana) in the last 30 days Baseline Int (n=152): 9.8% Comp (n=176): 10.9%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up (in months): 20 months Int (n=110): 14.1% Comp (n=70): 20% **Absolute change:** -4.9 pct pts **Relative change:** -21.5% **Narrative results:** The results show no significant differences between C and PY Favorable (Yes/No/No effect): Yes Statistical significance: NS **Outcome: Alcohol use** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 6.1% Comp (n=176): 8.0% Follow-up (in months): 20 months Int (n=110): 12.3% Comp (n=70): 16.2% **Absolute change:** -2.0 pct pts **Relative change:** -0.425% **Narrative results:** NR **Favorable (Yes/No/No** effect): No effect Statistical significance: NS **Outcome: Inhalant use** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 5.9% Comp (n=176): 4.6% Follow-up (in months): 20 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=110): 4.5% Comp (n=70): 2.3% **Absolute change: +**0.9 pct pts **Relative change:** +83.7% **Narrative results:** NR Favorable (Yes/No/No effect): No Statistical significance: NR **Outcome: Cigarette** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 4.0% Comp (n=176): 1.7% Follow-up (in months): 20 months Int (n=110): 4.5% Comp (n=70): 1.5% **Absolute change:** 0.7 pct pts **Relative change:** 27.5% **Narrative results:** NR Favorable (Yes/No/No effect): No Statistical significance: NR **Outcome: Marijuana use** Measure: frequency of the use in the last 30 days Baseline Int (n=152): 3.4% Comp (n=176): 1.1% Follow-up (in months): 20 months Int (n=110): 5.5% Comp (n=70): 5.1% **Absolute change:** -1.9 pct pts **Relative change:** -65.1%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: NR Favorable (Yes/No/No effect): Yes Statistical significance: NR In terms of effect size, the Cohen's h for significant differences were over 0.20 but less than 0.50 indicating small intervention effects.(for those estimates reporting significance) **Additional inhalant outcomes from** Marsiglia 2019 Journal of prevention & intervention in the community Overall, inhalant use is extremely low(M=1.09, SD=0.49), with the vast majority of youth in 7th grade reporting no use (95%). Parent only (PO) vs control (C) **Outcome: Inhalant use** Measure: frequency of the use in the last 30 days How many times have you sniffed glue, spray paint, or other inhalants to get high in the past 30 days?" Responses included (1) none, (2) 1–2 times, (3) 3–5 times, (4) 6–9 times, (5) 10–19 times, (6) 20–39 times, and (7) 40 or more times. Baseline Int (n=134): 1.11 (0.60) times at 30 days Comp (n=173): 1.06 (0.88) times at 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up (in months): 4 or 5 months (W2) Int (n=NR): 1.23 (0.31) times at 30 days Comp (n=NR): 1.09 (0.48) times at 30 days **Absolute change:** 0.1 times at 30 days **Relative change:** 8.1% **Narrative results:** NR Favorable (Yes/No/No effect): No effect Statistical significance: PY<PO mean scores were significantly different at p<.05. Parent and Youth (PY) vs control (C) **Outcome: Inhalant use** Measure: frequency of the use in the last 30 days How many times have you sniffed glue, spray paint, or other inhalants to get high in the past 30 days?" Responses included (1) none, (2) 1–2 times, (3) 3–5 times, (4) 6–9 times, (5) 10–19 times, (6) 20–39 times, and (7) 40 or more times. Baseline Int (n=180): 1.11 (0.53) times at 30 days Comp (n=173): 1.06 (0.88) times at 30 days Follow-up (in months): 4 or 5 months (W2) Int (n=NR): 1.03 (0.22) times at 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=NR): 1.09 (0.48) times at 30 days **Absolute change:** -0.11 times at 30 days **Relative change:** -10.2 % **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: Yes PY<PO mean scores were significantly different at p<.05.
Author (Year): Martinez et al. (2022) **Location:** USA; Willamette valley, Oregon **Years for Study:** Not reported **Period for Study**: 6 months post baseline (intervention was 4 months) **Study Design**: RCT-individual (family) **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization – Some	**Setting:** Mixed (home for initial assessment and telephone contact; community for group sessions-research center) Urbanicity Mixed; rural, suburban, and urban **Eligibility**: Hispanic ethnicity, Spanish speaking family; child in 5, 6,7, or 8th grade **Recruitment**: A community based recruitment using direct contact, referrals, and flyers, brochures and radio messages through churches, public school lists, community	**Brief description of intervention and content:** A culturally adapted parent management training preventive intervention for Spanish-speaking Latino parents and their middle-school aged children residing in an emerging immigration context ‘’ **Intervention/program name:** Nuestras Familias: Andando Entre Culturas Substance(s) focused*: General substance use focus **Format:** Face-to-face group sessions (15 families); Telephone support contact Content was delivered through short presentations by	**Brief description:** Youth self-reported likelihood of use in the next 12 months -3 question composite In home assessment at baseline; follow-up at research center. Computer and audio options. The majority of participants chose to self-administer their questionnaires through a computer. Depressive symptoms: measured by youth responses to Center for Epidemiologic Studies-Depression Scale Likelihood of substance use: scaled youth responses to three questions regarding how likely they were to use various target substances,	Intervention effect on likelihood of youth substance use from the Tobit regression Intention to treat **Outcome: Youth intention to use tobacco** Measure: Youth self-reported likelihood of use in the next 12 months Baseline Int (n=120): Not reported Comp (n=121): Not reported Follow-up: 6-month post baseline Int (n=114): Not reported Comp (n=117): Not reported **Absolute change:** NR **Relative change:** NR **Narrative results**: Estimate -1.48 (95% CI -2.63 to -0.33) p<0.01 Stratified analyses indicated greater effects among girls (estimate 1.53 95%CI 0.05 to 3.01) p<0.01 Favorable (Yes/No/No effect): Yes Statistical significance: Yes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
b) Deviations– Low c) Missing data – High d) Outcome measurements– Low e) Selective– Some Overall bias: High	events, agencies and businesses **Inclusion:** Two parental figures needed to agree. Excluded if not Hispanic, Spanish speaking, with child in 5, 6,7,8th grade Sample size: 445 (37%) of 1213 families contacted were eligible Baseline: 241 (54% of 445) recruited families Intervention: 120 families Comparison: 121 familes Follow-up Intervention: 114 (95%) Comparison: 117 (96.6%) Loss to f/u: 5% **Study population: Parent or caregivers** (mother in 98% of families) Age: Mothers 36.05 years, fathers 39.02	interventionists, small group and/or couple discussion of material, and role-plays of parenting techniques. **Intervention intensity:** weekly Number of sessions: 12 Number of hours per session: 2.5 hours including time for shared meal Total hours of intervention: 30 hours Additional components (things outside the sessions/modules): Weekly telephone calls to parents Meal provided by research team at each session Free childcare during parent sessions Homework club activities for children during parent sessions Group or private make-up sessions offered Incentives were provided for assessments (both arms) including transportation assistance and child care **Implementer(s):** 6 trained researcher interventionists (3 men, 3 women) were majority immigrants, bilingual, with bachelor's Degree, extensive	Academic success: average scaled score of primary caregiver ratings of youth school subject performance (i.e., five items performance in math, science, language arts, social studies, and other subjects) and youth homework diligence (i.e., three items concerning homework completion, interest, and quality). Substance(s)* Tobacco intentions Alcohol intentions Marijuana intentions Illicit substance intentions Polysubstance measures? YES, category of illicit substance use intentions Outcome types Intentions? YES Initiation? NO Use? NO SU disorder? NO Educational outcomes? YES Mental health: YES Morbidity? NO Mortality? NO Equity? YES study focused on Hispanic immigrant context and measured intervention satisfaction	**Outcome: Youth intention to use alcohol** Measure: Youth self-reported likelihood of use in the next 12 months Baseline Int (n=120): Not reported Comp (n=121): Not reported Follow-up: 6-month post baseline Int (n=114): Not reported Comp (n=117): Not reported **Absolute change: NR** **Relative change: NR** **Narrative results**: Estimate -0.91 (95% CI -1.99 to 0.71) p<0.10 Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Youth intention to use marijuana** Measure: Youth self-reported likelihood of use in the next 12 months Baseline Int (n=120): Not reported Comp (n=121): Not reported Follow-up: 6-month post baseline Int (n=114): Not reported Comp (n=117): Not reported **Absolute change: NR** **Relative change: NR** **Narrative results**: Estimate -0.86 (95% CI -2.13 to 0.41) NS Favorable (Yes/No/No effect): Yes Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: 78% of families had two parental figures who participated in the study in some way, while 20% of families had only a participating mother and 2% had only a participating father. Of the families with two participating parental figures, 86% included both biological parents. Race/ethnicity: 100% Hispanic by study criteria Education: 9th grade or less: 62% mothers, 69% fathers HS or greater: 25%, 19% fathers Employment: Mothers 63%; Fathers 89% Income: Parents reported an average of 4.89 persons in each household and a monthly household income of $1894 (SD= $1083), which falls below the federal poverty guideline for a family of five Marital status: Other:	experience working with Latino families **Intervention duration:** 12 weeks **Focus of intervention activities:** Both parents/caregivers and youth: No Parents only: Yes Parent and child in the same session/activity? No **Comparison group**: No additional interventions (services as usual)	Other outcomes? YES Parent outcomes, Parent assessments of youth aggression, social problems, internalizing and externalizing behaviors, Youth refusal skills	**Outcome: Youth intention to use illicit drugs** Measure: Youth self-reported likelihood of use in the next 12 months Baseline Int (n=120): Not reported Comp (n=121): Not reported Follow-up: 6-month post baseline Int (n=114): Not reported Comp (n=117): Not reported **Absolute change: NR** **Relative change: NR** **Narrative results**: Estimate -1.28 (95% CI -2.15 to -0.40) p<0.01 Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Youth self-reported depressive symptoms, subset of US-born youth** Measure: CED-S 20 item summation score Baseline Int (n=NR): 1.03 Comp (n=NR): 1.03 Follow-up: 6-month post baseline Int (n=NR): 1.00 Comp (n=NR): 0.92 **Absolute change:** +0.08 score points **Relative change:** NR **Narrative results:** Group x Time F=0.56 NS, effect size reported as 0.00 Favorable (Yes/No/No effect): No effect

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Foreign-born: 96% mothers (Mexico 96%), 98% fathers (Mexico 94%), remaining parents born in Central/South America **Study Population: Youth** Age: mean 12.28 years Grade level(s): 5, 6, 7, or 8 Sex: Female 50%; Male 50% Race/ethnicity: 100% Hispanic by study criteria Other: US-born: 56% Foreign-born: 44% (95% born in Mexico) **Community characteristics:** Recent immigrant context. Spanish-speaking parents			Statistical significance: No **Outcome: Youth self-reported depressive symptoms, subset of foreign-born youth** Measure: CED-S 20 item summation score Baseline Int (n=NR): 1.05 Comp (n=NR): 0.98 Follow-up: 6-month post baseline Int (n=NR): 0.97 Comp (n=NR): 1.04 **Absolute change:** -0.14 score points **Relative change:** NR **Narrative results:** Group x time x Nativity F=8.32 p<0.01 effect size reported as 0.04 (small) Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Parent assessment of youth academic success** Measure: Average score of 5 item school subject performance and 3 item youth homework diligence Baseline Int (n=120): 3.96 Comp (n=121): 4.06 Follow-up: 6-month post baseline Int (n=114): 4.03 Comp (n=117): 4.08 **Absolute change:** +0.05 score points **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: F=0.59 NS effect size based on partial n2 statistic reported as 0.00 Favorable (Yes/No/No effect): No effect Statistical significance: No
Author (Year): Martinez et al. (2005) **Location:** USA, Oregon, Eugene **Years for Study:** NR **Period for Study:** mean 5.6 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Unclear e) Selective– Low	**Setting:** Community (sessions held at research center) **Urbanicity**: Not reported **Eligibility:** Parents were Spanish-speaking, had a youth in middle school, were in two-parent or established stepfamily households, **Recruitment:** Multiple school and community-based recruitment activities **Inclusion/Exclusion:** Two-parent family or established family with stepfather Sample size: 314 families eligible; 159 screened; 73 enrolled Baseline	**Brief description of intervention and content:** Culturally tailored parent management training intervention for Latino families with middle school youth Intervention content was culturally tailored through pre-intervention work with Latino families **Intervention/prpgram name:** Nuestras Familias: Andando Entre Culturas" (Our Families: Moving Between Cultures) Substance(s) focused* General **Format:** Weekly group face-to-face sessions on parent management training. The intervention focused on parent empowerment and parental self-efficacy. **Intervention intensity:** Number of sessions: 12 Hours per session: 2.5 hours	**Brief description:** Youth self-reported likelihood of the youth using tobacco, alcohol, and marijuana and other drugs (5pt scale simplified to Final scores reflected whether the youth indicated that he or she was at least somewhat likely to use the target substance during the next year if offered by one of their best friends. Substance(s)* -Tobacco -Alcohol -Marijuana and other drug use Polysubstance measures? Yes for the category of marijuana and other drug use Academic success: Parent assessment of youth school subject performance on a 5 point scale Depression: Youth self-assessed Child Depression Inventory score	Youth self-reported intentions to use substances ANOVA models including parent years in U.S. residency, parent education, youth age, and youth gender as covariates. **Outcome: Intention to use tobacco** Measure: At least somewhat likely Baseline Int (n=37): mean 0.21 Comp (n=36): mean 0.01 Follow-up (in months): mean 5.61 months Int (n=34): mean 0.07 Comp (n=32): mean 0.08 **Absolute change:** NR **Relative change:** NR **Narrative results**: μ^2=0.06 (moderate) Favorable (Yes/No/No effect): Yes Statistical significance: Yes F(1,50)=2.85 p<0.05 Outcome: Intention to use alcohol Measure: At least somewhat likely Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Inter 37 families Comp 36 families Follow-up Inter 34 families Comp 32 families Loss to f/u: 11% **Study population: Parents** Age: Mothers 36.38 Fathers 39.39 years Sex: 50% female; 50% male Race/ethnicity: Latino 100% Education: 9th grade or less: 66% mothers; 78% fathers HS grad or higher: 20% mothers, 13% fathers Employment: 64% mothers, 83% fathers Income: Parents reported an average annual household income of $21,681.04 (SD $9,534.75). Marital status: Two-parent family 82%; Mother and stepdad 18% **Study Population: Youth**	(including 1 hour for group meal to encourage social support) Total hours of intervention: 30 hours of group sessions **Implementer(s):** Research staff with Oregon Social Learning Center (OSLC) project team **Intervention duration:** 12 weeks Additional components: Printed materials: Agenda, notebook and home practice assignments in Spanish with text and pictures Telephone contact: Weekly contact with each parent to review past session material, check on progress with the home assignment, offer support, and answer questions. **Focus of intervention activities:** Both parents/caregivers and youth: No Parents only: Yes Parent and child (either in the same session or not)(Yes/No) No Parent and child in the same session/activity? (Yes/No) No	Outcome types Intentions? Yes Initiation? No Use? No SU disorder? No Educational outcomes? Yes Mental health Yes (Depression) Morbidity? No Mortality? No Equity? Yes, targeted intervention study Other outcomes? Parent practices and communication outcomes	Int (n=37): mean 0.08 Comp (n=36): mean 0.09 follow-up: mean 5.61 months Int (n=34): mean 0.15 Comp (n=32): mean 0.26 **Absolute change:** NR **Relative change:** NR **Narrative results:** μ^2=0.01 Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Intention to use Marijuana and other drug use** Measure: At least somewhat likely Baseline Int (n=37): mean 0.28 Comp (n=36): mean 0.12 Follow-up (in months): mean 5.61 months Int (n=34): mean 0.06 Comp (n=32): mean 0.33 **Absolute change:** NR **Relative change:** NR**:** **Narrative results**: μ^2=0.04 (small) Favorable (Yes/No/No effect): Yes Statistical significance: No; F(1,50)=2.04, p<0.10 **Parent assessment of youth academic success** Int (n=37): mean 3.73 Comp (n=36): mean 3.81 Follow-up (in months): mean 5.61 months Int (n=34): mean 3.76

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Age: Average 12.74 years old Grade level(s): Middle School Sex: 44% female; 56% male Race/ethnicity: Latino 100% Other: Native born 50% Foreign-born 50% lived in the United States an average of 6.56 years **Community characteristics:** NR	**Comparison group:** No additional interventions for control		Comp (n=32): mean 3.73 **Absolute change:** NR **Relative change:** NR **Narrative results**: μ^2=0.02 (small) Favorable (Yes/No/No effect): Yes Statistical significance: No; F(1,50)=0.8, NS **Composite substance use measure:** Likelihood of tobacco use, F(1, 50) 2.85, p.05. A marginal intervention effect was found for change in likelihood of marijuana and other drug use, F(1, 50) 2.04, p 0.10. **Depression scale changes** μ^2=0.16 (large) A significant three-way interaction between group, time, and youth nativity status was also detected for depression, F(1, 50)= 8.32, p<.01
Author (Year): Mason et al. (2016) Related paper: Mason et al., 2015 **Location:** USA, Washington, Tacoma **Years for Study:** November/December 2010 – October 2014	**Setting:** School **Urbanicity:** NR **Eligibility: l**ow-income families from one region of Washington State; above 70% students in Grades 6-8 received free or reduced-price school lunch	**Brief description of intervention and content**: CSP (parent only) Sessions primary components: instruction in new skills related to discipline, praise, rationales, coping, problem solving, and anger management; discussion of short videos on skills; guided skills practice; reviews and summaries, and homework activities	**Brief description:** Baseline (enrollment & pretest):November/December - April Posttest: May/June - September 1-year f/u: October *2-year f/u:* October Substance use: Self-reported adolescents dichotomous (1 = any use, 0 = no use); due to relatively low	Intent-to-treat multivariate path analyses, no pattern of statistically significant condition differences across the measures at baseline. No evidence of differential attrition across conditions and no robust pattern of selective attrition comparing retained versus attrited families across a range of socio-demographic characteristics and psychosocial factors over study duration.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Period for Study: 48 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Low b) Deviations - Low c) Missing data - Low d)Outcome measurements - Low e) Selective - High Overall bias: High	(2010/2011 school year) **Recruitment:** school-based recruitment strategies. Research staff went to core classes and gave take home permission slips for parents to sign. Schools aided efforts by disseminating notices and by mailing a copy of permission slip directly to families who had not responded previously. **Exclusion:** NR 122 families (2010/2011 school year) 199 families (2011/2012) Sample size: Baseline 321 Int = 213 CSP = 118 CSP+ = 95 Control = 108 Follow-up 94% Loss to f/u 6%	CSP Plus (parent+adolescent**)** Same as CSP but added: (a) 2 new sessions (before and after standard CSP sessions) including adolescents New content: goal setting for parents and teens (for transition to high school) and guided skills practice in family communication and decision-making on opportunities and responsibilities **Intervention name:** Common Sense Parenting (CSP) Plus program Substance(s) focused* NR **Format**: face-to-face [group] printed materials Intervention intensity: weekly Number of sessions or modules: 6 (CSP), 8 (CSP Plus) Number of hours per session: 2h Total hours of intervention: 12h (CSP), 16h (CSP Plus) (CSP = 6*2h), (CSP Plus = 8*2h) Additional components (things outside the sessions/modules) Lottery system used to encourage and reward attendance. **Implementer(s)** NR	prevalence rates among early adolescent participants School suspension: Self-reported adolescents' dichotomous (1= suspended at least once, 0= not being suspended); frequency of being suspended from school for disciplinary reasons in past year. Substance(s)* alcohol, tobacco (smoking), cannabis Polysubstance measures? Yes Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (disciplinary actions; etc.)? YES (school suspensions) Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES Other outcomes? conduct problems	Due to dichotomous substance use and school suspensions outcome variables, primary analyses done by multivariate path analysis (change in targeted outcomes over time) using weighted least squares mean- and variance-adjusted (WLSMV) estimator in Mplus 7.11. Separate logistic regression analyses examined CSP and CSP Plus as predictors of each outcome at 1-year and 2-year follow-up, with reference to control condition and adjusting for pretest levels of the outcome. None of the intervention effects statistically significant (not shown paper, authors cited available on request). Mediation results do not provide strong evidence of causality since the test of the second path in the chain is correlational and not grounded in randomization). CSP versus control model **Outcome: Polysubstance (alcohol, tobacco (smoking), cannabis)** Measure: Means (standard deviations) any use in past year Baseline Int (n=118): .30 (.46) Comp (n=108): .27 (.45) Follow-up (in months): 24

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and Caregivers (Total) Age: 40.21 years Sex: 83% female, 17% male Race/ethnicity: 48% Caucasian, 26% African American, 4% Asian American, 4% Pacific Islander, 2% Native American, and 16% mixed or "other"; 14% Hispanic. Education: 8% less than high school, 92% at least high school graduates or had a GED (18% high school only, 39% some college, 17% associates, vocational/technical, 13% Bachelor's or more advanced degree, 6% other); Employment: 44% full time, 15% part time, 13% unemployed, 28% not in labor force Income: 42% low-income (incomes below $24,000); median	**Intervention duration:** 6 weeks (CSP), 8 weeks (CSP Plus) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes (CSP Plus) Parent and child in the same session/activity? Yes (CSP Plus) **Comparison group:** minimal-contact control mailed newsletters with general parenting information		Int (n=118): .38 (.49) Comp (n=108): .36 (.48) **Absolute change: -0.01 pts** **Relative change: -5.56%** **Narrative results**: None of the total intervention effects in these analyses was statistically significant (not shown in paper, authors cited available on request). CSP indirect effects (b1 = −.026 [−.107, .012] not statistically significant. 1-year follow-up indirect effect not maintained at 2-year follow-up. Favorable (Yes/No/No effect): No Statistical significance: No **Outcome: Educational outcomes (disciplinary actions involving school suspensions)** Measure: Means (standard deviations) at least once in past year Baseline Int (n=118): .26 (.44) Comp (n=108): .30 (.46) Follow-up (in months): 24 Int (n=118): .22 (.41) Comp (n=108): .22 (.41) **Absolute change:** +0.04 pts **Relative change:** +13.33**%** **Narrative results**: None of the total intervention effects in these analyses was statistically significant (not shown in paper, authors cited available on request).

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	annual household = $28,000–$31,000, 59% received food stamps. Marital status: 46% married, 23% relationship not married, 31% single Other 73% biological mothers 14% biological fathers 13% other (stepparent, grandparent) 60% living with spouse or significant other **Study Population: Youth** Age: 13.41 years Grade level(s): 8th (baseline) to 10th (2 yr f/u) Sex: 53% female, 47% male Race/ethnicity: NR **Community characteristics:** 3 of 5 schools fed into a high school with a 5-year graduation rate of 52% for class of 2010			CSP indirect effects statistically significant (b = −.057 [−.186, −.002]) on reduced suspensions. Indirect effects maintained across 1-year & 2-year follow-up assessments. Favorable (Yes/No/No effect): No Statistical significance: No 1-year follow-up: Substance Use - statistically significant (b = −.059 [−.181, −.005]) indirect effects on reduced use through improved parent-reported child emotion regulation skills at posttest. School suspensions - statistically significant indirect effects reduced suspensions (negative associations, b = −.071 [−.195, −.009]) through emotion regulation CSP Plus versus control model **Outcome: Polysubstance (alcohol, tobacco (smoking), cannabis)** Measure: Means (standard deviations) of any use in past year Baseline Int (n=95): .23 (.42) Comp (n=108): .27 (.45) Follow-up (in months): 24 Int (n=95): .38 (.49) Comp (n=108): .36 (.48) **Absolute change:** +0.06 pts **Relative change:** +20.37%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: None of the total intervention effects in these analyses was statistically significant (not shown in paper, authors cited available on request). Indirect effects of CSP Plus on substance use (b = −.014 [−.101, .011]), not statistically significant. (Table 3) Favorable (Yes/No/No effect): No Statistical significance: No **Outcome: Educational outcomes (disciplinary actions involving school suspensions)** Measure: Means (standard deviations) of at least once in past year Baseline Int (n=95): .17 (.38) Comp (n=108): .30 (.46) Follow-up (in months): 24 Int (n=95): .21 (.41) Comp (n=108): .22 (.41) **Absolute change:** +0.12 pts **Relative change:** +38.79% **Narrative results**: None of the total intervention effects in these analyses was statistically significant (not shown in paper, authors cited available on request). indirect effects of CSP Plus on school suspensions (b = .001 [−.053, .064]) not statistically significant. (Table 3) Favorable (Yes/No/No effect): No Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				1-year follow-up: Substance Use - statistically non-significant (b = −.029 [−.131, .010]) indirect effects on reduced use through improved parent-reported child emotion regulation skills at posttest. School suspensions - statistically non-significant indirect effects negative associations (b = −.026 [−.132, .012]) through emotion regulation
Author (Year): Mason et al. (2021) **Location:** USA, Tennessee, Knoxville **Years for Study:** January 2019 – December 2019 (recruitment Jan 2019-May 2019, data collection completed by Aug 2019; intervention 1 month; 3 monthly f/u) **Period for Study**: 4 months (Intervention 1 month, follow up for 3 months; total 4 months)	**Setting**: Community **Urbanicity**: NR **Eligibility:** adolescent participants were: 1) 13 to 18 years; 2) spoke fluent English, 3) access to a text-capable phone, 4) no medical conditions that would prevent them from participating, and 5) patients at FQHC recruitment site **Recruitment:** adolescents from community partner settings, either of near first author's university. Optional	**Brief description of intervention and content**: Universal prevention program, text-messaging intervention Adolescent intervention (PNC-txt): Text content: substance use intervention focuses on peer relations as the primary mechanism for behavior change. Receive personalized, automated, risk reduction and health promotion text messages every other day; 16 days of two-way conversations handling stress related to school, peers, and family, self-care, asking for help, practicing healthy coping skills (e.g., staying active, healthy routines, relaxation skills). Individualized	**Brief description**: Drug use: 10 drug items using Saliva Drug Test. Initial test by staff, results either positive or negative. At 3-month f/u survey, adolescents self-administered mouth swabs. Anxiety and depression: Patient Health Questionnaire 4 (PHQ-4) - Measures past 2-week psychiatric symptoms for 2 anxiety & 2 depressions items. Response range: 0 = not at all to 3 = nearly every day. Total score 0 to 12 (9+ = severe distress increased psychiatric symptoms). 3 months f/u data = growth modeling (symptoms over 3	Intent-to-treat analyses Anxiety and depression outcomes (scaled): Intervention effects tested using linear growth models. Differences in growth model parameters (intercept, slope) estimated by PNC-txt (versus control). Models conducted for each "outcome," separate for adolescents and parents. Cohen's d effect sizes for intervention from model parameters. Polysubstance use outcomes: logistic regression model with clustered standard errors **Outcome: Anxiety symptoms** Measure: Growth model Baseline Int (n=34): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Study Design: Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Some concerns b) Deviations - Low c) Missing data - Low d) Outcome measurements - Low e) Selective - Low Overall bias: Some concerns	enrollment for parents of participants. **Exclusion:** NR Sample size: Baseline 69 adolescents, 52 parents Int 34 adolescents, 23 parents Control 35 adolescents, 29 par ents Follow-up 94% (65 adolescents) 98% (51 parents) Loss to f/u 6% (4 adolescents) 2% (1 parent) **Study population: Parents and Caregivers (Total)** Age: 45.6 years Sex: 90.4% female 9.6% male Race/ethnicity: 84.6% white, 11.5% Black/ African American, 3.8% more than one race Education: 23.1% bachelor's degree Employment NR	content from baseline responses to several measures (substance use, parent relations, peers, stress, coping). "boost" content by self-enrolling to receive extra automated supportive messages at any time Parenting skills intervention (PP-txt): Text content targeted 4 parenting practice skills: parent-child communication, parental monitoring, parental disapproval of substance use, and parental involvement. Prompts allow free text responses, involve communicating/reinforcing rules and provide ideas for parents to try, explain rationale behind suggestions, reinforces importance of suggestion, opt-in feature for additional support. **Intervention/program name:** PNC-txt + P Modified version of Peer Network Counseling-txt (PNC-txt) and Parenting Practice-text (PP-txt) Substance(s) focused* illicit and prescription opioid misuse (POM)	months by treatment condition) Substance(s)* marijuana, cocaine, amphetamine, opiates, methamphetamine, phencyclidine, barbiturate, benzodiazepine, oxycodone, and buprenorphine Polysubstance measures? Yes Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? YES Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? NO Other outcomes? adolescent-parent relationship, Parenting Skills	Comp (n=35): NR Follow-up (in months): 3 Int (n=34): NR Comp (n=35): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** intervention group: anxiety symptoms decreased (p = 0.04), Control group: anxiety increased over time (p = 0.051). Small-to-medium Cohen's d effect sizes anxiety d = −.57. For males, intervention effect most strongly (Cohen's d = -1.12) associated with a reduction in anxiety symptoms (Table 4). Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Depression symptoms** Measure: Growth model Int (n=34): NR Comp (n=35): NR Follow-up (in months): 3 Int (n=34): NR Comp (n=35): NR **Absolute change: NR** **Relative change: NR** **Narrative results:** intervention group, depression symptoms decreased (p = 0.06) Control group increased over time for controls (p = 0.039). Small-to-medium Cohen's d effect sizes depression d = −.63. Females' higher

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Income: NR Marital status: NR Other 36.5% private health insurance **Study Population: Youth** Age: 15.2 years Grade level(s): Sex: 67% female 23% male Race/ethnicity: 76.8% white, Hispanic/Latino 8.7%, Black/African American 7.2%, more than one race 5.8%, other 1.4% Other NR **Community (FQHC partner) characteristics** Population 71,500 patients annually Race/ethnicity 63.3% Caucasian/White, 16.3% African American/Black, 15.6% Hispanic/Latino, 18.2% either did not report or refused to report their ethnicity/race SES (i.e., poverty): payer mix of 42% Medicaid, 17%	**Format:** mHealth (remote texting), one-on-one **Intervention intensity:** 4 weeks; every other day (averaging 6 texts per day), optional "boost" content Number of sessions or modules: NR Number of hours per session: NR Total hours of intervention: NR (16 days total, with 101 intervention texts) Additional components (things outside sessions/modules) saliva drug screen kits: adolescents completed 94% of all PNC-txt and parents completed 98%. All adolescents and 91% of parents reported they tried suggestions. **Implementer(s)** Automated, personalized messages based on baseline survey responses **Intervention duration:** 4 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No		reduction in depression outcomes (Cohen's d = -.84) (Table 4). Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Polysubstance (any drug)** Measure: proportion positive (Table 5) Baseline Int (n=34): 20.6% Comp (n=35): 11.4% Follow-up (in months): 3 Int (n=34): 5.9% Comp (n=35): 5.7% **Absolute change: -9.0 pct pts** **Relative change: 77.2%** **Narrative results:** probability of positive drug test decreased more strongly for intervention group. Decrease in odds of a positive drug test marginally significant for intervention group (OR = 0.23, 95% CI: 0.05, 1.13, 77.1% decrease) but not in control (OR = 0.46, 95% CI: 0.07, 3.10, p = 0.42, 54.3% decrease). Over time intervention by month interaction (b = −0.69, p = 0.58) no significant difference in decrease of substance use b/w intervention and control Favorable (Yes/No/No effect): Yes Statistical significance: Yes, odds of a positive drug test marginally significant (p = 0.07) **Outcome: Marijuana use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Medicare, 25% self-pay, and 16% commercial insurance. Other NR .	Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? No **Comparison group:** wait-list control condition		Measure: proportion positive Baseline Int (n=34): 11.8% Comp (n=35): 5.7% Follow-up (in months): 3 Int (n=34): 2.9% Comp (n=35): 5.7% **Absolute change: -8.90 pct pts** **Relative change -75.42** **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: cocaine use** Measure: proportion positive Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -2.90 pct pts** **Relative change: -100%** **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: amphetamine use** Measure: proportion positive Baseline Int (n=34): 13.5% Comp (n=35): 8.6% Follow-up (in months): 3

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=34): 5.9% Comp (n=35): 0% **Absolute change: +1.0 pct pts** **Relative change: +57.0%** **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR *Note: One person tested positive for remaining outcomes below:* **Outcome: opiates use** Measure: proportion positive Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -2.90 pct pts** **Relative change: -100%** **Narrative results**: NR Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: methamphetamine use** Measure: proportion positive (Table 5) Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -2.90 pct pts**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Relative change: -100% **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: phencyclidine use** Measure: proportion positive (Table 5) Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -2.90 pct pts** **Relative change: -100%** **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: barbiturate use** Measure: proportion positive Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -2.90 pct pts** **Relative change: -100%** **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: benzodiazepine use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: proportion positive Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -2.90 pct pts** **Relative change: -100%** Narrative results: NR Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: oxycodone use** Measure: proportion positive Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3 Int (n=34): 0% Comp (n=35): 0% **Absolute change: -**2.90 pct pts **Relative change:** -100% **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: buprenorphine use** Measure: proportion positive Baseline Int (n=34): 2.9% Comp (n=35): 0% Follow-up (in months): 3

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=34): 0% Comp (n=35): 0% **Absolute change:** -2.90 pct pts **Relative change: -**100% **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: NR
Author (Year): Mello et al. (2019) **Location:** USA, 3 sites, most likely northeast **Years for Study:** NR **Period for Study**: intervention 3 month; parent 3 month follow-up; adolescent 6 month follow-up **Study Design:** individual RCT (Group or Individual) **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - High b) Deviations - High c) Missing data - High	**Setting:** Mix (Community and Home). Hospital (trauma center) for one module of the e-parenting intervention with online access to the full intervention and text messaging at home **Urbanicity:** Not reported but likely urban (study pediatric trauma centers) **Eligibility:** Recruited medically stable adolescent (12-17 years) trauma patients screening positive by screening tool or blood test for alcohol or other drugs with a consenting parent. English speaking parent with text message capabilities	**Brief description of the intervention and content:** Electronic parenting skills intervention with text messaging support, and standard institutional care, The intervention consists of online Parenting Wisely modules coupled with text messaging for parents of injured adolescents, who reported alcohol or drug use Intervention name: Parenting Wisely an interactive web-based parenting program consisting of video scenarios, skills practice, interactive quizzes, and a parent forum. The program covers topics such as alcohol and drugs, school and homework problems, delinquency and other problem behaviors, and family conflict. **Intervention/program name:** Parenting Wisely Substance(s) focused* Alcohol or Other Drugs	**Brief description:** Adolescent self-reported use (1) past 3-month use of alcohol (Yes/No); and, if alcohol was reported, questions about (2) binge alcohol use in the past 3 months (three or more drinks for females and four of more for males [Yes/No]); (3) being drunk/intoxicated due to alcohol in the past 3 months (Yes/No), (4) single question about the past 30-day use of marijuana (Yes/No). (5) Use of substances other than alcohol or marijuana in the past 6 months (Yes/No) Secure web-based assessments of outcomes:	Across the types of substances used and time points that the survey was administered, there were no significant differences between adolescents in the standard care and intervention groups. **Outcome: Alcohol Use** Measure: Self-reported Baseline Int (n=25): 39% Comp (n=11):78% Follow-up (in months): 6 months Int (n=17): 53% Comp (n=8): 17% **Absolute change**: +75 percentage points **Relative change:** +523.5% **Narrative results**: Not significant Favorable (Yes/No/No effect): No Statistical significance: Not significant **Outcome: Binge drinking among those reporting alcohol use** Measure: Self-reported past 3m binge alcohol use Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
d) Outcome measurements - Low e) Selective– Some Overall bias: High	**Recruitment:** Three study pediatric trauma centers recruited patient-parent dyads from the inpatient trauma services **Exclusion:** Not medically or emotionally stable, suicide evaluation, prior evaluation for drug or alcohol dependency; incarcerated; parental abuse, under state custody, incarcerated Sample size: Consented adolescents–parent dyads were enrolled and assigned to either intervention or standard care conditions using a 2:1 allocation ratio. 91 adolescents were eligible Baseline: 37 adolescent-parent	**Format:** Remote, electronic (web access and text messages) except for one module provided electronically in study hospital **Intervention intensity:** Number of modules: NR, but minimum of 4 Number of hours per module: NR but first module was 20min Total hours of intervention: NR (estimate 4x20=80 minutes) plus text messages Additional components: Text messages on parenting skills of interest to parent twice weekly for 12 weeks with additional linkages Online parent forum for questions answered by intervention psychologist Standard care included brief alcohol/drug intervention for adolescent patients (both arms) **Implementer(s):** Trauma center staff recruited patients but intervention developed and implemented by researchers and included a psychologist (for the parent forum); electronic delivery of intervention	Adolescents- baseline, 3m and 6m assessments (alcohol and drug use) Parent(s)-baseline and 3m assessment (satisfaction and use) Telephone assessments if no computer access 25$ gift card for assessment completion Substance(s)* Alcohol Marijuana Other substances Polysubstance measures (Yes/No)? No Outcome types Intentions? No Initiation? No Use? Yes SU disorder? No Educational outcomes? No Mental health?: No Morbidity? No Mortality? No Equity? No Other outcomes? Yes Parents were asked about use of intervention	Int (n=10): 64% Comp (n=8): 43% Follow-up (in months): 6 months Int (n=NR): 70% Comp (n=NR): 100% **Absolute change:** -51 pct pts **Relative change**: 52.9% **Narrative results**: Not significant Favorable (Yes/No/No effect): Yes Statistical significance: Not significant **Outcome: Drunk/Intoxicated** Measure: Self-reported being drunk/intoxicated in the past 3 months Baseline Int (n=25): NR Comp (n=11): NR Follow-up (in months): 6 months Int (n=17): NR Comp (n=8): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: Not significant Favorable (Yes/No/No effect): NR Statistical significance: Not significant **Outcome: Use of marijuana** Measure: Self-reported past 3 months use of marijuana Baseline Int (n=25): NR Comp (n=11): NR Follow-up (in months): 6 months Int (n=17): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	dyads enrolled (1 dropped out) Intervention: 25 Comparison: 11 Follow-up Intervention: 17 (68%) Comparison: 8 (73%) Loss to f/u: 30.5% **Study population: Parents and Caregivers** Age: 42.9 years Sex: 85% female; 15% male Race/ethnicity: White: 78% Black: 0% More than one race: 7% Other race: 11% Don't know: 4% Hispanic ethnicity: 22% Education: NR Employment: NR Income: NR Marital status: 56% Other: In the past year, 55% of the parents reported having binged on alcohol at least once, 33% had used tobacco, 11% had used illicit drugs, and 22% had	**Intervention duration:** 12 weeks **Focus of intervention activities:** Both parents/caregivers and youth: No Parents only: Yes Parent and child (either in the same session or not)? No Parent and child in the same session/activity? No **Comparison group:** Standard clinical care including brief intervention for alcohol or drug use for the adolescent by clinical staff, but without the parenting intervention.	Adolescents completed Parental Monitoring Questionnaire	Comp (n=8): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: Not significant Favorable (Yes/No/No effect): NR Statistical significance: Not significant **Outcome: Use of other substances** Measure: Self-reported use of substances other than alcohol or marijuana in the past 6 months Baseline Int (n=25): NR Comp (n=11): NR Follow-up (in months): 6 months Int (n=17): NR Comp (n=8): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Not significant Favorable (Yes/No/No effect): Statistical significance: Not significant

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	used prescription medications not as prescribed. **Study Population: Youth** Age: 15.8 years Grade level(s): NR Sex: Female 25%; Male 75% Race/ethnicity: White: 64% Black: 4% More than one race: 11% Other race: 18% Don't know: 4% Hispanic ethnicity: 32% Other: NR **Community characteristics:** NR			
Author (Year): Milburn et al. (2012) **Location**: USA, California, Los Angeles and San Bernadino counties **Years for Study:** 2006-2009 **Period for Study:** 12 months	**Setting:** Community and Home (mix) **Urbanicity**: Urban and Suburban (county-wide mix) **Eligibility:** Youth having been away from home for at least two nights in the past 6 months, not being away for more than 6	**Brief description of the intervention and content:** Study evaluated the efficacy of a brief family intervention in reducing risk-taking and delinquent behaviors among newly homeless youth The session content was based on cognitive-behavioral theories, designed to improve families' problem-solving and conflict resolution skills	**Brief description**: Youth self-reported risk behaviors in the past 3 months Trained, diverse assessment team conducted computerized interviews. Audio computer-assisted self-interviewing was used for sensitive measures. Substance(s)* Alcohol	Intent-to-treat random-intercept regression model analyses were conducted to estimate the impact of the STRIVE intervention on risk behaviors in the 3 months before each assessment. Gender was controlled for in all analyses Note: No significant effect was found for change between use and non-use for Alcohol Marijuana

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Study Design: Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Low b) Concealment– Low c) Blinding– High d) Outcomes– High e) Selective– Low	months, and having the potential to return home. No current abuse or neglect, no active psychosis, or no current substance intoxication. **Recruitment:** Newly homeless youth were recruited from community-based organizations (e.g., presentations at shelters or schools) and from direct recruitment (e.g., flyers advertisements) **Inclusion/Exclusion:** Youth and family consent to participate required Sample size: Baseline: 151 youth +families 6m follow-up: 87 (58%) 12m Follow-up: 69 (46%) Loss to f/u: 54%	**Intervention/program name:** STRIVE (Support to Reunite, Involve and Value Each Other) intervention Substance(s) focused* General risk behavior prevention/modification **Format:** Face-to-face individual family meetings in the home Youth and parents participated **Intervention intensity:** Number of sessions: 5 weekly sessions Number of hours per session: 1.5-2 hours Total hours of intervention: 7.5-10 hours Additional components (things outside the sessions/modules) Yes Training for facilitator Facilitator manual **Implementer(s)** Trained facilitators led family sessions following manual **Intervention duration:** 5 weeks	Marijuana Hard drugs defined as cocaine; crack; heroin, amphetamines; ice/smoked speed, nonprescription methadone; other opiates, narcotics, or painkillers; barbiturates; tranquilizers; inhalants; party drugs; or other drugs. Polysubstance measures Yes-hard drugs above, no overall consolidated measure Outcome types Intentions? No Initiation? No Use? Yes plus use frequency SU disorder? No Educational outcomes? Yes but skipped class consolidated with 12 non-school behaviors Mental health: No Morbidity? No Mortality? No Equity? Yes. Intervention targeted to high-risk youth with current or recent homelessness in Southern California (Hispanic youth 66.2%) Other outcomes? Yes Sexual risk behaviors Delinquent behaviors	Hard drugs Sex behaviors **Outcome: Alcohol frequency of use** Measure: Number of times in last 3 months Baseline Int (n=68): 8.5 (SD 25.9) Comp (n=83): 5.5 (SD 11.9) Follow-up: 12 months Int (n=NR): 2.3 est from plot Comp (n=NR): 4.7 est from plot **Absolute change:** -5.4 times in 3m **Relative change:** -68.3% **Narrative results:** Effect size=0.38 F(1,260)=9.0 p=0.003 Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Marijuana frequency of use** Measure: Number of times in last 3 months Baseline Int (n=68): 9.9 (29.0) Comp (n=83): 11.6 (25.1) Follow-up: 12 months Int (n=NR): 10.4 est from plot Comp (n=NR): 6 est from plot **Absolute change:** +6.1 times in 3 months **Relative change:** +103.1% **Narrative results:** Effect size -0.40 F(1, 259)=13.1 p<0.001

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and Caregivers Overall Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: NR **Study Population: Youth** Overall Age: mean 14.8 years Grade level(s): NR Sex: Female 66.2%; male 33.8% Race/ethnicity: Hispanic: 61.6% White: 11.3% African-Amer 20.5% Other, mixed 6.6% Other-Sexual orientation Heterosexual 90.1% Bisexual, gay, lesbian 9.9% **Community characteristics**: NR	**Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes **Comparison group:** Standard care provided by referring agencies. Information and referrals to existing services.		Favorable (Yes/No/No effect): No Statistical significance: Yes **Outcome: Hard drugs frequency of use** Measure: Number of times in last 3 months (combined measure) Baseline Int (n=68): 2.5 (9.4) Comp (n=83): 2.8 (6.6) Follow-up: 12 months Int (n=NR): 0.2 Comp (n=NR): 1.5 **Absolute change:** -1.0 times in last 3 months **Relative change:** -85.1% **Narrative results**: effect size 0.13 F(1,259)=16.5 p<0.001 Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Sexual risk-taking:** A significant effect was found for number of partners. No significant intervention effect was found for whether the adolescent had been sexually active, whether the adolescent had unprotected sex, or for the number of times the adolescent had sex. **Delinquent behaviors:** A significant difference was found between intervention and control participants in number of delinquent behaviors.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				(note skipped class was one of 13 behaviors in this consolidated outcome)
Author (Year): Murry et al. (2019) Location: USA, Tennessee **Years for Study:** Summer 2009–Fall 2012 **Period for Study**: 37.1 month (pre-test+ last f/u) post-test: 14.5 months; long term follow-up: 22.6 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment (ROB2)** a) Randomization - Low b) Deviations- Low c) Missing data- Low d) Outcomes measurement - Low e) Selective – High Overall bias: High	**Setting:** Community **Urbanicity:** Rural **Eligibility**: African American sixth graders and their primary caregivers **Recruitment:** Families from lists of 6th-grade African American students provided by middle schools in five rural counties in Tennessee. Letter mailed to parents/guardians and community liaison contracted families by phone or home visit **Inclusion/Exclusion:** adult and youth excluded if either did not speak English. Sample size: Baseline - 418 Int - 282 Technology-based - 141	**Brief description of interventions and content:** Adapted SAAF program for computer-based delivery for rural African American families, researched computers usage in local communities. Similar content in each interactive intervention = concurrent parent and youth sessions, joint family session. Technology, "highway to success" session: discussion activities, customizable avatars, topics in off ramps and side streets to illustrate associations between choices and consequences Concurrently worked 45-min on separate computers, TIA escorted youth to parent's computer to complete 45-min family session, which had 3-min questions/discuss topic for parents and children Small in-person groups:	**Brief description:** Self-reported data at Posttest: [M= 14.5 (4.4) mo after pretest] Long-term follow-up (LTFU): [M= 22.6 (3.7) mo after posttest or 37.1 mo after pre-test]. Intentions: 8-item Substance Intention (1) "do you plan to use marijuana in next year?" (2) "how likely is it that you will use marijuana in next year?" *Response scale:* "Plan" = 1 (definitely no) to 4 (definitely yes), "Likely" = 1 (not at all likely) to 4 (very likely). higher scores = greater intent to engage in risk. Substance use: range of substances; 28-item Monitoring the Future scale; ex: (1) "have you ever used marijuana?" higher scores = greater engagement in risky behaviors. **Youth risk behavior** score: combine substance use and	ITT analysis Structural equation modeling compares ITT improvements in parenting and youth risk factors from pretest to posttest, and reductions in sexual risk behavior and substance use from pretest to long-term follow-up At baseline, no group differences significant at p<= .05 **Technology** **Outcome: Intentions** Measure: scale, mean (SD) Baseline (Table 1) Int (n=141): 1.0 (0.1) Comp (n=136): 1.1 (0.3) Follow-up (in months): 14.5 mo (posttest) Int (n=): NR Comp (n=): NR **Absolute change: NR** **Relative change: NR** **Narrative results**: significant decline in behavioral intent to engage in risk behaviors from baseline to posttest (b= -.12; 95% CI=.20, -.01). Favorable (Yes/No/No effect): Yes Statistical significance: p= .04 **Outcome: Youth risk behavior**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	group-based - 141 Control- 136 Follow-up – 81% (337/418) Int – 81% (229/282) Technology-based - 127 group-based - 102 Control – 79% (108/136) Loss to f/u - 19% (81/418) Int – 19% (53/282) technology based - 14 group-based - 39 Control – 21% (28/136) **Study population: Parents and Caregivers (Total)** Age: 40 years Sex: 84% female, 16% male Race/ethnicity: African American Education: 87% completed high school Employment 63% employed, 40hr per week Income: 56% income adequate to meet their	Group organized role-playing activities, guided discussions, and allotted time for questions. Parent sessions - universally adaptive parenting practices, positive parenting (communication, establishing rules about risk behaviors, monitoring) and racially specific parenting Youth sessions - universal (e.g., risk resistance skills and future orientation) and culturally specific content (dealing with racism). **Intervention/program name:** Pathways for African Americans Success (PAAS) Substance(s) focused* General **Format** Technology: face-to-face [one-on-one & group] In-person: face-to-face [group] **Intervention intensity:** both weekly Number of sessions or modules: both 6 Number of hours per session: Technology - 1.5h	sexual risk behavior due to small sample size at f/u period. Substance(s)* Alcohol, cigarettes, cocaine, marijuana, heroin, ecstasy, methamphetamines, huffing, hallucinogens, or prescription Polysubstance measures? Yes Outcome types Intentions? YES Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety.)? NO Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? NO Other outcomes? Youth Behaviors (Affiliation with Deviant Peers) Parenting Behaviors (supportive parent–youth relationship, adaptive racial socialization, communication	Measure: combined scale (Combines substance use and sexual risk) **Absolute change: NR** **Relative change: NR** **Narrative results:** significant decrease in risk behavior over time (b= -.17; 95% CI= -.31, -.04). Favorable (Yes/No/No effect): Yes Statistical significance: p= .04 **In-person Group** **Outcome: Intentions** Measure: scale, mean (SD) Baseline (Table 1) Int (n=141): 1.1 (0.3) Comp (n=136): 1.1 (0.3) Follow-up (in months): 14.5 mo (posttest) Int (n=): NR Comp (n=): NR **Absolute change: NR** **Relative change: NR** **Narrative results:** (b= .03) Favorable (Yes/No/No effect): No effect Statistical significance: NR **Outcome: Substance Use** Measure: scale, mean (SD) Baseline (Table 1) Int (n=141): 0.4 (0.8) Comp (n=136): 0.5 (1.3)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	needs; 14% received public assistance. Marital status: 50% single parents, 37% married Other 13% caregiver grandparents 2.7 avg children 50% owned their own home **Study Population: Youth** Age: NR Grade level(s): 6th Sex: 54% female, 46% male Race/ethnicity: 100% African American **Community characteristics:** (1) rurality index scores >11 (scale of 0¼least rural to 16 or greater ¼ most rural), (2) > 30% African American residents, (3) > 600 African American teens in the targeted age range, (4) teen pregnancy rates of 69%, which is 13% higher than the average for TN, and (5)	In-person - 2h Total hours of intervention: Technology - 9hr In-person - 12h Additional components (things outside the sessions/modules) Families received $25 per session; research staff sent a meeting schedule and availability, and follow-up call to confirm attendance. **Implementer(s)** Technology - teams of two trained on-site technology intervention assistants (TIAs). Group - teams of three (one for parent and two for youth sessions). Training TIAs - 6hr (content and technical troubleshooting) Group facilitators - 36hr over 6 days **Intervention duration:** 6 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No	about sex, clear communication of rules and expectations on substance use)	Follow-up (in months): 37.1 mo (after pre-test) Int (n=): NR Comp (n=): NR **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: youth risk behavior** Measure: combined scale (Combines substance use and sexual risk) **Absolute change: NR** **Relative change: NR** **Narrative results:** decrease for participants assigned to group condition not significant (b= -.05; 95% CI= -.20, .11) Favorable (Yes/No/No effect): Yes Statistical significance: No, p= .58 **Overall** **Outcome: Intentions** Measure: scale, mean (SD) Baseline Pretest (n=414): 1.1 (0.2) Follow-up (in months): 14.5 mo (posttest) Posttest (n=337): 1.1 (0.3) Absolute change: NR **Relative change: NR** **Narrative results: NR** **Favorable (Yes/No/No effect**): No effect

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	state health indicators reflect poor health determinant outcomes in TN, (include health care, health behaviors, socioeconomic factors related to health, and physical environment)	Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** noninteractive literature - received home-mailed educational materials containing same topical content information as the weekly technology-delivered and traditional small group conditions		Statistical significance: NR **Outcome: Substance Use** Measure: scale, mean (SD) Baseline Pretest (n=414): 0.4 (0.9) Follow-up (in months): 37.1 mo (after pre-test) long-term follow-up (n=165): 0.8 (1.1) **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): No Statistical significance: NR
Author (Year): O'Donnell et al. (2010) **Location:** USA, New York City, New York **Years for Study:** 2005-2006 **Period for Study:** 6 months **Study Design:** Individual RCT (families assigned) **CG Suitability**: Greatest	**Setting:** Home **Urbanicity:** Urban **Eligibility:** Families with a daughter in 6th-grade in one of 4 high poverty NYC public schools (2005-2006) general education classroom, one parent who could speak English, not be planning to move during the school year, and have a telephone and address for receiving materials. Parents who returned consent forms were	**Brief description of interventions and content:** Intervention: 4 CDs 4 audio CDs containing dramatic, role-model stories that offer windows into the lives of four fictional families. These families reflect the diversity of the intended audience: two are African American, one family that has recently emigrated from the Caribbean, and one is Latino CD's focus on what parents can say or do to be supportive. Stories present reasons why girls may drink (e.g., peer pressure, handling emotions, sensation seeking), pressures they may be under to drink and/or have sex, and warning signs of problems,	**Brief description:** alcohol consumption (asked if in had more than a few sips of alcohol or been drunk) Substance(s)* alcohol use Polysubstance measures (Yes/No)? No Outcome types (Type YES or NO next to each outcome) Intentions? No Initiation? No Use? Yes SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? No	ITT Analysis For each outcome **Intervention CD** Outcome: **Alcohol Use** Measure: used alcohol or gotten drunk in past 3 months logistic regression Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 3 months post intervention (9 months from baseline) Int (n=): 14% Comp (n=): 26% **Absolute change:** -12 pct pts **Relative change:** -46.2% **Narrative results**: controlling for school attended, girls' age, ethnicity, and baseline risk females in the CD condition were less likely to report

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Unclear e) Selective– Low	enrolled in the study; youth provided assent **Recruitment:** School in four high poverty NYC public schools All girls provided brochures describing study to take home to parents **Inclusion/Exclusion:** see above Sample size: Baseline: 268 families Follow-up: 222 (girls); 233 (parents) Loss to f/u: 17% girls; 13% parents Study population: Parents and Caregivers Age: NR Sex: NR (89.1% mother; 5.8% father; 5% self-identified caregivers mostly mothers or other women, grandmother aunt) Race/ethnicity: 29.1% Latino Education: NR Employment: NR Income: NR	including hanging out with older boys, accepting gifts, and concerns about unwanted sexual advances. Attention-controlled: 4 booklets **Intervention /program name:** Especially for Daughters Substance(s) focused*: alcohol use **Format:** Intervention: CD Attention-controlled: booklet **Intervention intensity:** I: 4 CD's; AC: 4 booklets Number of sessions or modules: 4 Number of hours per session: NR Total hours of intervention: NR Additional components telephone calls made to ensure parents received materials. modules also focused on sexual initiation **Implementer(s):** I: CD AC: booklet **Intervention duration:** about 6 months (4 CD's mailed every 6 weeks)	Mental health (depressive symptoms; anxiety; etc.)? No Morbidity? No Mortality? No Equity (stratified analysis; focused on one historically disadvantaged group)? Population high poverty area. Latina versus other Other outcomes? Sexual behavior Asked if engaged in hetero-sexual romantic or social behaviors that typically precede sexual intercourse Parents provided information on communicating with daughter's about alcohol use and sex	alcohol use than girls in the control condition Adjusted OR: 0.38 (0.15 -0.97) RR of 1.86 Favorable (Yes/No/No effect): Yes Statistical significance: No **Attention Control: booklet** Measure: used alcohol or gotten drunk in past 3 months (Table 2) logistic regression Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 3 months post intervention (9 months from baseline) Int (n=): NR Comp (n=): NR **Absolute change:** NA **Relative change:** NA **Narrative results**: controlling for school attended, girls' age, ethnicity, and baseline risk females in the adjusted OR: 0.49 (0.20 -1.19) Favorable (Yes/No/No effect): Yes Statistical significance: No **Subgroup analysis:** Latina vs other aOR: 0.93 (0.43-2.15) Narrative results: being Latina was not significantly related to the outcomes **Parent reported outcomes:** parents in the intervention condition were more likely to report talking with their daughter about alcohol use at

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Marital status: 33.6% live with both parents most of the time Other: none **Study Population: Youth** Age: 11-13 years (41.8% 11 years; 44.4% 12 years; 13.8% 13 years) Grade level(s): 6th grade Sex: 100% female Race/ethnicity: 34.3% Latina Other: none **Community characteristics:** predominately African American and Latino families Across schools, 76% to 96% of families were eligible for Title 1 low-income requirements for free or reduced-price lunch	**Focus of intervention activities:** Both parents/caregivers and youth: No Parents only: Yes (however, parents noted they often listened to program with daughters) Parent and child (either in the same session or not)? No Parent and child in the same session/activity? No **Comparison group:** usual care no materials other than a form for updating contact information		follow-up compared with controls: AOR = 5.74, CI = 2.36-13.97, p< .001. There is a smaller but still significant benefit of the print materials received by the attention-controlled group: AOR = 2.71, CI = 1.28- 5.71, p< .01.
Author (Year): Pantin et al. (2009) **Location:** USA, Florida, Miami	**Setting:** Mix (home + community) Recruitment through schools, but location of group sessions not reported	**Brief description of interventions and content:** Familias Unidas: Hispanic-specific, family-based preventive intervention including	**Brief description**: Adolescents were asked whether they had ever smoked, drunk alcohol, or used an illicit drug in their lifetime	**Outcome: Substance Use (smoked, drunk alcohol or used an illicit drug)** Measure: substance use in past 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Years for Study: 2004-2008 **Period for Study:** 30 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Low b) Concealment– Unclear c) Blinding– High d) Outcomes– Low e) Selective– Low	**Urbanicity:** Urban (Miami) **Eligibility:** Only adolescents rated by their parents as ≥1 SD above the nonclinical normed mean (24) on at least one of the three RBPC scales were included in the study. Adolescents also had to be of Hispanic immigrant origin (at least one parent born in a Spanish speaking country in the Americas), to be in the 8th grade, to have an adult primary caregiver willing to participate in the study, and to live within the catchment areas of one of the three middle schools included in the study. **Recruitment:** Recruited from three large, predominantly Hispanic middle schools located within a single urban low-income school district in Miami-Dade County, Florida.	(a) increasing parental involvement in the adolescent's life, (b) increasing family support for the adolescent, (c) promoting positive parenting, and (d) improving parent–adolescent communication **Intervention/program name:** Familias Unidas Substance(s) focused* general (substance use) **Format**: face-to-face Small group sessions Family visit sessions **Intervention intensity:** Number of sessions or modules: 19 (9 group + 10 family + 4 booster) Number of hours per session: 2 hours groups session; 1 hour family session, 1 hour booster Total hours of intervention: 32 (18 hours group; 10 hours family; 4 hours booster) Additional components (things outside the sessions/modules): families compensated $20, $25, $30, and $35 for completing	and in the 30 days before assessment. Substance(s)* General Polysubstance measures: No (illicit drug not reported separately) Outcome types (Type YES or NO next to each outcome) Intentions? No Initiation? No Use? Yes SU disorder? No Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? No Mental health (depressive symptoms; anxiety; etc.): Yes, externalizing disorders Morbidity? No Mortality? No Equity (stratified analysis; focused on one historically disadvantaged group)? Yes, low-income, Hispanic Other outcomes? Parent involvement, positive parenting, family support, parent and adolescent communication and parental monitoring using Parenting Practices Scale; Parent-	Baseline Int (n=109): 15% Comp (n=104):25% Follow-up (in months): 30 month Int (n=93): 13% Comp (n=87): 34% **Absolute change:** -11.0 pct pts **Relative change:** -61.8% **Narrative results:** Growth curve analyses showed a significant difference in past 30-day substance use between Familias Unidas and Community Control b=0.53, z = 2.42, p<0.02; d=0.25) Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Externalizing Behavior Problems** Measure: Not well described but parent reported Baseline Int (n=109): 68.2% Comp (n=104):64.7% Follow-up (in months): 30 month Int (n=93): 32.6% Comp (n=87): 41.0% **Absolute change:** -11.9 pct pts **Relative change:** -20.5% **Narrative results:** no significant difference in the percentage of youth externalizing behavior problems over time between Familias Unidas and

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	School counselors at each of the participating schools were asked to identify Hispanic 8th grade students who had at least "mild problems" on at least one of three Revised Behavior Problem Checklist subscales: conduct disorder; socialized aggression; and attention problems. **Inclusion/Exclusion:** Exclusion: Adolescents were excluded if a) the family was planning to move out of the catchment areas of the three schools during the intervention period, or out of the South Florida area during the remaining 3 years of the study; b) the adolescent did not assent to participate; or c) scheduling conflicts prevented parents from participating in intervention sessions.	each assessment. Families were also compensated $30 for transportation at each assessment. **Implementer(s):** Facilitators (3 Master's and 1 PhD level) clinical experience with urban, low-income Hispanic immigrant families **Intervention duration:** 9 months **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Community control families were given three referrals to agencies in their catchment area that serve youth with behavior problems. These families had no other contact with the study, except for assessment activities.	Adolescent Communication Scale; Family Relations Scale; Parent Relationship with Peer Group Scale Sexual Risk Behaviors; condom use (unprotected sexual behavior) Externalizing Disorders	Community Control, although there is a trend favoring Familias Unidas b=0.41, z = 1.85, p<0.10; d=0.18) Favorable (Yes/No/No effect): Yes Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sample size: 215 families Baseline: Int: 109; Cont: 104 Follow-up: Int: 93; Cont: 87 Loss to f/u: 15.5% **Study population: Parents and Caregivers** Age: 40.0 Sex: 87.3% female; 12.7% male Race/ethnicity: NR (presumed to be 100% Hispanic) Education: NR Employment: NR Income: $0–$9,999/year 29.4%; $10,000-$19,999/year 38.5%; $20,000-$29,999/year 18.3%; >$30,000/year 13.1% Marital status: NR Other: years in US: Years in U.S. 16.5% 0-3 years 21.1% 3-10 years 62.4% >10 years **Study Population: Youth** Age: 13.8 years			

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Grade level(s): 8th grade Sex: 36.2% females; 63.8% males; Race/ethnicity: 100% Hispanic Other: 56.1% born in U.S; 43.7 immigrant (26.9% Honduras; 20.4% Cuba; 16.1% Nicaragua) **Community characteristics:** NR			
Author (Year): Perry et al. (1996) Related papers: Williams et al.,1999 Perry et al., 2002 **Location**: USA, Northeast Minnesota **Years for Study:** 1991-1998 1991-1994 (phase 1) 1994-1996 interim 1996-1998 (phase 2) **Period for Study:** 90 months (overall) 30 months (Phase 1) 24 months (Phase 2)	**Setting:** Mix (school, home, and community) **Urbanicity:** rural **Eligibility:** 6th grade students and families in all schools in selected study region (6 counties, 24 school districts) **Recruitment:** 24 school districts recruited in 1990 Student in 6th grade and baseline (fall 1991) and part of study through high school graduation (spring 1998)	**Brief description of intervention and content:** Multi-year multi-level, multi-component, alcohol prevention interventions including: Youth prevention curricula Peer activities Parent engagement education Community activities **Intervention/program name:** Project Northland Substance(s) focused: alcohol Parent engagement education (6th-12th grade) 6th-7th grade -8 workbooks with weekly assignments to do with child with encouragement on parental rules	**Brief description:** Student self-reported substance use and intentions outcomes over serial assessments conducted in classrooms 6th-12th grade evaluated in two phases Phase 1: 6th-8th grade Phase 2: 11-12th grade Alcohol Measures -Past-month alcohol use, -Past week alcohol use and -Binge drinking (5 or more drinks in a row within the past 2 weeks) Note: Tendency to Use Alcohol measure combined intentions and use outcomes. Results not reported here for either category	12th grade outcomes based on growth curve analyses with three-level mixed effects regression model (within and between school-district variance included and adjusted for race) Interim period (9-10th grade) results are not reported 8th grade outcomes (from Perry 1996) provide rates of use measures (overall sample) and rates of initiation (baseline nonusers) Outcomes for interventions in 11-12th grade (Phase 2 outcomes on use) **Outcome: Growth rate in Past Month Alcohol Use** Measure: Score based on use of alcohol on at least one occasion in the past 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Study Design: Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– High e) Selective– High	**Inclusion/Exclusion:** 6th grade student at one of the 24 selected school districts Sample size: Recruited school districts: 24 (4 small districts consolidated) Intervention: 10 districts Comparison: 10 districts Recruited 6th grade students Baseline: 2351 Intervention: NR Comparison: NR 8th grade outcomes: 1901 (80.8%) 8th grade loss to follow-up: 19.2 12th grade students in study schools at follow-up: 2950 Intervention 1401 Comparison: 1549 Loss to f/u: NA (67.8% of original cohort surveyed)	and monitoring of alcohol in the home 7 Parent newsletters Parent involvement in Youth Peer activities Parent recruitment on community Task Forces 11-12th grade 11 postcards for parents in with behavioral tips on communicating and working with their high school students -Parent recruitment to campaign to promote parent/youth communication Youth Prevention Curricula Classroom curricula and activities on alcohol prevention (6th-11th grade) 4 weeks in 6th grade 8 weeks in 7th grade 8 sessions in 8th grade 5 sessions in 9th grade 6 sessions in 11th grade Behavioral content including alcohol facts, influences, peer communication, and skills. Grade 9 focused on drinking and driving and alcohol advertising Youth Peer Activities 6th-8th grade Peer leadership recruitment	Cigarette use and smokeless tobacco use were defined as more than two or three lifetime occasions of use (indicated by occasionally but not regularly, regularly in the past, or regularly now). Marijuana use was defined as any use in the past year. Substance(s): alcohol, cigarette, smokeless tobacco, marijuana Polysubstance measures? No (but a combined alcohol, cigarette use, and marijuana use measure was described) Outcome types Intentions? Yes but only as combined measure Initiation? Yes Use? Yes SU disorder? Yes (binge drinking) Educational outcomes? Yes, school problems scale Mental health? No Morbidity? No Mortality? No Equity? No, but rural applicability	Baseline (n=NR; 2950 overall) Int (n=NR; 1401 overall): 1.96 score Comp (n=NR; 1549 overall): 1.83 score Follow-up: 24 months (n=NR) Int (n=NR): growth rate 0.13 Comp (n=NR): growth rate 0.20 **Absolute change:** NR **Relative change:** NR **Narrative results:** p=0.07 Favorable: Yes Statistical significance: No **Outcome: Growth rate in Past Week Alcohol Use** Measure: Score based on use of alcohol on at least one occasion in the past 7 days Baseline (n=NR; 2950 overall) Int (n=NR; 1401 overall): 1.39 score Comp (n=NR; 1549 overall): 1.33 score Follow-up: 24 months (n=NR) Int (n=NR): growth rate 0.07 Comp (n=NR): growth rate 0.10 **Absolute change:** NR **Relative change:** NR **Narrative results:** p=0.53 Favorable: Yes Statistical significance: No **Outcome: Growth rate in Binge Drinking**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and Caregivers Age: NR Sex: NR Race/ethnicity: see children Education: NR Employment NR Income: NR Marital status: NR Other: NR **Study Population: Youth** Age: NR Grade level(s): followed 6th through 12th grade Sex: Females 48.7%; Males 51.3% Race/ethnicity: White 94% American Indian: 5.5% Other: NR **Community characteristics:** Mostly lower-middle to middle class Rural counties ranked top alcohol-related problems in state Study area included 7 American Indian reservation's	TEENS group activities 11-12th grade Peer action groups focused on school projects and promotion Community Activities 6th -8th grades Community Task Forces recruiting community members to work on alcohol prevention activities and policies 11-12th grades Community action teams focused on alcohol sales policies **Formats:** Face-to-Face youth groups Mailed workbooks and newsletters for parents Community group activities **Intervention intensity:** Alcohol prevention content Number of sessions: Youth: 31 or more school sessions (most 45 minutes) + 8 workbooks+ peer activities Parents: 8 weekly workbooks + 7 newsletters+11 postcards+ parent engagement in peer and community activities Number of hours per session: NR Total hours of intervention: NR Additional components: Local policy implementation Family Fun Nights	Other outcomes? Yes Peer Influence Scale Self-efficacy Scale Perceived Access Scale Sales: All outlets and Off-sale outlets Parent survey on changes in the home	Measure: Score based episodes of 5 or more drinks in a row in the last 3 weeks Baseline (n=NR; 2950 overall) Int (n=NR; 1401 overall): 1.60 score Comp (n=NR; 1549 overall): 1.45 score Follow-up (in months): 24 months (n=NR) Int (n=NR): growth rate 0.09 Comp (n=NR): growth rate 0.18 **Absolute change:** NR **Relative change:** NR **Narrative results:** p=0.02 Favorable: Yes Statistical significance: Yes **8th grade outcomes (Phase 1 Outcomes reported in Perry 1996)** Substance Use Measures Outcome: Past Month Alcohol Use Measure: Self-reported use of alcohol on at least one occasion in the past 30 days Baseline (n=2351) Int (n=NR): 6.9% Comp (n=NR): 3.9% Follow-up (in months): 30 months (n=1901) Int (n=NR): 23.6% Comp (n=NR): 29.2% **Absolute change:** -8.6 pct pts **Relative change:** -54.3 **Narrative results:** p<0.05(differences

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
		Print media campaign Local news coverage **Implementer(s):** Trained teachers delivered youth school curricula and activities Student peers had leadership meeting and training **Intervention duration:** 7 years overall with most interventions in Phase 1: 6th-8th grade (3 years) and Phase 2: 11-12th grade (2 years) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes, booklet activities in the home **Comparison group:** Usual alcohol and other drug education programs continued; (most received Project DARE) Note: comparison school districts were offered delayed phase 1 interventions. Uptake NR		between conditions based on F statistic). Favorable: Yes Statistical significance: Yes **Outcome: Past Week Alcohol Use** Measure: Self-reported use of alcohol on at least one occasion in the past 7 days Baseline (n=2351) Int (n=NR): 3.8% Comp (n=NR): 2.0% Follow-up (in months): 30 months (n=1901) Int (n=NR): 10.5% Comp (n=NR): 14.8% **Absolute change**: -6.1 percentage points **Relative change:** -62.6**%** **Narrative results:** p<0.05(differences between conditions based on F statistic). Favorable: Yes Statistical significance: Yes **Outcome: Cigarette use** Measure: more than one or two occasions (occasionally or regularly) Baseline (n=2351) Int (n=NR): 6.9% Comp (n=NR): 4.7% Follow-up (in months): 30 months (n=1901) Int (n=NR): 24.8%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=NR): 30.7% **Absolute change:** -8.1 percentage points **Relative change:** 44.9% **Narrative results:** NR Favorable: Yes Statistical significance: No **Outcome: Smokeless tobacco use** Measure: more than one or two occasions (occasionally or regularly) Baseline (n=2351) Int (n=): 1.5% Comp (n=): 1.5% Follow-up (in months): 30 months (n=1901) Int (n=): 13.5% Comp (n=): 16.3% **Absolute change: -**2.8 percentage points **Relative change:** -17.2% **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: No, p<0.08 **Outcome: Marijuana use** Measure: Any use in past year Baseline (n=2351) Int (n=): 0.7% Comp (n=): 0.4% Follow-up (in months): 30 moths (n=1901) Int (n=): 7.4% Comp (n=): 8.6%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Absolute change: -1.5 percentage points **Relative change:** -50.8% **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: No 8th grade outcomes (Perry 1996) Initiation of Substance Use Measures (8th grade outcomes among 6th grade baseline nonusers) **Outcome: Initiation of Alcohol Use** Measure: Self-reported use of alcohol on at least one occasion in the past 30 days among 6th grade nonusers Baseline (n=NR; 2351 overall) Int (n=NR): 0% Comp (n=NR): 0% Follow-up (in months): 30 months (n=NR; 1901 overall) Int (n=NR): 15.3% Comp (n=NR): 21.2% **Absolute change:** -5.9 pct pts **Relative change:** -27.8% **Narrative results**: p<0.05 (differences between conditions based on F statistic). Favorable: Yes Statistical significance: Yes Note: Past week use initiation Not reported here in favor of 30-day use initiation above

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Initiation of Cigarette use Measure: more than one or two occasions (occasionally or regularly) among baseline nonusers Baseline (n=NR; 2351 overall) Int (n=NR): 1.5% Comp (n=NR): 0.9% Follow-up (in months): 30 months (n=NR; 1901 overall) Int (n=NR): 15.5% Comp (n=NR): 24.6% **Absolute change:** -9.7 pct pts **Relative change:** -62.2 **Narrative results**: p<0.05(differences between conditions based on F statistic). Favorable: Yes Statistical significance: Yes **Outcome: Initiation of Smokeless tobacco use** Measure: more than one or two occasions (occasionally or regularly) in baseline nonusers Baseline (n=NR; 2351 overall) Int (n=NR): 0% Comp (n=NR): 0% Follow-up (in months): 30 months (n=NR 1901 overall) Int (n=NR): 7.4% Comp (n=NR): 12.3% **Absolute change: -**4.9 pct pts **Relative change:** -39.8%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: NR Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Initiation of Marijuana use** Measure: Any use in past year among baseline nonusers Baseline (n=NR; 2351 overall) Int (n=NR): 0% Comp (n=NR): 0% Follow-up (in months): 30 months (n=NR; 1901 overall) Int (n=NR): 3.1% Comp (n=NR): 6.2% **Absolute change:** -3.1 pct pts **Relative change:** -50% **Narrative results**: p<0.05 (differences between conditions based on F statistic). Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Educational Outcomes (Phase 1 reported in Williams 1999)** **Outcome: Self-assessed adolescent school problems** Measure: Scale score in 20 item Minnesota Muttiphasic Personality Inventory- Adolescent (MMPI-A)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline (n=NR; 2351 overall) Int (n=NR): score 3.97 Comp (n=NR): score 3.67 Follow-up (in months): 30 moths (n=NR; 1901 overall) Int (n=NR): 5.33 Comp (n=NR): 5.81 **Absolute change:** -0.78 scale score points **Relative change:** NA **Narrative results:** p=0.10 Favorable (Yes/No/No effect): No effect Statistical significance: No
Author (Year): Prado et al. (2007) **Location:** USA, Florida, Miami **Years for Study:** 2001-2005 **Period for Study**: 36 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Low	**Setting:** Mix (home + Community) **Urbanicity:** Urban (Miami) **Eligibility:** Hispanic youth in 7th grade in one of three study middle schools **Recruitment:** through schools, but location of group sessions was not reported Flyer recruitment in study middle schools. **Inclusion:** At least one parent was born in a Spanish-speaking country in the Americas	**Brief description of intervention and content:** combined two parent-centered programs to improve family functioning and HIV risk communication Familias Unidas: Hispanic-specific, family-based preventive intervention including (a) increasing parental involvement in the adolescent's life, (b) increasing family support for the adolescent, (c) promoting positive parenting, and (d) improving parent–adolescent communication PATH HIV prevention curriculum designed to promote family	**Brief description** Youth online self-reported substance use and sexual activity questions Substance use questions on lifetime use, in the 90 days prior, and frequency of use Frequency of use of a variety of drugs, including marijuana, cocaine, amphetamines, methamphetamines, and barbiturates. Initiation of use was generated in post-hoc analyses Substance(s)* cigarette, alcohol, general (illicit drug) Polysubstance measures (Yes/No)? Yes (illicit drugs)	Substance use outcomes were analyzed using growth curve modeling. Growth curve analyses were used to estimate individual trajectories of change and to test for slope differences among the three study conditions over time Smoking and illicit drug use 90 day use rates for each study arm at baseline and follow-up were plotted **Outcome: Cigarette use** Measure: Self-reported cigarette use past 90 days (comparison with ESOL+HEART arm) Baseline Int (n=91): 3.3% Comp (n=91): 3.3% Follow-up (in months): 36 months Int (n=71): 1.4%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
b) Concealment– Unclear c) Blinding– High d) Outcomes– Low e) Selective– Low	and available to attend weekly meetings Sample size: Family dyads Interested: 640 families Evaluated: 579 Randomized: 266 Intervention 91 Control 1 84 Control 2 91 36m follow-up: 211 (79.3%) Loss to f/u: 20.7% **Study population: Parents and Caregivers (overall)** Age:40.9 years Sex: 85.3% females; 14.7% males Race/ethnicity: 100% Hispanic Education: NR Employment: NR Income: $0 -$9,999; 22% $10,000-$19, 999; 37% $20,000-$29,999; 22% >$30,000/year; 15% NR 3% Marital status: NR Other: immigrant: Cuba, 40%	communication and responsible sexual behaviors **Intervention/program name:** Familias Unidas + Preadolescent Training for HIV Prevention (PATH) Substance(s) focused General **Format:** face-to-face Small group sessions Family visit sessions **Intervention intensity:** Number of sessions: 25 (15 parent group, 8 family visits, 2 parent-adolescent circles) Number of hours per session: 2 Total hours of intervention: 49 Additional components: No important components ($20-40 incentives for reporting and $30 to cover transportation to meetings) **Implementer(s):** Facilitators with clinical experience working with Hispanic families were trained by researchers in each program (ESOLS were teachers) **Intervention duration:** 12 months active intervention	Outcome types Intentions? No Initiation? Yes Use? Yes SU disorder? No Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity? Tailored intervention for Hispanic families evaluated in Hispanic families Other outcomes? Yes Sexual risk behaviors Family functioning Sexual Behavior instrument: Self-reported if they had ever had sex in their lifetime (initiation) and in the 90 days (recent) prior to assessment. Sex initiators asked if they had engaged in unprotected sex at last intercourse, had consumed alcohol or drugs before their last sexual intercourse, and had ever contracted a sexually transmitted disease.	Comp (n=70): 14.3% **Absolute change:** -12.9 pct pts **Relative change:** -90.2% **Narrative results:** z=2.66, p <0.008; d=0.80; trajectory decreased for intervention group and increased for control group Favorable: Yes Statistical significance: Yes **Outcome: illicit drug use** Measure: illicit drug use past 90 days (comparison with ESOL+HEART arm) Baseline Int (n=91): 2.2% Comp (n=91):3.3% Follow-up (in months): 36 months Int (n=71): NR Comp (n=70): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** Growth curve analyses indicated significant differences in past 90-day illicit drug use between intervention arm and ESOL + HEART (z = 2.02, p < .05; d = 0.58). Favorable: Yes Statistical significance: Yes **Outcome: illicit drug use frequency** Measure: Frequency of past 90 day illicit drug use (comparison with ESOL+HEART arm)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Nicaragua; 25% Honduras; 9% Colombia; 4% Other 22% **Study Population: Youth (intervention group)** Age:13.4 years Grade level(s): 8th grade Sex: 57% females; 43% males Race/ethnicity: 100% Hispanic Other: Years in US 0-3 34% 3-10 20% >10 46% Community characteristics: NR	**Focus of intervention activities:** Both parents/caregivers and youth: Yes but most sessions were parent only Parents only: No Parent and child in the same session/activity? Yes (parent-adolescent small groups) **Comparison groups:** Two control arms ESOL + HEART arm ESOL + PATH arm English for Speakers of Other Languages (ESOL) taught by ESOL teachers to help parents communicate more effectively in English HEART: cardiovascular health promotion including some content on cigarette use taught by facilitators Dosage for both arms designed to be equivalent 49 hours: 8 ESOL classes and 7 group sessions		Baseline Int (n=NR): mean 0.43 (SD 3.69) Comp (n=NR): mean 0.07 (SD 0.54) Follow-up: 36 months Int (n=NR): mean 0.18 (SD NR) Comp (n=NR): mean 1.48 (SD NR **Absolute change:** -1.66 instances in 90 days **Relative change:** -98.0% **Narrative results**: The observed mean frequency of illicit drug use decreased in intervention arm but increased in ESOL + HEART arm between 24 and 36 months postbaseline Favorable: Yes Statistical significance: NR **Outcome: Alcohol use** Measure: alcohol use past 90 day (comparison ESOL+HEART control arm) Baseline Int (n=91): 10.0% Comp (n=91): 8.8% Follow-up (in months): 36 months Int (n=71): NR Comp (n=70): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: Growth curve analyses showed no significant differences in past-90-day alcohol use between intervention and either control arm

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Favorable: No effect Statistical significance: No **Outcome: Cigarette initiation (post hoc analyses)** Measure: Cigarette initiation across all 3 study arms Baseline Int (n=91): 0 Comp (n=91): 0 Follow-up (in months): 36 months Int (n=74): 10.8% Comp (n=70): 27.1% **Absolute change:** -16.3 pct pts **Relative change:** NA **Narrative results:** Fewer adolescent in intervention group reported initiating smoking during the study than in the two control arms X2 (2, n=218)=6.79, p<0.04. Favorable: Yes Statistical significance: Yes, post hoc includes all three groups **Outcome: Alcohol initiation** Measure: alcohol initiation across all 3 study arms Baseline Int (n=91): 0 Comp (n=91): 0 Follow-up (in months): 36 months Int (n=71): NR Comp (n=70): NR **Absolute change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Relative change: NR **Narrative results:** no significant difference for alcohol initiation Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Illicit drug initiation** Measure: illicit drug initiation across all 3 study arms Baseline Int (n=91): 0 Comp (n=91): 0 Follow-up (in months): 36 months Int (n=71): NR Comp (n=70): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** no significant difference for illicit drug initiation Favorable (Yes/No/No effect): No effect Statistical significance: No **Unprotected sexual behavior:** Recent sex, asked if they had engaged in unprotected sex (i.e., sex without a condom) during that time. Growth curve analyses not estimated for past-90-day unprotected sex given the small number of participants engaging in sexual behavior in past 90 days. Post hoc analyses - significant difference also emerged, $\chi 2(1, N = 53) = 3.87, p < .05$ (w = .27), in unsafe sex at last sexual intercourse

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				between Familias Unidas + PATH and ESOL + PATH, with 19.2% (or 5 out of 26) of the adolescents in Familias Unidas + PATH and 44.4% (or 12 out of 27) in ESOL + PATH reporting unsafe sexual intercourse. No other significant differences were found. Familias Unidas + PATH moderately efficacious in preventing unsafe sexual behavior Regarding prevention of unsafe sexual behavior, sexually active adolescents in Familias Unidas + PATH reported having been significantly more likely to use a condom at last sexual intercourse than their counterparts in ESOL + PATH. The condition differences in condom use at last sexual intercourse must be interpreted with caution, given that no effects were found forpast-90-day unprotected sexual intercourse. It is important to note, however, that this lack of statistical significance might have been due, at least in part, to the small number of participants reporting past-90-day unprotected sexual intercourse.
Author (Year): Prado et al. (2012) **Location:** USA, Florida, Miami-Dade County	**Setting:** Mixed (home and community) Recruitment through schools and juvenile justice center	**Brief description of intervention and content:** Hispanic-specific, parent-centered intervention designed to improve family functioning and	**Brief description**: Youth self-reported behaviors using survey assessment using an audio-enhanced, computer-assisted self-interviewing	Growth curve analyses were used to estimate individual trajectories of change and to test for slope differences between conditions over time. For each

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Years for Study: NR **Period for Study:** 12 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Low b) Concealment– Low c) Blinding– High d) Outcomes– Low e) Selective– Low	Location of intervention meetings was not reported **Urbanicity:** NR (urban and suburban Miami-Dade County) **Eligibility:** Hispanic adolescents 12-17 years old identified as delinquent youth based on "Level III behavior problem" - assault/threat against a non-staff member, breaking and entering/ burglary, fighting (serious), hazing, possession or use of alcohol and/or controlled substances, possession of simulated weapons, trespassing, and vandalism) **Recruitment:** Miami-Dade County's Department of Juvenile Services and the Miami-Dade County Public School system **Inclusion/Exclusion:** See inclusion above	reduce youth substance use and unsafe sexual behaviors Intervention aims to prevent substance use and sexual risk behaviors by positioning parents as the experts of their adolescents' needs and development involvement in the adolescent's life, (b) increasing family support for the adolescent, (c) promoting positive parenting, and (d) improving parent–adolescent communication Parent-focused group session goals are to bring parents together for the purposes of establishing parental investment, increasing parental support, and providing a context for parent participation in a conjoint skill learning process. Family visits goals are to provide parents with an opportunity to transfer the competencies learned in the group sessions to their adolescent, foster more nurturing and supportive relationships, and increase parent–child communication. **Intervention/program name:** Familias Unidas	program, in either English or Spanish Youth were asked whether they had drunk alcohol or used an illicit drug in their lifetime and in the 90 days prior to assessment. Alcohol dependence and marijuana dependence was assessed using Diagnostic Interview Schedule for Children predictive scales. Having has sex under the influence of alcohol or drug use assessed from sexual behavior instrument Substance(s): Alcohol Illicit drugs Combined substance use (alcohol or illicit drugs) Polysubstance measures? Yes Outcome types Intentions? No Initiation? No Use? Yes SU disorder? Yes Educational outcomes? No	of the outcomes, data from all three assessment points were used. **Outcome: Substance use** Measure: alcohol or drug use past 90 days Baseline Int (n=120): 44.4% Comp (n=122):38.8% Follow-up (in months): 12 months Int (n=113): 33.3% Comp (n=116): 45.5% **Absolute change:** -17.8 pct pts **Relative change:** -36.5% **Narrative results:** Growth curve analyses showed a significant difference in past 90-day substance use between intervention and control (b =-0.67, p=0.02; χ^2=1.06) Favorable: Yes Statistical significance: Yes **Outcome: illicit drug use** Measure: illicit drug use past 90 day Baseline Int (n=120): 29.1% Comp (n=122): 23.1% Follow-up (in months): 12 months Int (n=113): 22.5% Comp (n=116): 31.3% **Absolute change:** -14.8 pct pts **Relative change:** -42.9%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sample size: Screened: 446 Baseline: 242 families Intervention: 120 Comparison:122 Follow-up: 229 (94.6%) of 242 at 12m f/u Loss to f/u: 5.4% **Study population: Parents and Caregivers Overall** Age: NR Sex: NR Race/ethnicity: 100% Hispanic Education: NR Employment: NR Income: median 15k-19,999 [Intervention arm categories] $0 -$9,999 25.0% $10,000-$19,999 31.7% $20,000-$29,999 21.7% >$30,000/year 21.7% Marital status: NR Other: immigrants from Cuba 25% Honduras 15.5% Nicaragua 9.5%	Substance(s) focused: General **Format:** face-to-face Small group parent sessions Family visit sessions including parent(s) and youth **Intervention intensity:** Number of sessions: 12 (8 group sessions, 4 family visits) Number of hours per session: group 2 hours/session; family 1 hour/session Total hours of intervention: 20 hours Additional components: None Note: Incentives ($60-80) for completing baseline and f/u assessments for all study arms **Implementer(s):** NR (in other papers, sessions are run by trained facilitators with clinical family management experience) **Intervention duration:** 12 weeks Focus of intervention activities: Both parents/caregivers and youth: Yes Parents only: No	Mental health: No for youth; Yes, for parents Morbidity? No Mortality? No Equity? Yes, tailored intervention evaluated in Hispanic families Other outcomes? Yes sexual intercourse while under the influence of alcohol or drugs Parental stress Parental social support Having had sex under the influence of alcohol and drug use measured one item from sexual behavior instrument. Self-reported if they had ever had sex in their lifetime and in the 90 days. Recent sex asked on how many days they got high on alcohol or drugs and engaged in sex in the past 90 days. binary variable if participants engaged in sex under the influence of alcohol or drugs in the past 90 days. The impact of Familias Unidas on non-alcohol or drug related sexual risk behaviors can be	**Narrative results:** The results showed that intervention was efficacious in reducing illicit drug use in the past 90 days (b =-0.72, p = 0.04, λ = 0.79) Favorable: Yes Statistical significance: Yes **Outcome: Alcohol use** Measure: Alcohol use in past 90 days Baseline Int (n=120): NR Comp (n=122): NR Follow-up (in months): 12 months Int (n=113): NR Comp (n=116): NR **Absolute change:** NA **Relative change:** NA **Narrative results**: trend favoring intervention, no statistically significant intervention effects were found (b = −0.47, p = 0.14, ı = 0.57) Favorable: Yes Statistical significance: No **Outcome: Alcohol dependence** Measure: Diagnostic Interview Schedule for Children (DISC) predictive scales Baseline Int (n=120): 15.8% Comp (n=122): 6.6% Follow-up (in months): 12 months Int (n=113): 5.4% Comp (n=116): 8.1%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Puerto Rico 8.3% Dominican Republic 7.1% **Study Population: Youth (intervention group)** Age:14.8 years range 12-17 Grade level(s): NR (7th-12th) Sex: females 33.3%; males 66.7% Race/ethnicity: 100% Hispanic **Community characteristics:** NR	Parent and child in the same session/activity? Yes for family visit sessions **Comparison group**: Community Practice including referrals to county available community-based services including several therapeutic modalities (individual and family therapy), as well as address multiple problem behaviors, including alcohol and drug use.	found elsewhere (Prado et al., 2012).	**Absolute change:** -11.9 pct pts **Relative change:** -72.1% **Narrative results:** significant difference in the percentage of youth with an alcohol dependence diagnosis over time between groups (b = −1.16, p = 0.02, ı = 0.93) Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Marijuana dependence** Measure: Diagnostic Interview Schedule for Children (DISC) predictive scales Baseline Int (n=120): NR Comp (n=122): NR Follow-up (in months): 12 months Int (n=113): NR Comp (n=116): NR **Absolute change:** NA **Relative change:** NA **Narrative results:** trend favoring intervention with a marijuana dependence diagnosis, no significant intervention effects were found (b = −0.49, p = 0.15, ı = 0.93) Favorable (Yes/No/No effect): Yes Statistical significance: No **Sexual intercourse while under the influence of alcohol or drugs** Measure: how many days they got high on alcohol or drugs and engaged in sex in the past 90 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Growth curve analyses showed a significant difference in past 90-day having had sexual intercourse under the influence of alcohol or drugs between Familias Unidas and Community Practice (b = −1.39, p = 0.025, ı = 1.04). The proportion of youth reporting having had sex while under the influence of alcohol or drugs increased from 12.5% to 34.9% in youth randomized to Community Practice. In contrast, adolescents randomized to Familias Unidas reported no change in the proportion of youth having had sex under the influence of alcohol or drugs from baseline to 12 months post-baseline assessment.
Author (Year): Riesch et al. (2012) **Location:** USA; Wisconsin, Madison; Indiana, Indianapolis **Years for Study**: April 2003 - December 2005 **Period for Study:** 33 months **Study Design**: Group RCT	**Setting:** Mix (community and school) **Urbanicity:** Mixed (midsized/large urban) **Eligibility:** Speaking English for adults and youth, youth in fifth grade/aged 9 to 11, family intended to stay in area for 8 months after enrollment	**Brief description of interventions and content:** Revised version of 14-session Strengthening Families Program to examine the potential for ATOD prevention Universal intervention designed to reduce risk factors (via family functioning) and build family capacity and coping skills to access and use resources within their school and community to achieve child socialization goals	**Brief description:** Self-reported Health risk behaviors: 21-item CHRBS (Children's Health Risk Behavior Survey) & CSAP GPRA (Government Performance Required Accountability) Baseline (Time 1) Post 1 (Time 2) = >1 mo Post 2 (Time 3) = 6 mo Substance(s)* Alcohol, tobacco, and other drugs (ATOD)	Intention-to-treat analysis, Youth participation in alcohol, tobacco, and other drugs was very low and did not differ post-program. Basic proportions conducted using exact tests. No significant differences were documented in youth ATOD use over time or between the intervention and comparison conditions. **Outcome: Tobacco (smoking) Use** Measure: 30-day frequency (Table 5) smoked even one puff and smoked a whole cigarette

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
CG Suitability: Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Low e) Selective– Low	**Recruitment:** All public elementary schools with a 5th grade in two Midwestern cities Wisconsin (Madison): 6 Indiana (Indianapolis): 10 Enrollment rate of 14% (Madison) and 22% (Indianapolis) **Inclusion/Exclusion**: NR Sample size Baseline (Time 1): 167 Int (86) Control (81) Follow-up (Time 3 - Post 2) Int (66) Control (59) Loss to f/u (Time 3 - Post 2) Attrition = 25% (42/167) Int (20), Control (22) (Used figure 1 to calculate attrition)	Materials: videotape, discussions, and manual/curriculum **Intervention/program name**: Strengthening Families Program 10–14 (SFP 10–14) Substance(s) focused* General **Format:** face-to-face group (1st hr parent-child separated, 2nd hr parent-child together) **Intervention intensity:** No booster, staff telephoned and mailed reminders to adults Number of sessions or modules: 7 Number of hours per session: 2 Total hours of intervention: 14 Additional components Meals provided (on-time incentive), transportation and childcare vouchers, neutral content newsletters **Implementer(s)** Trained staff from communities (similar racially, ethnically, and socioeconomically). 3-person teams: trained facilitators conducted 10 groups (5 Madison, 5 Indianapolis). Group size average of 8	Polysubstance measures? NO Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes? NO Mental health? NO Morbidity? NO Mortality? NO Equity? NO Other outcomes? Yes Family functioning (family cohesion, involvement, supervision, and open communication); stratified by high and low dosage ? **Outcome: Tobacco (smoking) Use** Specific measure: Smoked whole cigarette Baseline Int (n=86): NR Comp (n=81): NR Follow-up (in months): 6 months Int (n=2): 3.0% Comp (n=3): 4.5% **Absolute Proportional Differences:** +0.09 **Relative change:** NR **Narrative results:** Exact alpha, 0.86 Favorable (Yes/No/No effect): No effect Statistical significance: NS (CI: −0.45, 0.61) **Outcome: Tobacco (chewing) Use** Measure: 30-day frequency (Table 5)	Specific measure: Smoked even one puff Baseline Int (n=86): NR Comp (n=81): NR Follow-up (in months): 6 months Int (n=5): 7.6% Comp (n=6): 9.1% **Absolute Proportional Differences:** **+**0.01 **Absolute change (post):** -1.5 pct pts **Relative change (post):** -16.4% **Narrative results**: Exact alpha, 0.87 Favorable (Yes/No/No effect): No effect Statistical significance: NS (CI: −0.10, 0.12)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study population: Parents and Caregivers Age: 38.7 Mean (Range 21-66) Sex: Female 91%, Male 9% Race/ethnicity: African American 55% Asian 1% Alaska Native/Native American 1% Hispanic 5% Euro-American 37% Missing 1% Education: Grade school 1% Some high school 12% High school 24% Some college 20% College 20% Trade or technical college 5% Post-college 15% Missing 4% Employment Full-time 45% Part-time 20% Not employed 31% Missing 4% Income: $0-$5,000, 5% $5,001-10,000, 14% $10,001-15,000, 8% $15,001-20,000, 16% $20,001-25,000, 8%	**Intervention duration:** 7 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** No intervention, participated only in data collection procedures. No comparison families reported participation in another family skill building or parenting program. Received neutral content newsletters		Baseline Int (n=86): NR Comp (n=81): NR Follow-up (in months): 6 months Int (n=3): 4.5% Comp (n=5): 7.6% **Absolute Proportional Differences:** +0.02 **Absolute change (post):** -3.1 pct pts **Relative change (post):** -40.8% **Narrative results:** Exact alpha, 0.55 Favorable (Yes/No/No effect): No effect Statistical significance: NS (CI: −0.06, 0.13) **Outcome: Alcohol Use** Measure: 30-day frequency (Table 5) Drank wine, beer, or liquor without parent permission Baseline Int (n=86): NR Comp (n=81): NR Follow-up (in months): 6 months Int (n=1): 1.5% Comp (n=1): 1.5% **Absolute Proportional Differences:** 0.00 **Absolute (post):** 0 pct pts **Relative change:** NR **Narrative results**: Exact alpha, 1.00 Favorable (Yes/No/No effect): No effect Statistical significance: NS (CI: −0.07, 0.06) **Outcome: Cannabis Use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	$25,001-30,000, 1% $30,001-35,000, 8% $35,001-40,000, 4% $40,001-45,000, 1% $45,001-50,000, 2% >$50,000, 29% Missing, 4% Marital status: Adult w/partner Yes 40%, No 60% Other Public Assistance – Yes 60%, No 40% Poverty Index – High 41% Low 59% **Study Population: Youth** Age: 10.8 mean (Range 10-12) Grade level(s): 5th grade Sex: Female 47%, Male 51%, Missing 2% Race/ethnicity: African American 56% Asian 1% Alaska Native/Native American 1% Hispanic 4% Euro-American 35% Other 1% Missing 3% **Community characteristics:**			Measure: 30-day frequency (Table 5) Baseline Int (n=86): NR Comp (n=81): NR Follow-up (in months): 6 months Int (n=NR): 3.0% Comp (n=NR): 1.5% **Absolute Proportional Differences:** +0.01 **Absolute change (post):** +1.5 pct pts **Relative change (post):** +100% **Narrative results**: Exact alpha, 0.65 Favorable (Yes/No/No effect): No or No effect Statistical significance: NS (CI: −0.09, 0.05) **Outcome: Other drugs (Inhalants) Use** Measure: 30-day frequency (Table 5) Baseline Int (n=86): NR Comp (n=81): NR Follow-up (in months): 6 months Int (n=0): 0.00 Comp (n=0): 0.00 **Absolute Proportional Differences:** 0.00 **Relative change:** NR **Narrative results**: NR Favorable (Yes/No/No effect): No effect Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Schools stratified by race - high minority (<60%) or low (>60%) minority enrollment. 60% chosen because it constituted high minority enrollment in Madison, Wisconsin.			Post-hoc analysis: secondary outcomes, Figure 2 contain effect sizes, by full dose (>=5 sessions) versus partial dose (<=4)
Author (Year): Schinke et al. (2009a) **Location:** USA; New York, New Jersey, Connecticut **Years for Study:** NR **Period for Study:** 3 months (2-month f/u) **Study Design:** Individual RCT (mother-daughter dyads) **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Low	**Setting:** Home **Urbanicity:** NR (presumed mixed) **Eligibility:** Adolescent girls ages 10-13 years of age and mothers in study region **Recruitment:** recruited through newspaper advertisements and postings on Craiglist.org. **Inclusion/Exclusion:** Girls and mothers needed private access to personal computer Sample size: Interest: 380 dyads Baseline: 202 dyads Stratified by age and ethnic-racial	**Brief description of interventions and content:** Computer-based intervention for mother-daughters (website or CD-Rom) Family interaction theory: Gender-specific prevention program had two aims: (1) enhance the quality of girls' relationships with their mothers and (2) teach girls cognitive behavioral skills to avoid underage drinking. To accomplish these aims, girls and their mothers interactively completed 14 computer-mediated intervention modules. Int**ervention name**: NR Substance(s) focused* Alcohol **Format:** Remote: Computer program	**Brief description:** Youth self-reported online alcohol use and intentions Girls were asked to reflect on the past week, month, and year to report their consumption of beer, wine, and distilled spirits, responding to such questions as, "How often in the last week have you had alcohol to drink?" Substance(s)* Alcohol Polysubstance measures? No Outcome types Intentions? Yes Initiation? No Use? Yes SU disorder? No Educational outcomes? No Mental health? No Morbidity? No Mortality? No	Outcome variables were examined with general linear model repeated-measures analyses. outcome variables comprised the within-subject factor; study arm assignment was the between-subject factor; and girls' ages and ethnic-racial back grounds and mothers' ages and education were covariates. Effect size was calculated by eta squared All analyses were conducted at $p < .05$. **Outcome: Alcohol use in the last 30 days** Measure: Number of drinks in last 30 days Baseline Int (n=101): 0.33 (SD 0.47) Comp (n=101): 0.30 (SD 0.46) Follow-up: 2 months Int (n=99): 0.26 (SD 0.44) Comp (n=100): 0.30 (SD 0.46) **Absolute change:** -0.07 instances in 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
e) Selective– Low	background, girls were randomly divided between intervention and control arms; Bsline 2m F/u Intervention: NR (101) (99) Control: NR (101) (100) Follow-up: 199 (98.5%) of 202 dyads Loss to f/u: 1.5% **Study population: Parents (mothers) and Caregivers (Int)** Age: mean 41.07 years Sex: 100% female Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: Single parent: NR Two parent: NR **Study Population: Youth (Int)** Age: mean 12.2 years Grade level(s): NR ages 10-13 Sex: 100% female Race/ethnicity: Black 9.5% White 67.8% Latina 14.1%	**Intervention intensity:** Number of modules: 14 to be completed in 3 weeks Number of hours per session: NR Total hours of intervention: NR Additional components: None (incentives for both arms for participation) **Implementer(s):** NA Computer program content **Intervention duration:** 3 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes **Comparison group**: No intervention group (delayed intervention)	Equity? No Other outcomes? Yes Mother-daughter communication Family rules Parent monitoring	**Relative change:** -21.2% **Narrative results**: F intervention x time =3.96 p<0.05 Favorable: Yes Statistical significance: Yes **Outcome: Alcohol use in the last 7 days** Measure: Number of drinks in last 7 days Baseline Int (n=101): 0.17 (SD 0.38) Comp (n=101): 0.10 (SD 0.30) Follow-up: 2 months Int (n=99): 0.08 (SD 0.27) Comp (n=100): 0.16 (SD 0.37) **Absolute change:** -0.15 instances in 7 days **Relative change:** -70.58% **Narrative results:** F intervention x time =4.74 p<0.01 Favorable: Yes Statistical significance: Yes **Outcome: Alcohol use in the last year** Measure: Instances of drinks in the last year Baseline Int (n=101): 0.47 (SD 0.50) Comp (n=101): 0.35 (SD 0.48) Follow-up: 2 months Int (n=99): 0.35 (SD 0.48) Comp (n=100): 0.39 (SD 0.49)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Asian 0.5% Other: 8% **Community characteristics:** NR			**Absolute change:** -0.16 instances in 1 year **Relative change:** -36.9% **Narrative results**: F intervention x time =6.18 p<0.01 Favorable: Yes Statistical significance: Yes **Outcome: Intentions to drink alcohol when they become adults** Measure: Scale (5 item) score Baseline Int (n=101): 4.22 (SD: 2.73) Comp (n=101): 4.90 (SD: 2.95) Follow-up: 2 months Int (n=99): 3.35 (SD: 2.34) Comp (n=100): 3.98 (SD: 2.72) **Absolute change:** Scale score +0.05 points **Relative change:** NR **Narrative results**: F intervention= 4.98 (p<0.05) but F intervention x time =0.02 (NR) Favorable: No Statistical significance: Yes
Author (Year): Schinke et al. (2009b) **Location:** USA; New York City, eastern New Jersey, southern Connecticut	**Setting:** Home **Urbanicity:** NR (presumed mixed) **Eligibility:** Adolescent girls ages 11, 12, or 13 years of age and	**Brief description of interventions and content:** Computer-based intervention for mother-daughters (website or CD-ROM modules to complete) Informed by family interaction theory, the program focused on fostering parent-child	**Brief description:** Youth self-reported online Primary outcomes for the study were assessed by scales asking girls to report their use of cigarettes, alcohol, marijuana, and	Differences between study arms and across baseline and 1- and 2-year follow-up measurements were tested by a repeated-measures general linear analytic model. Tests of intervention by measurement interactions adjusted for girls' age and ethnic-racial background and for mothers' age and head of-household status.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Years for Study: 2006-09 **Period for Study:** 24 months **Study Design:** Individual RCT (mother-daughter dyads) **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Low e) Selective– Unclear	mothers in study region **Recruitment:** Recruitment vehicles were postings on craigslist.org and advertisements in newspapers, posted on buses, and broadcast on a popular New York City radio station **Inclusion/Exclusion:** Girls and mothers needed to speak English and have private access to personal computer Sample size: Contacted: 1702 dyads Baseline: 916 dyads Bsline 2yr F/u Intervention: 458 415 Control: 458 413 Follow-up: 828 (90.4%) of 916 Loss to f/u: 9.6% **Study population: Parents (mothers) and Caregivers (Int)** Age: mean 39.9 years	attachment, supervision, and support to reduce risk factors and build protective factors. Program exercises taught mothers and daughters the value of listening to each other, spending time together, understanding one another's personality, negotiating mutually agreeable decisions to problems, doing personal favors for one another, and giving each other praise and compliments. **Intervention name:** NR Substance(s) focused* General substance use prevention **Format:** Remote: computer program from web or CD-rom **Intervention intensity:** Number of modules: 11 (9 + 2 annual booster modules) Number of hours per session: 45 minutes Total hours of intervention: 8.25 hours Additional components: None (incentives for both arms for participation) **Implementer(s):** NA	prescription and over-the-counter drugs for nonmedical purposes over the past 30 days Substance(s)* Cigarettes, alcohol, marijuana, inhalants, prescription, and over-the-counter drug use Polysubstance measures? No (Intentions was a combined measure) Outcome types Intentions? Yes Initiation? No Use? Yes SU disorder? No Educational outcomes? No Mental health? Yes-depression Morbidity? No Mortality? No Equity? Yes (demographics of participants but no stratified analyses) Other outcomes? Yes Depression (measured) Mother-daughter communication Family rules Parent monitoring Body esteem	**Outcome: Cigarette use** Measure: Instances of use in last 30 days Baseline Int (n=458): 1.02 (SD 0.2) Comp (n=458): 1.04 (SD 0.3) Follow-up: 24 months Int (n=415): 1.05 (SD 0.5) Comp (n=413): 1.39 (SD 3.6) **Absolute change:** -0.32 instances in 30 days **Relative change:** -22.9% **Narrative results**: F=1.11 NS Favorable: Yes Statistical significance: No **Outcome: Alcohol use** Measure: Instances of use in last 30 days Baseline Int (n=458): 0.14 (SD 0.2) Comp (n=458): 0.18 (SD 0.3) Follow-up: 24 months Int (n=415): 0.17 (SD 0.3) Comp (n=413): 0.33 (SD 0.7) **Absolute change:** -0.12 instances in 30 days **Relative change:** 33.8% **Narrative results**: F =5.20 p<0.006 Favorable: Yes Statistical significance: Yes **Outcome: Marijuana use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: 100% female Race/ethnicity: NR Education: <High school 6.3% High school 9.1% Some college 28.3% A.A. or B.A. degree 42.6% Graduate degree 13.7% Employment: NR Income: NR Marital status: Family status Single parent: 43.7% Two parent: 56.3% **Study Population: Youth (Int)** Age: mean 12.76 years Grade level(s): NR ages 11-13 Sex: 100% female Race/ethnicity: Black 40.6% White 23.2% Latina 23.1% Asian 10.8% Other 1.7% Other: Grades A's 9.1% B's 42.3% C's 13.4%	Computer program content **Intervention duration:** 9 weeks plus 2 booster modules **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes **Comparison group:** No intervention for control		Measure: Instances of use in last 30 days Baseline Int (n=458): 0.08 (SD 0.0) Comp (n=458): 0.09 (SD 0.0) Follow-up: 24 months Int (n=415): 0.1 (SD 0.1) Comp (n=413): 0.2 (SD 0.7) **Absolute change:** -0.09 instances in 30 days **Relative change:** -43.75% **Narrative results**: F =4.12 p<0.016 Favorable: Yes Statistical significance: Yes **Outcome: Illicit prescription drug (mis)use** Measure: Instances of use in last 30 days Baseline Int (n=458): 0.12 (SD 0.2) Comp (n=458): 0.09 (SD 0.1) Follow-up: 24 months Int (n=415): 0.09 (SD 0.1) Comp (n=413): 0.11 (SD 0.2) **Absolute change:** -0.05 instances in 30 days **Relative change: -**38.7% **Narrative results:** F=3.58 p<0.03 Favorable: Yes Statistical significance: Yes **Outcome: Inhalants use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	D's and below 5.2% **Community characteristics:** NR			Measure: Instances of use in last 30 days Baseline Int (n=458): 0.04 (SD 0.3) Comp (n=458): 0.01 (SD 0.1) Follow-up: 24 months Int (n=415): 0.02 (SD 0.1) Comp (n=413): 0.03 (SD 0.2) **Absolute change:** -0.04 instances in 30 days **Relative change:** -83.3% **Narrative results**: F =3.72 p<0.024 Favorable: Yes Statistical significance: Yes **Outcome: Intentions to use** Measure: Scale (5 item) score Baseline Int (n=458): 0.98 (SD 1.0) Comp (n=458): 0.98 (SD 1.1) Follow-up: 24 months Int (n=415): 1.1 (SD 1.2) Comp (n=413): 1.5 (SD 1.4) **Absolute change: Scale score** -0.4 points **Relative change:** NR **Narrative results**: F = 10.38 p<0.0001 Favorable: Yes Statistical significance: Yes
Author (Year): Schinke et al. (2009c)	**Setting:** Home	**Brief description of interventions and content:**	**Brief description:** Youth self-reported online	Generalized estimating equations (GEE) adjusted for age, ethnic-racial

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Location: USA; New York, New Jersey, Connecticut **Years for Study:** 2006-2008 **Period for Study:** 12 months **Study Design**: Individual RCT (mother-daughter dyads) **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– Low d) Outcomes– Low e) Selective– Low	**Urbanicity:** NR (presumed mixed) **Eligibility:** Adolescent girls ages 11, 12, or 13 years of age and mothers/caregivers in study region **Recruitment:** recruited through advertisements posted in local newspapers, online, in subway trains and buses, and broadcast on the radio. **Inclusion/Exclusion:** Girls and mothers needed private access to personal computer Sample size: Baseline: 591 dyads Bsline 1yr F/u Intervention: 252 205 Control: 339 327 Follow-up: 532 (90%) of 591 Loss to f/u: 10% **Study population: Parents (mothers) and Caregivers (Int)**	Computer-based intervention for mother-daughters Informed by family interaction theory, the program focused on fostering parent-child attachment, supervision, and support to reduce risk factors and build protective factors associated with the prevention of smoking, drinking, and illicit drug taking by adolescent girls. **Intervention name**: NR Substance(s) focused* Smoking (cigarettes), drinking (alcohol), illicit drug use **Format:** Remote: computer program **Intervention intensity:** Number of modules: 9 Number of hours per session: 45 minutes Total hours of intervention: 6.75 hours **Additional components:** None (incentives for both arms for participation) **Implementer(s):** NA Computer program content	Primary outcomes for the study were assessed by scales asking girls to report their use of cigarettes, alcohol, marijuana, and prescription and over-the-counter drugs for nonmedical purposes over the past 30 days Substance(s)* Cigarettes, alcohol, marijuana, prescription, and over-the-counter drug use Polysubstance measures? No Outcome types Intentions? Yes Initiation? No Use? Yes SU disorder? No Educational outcomes? No Mental health? Yes-depression Morbidity? No Mortality? No Equity? No Other outcomes? Yes Mother-daughter communication Family rules Parent monitoring Body esteem	group membership, and household composition, To examine overall intervention effects, GEE analyses were repeated across baseline, post-intervention, 1- year follow-up measurements. GEE analyses yielded the Wald test statistic. **Outcome: Cigarette use** Measure: Instances of use in last 30 days Baseline Int (n=252): 0.03 (SD 0.24) Comp (n=339): 0.03 (SD 0.27) Follow-up: 12 months Int (n=205): 0.05 (SD 0.5) Comp (n=327): 0.11 (SD 1.08) **Absolute change:** -0.06 instances in 30 days **Relative change:** -54,5% **Narrative results**: Wald X2 =0.73 NR Favorable: Yes Statistical significance: No **Outcome: Alcohol use** Measure: Instances of use in last 30 days Baseline Int (n=252): 0.15 (SD 0.17) Comp (n=339): 0.16 (SD 0.31) 12-month follow-up Int (n=205): 0.17 (SD 0.32) Comp (n=327): 0.31 (SD 0.61)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Age: mean 41.07 years Sex: 100% female Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: Single parent: 39.7% Two parent: 60.3% Other: NR **Study Population: Youth (Int)** Age: mean 12.64 years Grade level(s): NR ages 11-13 Sex: 100% female Race/ethnicity: Black 38.9% White 38.9% Latina 22.2% Other: NR **Community characteristics:** NR	**Intervention duration:** 9 weeks **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes **Comparison group:** No intervention for control		**Absolute change:** -0.13 instances in 30 days **Relative change:** -41.5% **Narrative results**: Wald X2 =6.11 p<0.05 Favorable: Yes Statistical significance: Yes **Outcome: Marijuana use** Measure: Instances of use in last 30 days Baseline Int (n=252): 0.08 (SD 0.01) Comp (n=339): 0.08 (SD 0.02 Follow-up: 12 months Int (n=205): 0.1 (SD 0.13) Comp (n=327): 0.2 (SD 0.65) **Absolute change:** -0.1 instances in 30 days **Relative change:** -50.0% **Narrative results**: Wald X2 =6.75 p<0.01 Favorable: Yes Statistical significance: Yes **Outcome: Prescription drug (mis)use** Measure: Instances of use in last 30 days Baseline Int (n=252): 0.21 (SD 0.96) Comp (n=339): 0.10 (SD 0.47) Follow-up: 12 months Int (n=205): 0.06 (SD 0.46)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=327): 0.17 (SD 1.58) **Absolute change:** -0.22 instances in 30 days **Relative change:** -83.2% **Narrative results**: Wald X2 =12.45 p<0.0001 Favorable: Yes Statistical significance: Yes **Outcome: Intentions to use** Measure: Scale (5 item) score Baseline Int (n=252): 1.92 Comp (n=339): 1.94 Follow-up: 12 months Int (n=205): 2.16 Comp (n=327): 3.04 **Absolute change:** Scale score -0.86 points **Relative change:** NR **Narrative results:** Wald score 8.02 p<0.01 Favorable: Yes Statistical significance: Yes
Author (Year): Schinke et al. (2010) Related papers: Schwinn et al., 2010; Schinke et al., 2004 **Location:** USA; New York City, New Jersey, Delaware	**Setting:** Home and Community (Mixed) **Urbanicity:** Urban **Eligibility:** Youth at community agencies ages 10-12 years (youth and parent consent to participate)	**Brief description of interventions and content:** Computer-based alcohol prevention intervention with both youth and parent components **Intervention/program name:** NR Substance(s) focused*	**Brief description**: Youth self-reported alcohol use, intentions, influences. Cigarette use, and marijuana use Substance(s)* Alcohol, cigarettes, marijuana	Repeated measures MANOVA -baseline group differences by race/ethnicity were significant precluding stratified analyses on these characteristics 7-year follow-up results combined intervention arms for significance testing vs control, but reported raw data separately in Table 2

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Years for Study: NR **Period for Study:** 7 years (84 months) **Study Design**: Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Low e) Selective– High	**Recruitment:** Youths were recruited from 43 New York City, New Jersey and Delaware community agencies offering such services as recreation, after-school programs and social services. Inclusion/Exclusion: Sample size: NR Baseline: 514 youth and their parent(s) randomly assigned by community to study arm Follow-up: Youth-Parent arm 3 years 88.2% 6 years: NR (80.5% overall) 7 years NR (79.7% overall) Loss to f/u: Youth-Parent arm at 3 years was 11.8% and 21.6% at 7 follow-ups **Study population: Parents and Caregivers** Age: NR Sex: NR	Alcohol **Format:** Remote: Computer CD-rom or online content, printed materials Youth components Primary: 10 computer modules each 45 minutes. Program covered skills and practices for goal setting, coping, peer pressure, refusal skills, norm correcting, self-efficacy, problem solving, decision making, effective communication and time management. Boosters: Annual, 30-minute computer (CD or online) module Parent components Primary: Videotape (30 minutes) and print materials in English and Spanish. Informed by family interaction theory, the parent intervention sought to prevent underage drinking by increasing youths' attachment to parents and by enhancing parents' awareness and support of the program objectives, components and strategies. Newsletters for parents (2)	Polysubstance measures (Yes/No)? No Outcome types Intentions? Yes Initiation? No Use? Yes SU disorder? Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity? Yes, intervention content was culturally tailored. Study did not stratify results on race/ethnicity due to significant group differences at baseline Other outcomes? Yes Binge drinking alcohol use Family communication Peer influences	**Outcome: Alcohol use** Measure: Self-reported (mean) number of times of use in the previous 30 days Baseline Int (n=162): 0.07 (SD 0.5) Comp (n=163): 0.05 (SD 0.3) Follow-up: 84 months (7 year f/u) Int (n=127): 2.51 (SE 0.6) Comp (n=139): 4.25 (SE 0.6) **Absolute change:** -1.76 instances in 30 days **Relative change:** -57.8% **Narrative results**: Relative to youths assigned to the control arm, those who participated in the prevention program (combined intervention arms) reported fewer instances in the past 30-days of alcohol consumption ($p < .05$). Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: Alcohol Binge Drinking (use)** Measure: Self-reported instances of $\geq$5 alcohol drinks in a row in the previous 30 days Baseline Int (n=162): 0.0 (SD 0.0) Comp (n=163): 0.03 (SD 0.2) Follow-up: 84 months (7-year f/u) Int (n=127): 0.76 (SE 0.5) Comp (n=139): 2.15 (SE 0.5)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: Spanish preferred language 11.5% **Study Population: Youth** Age: mean 11.5 years (10-12) Grade level(s): NR Sex: 51% female; 49% male Race/ethnicity: Black 54% Hispanic 30% White 11% Asian or other 5% Other: Speaks English 100% **Community characteristics:** NR	Boosters: Year 1 Two-hour workshop + printed manual with home activities Annual boosters: CD or digital audio recordings with parent and youth content and activities **Intervention intensity:** Youth: Number of modules: 10 45-minute modules + 30-minute booster module annually (10-12 hours total) Number of hours per session: 30-45 minutes Total hours of intervention:10-11 hours Parent: 1 30-minute videotape and one 2-hour workshop plus printed materials and newsletters Number of hours per session: 30 minutes Total hours of intervention: 5 hours Additional components: Yes Incentives for participation for youth Incentives for participation for parents **Implementer(s):** NR for parents workshop; NR for computer and printed materials		**Absolute change:** -1.39 instances in 30 days **Relative change (post):** -64.6% **Narrative results**: Relative to youths assigned to the control arm, those who participated in the prevention program (combined intervention arms) reported fewer instances in the past 30-days of binge drinking ($p < .05$) Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: Cigarette use** Measure: Self-reported (mean) number of times of use in the previous 30 days Baseline Int (n=162): 0.16 (SD 2.0) Comp (n=163): 0.05 (SD 0.5) Follow-up: 84 months Int (n=127): 7.82 (SE 4.4) Comp (n=139): 20.79 (SE 4.2) **Absolute change:** -13.08 instances in 30 days **Relative change:** -88.2% **Narrative results**: Relative to youths assigned to the control arm, those who participated in the prevention program (combined intervention arms) reported fewer instances of cigarette smoking ($p<0.05$) Favorable: Yes Statistical significance: NR **Outcome: Marijuana use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
		Intervention duration: NR, but 6-7 years (primary + annual boosters) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? No, but some activities encouraged parent and youth engagement. Parent and child not in the same session/activity? Yes **Comparison group:** No intervention for control		Measure: Self-reported (mean) number of times of use in the previous 30 days Baseline Int (n=162): 0.04 (SD 0.5) Comp (n=163): 0.04 (SD 0.5) Follow-up: 84 months Int (n=127): 4.68 (SE 1.1) Comp (n=139): 3.59 (SE 1.0) **Absolute change:** +1.09 instances in 30 days **Relative change:** +30.4% **Narrative results**: Marijuana use in the previous 30 days increased in intervention arm youth compared to control youth Favorable: No Statistical significance: NR **Outcome: Youth intentions to drink alcohol in the future** Measure: 10-point scale score of intentions Int (n=162): 1.74 (SD 1.3) Comp (n=163): 1.24 (SD 1.1) Follow-up: 84 months Int (n=127): 4.74 (SE 0.3) Comp (n=139): 5.57 (SE 0.3) **Absolute change:** -1.33 scale score points **Relative change:** NA Ranked score **Narrative results:** Relative to youths assigned to the control arm, those who participated in the prevention program (CD and CDP arms) reported lower

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				intentions to drink alcohol in the future ($p < .05$). Favorable: Yes Statistical significance: NR
Author (Year): Schinke et al. (2011) **Location:** USA; New York, New Jersey, and Connecticut **Years for Study**: 2008 **Period for Study**: ~2.5 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– High d) Outcomes– Low e) Selective– High .	**Setting**: Home **Urbanicity:** Mixed **Eligibility:** 1) a daughter between the ages of 10 and 13 years, 2) have private access to a personal computer, and 3) provide assurance that daughter and mother would complete measurement and intervention procedures **Recruitment:** Postings on craigslist.org and from advertisements in New York City newspapers **Inclusion/Exclusion**: Access to private computer and/or internet Sample size Baseline: 546 Intervention: 212	**Brief description of interventions and content:** Drug abuse prevention program for joint mother-daughter involvement in various interactive activities Girls learned substance use statistics, stress management and coping skills Mothers learned family functioning skills (communication, involvement, supervision) **Intervention/program name:** Computer-delivered family intervention Substance(s) focused* General **Format:** Remote [CD-ROM or online] **Intervention intensity:** at least one session per week Number of sessions or modules: 10	**Brief description:** Self-report data Substance(s)* Tobacco, Alcohol, Cannabis, Prescription drug Polysubstance measures YES Outcome types Intentions? YES Initiation? NO Use? YES SU disorder? NO Educational outcomes? NO Mental health (depression and body esteem) YES Morbidity? NO Mortality? NO Equity (focused on one historically disadvantaged group)? YES Other outcomes? YES From daughters: Communication, family rules, self-efficacy, parental involvement, beliefs From mothers:	For each outcome Rates of 30-day substance use for girls were low overall, except for alcohol consumption. **Outcome: Tobacco use** Measure: Mean 30-Day (past month's) cigarettes consumption rate Baseline Int (n= NR): 0.01 (0.09) Comp (n= NR): 0.01 (0.11) Follow-up (in months): 2.5 months Int (n= NR): 0.01 (0.10) Comp (n= NR): 0.02 (0.12) **Absolute change:** -0.01 instances in 30 days **Relative change:** -50% **Narrative results**: F(1, 541), 0.21 Favorable (Yes/No/No effect): No effect Statistical significance: NS **Outcome: Alcohol use** Measure: Mean 30-Day (past month's) beer, wine, spirits consumption rate Baseline Int (n= NR): 0.10 (0.30) Comp (n= NR): 0.09 (0.29) Follow-up (in months): 2.5 months Int (n= NR): 0.09 (0.28) Comp (n= NR): 0.17 (0.38) **Absolute change:** -0.09 instances in 30 days

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Control: 334 Follow-up NR Loss to f/u NR Note: study reported intervention and control separately, only reported intervention population characteristics below **Study population: Parents and Caregivers (Int)** Age: 40.44 (mean) Sex: 100% female Race/ethnicity: NR Education: < High school 7.5 High school 8.5 Some college 29.7 College degree 34.9 Post-graduate 17.0 Employment NR Income: NR Marital status: Single parent 52.4 Partner/Married 47.6 Other NR **Study Population: Youth (Int)** Age: 12.64 (Mean), Range: 10-13	Number of hours per session: varied Total hours of intervention: varied **Implementer(s)** Computer **Intervention duration:** ~10 weeks **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** No intervention	Communication, family rules, parental involvement,	**Relative change:** -52.3 **Narrative results**: $F(1,541) = 7.77$ Favorable (Yes/No/No effect): Yes, intervention reduced alcohol use Statistical significance: Yes, $F(1,541)$, $p < .01$ **Outcome: Cannabis use** Measure: Mean 30-Day (past month's) marijuana consumption rate Baseline Int (n= NR): 0.06 (0.45) Comp (n= NR): 0.05 (0.35) Follow-up (in months): 2.5 months Int (n= NR): 0.01 (0.01) Comp (n= NR): 0.05 (0.22) **Absolute change:** -0.05 **Relative change:** -83.3% **Narrative results**: F (1, 541) = 2.11 Favorable (Yes/No/No effect): Yes Statistical significance: NS **Outcome: Prescription drug use** Measure: Mean 30-Day (past month's) recreational use of prescription drugs rate Baseline Int (n= NR): 0.01 (0.11) Comp (n= NR): 0.03 (0.35) Follow-up (in months): 2.5 months Int (n= NR): 0.00 (0.00) Comp (n= NR): 0.01 (0.22) **Absolute change:** +0.01 **Relative change:** -100% (-33%) **Narrative results**: F (1, 541) = 0.06 Favorable (Yes/No/No effect): Mixed

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Grade level(s): NR Sex: 100% female Race/ethnicity: 58% Black, 42% Hispanic American Other School grades A's 35.9 B's 50.2 C's and lower 13.9 **Community characteristics:** NR			Statistical significance: NS **Outcome: intentions to use substances** (tobacco, alcohol, and drug use) Measure: Mean of intentions to smoke, drink, and use drugs when adults Baseline Int (n= NR): 1.73 (1.01) Comp (n= NR): 1.76 (1.01) Follow-up (in months): 2.5 months Int (n= NR): 1.25 (0.88) Comp (n= NR): 1.44 (0.85) **Absolute change:** -0.16 **Relative change:** NR **Narrative results**: $F(1,541) = 4.99$ Favorable (Yes/No/No effect): Yes, intervention lower intentions Statistical significance: Yes, $F(1,539)$, $p < .05$ **Outcome: Depression** Measure: Mean scale asking about their feelings over the past fortnight Baseline Int (n= NR): 1.34 (1.08) Comp (n= NR): 1.33 (1.05) Follow-up (in months): 2.5 months Int (n= NR): 1.15 (1.04) Comp (n= NR): 1.39 (1.05) **Absolute change:** -0.25 **Relative change:** NR **Narrative results:** $F(1,541) = 5.80$ Favorable (Yes/No/No effect): Yes, intervention lower levels of depression

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Statistical significance: Yes, $F(1,541)$, $p < .05$ **Outcome: body esteem** Measure: scale with questions about the degree to which they were happy with the way they look Baseline Int (n= NR): 3.57 (1.49) Comp (n= NR): 3.64 (1.47) Follow-up (in months): 2.5 months Int (n= NR): 3.58 (1.42) Comp (n= NR): 3.47 (1.52) **Absolute change:** 0.18 **Relative change:** NR **Narrative results**: F (1, 541) = 2.08 Favorable (Yes/No/No effect): No effect Statistical significance: NS
Author (Year): Scull et al. (2017) **Location:** USA, North Carolina and Texas **Years for Study:** NR **Period for Study**: 3 months **Study Design:** Group RCT **CG Suitability**: Greatest	**Setting:** Home (and mobile/digital) **Urbanicity**: Rural **Eligibility:** 3rd -5th graders from 3 selected counties who owned a computer, had access to the Internet at home, and spoke English (one county is outside of a metropolitan area one county is outside of a micropolitan area	**Brief description of interventions and content:** Family-based, online media literacy education (MLE) program for substance abuse prevention in children from rural areas **Intervention/program name:** The Media Detective Family Program Substance(s) focused* General **Format:** Web application using computers as the mode of program delivery	**Brief description:** Monitoring the Future Survey: Substance use: How often they used tobacco and alcohol in the past 30 days. Children answered separately for alcohol and tobacco use using a scale ranging from 1 (0 days) to 7 (all 30 days). Willingness to use substances: Participants responded on a scale ranging from 1 (not at all willing) to 4 (very willing) to items such as "Take one puff" and "Smoke a whole cigarette.	Missingness on outcome variables was modeled under the missing-at-random assumption **Outcome: 30-day substance use** Measure: mean (SD) Baseline Int (n=47): 1.18 (.62) Comp (n=36): 1.00 (.00) Follow-up: 3 months Int (n=12): 1.01 (.05) Comp (n=22): 1.04 (.13) **Absolute change:** +0.21 score points **Relative change:** NA Reported scale score

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment (ROB2) a) Randomization– Some concerns b) Deviations– Low c) Missing data– Low d) Outcomes– Some concerns e) Selective– Low Overall bias: Some concerns	one county is not near a metropolitan/ micropolitan area) **Recruitment:** media, flyers, community event presence Families were randomized to the intervention and control groups within state and by gender at the pretest assessment. **Inclusion/exclusion:** NR Sample size: 229 families (parent–child pairs) Baseline: 83 parent–child pairs (Int 47, Cont. 36) Follow-up at 3 months: Int 12 of 47 Loss to follow up: 75.5% Cont. 22 of 36 Loss to follow up: 38.8% **Study population: Parents and Caregivers** Age: NR	Parents and their children are trained together to become media detectives, who can solve a series of mysteries that are related to advertising Youth components: Media literacy education (MLE) program using family discussion, practice, and application using computer modules Introduce Mystery instructions Case 1 Product advertisements Case 2 Target Audience Case 3 Ad Hook to attract the target audience. Case 4 Address hidden messages Case 5 Missing Information advertisers leave out health information from ads Conclusion All Five Clues (see Table 1) Parent components: Same as youth **Intervention intensity**: Parent and youth combined: Number of modules: 7 lessons Number of hours per session: NR Total hours of intervention: 3 hrs Lessons are completed on demand and are self-paced Additional components: NR	Substance(s)* Alcohol and Tobacco Polysubstance measures (Yes/No)? Yes Outcome types Intentions? Willingness to use? Initiation? No Use? Yes SU disorder? No Educational outcomes? Mental health? No Morbidity? No Mortality? No Equity? No Other outcomes? Yes Willingness to use or intention. -Media deconstruction skills -Parent–child communication behaviors -Program satisfaction	**Narrative results:** MDF yielded statistically significant reductions over time on the key outcome of current substance use, b = −.102 (.043), t=−2.29, p =.029, d=−.80. Children who received MDF reported a significant reduction in their use of tobacco and alcohol over time as opposed to children who did not receive MDF Favorable (Yes/No/No effect): Yes Statistical significance: Yes, from narrative report **Outcome: Willingness to use substances** Measure: Mean (SD) Baseline Int (n=47): 1.05 (.21) Comp (n=30): 1.02 (.08) Follow-up: 3 months Int (n=12): 1.05 (.24) Comp (n=22): 1.03 (.09) **Absolute change:** -0.01 pct pts **Relative change:** NA Report scale score **Narrative results**: No statistically significant differences over time in child's self-reported willingness to use substances were found between the intervention and control groups. However, compared to the control group, children receiving MDF yielded meaningful changes with respect to effect size on both willingness to try

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: NR **Study Population: Youth** Age: NR Grade level(s): 36% third grade, 33% in fourth grade, 31% in fifth grade Sex: 52% female; 48% male Race/ethnicity: NR Black NR Hispanic NR White NR Asian or other NR **Community characteristics:** Demographic composition of families in the intervention and control groups who dropped out of the study was similar (i.e., male parent: 16%, 9%; White parent: 75%, 85%; non-Hispanic parent: 93%,	**Implementer(s):** web application as the mode of program delivery **Intervention duration:** NR **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No **Comparison group:** Control group families received a CD-ROM copy of Hasbro's Family Game Night (FGN) to use on their computers or gaming systems (e.g., Wii). FGN is a minigame collection with six digitized classic board games (i.e., Yahtzee, sorry!) that can be played with up to four players. This control program contains no media literacy education or substance abuse prevention programming.		alcohol (d= −0.22) and willingness to try cigarettes (d=−0.50). Favorable (Yes/No/No effect): Yes Statistical significance: No from narrative report

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	100%; mean parent age: 39, 37; male child: 47%, 61%; White child: 80%, 84%; non-Hispanic child: 90%, 92%; (Mean child age: 9.9).			
Author (Year): Simons-Morton et al. (2005) **Location:** USA, Maryland **Years for Study:** Fall 1996-Fall 1999 **Period for Study**: 48 months **Study Design**: Group RCT **CG Suitability**: Greatest **Risk of Bias Assessment (ROB2)** a) Randomization– Unclear b) Concealment– Unclear c) Blinding– Low d) Outcomes– High e) Selective– Low	**Setting**: school (adolescents); home (parents) **Urbanicity:** NR **Eligibility**: students in 6th grade at selected middle school in Maryland who completed consent form, did not receive failing grade or become newly classified as special education, did not move out of school district, and provided smoking data for all five assessments **Recruitment:** 7 middle schools in Maryland; 3 treatments, 4 control **Inclusion/Exclusion:** above	**Brief description of interventions and content:** Social skills curriculum, parent education, school/academic environment enhancement and commitment to school; alter perceptions, attitudes, antisocial behavior, expectations about substance use; and reduce multiple problem behaviors Adolescents Curriculum: problem solving, communication, self-control, and conflict resolution Included video tape with actors of common problems and problem-solving approaches then brief teacher-lead discussion of relevant skills, interactive group activities and role plays, and skills practice with constructive feedback. Students assigned homework that required involvement of a parent or guardian.	**Brief description:** Waves T1: beginning 6th grade T1: end 6th grade T1: end 7th grade T1: end 8th grade T5: beginning 9th grade Overall mean scale (4 pt): Smoking/Drinking Variables: never (nonusers), -future intent (intenders), 12-month (12-month user) 30-day (recent users), 3 or more times in past 30 days (frequent users) Questions -# times in past 30 days and past 12 months they smoked cigarette and drank alcohol -how often they intend to smoke/drink in high school Antisocial behavior: how often in past year youth in physical fight, in physical fight and someone got hurt, bullied or	Not intent to treat analysis; of 1484 in final sample, 164 study participants not included in final analyses because they did not provide data on smoking on all five surveys. Treatment group effects examined using Latent Growth Curve; to control for baseline differences in outcomes, ANCOVA performed comparing the follow-up measures using the baseline of the outcome as a covariate. **Outcome: Tobacco (Smoking) Use** Measure: means (prevalence) smoking stage (score) Baseline Int (n= 692): 0.15 (0.52) Comp (n=628): 0.23 (0.68) Follow-up (in months): 40 months Int (n= 692): 0.85 (1.32) Comp (n= 628): 1.11 (1.50) **Absolute change:** -0.18 score points **Relative change:** NA **Narrative results**: Figure 1, average smoking stage lower for treatment group than control.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sample size: Baseline: 1484 (2651 provided consent at baseline, but authors use final sample as 1484) Follow-up: 1320 (only included those who completed all 5 surveys; 89%) Loss to f/u: 11% Note: for population characteristics, if study reported total number for intervention and control groups, report the total. If study reported intervention and control separately, report intervention population characteristics **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: NR	Parent education: parental monitoring, involvement, and expectations regarding academic engagement and problem behavior; mailed 20-min video on authoritative parenting, 20-page booklet and periodic newsletters. **Intervention/program name**: Going Places Substance(s) focused* smoking, alcohol (similar time spent on smoking, alcohol and antisocial behavior) **Format:** Adolescents: face-to-face group, printed materials Parents: remote, printed materials **Intervention intensity:** informational "roll-outs" preceding each unit; posters and short video segments presented in the cafeteria and display areas Number of sessions or modules: 36 sessions (6th grade 18 sessions, 7th grade 12 sessions, 8th grade 6 sessions) Number of hours per session: NR Total hours of intervention: NR	picked on someone younger or weaker, lied to a parent or guardian about where they were or whom they were with, gone someplace dangerous or off-limits, stole something from person or store or carried a weapon. Substance(s)* alcohol, tobacco Polysubstance measures (Yes/No)? No Outcome types Intentions? Yes Initiation? Yes Use? Yes SU disorder? No Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? No Mental health (depressive symptoms; anxiety; etc.): Yes (Antisocial behavior) Morbidity? No Mortality? No Equity (stratified analysis)? Yes (sex and race) Other outcomes? Social competence, Deviance acceptance, Parental expectations,	analyses indicate significant differences at S6 (F1,1317=6.06, p=0.014), S7 (F1,1317=12.2, p=0.001), and F9 (F1,1317=8.4, p=0.004), with control group having significantly higher smoking stages when the F6 baseline value was partialed out Favorable (Yes/No/No effect): Yes Statistical significance: Yes (shown above) **Analysis Group: Black vs white** Baseline Black (n=273): 0.17 (0.60) White (n=939): 0.20 (0.60) Follow-up (in months): 40 Black (n=273): 0.89 (1.36) White (n=939): 1.02 (1.44) **Absolute change:** -0.10 score points **Relative change:** NA **Narrative results**: Race, not a significant predictor of slope in added growth factor model (Fig 2) Favorable (Yes/No/No effect): Yes, lower rate of increase in Blacks than whites Statistical significance: NS **Analysis Group: Female vs male** Baseline Female (n=750): 0.17 (0.34) Male (n=570): 0.23 (0.68) Follow-up (in months): 40 Female (n=750): 1.05 (1.43) Male (n=570): 0.87 (1.38) **Absolute change:** +0.24 score points

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Below based on (n=1465 antisocial behavior in Table 1) **Study Population: Youth** Age: NR Grade level(s): beginning 6th to 9th Sex: 56.0% female; 44.0% male Race/ethnicity: 22.0% Black or African American; 69.8% White; 8.1% other Other NR **Community characteristics:** NR	Additional components (things outside sessions/modules) Enhanced school environment: social marketing strategies to improve school climate, reinforce student achievement, establish prosocial norms and positive image for school, and extend exposure to Going Places curriculum concepts **Implementer(s):** Classroom teacher (received training); school administration for school environment, **Intervention duration**: 36 months (6th-8th grade) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes (homework together) **Comparison group**: non-participating school district schools	School climate, Problem behaving friends (how many of five closest friends (0–5) smoke drink alcohol, cheat on a test, bully someone, act disrespectfully, steal, lie to parents, or damage property)	**Relative change:** NA **Narrative results**: Gender, significant predictor of slope in added growth factor (Fig 2), girls progressed relatively faster than boys Favorable (Yes/No/No effect): No Statistical significance: Yes, for females **Outcome: Alcohol Use** Measure: means (prevalence) drinking stage (score) Baseline Int (n=692):0.36 (0.86) Comp (n=620): 0.35 (0.84) Follow-up (in months): 40 months Int (n=692): 1.47 (1.40) Comp (n=620): 1.51 (1.45) **Absolute change:** -0.05 score points **Relative change:** NA **Narrative results**: Negligible treatment group differences were found for drinking behavior Favorable (Yes/No/No effect): Yes?? Statistical significance: No **Analysis Group: Black vs white** Baseline Black (n=273): 0.17 (0.60) White (n=939): 0.20 (0.60) Follow-up (in months): 40 Black (n=273): 0.89 (1.36) White (n=939): 1.02 (1.49) **Absolute change:** -0.10 score points **Relative change:** NA

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: Race, not a significant prediction of slope in added growth factor model (Fig 2) Favorable (Yes/No/No effect): Yes, lower rate of increase in Blacks than whites Statistical significance: NS **Analysis Group: Female vs male** Baseline Female (n=750): 0.29 (0.77) Male (n=570): 0.44 (0.93) Follow-up (in months): 40 Female (n=750): 1.56 (NR) Male (n=570): 1.39 (1.40) **Absolute change:** +0.32 score points **Relative change:** NA **Narrative results**: gender effects not found, not significant predictor of slope in added growth factor (Fig 2) Favorable (Yes/No/No effect): yes, lower rate of growth for males than females Statistical significance: NS **Outcome: Antisocial behavior** Measure: means (prevalence) Baseline Int (n=773): 0.93 (1.33) Comp (n=692): 0.82 (1.29) Follow-up (in months): 40 Int (n=733): 1.18 (1.46) Comp (n=692): 1.15 (1.47) **Absolute change:** -0.08 pct pts

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Relative change: -10.8% **Narrative results**: Negligible treatment group differences were found for antisocial behavior Favorable (Yes/No/No effect): Yes, slower rate of increase for intervention Statistical significance: No **Analysis Group: Black vs white** Baseline Black (n=322): 1.03 (1.37) White (n=1023): 0.85 (1.29) Follow-up (in months): 40 Black (n=322): 1.19 (1.47) White (n=1023): 1.17 (1.43) **Absolute change:** -0.16 pct pts **Relative change:** -19.5% **Narrative results:** Race, not a significant predictor of slope in added growth factor model (Fig 2) Favorable (Yes/No/No effect): Yes, lower rate of increase in Blacks than whites Statistical significance: NS **Analysis Group: Female vs male** Baseline Female (n=820): 0.56 (1.46) Male (n=645): 1.29 (1.46) Follow-up (in months): 40 Female (n=820): 0.99 (1.38) Male (n=645): 1.40 (1.53) **Absolute change:** +0.32 pct pts **Relative change:** +27.3%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: gender effects not found, not significant predictor of slope in added growth factor (Fig 2) Favorable (Yes/No/No effect): yes, lower rate of growth for males than females Statistical significance: NS **Outcome: Tobacco (Smoking) Intention and Initiation** Measure: Growth Mixture Modeling (in Fig 3) Class 1, never smoked, did not intend to start Class 2, intent to smoke, but did not start over assessment period Class 3, delayed initiation followed by rapid acceleration Class 4, initiated early, smoked infrequently Class 5, initiated early, accelerated rapidly to frequent smoking Baseline Int (n=692): reported in Fig 3 Class 1 (n=308), Class 2 (n=218), Class 3 (n=74), Class 4 (n=78), Class 5 (n=14), Comp (n=628): reported in Fig 3 Class 1 (n=262), Class 2 (n=202), Class 3 (n=75),

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Class 4 (n=69), Class 5 (n=20), Follow-up (in months): 40 Int (n=692): reported in Fig 3 Comp (n=628): reported in Fig 3 **Absolute change:** NR **Relative change:** NR **Narrative results**: group differences due to slower increase in smoking stage for Classes 3–5; moderate rate of increase Favorable (Yes/No/No effect): Yes Statistical significance: NR
Author (Year): Spirito et al. (2011) **Location:** Rhode Island **Years for Study:** Jan 2003 to Jan 2008 **Period for Study**: 61 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization– Low b) Concealment– Low	**Setting:** Community /hospital (trauma center) **Urbanicity**: Urban **Eligibility:** 13- to 17-year-old patients treated at urban level I trauma center with positive blood alcohol concentration (BAC), tested using blood, breath, or saliva or self-reported drinking of alcohol in the 6 hours before ED visit. **Recruitment:** see above	**Brief description of intervention and content:** Part I: Individual motivational interview (IMI): 45 min counseling session for adolescents Components: motivation for drinking and review of potential negative consequences, personal responsibility, personalized normative assessment feedback, establishing goals regarding drinking, anticipating barriers to accomplishing goals (i.e., peer pressure to drink) Part II: Family check-up (FCU): Families returned for 1-hour videorecorded assessment	**Brief description:** Self-reported alcohol measures at baseline from Adolescent Drinking Questionnaire (8-point scale) -drinking frequency (days/month) -quantity (drinks/occasion), -frequency of high-volume drinking (greater than or equal to 5 drinks/occasion), -frequency of intoxication (feeling drunk, or very, very high in previous 3 months) Drunk (intoxication) data not reported due to high correlation with high volume drinking days	x^2 tests: Follow-up completion by group Generalized estimating equations (GEE): if alcohol use changed during follow-up and differed at follow-up based on treatment condition. Poisson model: to examine differences in count data for quantity per drinking occasion. **FCU + IMI vs IMI (control)** **Outcome: any alcohol drinking in previous 3-months** Measure: proportion (percentage) Baseline Int (n=62): 100% Comp (n=63): 100% Follow-up (in months): 12m

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
c) Blinding– Low d) Outcomes– Unclear e) Selective– Unclear	**Inclusion:** cited above, and signed informed consent Exclusion: Alcohol-positive patients who were suicidal (n=17) primary language not English or Spanish (n=4), or experienced serious traumatic injury (n=21) Sample size: Baseline: 125 (I: 62; C: 63) Follow-up: 83 (I: 36; C: 47) Total: 66.4% I: 58.1% (36/62) C: 74.6% (47/63) Loss to f/u: 33.6% I: 41.9% (26/62) C: 25.4% (16/63) **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR	session (FAsTask); week later parents returned and received feedback (1 hour) Components: parent(s) and adolescent discuss family beliefs on alcohol, marijuana, cigarette, and other drug use; other topics (i.e., curfew). Parents given follow-up information on substance use treatment services **Intervention/program name**: Individual Motivational Interview + Family Check-up (**IMIFCU**) Substance(s) focused* alcohol **Format:** Adolescents: face-to-face one-on-one Parents: face-to-face one-on-one, printed materials **Intervention intensity**: parents received 5 monthly booster brochures on parenting before 6-month f/u visit Number of sessions or modules: 3 (1 IMI, 2 FCU) Number of hours per session: IMI 45-60 min; FCU 2hr (two 60 min) Total hours of intervention: 2 hrs 45 min to 3 hrs	Substance(s)* alcohol Polysubstance measures (Yes/No)? No Outcome types Intentions? Yes Initiation? No Use? Yes SU disorder? Yes Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? No Mental health (depressive symptoms; anxiety; etc.) : No Morbidity? No Mortality? No Equity (stratified analysis; focused on one historically disadvantaged group)? No Other outcomes? Parents: family stress, parent substance use and substance use beliefs	Int (n=36): 60% Comp (n=47): 70% **Absolute change: -**10 pct pts **Relative change:** -14.3% **Narrative results:** NR – provide overall analysis but not by group Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: high-volume drinking** Measure: proportion (percentage) in table 3 Baseline Int (n=62): 84% Comp (n=63): 84% Follow-up (in months): 12m Int (n=36): 48.6% Comp (n=47): 58.0% **Absolute change:** -9.4 pct pts **Relative change: -**16.2% **Narrative results**: (Figure 3) OR for treatment = 1.61 (95% CI, 0.72-3.63); Treatment X time interaction = 1.14 (95% CI, 0.60-2.15) Favorable (Yes/No/No effect): Yes Statistical significance: R **Outcome: Alcohol drinking frequency** Measure: days/month (Table 2) Baseline Int (n=62): 3.4 Comp (n=63): 3.4 Follow-up (in months): 12m

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Marital status: NR Other: NR **Study Population: Youth** Age: 15.42 (range 13-17) Grade level(s): NR Sex: 54.8% female; 45.2% male Race/ethnicity: 4.8% Asian American or East Indian; 1.6% Black or African American; 27.4% Hispanic; 61.3% White; 4.8% mixed race Other: *Reason for ED visit* 22.6% Intoxication with injury or medical concern 77.4% Intoxication only **Community characteristics**: NR	Additional components (things outside the sessions/modules) Parents received follow-up information on substance use treatment services, 5 monthly booster brochures Follow-up interviews (by research assistants masked to treatment group assignment): telephone at 3 months, in-person at 6 and 12 months **Implementer(s):** interventionist with master's degrees in counseling and psychology conducted intervention **Intervention duration:** 3 months (about 2 weeks with booster brochures to parents up to 6 months and final follow-up at 12 months) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes		Int (n=36): 2.6 Comp (n=47): 2.5 **Absolute change:** +0.1 days/month **Relative change:** +4.0% **Narrative results:** Favorable (Yes/No/No effect): No effect Statistical significance: NR **Outcome: Alcohol drinking quantity** Measure: drinks/occasion (Table 2) Baseline Int (n=62): 5.4 Comp (n=63): 5.2 Follow-up (in months): 12m Int (n=36): 3.1 Comp (n=47): 3.4 **Absolute change:** -0.5 drinks/ occasion **Relative change: -**12.2% **Narrative results:** Favorable (Yes/No/No effect): Yes Statistical significance: NR **Outcome: High-volume drinking frequency** Measure: ≥5 drinks/occasion (Table 2) Baseline Int (n=62): 2.5 Comp (n=63): 2.7 Follow-up (in months): 12m Int (n=36): 2.4 Comp (n=47): 2.0 **Absolute change:** +0.6 ≥5 drinks/ occasion

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
		Parent and child in the same session/activity? Yes **Comparison group:** IMI only; same as intervention group done before randomization. Parents given follow-up information regarding substance use treatment services, received 5 monthly booster brochures on parenting before 6-month f/u visit		**Relative change:** +29.6% **Narrative results:** NR Favorable (Yes/No/No effect): No Statistical significance: NR **<u>Entire sample analyses:</u> FCU + IMI combined + IMI Only (control)** **Outcome: drinking frequency: # of days** **Narrative results**: rose from 3 to 12 months, but average # of drinking days per month at each follow-up point significantly lower than at baseline. Statistical significance: Yes baseline to 12 months, t_{82}=4.18 (P < .001). **Outcome: drinking quantity (per occasion)** **Narrative results**: Time from 3 to 12 months = OR 0.94 (95% CI, 0.87-1.02). OR of 1.10 (95% CI, 0.95-1.27) by treatment condition and OR of 0.99 (0.88-1.11) for treatment condition x time interaction. Statistical significance: Yes, decreased significantly from baseline to 12-month (t82=6.75) (P < .001). **Outcome: high-volume drinking days** Baseline (n=125): 84% 12m follow-up (n=83): 53.3% **Absolute change:** NR **Relative change:** NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: time from 3 to 12 months OR = 1.39 (95% CI, 0.90-2.13). Treatment condition 2.66 OR (95% CI, 0.99- 7.17); average likelihood across follow-up = 30.1% (IMI + FCU) and 44.6% (IMI only). Condition x time interaction = 1.51 OR (95% CI, 0.73-3.11) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, decreased significantly from baseline to 12-month (*t*82=4.48) (*P*< .001) but at 12-month intervention comparisons not statistically significant.
Author (Year): Spirito et al. (2017) Related paper: Becker et al., 2019 **Location:** USA; State not reported **Years for Study:** 2009-2014 **Period for Study:** 65 months **Study Design:** RCT Individual **CG Suitability:** Greatest	**Setting**: Mix (community, school, home) **Urbanicity:** NR **Eligibility:** Adolescents whose parents were concerned about their alcohol or marijuana use, and who had a sibling **Recruitment:** Participants were recruited from the community, including local high schools, family court and	**Brief description of intervention and content:** Intervention provided individualized, tailored feedback on specific parenting skills, including monitoring and supervision, limit setting, and alcohol-related communication **Intervention/program name:** Family Check-Up (FCU) Substance(s) focused*: Alcohol and marijuana use. (Tailored focus to substances identified as a problem) **Format:** Self-administered assessment (baseline)	**Brief description:** Youth self-reported drug use at 3m, 6m, 12m Adolescent outcomes Sibling outcomes Substance(s)* Alcohol use in the past 3m, and heavy drinking in the past month Marijuana use, number of days used in past 3m, average per day Sum score of all drug categories (max 10) used in the past 3m Polysubstance measures: Yes, sum total of categories of drugs used in past 3m	There were no differences between conditions in alcohol, marijuana, and sum categories of drug use at baseline or follow-up for the participating adolescent and sibling. Attrition analyses examining differences between baseline and 12-month follow-up non-significant for both teens and siblings Neither the intervention nor comparison program was found to significantly reduce alcohol or marijuana use in the identified teens. Study does not report specific intervention or comparison pre or post measures (Table 3)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment (ROB2) a) Randomization– Low b) Deviations– Low c) Missing data– High d) Outcomes– High e) Selective– High Overall bias: High	truancy courts, as well as through advertisements or referrals from emergency departments or mental health agencies. **Inclusion/Exclusion:** 1) ages of 12-19 years 2) living at home with a parent or legal guardian who is also willing to participate; 3) used alcohol or marijuana in the past 90 days 4) a sibling within 5 years of age of the target teen, living at home with the adolescent and participating parent(s), and between the ages of 11 and 21 years old. Sample size: Assessed: 930 families Randomized: 107 families Baseline Intervention: 55 families Comparison: 52 families	One-hour video-taped family assessment task (used to inform counseling feedback) Face-to-face counseling session for parents (educate parents about risk for AOD use among adolescents, support appropriate parenting, and motivate parents to change ineffective parenting). **Intervention intensity:** 1 meeting, booster brochures every 3–4 weeks Number of sessions: 2 baseline+ counseling; plus 8 mailed boosters Number of hours per session: 1-1.5 hours Total hours of intervention: 2-3 hours (baseline assessment + video+ counseling f/u) Additional components: Yes Baseline assessment Videotape family task Mailed boosters (n=8) for parents every 3-4 weeks for 6 months **Implementer(s):** Trained (8-hour training) four master's level and one doctoral level Counselors **Intervention duration:** 2 weeks between baseline and	(Marijuana, cocaine, ecstasy, stimulants, sedatives, hallucinogens, opiates, inhalants, cough syrup or "other"). Outcome types Intentions? No Initiation? No Use? Yes SU disorder? No Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity? No Other outcomes? Yes Sources of Parental Knowledge	**Outcome: Alcohol use** Measure: number of days in past 3m Baseline Int (n=55): NR Comp (n=52): NR Follow-up (in months): 12m Int (n=55): NR Comp (n=52): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: No differences. However, Teen alcohol use was associated with sibling alcohol use and alcohol use increased with the age of the sibling. Favorable: No effect Statistical significance: No **Outcome: Alcohol use** Measure: Alcohol use Heavy drinking days/month (5 or more drinks) categorized frequency Baseline Int (n=55): NR Comp (n=52): NR Follow-up (in months): 12m Int (n=55): NR Comp (n=52): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** No differences Favorable: No effect Statistical significance: No **Outcome: Marijuana use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Follow-up: 92 families (86%) Loss to f/u 14% In order to ensure that the two treatment conditions were balanced for alcohol use and externalizing problems, families were assigned to their condition using an urn randomization procedure **Study population: Parents** Age: mean 43.3 years Sex: Female 87.2% Male 12.8% Race/ethnicity: White 53.2% Black 8.5% Native American 2.1% Asian 2.1% >1 race 4.3% Hispanic 29.8% Education: Prior to HS 2.2% HS/GED 47.8% 2yr/4yr college 45.7% >4yr college 4.3% Employment: NR Income: 0-$25,999 36.4% $26k-$49,999 27.3%	counseling session, but booster mailings extended to 6 months **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes (video) Counseling session for parents **Comparison group:** Psychoeducation Baseline assessment 60-minute face to face session with informational material on alcohol and other drug use Handouts on the topics reviewed in the session. Mailed boosters (n=8) for parents every 3-4 weeks for 6 months		Measure: number of days in the past 3m Baseline -s): 12m Int (n=55): NR Comp (n=52): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** No differences. However, Teen marijuana use was associated with sibling marijuana use. Marijuana use increased with the age of the sibling Favorable: No effect Statistical significance: No **Outcome: Marijuana use** Measure: Daily frequency Baseline Int (n=55): NR Comp (n=52): NR Follow-up (in months): 12m Int (n=55): NR Comp (n=52): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** No differences Favorable: No effect Statistical significance: No **Outcome: Sum of drug categories (10) used in the past 3m** Baseline Int (n=55): NR Comp (n=52): NR Follow-up (in months): 12m

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	$50k or more 36.4% Marital status: Single/never married 21.7% Together/Married 52.2% Divorced/Widowed 26.1% Other **Study population: Youth** Sex: Female 46.8% Male 53.2% Race/ethnicity: White 44.7% Black 2.1% Native American 2.1% Asian 2.1% >1 race 21.3% Hispanic 27.7% **Community characteristics**: NR			Int (n=55): NR Comp (n=52): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** No differences Favorable: No effect Statistical significance: No In another study by Becker (2014), using motivation enhancement therapy, adolescents reported significant decreases in both marijuana and alcohol use over the 12-month study.
Author (Year): Studies evaluating PDFY Spoth et al., 1999 Park et al., 2000 Spoth et al., 2001 Mason et al., 2003 Guyll et al., 2004 Spoth et al., 2004 Spoth et al., 2006a Spoth et al., 2006b Spoth et al., 2008	**Setting:** School School recruitment and school small group sessions for parents **Urbanicity**: Rural **Eligibility:** All 6th grade students and their families in study	PDFY Intervention arm of three-arm trial of two family-focused universal prevention programs **Intervention name:** Preparing for the Drug-Free Years (PDFY) program Family competency training program based on social development model	Youth self-reported measures of lifetime and past month use of substances on questionnaire administered during 60–80-minute home visit Families were reassessed approximately 6, 18, 30, 48, and 72 months following the pretest (when students were in the sixth, seventh, eighth,	Relevant substance use outcome results reported from identified included studies with the longest follow-up period Spoth 2001 (4-year follow-up) For dichotomous outcome measures differences in proportions of intervention and control groups reporting substance-use behaviors (i.e.,lifetime use, past year use, and

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Spoth et al., 2014b **Location:** USA; rural Iowa **Years for Study:** 1993-2007 **Period for Study:** Longest term follow-up was 120 months (6th grade to age 21). **Study Design:** group RCT **CG Suitability**: greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Low c) Blinding - High d) Outcomes - Low e) Selective - High	public schools were eligible 33 study schools in 19 Iowa counties selected based on free/reduced lunch status of 15% or higher and community size of 8500 or fewer. **Recruitment:** as above **Inclusion/Exclusion:** as above Sample size: Schools were the unit of randomization • PDFY: 11 schools • Control: 11 schools • ISFP: 11 schools (second intervention evaluated) Recruited students/families 883 families contacted N=424 (48%) completed pre-test and were randomized to one of 3 study arms Baseline PDFY arm: n=221 families	Enhance protective child-parent interactions and reduce children's risk for early substance use Substance(s) focused General (universal) prevention **Format:** Small group sessions for parents with child included in 1 of the 5 sessions Average group size 10 families Videotapes were used to standardize content delivery. **Intervention intensity:** Number of sessions: Five Number of hours per session: 2 hours Total hours of intervention: 10 **Additional components:** No but babysitting was provided for small group sessions **Implementer(s):** Trained program implementers. Implementers for the PDFY were adult members of the local communities hired on the basis of their presentational and interpersonal skills, as assessed through personal interviews with project leaders. Training included a 3-day training plus a booster.	tenth, and twelfth grades, respectively). At age 21 young adults were assessed using computer-assisted telephone interviews and questionnaires Substance(s): Alcohol, tobacco, marijuana, methamphetamine, narcotic drug misuse, barbiturate drug misuse Polysubstance measures? No. Subset of studies consolidated measures across substances, but specific substance use outcomes are reported here Outcome types Intentions? NO Initiation? YES Use? YES SU disorder? NO Educational outcomes? NO Mental health: NO Morbidity? YES Young Adult Lifetime Sexually Transmitted Diseases Mortality? NO Equity?: NO, but rural applicability Other outcomes? Yes. Self-reported non-drug delinquent behaviors	past month use) were evaluated with z tests. Relative reduction rates of new user proportions were calculated (Table 2) **Outcome: Initiation of alcohol use** Measure: Lifetime prevalence of ever drank alcohol (grade 6-grade 10) Study: Spoth 2001 (Table 2) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months post baseline Int (n=122): 60% Comp (n=126): 68% **Absolute change (post):** -8 pct pts **Relative change (post):** -11.77% **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Initiation of cigarette use** Measure: Lifetime prevalence of ever smoked cigarettes (grades 6-10) Study: Spoth 2001 (Table 2) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months post baseline Int (n=128): 44% Comp (n=142): 50% **Absolute change (post):** -6 pct pts **Relative change (post):** -12.5%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Control arm: n=208 families Loss to f/u: 35% at 10 years Characteristics as reported in Spoth 2001 (Table 1 PDFY) **Study population: Parents and Caregivers: Overall** Age: mean 37.8 Sex: NR Race/ethnicity: Caucasian 99% Education: mean 13.5 years Completed HS: 96-97% Some college 54-59% Employment: Income: median household income $37,500 Marital status: 86% two-parent household Other: Number of children in household: 3 **Study Population: Youth Overall** Age: mean 11.4 years	Implementers worked in two person teams to conduct the 5-session small group program content. **Intervention duration:** 5 weeks **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child Yes but only 1 session with parent Parent and child in the same session/activity? Yes for 1 session **Comparison group:** Minimal contact control schools. Parents received printed materials (4 mailed leaflets on developmental changes	(e.g., taken something worth $25 or more; purposely damaged property) Measures of Health Risk Sexual Behaviors (Spoth 2014b) Young Adult Number of Sexual Partners in Past Year Young Adult Condom Use in Past Year Young Adult Substance Use and Sex Additional outcome results (Spoth 2014b Tables 2) post-only comparisons at age 21 Morbidity **Lifetime sexually transmitted diseases** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=220): 5.6% Comp (n=208): 6.8% **Absolute change:** -1.2 percentage points (p<0.05) **Relative change:** RRR -18% **Narrative results:** NR Favorable? Yes Significant? Yes	**Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: No Outcome: Initiation of marijuana use Measure: Lifetime prevalence of ever used marijuana (grades 6-10) Study: Spoth 2001 (Table 2) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months post baseline Int (n=143): 11% Comp (n=151): 17% **Absolute change (post):** -6 pct pts **Relative change (post):** -35.3% **Narrative results**: significant only at p<0.1 Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol use** Measure: Proportion reporting use in the past month Study: Spoth 2001 Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** -40.6%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Grade level(s): 6th grade at intervention, 10th grade at 4-year follow-up Sex: 51.1% female; 48.9% male Race/ethnicity: Caucasian 99% Other: Two parent household (86%) **Community characteristics:** Proportion of families in study schools eligible for free/reduced lunch 26.9% Other: Rural counties/schools		Health risk sexual behaviors (categorized) **Past year number of partners >1** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=220): 26.6% Comp (n=208): 29.3% Absolute change: -2.7 percentage points (NS) Relative change: RRR -9% Narrative results: Favorable? Yes Significant? No **Past year condom use < always** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=220): 70.5% Comp (n=208): 71.9% **Absolute change:** -1.4 percentage points **Relative change:** RRR -2% **Narrative results:** NR Favorable? Yes (small) Significant? No **Substance use and sex > never** Baseline (not measured) Int (n=NR): NR	**Narrative results:** These differences were significant for the PDFY vs control group comparison of past month alcohol use (relative reduction = 40.6%, z = 2.97). Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Cigarettes use** Measure: Proportion reporting use in the past month Study: Spoth 2001 Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 48 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** An analysis of the proportions of adolescents using tobacco during the past month showed that lower proportions of PDFY group students (vs. control group students) used at the lOth-grade follow-up. Favorable: Yes Statistical significance: No (NR) **Outcome: Marijuana use** Measure: Proportion reporting use in the past year Study: Spoth 2001 Baseline Int (n=NR): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
			Comp (n=NR): NR Follow-up: 120 months Int (n=220): 54.8% Comp (n=208): 58.4% **Absolute change:** -3.6 percentage points (p<0.05) **Relative change:** RRR -6**%** **Narrative results:** NR Favorable? Yes Significant? Yes	Comp (n=NR): NR Follow-up (in months): 48 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: An analysis of the proportions of adolescents using marijuana during the past year showed that lower proportions of PDFY group students (vs. control group students) used at the 10th-grade follow-up. Favorable (Yes/No/No effect): Yes Statistical significance: No (NR) **Outcome: Methamphetamine use** Measure: Past year use at 12th grade follow-up Study: Spoth 2006a Baseline Int (n=NR): NA (presumed 0) Comp (n=NR): NA (presumed 0) Follow-up (in months): 72 months Int (n=149): 3.57% Comp (n=157): 3.21% **Absolute change:** +0.36 percentage points NS **Relative change:** +11% **Narrative results:** Among the 140 PDFY condition participants, 5 (3.57%) reported using methamphetamines in the past 12 months—a rate similar to that in the control group. Favorable (Yes/No/No effect): No effect

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Statistical significance: No Applicability: Spoth 2006b examined effects for subsets (at 12 grade assessment) defined by family risk including parent marital status, parental education, household income, household financial strain, parent and child internalizing and externalizing behaviors Results were most consistent with the interpretation that ISFP intervention provided comparable benefits for two outcome measures, regardless of family risk status **Outcome: Narcotic drug misuse-lifetime** Measure: Have you ever used narcotics (e.g. Vicodin, Oxycontin, or Percocet), not under a doctor's orders?'; Study: Spoth 2008 Baseline Int (n=NR): NA Comp (n=NR): NA Follow-up (in months): 120 months Int (n=152): 4.6% Comp (n=161): 8.7% **Absolute change:** -4.1 percentage points NS **Relative change (post):** -47.1% **Narrative results**: PDFY group young adults' lifetime narcotic misuse [Fisher's exact test (df = 1) = 2.039, *P*

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				= 0.11] were not significantly different, although they were less than those of the controls. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Barbiturate drug misuse-lifetime** Measure: Have you ever used barbiturates (sedatives), not under a doctor's orders?'. Study: Spoth 2008 Baseline Int (n=NR): NA Comp (n=NR): NA Follow-up (in months): 120 months Int (n=152): 1.3% Comp (n=161): 3.1% **Absolute change:** -1.8 percentage points NS **Relative change:** -58.0% **Narrative results:** PDFY group young adults' barbiturate misuse rates [Fisher's exact test (df = 1) = 1.123, *P* = 0.25] were not significantly different, although they were less than those of the controls. Favorable (Yes/No/No effect): Yes Statistical significance: No Spoth 1999a: 1year and 2 year post baseline Consolidated (alcohol and tobacco) initiation

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Consolidated (alcohol, tobacco, illicit drug) progression of use Park 2000: 3.5-years post baseline Alcohol initiation Alcohol past month use Spoth 2001: 4-year outcomes post baseline Alcohol, tobacco, marijuana initiation Alcohol, tobacco, marijuana use and frequency of use Mason 2003: 3.5-year outcomes post baseline Polysubstance use Delinquency behaviors (not school-related) Guyll 2004: 4-year outcomes post baseline Alcohol and tobacco composite initiation Alcohol and tobacco composite use Spoth 2004: 6-year outcomes post baseline Alcohol, tobacco, marijuana initiation Alcohol, tobacco composite score use Spoth 2006a: 6.5-year outcome post baseline Methamphetamine past year use (only at 6.5 years)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Spoth 2006b: 6.5-year outcomes post baseline Risk moderation in initiation of alcohol and illicit substances Spoth 2008: 9–10-year outcomes post baseline Narcotic drug misuse lifetime Barbiturate drug misuse lifetime
Author (Year): Studies providing assessments of Iowa Strengthening Families Program (IFSP) Spoth et al. 1999a Spoth et al. 1999b Spoth et al. 2001 Guyll et al. 2004 Spoth et al. 2004 Spoth et al. 2006a Spoth et al. 2006b Spoth et al. 2008 Spoth et al. 2009 Spoth et al. 2012 Spoth et al. 2014b Spoth et al. 2019 **Location:** USA; rural Iowa **Years for Study:** 1993-2007 **Period for Study**: Longest term follow-up	**Setting:** School Schools were utilized for recruitment and conducting intervention small group sessions **Urbanicity:** Rural **Eligibility:** All 6th grade students and their families in study public schools were eligible 33 study schools in 19 Iowa counties selected based on free/reduced lunch status of 15% or higher and community size of 8500 or fewer. **Recruitment:** as above **Inclusion/Exclusion**: as above	**Brief description of intervention and content:** Intervention and Iowa Strengthening Families Program (ISFP): One arm of a three-arm trial Biopsychosocial model content ISFP targets the enhancement of family protective processes, along with family risk reduction Objectives of the ISFP focus on improving (a) disciplinary practices, (b) parent–child relationship quality, (c) parent–child bonding, and (d) child coping and problem-solving skills. **Intervention/program name: Iowa** Strengthening Families Program (ISFP): Substance(s) focused General (universal) prevention	**Brief description**: self-reported measures of lifetime and past month use of substances on questionnaire administered during 60–80-minute home visit Families were reassessed approximately 6, 18, 30, 48, and 72 months following the pretest (when students were in the sixth, seventh, eighth, tenth, and twelfth grades, respectively). At age 21 young adults were assessed using computer-assisted telephone interviews and questionnaires Substance(s): Alcohol, tobacco, marijuana, methamphetamine, narcotic drug misuse, barbiturate drug misuse	Relevant substance use outcome results reported from identified included studies with the longest follow-up period **Outcome: Initiation of illicit substance use** Measure: Yes response to lifetime ever use of one or more of 11 illicit substances (e.g., marijuana, inhalants, methamphetamine, cocaine, ecstasy, nonmedical prescription drug use) Study: Spoth 2012 (Note: Spoth 2009 reports similar analyses for 12th grade follow-up) Growth curve model estimates Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months post baseline Int (n=170): 27.5% Comp (n=161): 38.3% **Absolute change:** -10.8 percentage points **Relative change:** -28.2**%**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
was 120 months (6th grade to age 21). **Study Design:** Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Low c) Blinding - High d) Outcomes - Low e) Selective - High	Sample size: Schools were the unit of randomization ISFP: 11 schools Control: 11 schools PDFY: 11 schools (second intervention evaluated) Recruited students/families 883 families contacted N=424 (48%) completed pre-test and were randomized to one of 3 study arms Baseline ISFP arm: n=238 families Control arm: n=208 families Loss to f/u: 29% at 120 months Characteristics as reported in Spoth 2001 (Table 1 ISFP) **Study population: Parents and Caregivers: Overall** Age: mean 38.2 Sex: NR Race/ethnicity: Caucasian 99%	**Format:** Small group sessions with sections for parents, for youth, and for both. Each of the first six sessions includes a separate, concurrent youth and parent skills-building curriculum (1 hour), followed by a family curriculum (1 hour). The parents and their youth jointly participate in the family session where they practice skills learned in their separate sessions. The seventh session includes only the 1-hour family interaction session. Videotapes: Essential program content for the parent and child skills training sessions was presented on videotapes that included family interactions that illustrated key program concepts. The group sizes ranged from 3 to 15 families, with an average group size of 8 families and 20 persons. **Intervention intensity:** Number of sessions: Seven Number of hours per session: 2 hours Total hours of intervention: 14	Polysubstance measures? Yes, lifetime illicit substance use consolidated responses for 11 items (e.g., marijuana, inhalants, methamphetamine, cocaine, ecstasy, nonmedical prescription drug use) Outcome types Intentions? NO Initiation? YES Use? YES SU disorder? NO Educational outcomes? NO Mental health: NO Morbidity? YES Young Adult Lifetime Sexually Transmitted Diseases Mortality? NO Equity?: NO, but rural applicability Other outcomes? Yes. Self-reported non-drug delinquent behaviors (e.g., taken something worth $25 or more; purposely damaged property) Measures of Health Risk Sexual Behaviors (Spoth 2014b) Young Adult Number of Sexual Partners in Past Year	**Narrative results:** Results supported an indirect effect of ISFP on lifetime illicit substance use of young adults through reduction in the rate of increase of illicit substance use exposure across adolescence p=0.02 Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Past Year Illicit Substance Use at age 21** (Spoth 2019) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 120 months Int (n=170): NR Comp (n=161): NR **Absolute change: N**R **Relative change:** NR **Narrative results:** Direct intervention effects were not significant. Indirect effects of the intervention were found for adult past year illicit substance use (ß=-0.170, t=-4.335, p < .0001) follow-up. Favorable: Yes Statistical significance: Yes **Outcome: Initiation of prescription drug narcotic misuse** Measure: Yes response to 'Have you ever used narcotics (e.g.Vicodin, Oxycontin, or Percocet), not under a doctor's orders? Study: Spoth 2008 Baseline Int (n=NR): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Education: mean 13.3 years Completed HS: 96-97% Some college 54-59% Employment: Income: median household income $42,300 Marital status: 88.7% two-parent household Other: Number of children in household: 3.2 **Study Population: Youth Overall** Age: mean 11.3 years Grade level(s): 6th grade at intervention, 10th grade at 4 year follow-up Sex: 51.9% female; 48.1% male Race/ethnicity: Caucasian 99% Other: Two parent household (88.7%) **Community characteristics:** Proportion of families in study schools eligible for free/reduced lunch 26.3% Rural counties/schools	Additional components: No, but babysitting services were provided during meeting times. **Implementer(s)** trained program implementers. Implementers for the ISFP were adult members of the local communities hired on the basis of their presentational and interpersonal skills, as assessed through personal interviews with project leaders. Training included a 3-day training plus a booster. Implementers worked in two person teams to conduct the 7 session small group program content. **Intervention duration:** 7 weeks **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes **Comparison group:** Minimal contact control schools. Parents received printed materials (4	Young Adult Condom Use in Past Year Young Adult Substance Use and Sex Additional outcome results (Spoth 2014b Tables 2) post-only comparisons at age 21 Morbidity **Lifetime sexually transmitted diseases** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=238): 2.9% Comp (n=208): 5.4% **Absolute change:** -2.5 percentage points (p<0.01) **Relative change:** RRR -46% **Narrative results:** NR (Yes/No/No effect) Yes Significant Yes Health risk sexual behaviors (categorized) **Past year number of partners >1** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=238): 25.8% Comp (n=208): 33.1%	Comp (n=NR): NR Follow-up: 120 months post baseline Int (n=170): 0.6% Comp (n=161): 8.7% **Absolute change:** -8.1 percentage points **Relative change (post):** -93.1% **Narrative results**: The ISFP group young adults reported significantly less life-time narcotic misuse [Fisher's exact test (df = 1) = 12.442, *P* < 0.001] Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Initiation of prescription drug barbiturates misuse** Measure: Yes response to 'Have you ever used barbiturates (sedatives), not under a doctor's orders?'. Study: Spoth 2008 Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months post baseline Int (n=170): 0.0% Comp (n=161): 3.1% **Absolute change:** -3.1 percentage points **Relative change (post):** -99.6% **Narrative results:** The ISFP group young adults reported significantly less life-time barbiturate misuse than controls [Fisher's exact test (df = 1) = 5.313, *P* = 0.03] Favorable (Yes/No/No effect): Yes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Adult follow-up (Spoth 2019) Intervention 170 (71.4% of 238) Comparison 161 (77.4% of 208)	mailed leaflets on developmental changes	**Absolute change:** -7.3 percentage points (p<0.01) **Relative change:** RRR -22% **Narrative results:** Favorable (Yes/No/No effect) Yes Significant Yes **Past year condom use < always** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=238): 69.2% Comp (n=208): 71.4% **Absolute change:** -2.2 percentage points **Relative change:** RRR -3% **Narrative results:** NR Favorable (Yes/No/No effect) Yes (small) Significant No **Substance use and sex > never** Baseline (not measured) Int (n=NR): NR Comp (n=NR): NR Follow-up: 120 months Int (n=238): 53.9% Comp (n=208): 59.5% **Absolute change:** -5.6 percentage points (p<0.01) **Relative change:** RRR -9% **Narrative results:**	Statistical significance: Yes **Outcome: Past month prescription drug narcotics misuse** Measure: Yes response to 'In the past year, did you take narcotics other than heroin (e.g. morphine, codeine, Demerol) to get high? Study: Spoth 2008 (12th grade assessment) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 72 months post baseline Int (n=151): 0.0% Comp (n=157): 3.8% **Absolute change:** -3.8 percentage points **Relative change: -**99.7% **Narrative results:** 12th-grade ISFP intervention condition participants reported significantly less narcotic misuse [Fisher's exact test (df = 1) = 5.788, *P* = 0.02] in the past year than control condition participants Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Past year use of methamphetamines** Measure: Any non-zero response to 'Write down the number of times during the past 12 months you took methamphetamines?

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
			Favorable (Yes/No/No effect) Yes Significant Yes	Study: Spoth 2006a (12th grade assessment) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 72 months post baseline Int (n=151): 0.0% Comp (n=157): 3.21% **Absolute change:** -3.21 percentage points **Relative change:** -100% **Narrative results:** statistically significant difference (P=.04). Favorable (Yes/No/No effect): Yes Statistical significance: Yes Applicability: Spoth 2006b examined effects for subsets (at 12 grade assessment) defined by family risk including parent marital status, parental education, household income, household financial strain, parent and child internalizing and externalizing behaviors Results were most consistent with the interpretation that ISFP intervention provided comparable benefits for two outcome measures, regardless of family risk status Spoth 2001 (4-year, 10th grade follow-up) For dichotomous outcome measures differences in proportions of intervention and control groups

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				reporting substance-use behaviors (i.e., lifetime use, past year use, and past month use) were evaluated with z tests. Relative reduction rates of new user proportions were calculated (Table 2) **Outcome: Initiation of alcohol use** Measure: Lifetime prevalence of ever drank alcohol (grade 6-grade 10) Study: Spoth 2001 (Table 2) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months post baseline Int (n=131): 50% Comp (n=126): 68% **Absolute change:** -18 percentage points **Relative change:** -26.4% p<0.01 **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Initiation of cigarette use** Measure: Lifetime prevalence of ever smoked cigarettes (grades 6-10) Study: Spoth 2001 (Table 2) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months post baseline Int (n=141): 33%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=142): 50% **Absolute change:** -17 percentage points **Relative change**: -34.8% p<0.01 **Narrative results**: NR Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Initiation of marijuana use** Measure: Lifetime prevalence of ever used marijuana (grades 6-10) Study: Spoth 2001 (Table 2) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months post baseline Int (n=143): 7% Comp (n=151): 17% **Absolute change:** -10 percentage points **Relative change:** -58.2% p<0.05 **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Alcohol use** Measure: Proportion reporting use in the past month Study: Spoth 2001 Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up: 48 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** -30% **Narrative results:** These differences were significant for the IFSP vs control group comparison of past month alcohol ISFP-control group (relative reduction = 30%, *z* = 2.19) and past month cigarette use (relative reduction =46%, *z* = 2.50). Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Cigarettes use** Measure: Proportion reporting use in the past month Study: Spoth 2001 Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 48 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** -46% **Narrative results**: These differences were significant for the IFSP vs control group comparisons of past month cigarette use (relative reduction = 46%, *z* = 2.50). Favorable (Yes/No/No effect): Yes Statistical significance: Yes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Marijuana use Measure: Proportion reporting use in the past year Study: Spoth 2001 Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 48 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: An analysis of the proportions of adolescents using marijuana during the past year showed that lower proportions ISFP group students (vs. control group students) marijuana at the 10th-grade assessment follow-up. Favorable (Yes/No/No effect): Yes Statistical significance: No (NR)
Author (Year): Spoth et al. (2002) Related papers: Spoth et al. 2005 Spoth et al. 2006a Spoth et al. 2006b Spoth et al. 2008a Spoth et al. 2008b Spoth et al. 2014a Spoth et al. 2016 Trudeau et al. 2016	**Setting:** Mix (school and community) **Urbanicity:** Rural **Eligibility:** Middle schools in 22 counties of Iowa eligible based on: 20% or more of households in the school district within 185% of the federal poverty level; School	**Brief description of intervention and content:** Intervention was a combination of a family-focused intervention and school-based prevention curricula (three-arm trial with the school only arm excluded from this summary) **Intervention name**: Capable Families and Youth Study (Strengthening Families	**Brief description** Self-reported substance use outcomes using in-classroom questionnaires Self-reports were collected at baseline, 6 months later following the interventions, then yearly through the 12th grade Adult (ages 22, 25, and 27) follow-up was conducted using	Outcome analyses were "intent-to-treat," using data from individuals in the entire sample, whether or not particular individuals participated in the intervention(s). 12th Grade Results as reported in Spoth 2008b (Table 2) **Outcome: Substance Use Initiation Index** Measure: Scale score for ever use of alcohol, cigarettes, or marijuana

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Location: USA, Iowa **Years for Study**: 1997-2011 **Period for Study:** 66 months for Grade 12 follow-up (up to 174 months for age 27 follow-up) **Study Design**: Group RCT **CG Suitability**: Greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Low c) Blinding - High d) Outcomes - Low e) Selective - High	district enrollment under 1,200; all middle school grades (6–8) taught at one location. 7th grade students (and families) in study schools **Recruitment:** Random selection of eligible middle schools **Inclusion/Exclusion:** As above Recruited schools: 36 with schools randomized to condition: Intervention: 12 schools Control: 12 schools 2nd intervention: 12 schools (not reported here) Sample size: Students (Spoth 2008 table 1) Baseline 7th grade: 1050 Intervention: 554 Control: 496 Follow-up 12th grade: 797	Program: For Parents and Youth 10-14 + Life Skills Training) Substance(s) focused* General substance use prevention **Format:** Family intervention: face-to-face small groups School intervention: face-to-face classroom curricula **Intervention intensity:** Parents (family intervention) Number of sessions: 11 (7 sessions plus 4 boosters) Number of hours per session: 2 hours Total hours of intervention: 22 Youth (Family + school) Number of sessions: 11 family sessions + 20 classroom sessions Number of hours per session: 2 hours for family sessions; 45 minutes for classroom sessions Total hours of intervention: 22 hours +15 hours =37 hours Additional components: A subset of families received as booster a videotape and handout and family–school resource fair and resource directory; and a goal-setting seminar presented to students	computer-assisted telephone interviews supplemented by mailed questionnaires Substance(s)* Alcohol and related drunkeness Cigarettes Marijuana Methamphetamines Prescription drug misuse Polysubstance measures? Yes Overall: Substance use initiation index (ever had a drink of alcohol; ever smoked a cigarette; and ever smoked marijuana Subset analyses of higher-risk youth: Monthly poly-substance use Monthly or more frequent alcohol use, cigarette use, and marijuana use Advanced poly-substance use (APU) index. Sum of five items, daily or more frequent use of cigarettes, alcohol use a few times a month or more drunkenness, monthly or more frequent	Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 1.871 adjusted means score Comp (n=NR): 2.040 adjusted means score **Absolute change:** -0.169 scale points **Relative change:** NR **Narrative results**: Tests of differences (*t*-values) =2.28 p<0.01 one-tailed Favorable? Yes Statistical significance: Yes p<0.01 **Outcome: Initiation of Alcohol** Measure: Score for Lifetime ever use of alcohol Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 0.939 score Comp (n=NR): 0.963 score **Absolute change:** -0.024 score points **Relative change:** -2.5% **Narrative results**: Tests of differences (*t*-values)=0.87 NR (NS) Favorable: Yes Statistical significance: No Outcome: Initiation of drunkenness Measure: Score for Lifetime ever drunkenness

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Intervention: 450 Control:347 Loss to f/u: 24.1% (Grade 12) Adult sample: NR **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: Family eligible for free-reduced lunch program 24.3% **Study Population: Youth Intervention arm** Age: NR Grade level(s): 7th grade Sex: Female 46.5%; Male 53.5% Race/ethnicity: Caucasian: 96.5% Other: Living with both biological parents: 71.6 Other: Family eligible for free-reduced lunch program 24.3%	**Implementer(s)** Trained facilitators (3 day training) for family group interventions Trained classroom teachers delivered the school intervention **Intervention duration:** With boosters interventions took place over 2 school years (7th and 8th grade) **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes (group session in family intervention) **Comparison group**: Printed, mailed materials (4) Families participating in the control group were mailed four leaflets describing aspects of adolescent development (e.g., physical and emotional changes, as well as parent-child relationships)	lifetime marijuana use, and lifetime use of glue, paint, gas, or other inhalants. Outcome types (Type YES or NO next to each outcome) Intentions? NO Initiation? YES Use? YES SU disorder? NO Educational outcomes? NO Mental health? YES (subset) Morbidity? NO Mortality? NO Equity? NO but rural applicability Other outcomes? No Evidence gaps? No	Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 0.645 score points Comp (n=NR): 0.679 score points **Absolute change: -**0.034 score points **Relative change:** -5.2% **Narrative results:** Tests of differences (*t*-values) = 0.76 NR (NS) Favorable: Yes Statistical significance: No **Outcome: Initiation of cigarette use** Measure: Lifetime ever cigarette use Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 0.583 score points Comp (n=NR): 0.669 score points **Absolute change:** -0.086 score points **Relative change:** -12.3% **Narrative results:** Tests of differences (*t*-values)= 1.76 p<0.05 Favorable: Yes Statistical significance: Yes **Outcome: Initiation of marijuana use** Measure: Lifetime ever marijuana use Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: 20% or more of households in the school district within 185% of the federal poverty level Other: Rural			Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 0.293 score points Comp (n=NR): 0.381 score points **Absolute change:** -0.088 score points **Relative change:** -23.1% **Narrative results**: Tests of differences (*t*-values) = 2.17; p<0.05 Favorable: Yes Statistical significance: Yes **Outcome: Initiation of prescription drug misuse** Measure: Lifetime ever misuse of prescription drugs (Spoth 2008a) Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 7.7% Comp (n=NR): 10.5% **Absolute change (post):** -2.8 percentage points **Relative change:** -26.7% **Narrative results (post):** Fisher's exact test (df = 1) = 1.921, *P* = 0.10 Favorable: Yes Statistical significance: No **Outcome: Initiation of use of methamphetamines** Measure: Lifetime ever use methamphetamines

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=189): 2.12% Comp (n=196): 4.59% **Absolute change (post)**: -2.47 percentage points **Relative change (post):** -53.8% **Narrative results:** NR Favorable: Yes Statistical significance: No **Outcome: Methamphetamine use** Measure: Past year use of methamphetamines Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=190): 2.63% Comp (n=197): 7.61% **Absolute change (post):** -4.98 percentage points **Relative change (post):** -65.4% **Narrative results**: p=0.02 Favorable: Yes Statistical significance: Yes **Subset Analyses**: Higher-risk youth **Outcome: Monthly poly-substance use among higher risk subset of students** Measure: Past month or more frequent use of

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				alcohol use, cigarette use, and marijuana use Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 1.348 score points Comp (n=NR): 2.127 score points **Absolute change:** -0.779 score points **Relative change:** NR **Narrative results**: Tests of differences (*t* - values)=3.30 p<0.01 Favorable: Yes Statistical significance: Yes **Outcome: Advanced poly-substance use (APU) index among higher risk subset of students** Measure: Score based on combined drug-specific use and frequency Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 66 months Int (n=NR): 2.380 score points Comp (n=NR): 3.718 score points **Absolute change:** -1.34 score points **Relative change:** NR **Narrative results:** Tests of differences (*t* - values)= 3.96 p<0.01 Favorable: Yes Statistical significance: Yes Subset analyses:

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Subset of study participants who participated in in-home assessments (n=670 in all 3 arms; 578 at follow-up) were included in analyses of depression symptoms as adults (age 22) Int (n=NR): NR Comp (n=NR): NR Follow-up: 108 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: significant intervention direct effect on age 22 depression symptoms; β=−0.08, 95 % CI [−0.16, −0.00], p=0.042. Indirect intervention effect on age 22 depression symptoms was ß = -0.07, p=0.014 [for LST+SFP 10–14 vs. control]. Effect size was *d*=0.17 (small) Favorable: Yes Statistical significance: Yes Adult Follow-up: Self-reported substance use measures collected at age 22 (Spoth 2014a), 25 (Spoth 2016), and 27 (Spoth 2016). Results at age 27 reported here Drunkenness, Alcohol-related problems, Cigarette use, Illicit drug use (lifetime and frequency), Marijuana use (index) Prescription drug misuse (lifetime)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Analyses were restricted to those who had data on intervention condition, baseline risk level, and cluster [school]); for Intervention (SFP 10–14+LST) versus Control, N = 983 Relative reduction rates (RRR) were computed from the estimated percentages of those above the cutoff in the intervention and control condition, for both the overall sample and the higher-risk subsample Relative rate reductions from Table 4 (Spoth 2016) at age 27 **Outcome: Drunkenness** Measure: at greater than once per month Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change: -**13.8% **Narrative results:** NR for relative rate reductions Favorable: Yes Statistical significance: NR **Outcome: Alcohol-related problems** Measure: at more than one out of 10

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** -6.1% **Narrative results**: NR for relative rate reductions Favorable: Yes Statistical significance: NR **Outcome: Cigarette use** Measure: at greater than no use in the past year Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** -14.9% **Narrative results**: NR for relative rate reductions Favorable: Yes Statistical significance: NR **Outcome: Illicit drug use** Measure: at greater than no use in the past year Baseline Int (n=554): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change: -**12.7% **Narrative results**: NR for relative rate reductions Favorable: Yes Statistical significance: NR **Outcome: Marijuana use index** Measure: at greater than no use Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change:** -12.0% **Narrative results:** NR for relative rate reductions Favorable: Yes Statistical significance: NR **Outcome: illicit drug use** Measure: Lifetime Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Absolute change: NR **Relative change:** -12.5% **Narrative results**: NR for relative rate reductions Favorable: Yes Statistical significance: NR **Outcome: Prescription drug use** Measure: Lifetime Baseline Int (n=554): NR Comp (n=496): NR Follow-up: 174 months Int (n=NR): NR Comp (n=NR): NR **Absolute change:** NR **Relative change: -**9.8% **Narrative results**: NR for relative rate reductions Favorable: Yes Statistical significance: NR
Author (Year): Spoth et al. (2007) Related papers: Redmond et al., 2009 Spoth et al., 2011 Spoth et al., 2013 **Location:** USA; Iowa and Pennsylvania **Years for Study**: 2002-2010	**Setting:** Mix (school and community) **Urbanicity:** Rural **Eligibility:** Selected public school districts in rural communities in PA and Iowa School districts were required to have:	**Brief description of intervention and content:** Community-University partnerships combined with: Family-focused intervention to recruited families School-based youth intervention or all students in study school grade Family-focused intervention (all communities selected Strengthening Families: For	**Brief description:** Student self-reported substance use behaviors in classroom administered paper and pencil questionnaires Assessments conducted in 8th grade, 9th grade, 11th grade, and 12th grade (6.5 years post baseline) Substance(s) in 12th grade measures*	Longitudinal multi-level models (school district and individual) from posttest to 12th grade were applied to analyze point-in-time 12th grade substance use outcomes and growth trajectories of those outcomes Intention to treat analyses Relative reduction rates (RRR) were calculated to illustrate the practical significance of findings for dichotomous outcomes; they indicate the

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Intervention: 2003-2005 (two 2-year cohorts) **Period for Study**: 78 months (6.5 years) **Study Design**: Group RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization – Unclear b) Concealment - Unclear c) Blinding - High d) Outcomes - Low e) Selective - High	enrollment of between 1300 and 5200 students At least 15% students eligible for free or reduced lunch program participation Families with 6th grade students recruited to family-based intervention All 6th grade students in study schools **Recruitment:** School districts were recruited for study Community teams recruited families of 6th grade students for family intervention Schools implemented youth classroom prevention curricula **Inclusion/Exclusion**: As above Excluded students who crossed over from intervention and comparison communities	Parents and Youth 10-14 program). 2 hour sessions included parent-only; youth-only, and parent + youth group time School-based prevention curricula (one of 3 programs) Project Alert Life Skills Training AllStars **Intervention/program name:** PROSPER (PROmoting School–community–university Partnerships to Enhance Resilience) Substance(s) focused* General prevention **Format:** Face-to-face Family-intervention small group sessions (year 1) Face-to-face School-based intervention: classroom curricula (year 2) **Intervention intensity:** Parents (6th grade youth) Number of sessions: 7 Number of hours per session: 2 Total hours of intervention: 14 (plus optional booster) Youth (7th grade students)	"Current" use of Drunkeness (past month) Cigarettes (past month) Driving after drinking (past year) Marijuana (past year) Inhalant use (past year) Methamphetamine use (past year) Polysubstance measures? Yes Substance Initiation Index–Illicit: combined ever used measure of: -Methamphetamine (meth) -Ecstasy (MDMA)? -Marijuana or hashish? -Drugs or medications that were prescribed for someone else? -Vicodin, Percocet, or Oxycontin? Outcome types Intentions? YES Initiation? YES Use? YES including alcohol drunkeness and driving after drinking SU disorder? NO Educational outcomes? NO Mental health? NO Morbidity? NO Mortality? NO	proportional behavioral reduction in the intervention group relative to controls Table 1 (Spoth 2013) Additional outcomes form other papers **Outcome: Lifetime illicit substance use (polysubstance initiation)** Measure: Self-reported ever use of methamphetamine, ecstasy, marijuana, prescription drug misuse, vicodin, percocet, or oxycontin Baseline: Post-test Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 78 months Int (n=NR): 1.43 units NR Comp (n=NR): 1.68 units NR **Absolute change:** -0.25 units NR **Relative change:** Relative reduction rate = 15.0% (-15.0%) **Narrative results**: F(1,72) =25.53 p=0.001 Favorable: Yes Statistical significance: Yes **Outcome: Alcohol use outcome: drunkeness** Measure: Self-reported past month drunkenness Baseline: Post-test Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 78 months Int (n=NR): 0.41 units NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sample size: 28 of 68 eligible school districts in Pennsylvania and Iowa. Pairs of communities were matched (14 blocks) on school district size and geographic location, and then randomly assigned Intervention: 14 districts Comparison: 14 districts Baseline: 11,960 students (90% of those eligible) completed pretest surveys in the fall of 6th grade Intervention: 6059 Comparison: 5901 Follow-up: average, across the eight data points up through 12th grade, 86% of all eligible students completed the surveys with slightly higher rates of participation at earlier data collection points	Number of sessions: 7 Number of lessons: 11-15 Number of hours per session: 14 + classroom time (NR) Total hours of intervention: 14 +classroom lesson time Additional components: University-Community partnership with three elements -Community teams (10-15 members including extension system staff, school district representative, local community service providers and other stakeholders, including parents and Youth) Prevention coordinator University researchers Partners worked together to select, implement, and sustain community teams and interventions in the community **Implementer(s)** -University-community partnership and teams Facilitators selected by local teams included parents, teachers, counselors, and law enforcement personnel, among others and received 2 day training on family-focused intervention	Equity? NO, but applicability to rural settings Other outcomes? YES 12th grade frequency of use measures for drunkenness, marijuana, and drinking and driving Parent practices Youth attitudes and norms	Comp (n=NR): O.44 units NR **Absolute change:** -0.03 units NR **Relative change:** Relative reduction rate = 5.9% (-5.9%) **Narrative results**: F(1,72)= 1.40 p=0.12 Favorable?: Yes Statistical significance: No **Outcome: Alcohol use outcome: driving after drinking** Measure: Self-reported past year driving after drinking Baseline: Post-test Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 78 months Int (n=NR): 0.25 units NR Comp (n=NR): O.26 units NR **Absolute change:** -0.01 units NR **Relative change:** Relative reduction rate = 4.9% (-4.9%) **Narrative results**: F(1,72)= 0.24 p=0.117 Favorable?: No effect Statistical significance: No **Outcome: Cigarette** Measure: Self-reported past month use of cigarettes Baseline Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 72 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	9th grade assessment was completed by 9,438 (79%) of those pretested. Loss to f/u: 14-21% **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: NR **Study Population: Youth** Age: NR Grade level(s): 6th -7th for 2 years of intervention Sex: Girls 51%; Boys 49% Race/ethnicity: White: 85% Hispanic/Latino: 5% African American: 3% Other NR Other: Free or reduced lunch program participation: 31%	Trained school teachers **Intervention duration**: Two school years (6th grade and 7th grade) with optional family intervention booster sessions in year 2. **Focus of intervention activities:** Both parents/caregivers and youth: Yes Parents only: No Parent and child in the same session/activity? Yes for family-based intervention **Comparison group**: No additional interventions. 6 of 14 comparison districts offered one or more evidence-based prevention interventions, but implementation or exposure data NA		Int (n=NR): 0.33 units NR Comp (n=NR): 0.37 units NR **Absolute change:** -0.04 units NR **Relative change:** Relative reduction rate = 11.0% (-11.0%) **Narrative results**: F(1,72)=3.32; p=0.036 Favorable? Yes Statistical significance: Yes **Outcome: Marijuana use** Measure: Self-reported past year use of marijuana Baseline Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 72 months Int (n=NR): 0.35 units NR Comp (n=NR): 0.39 units NR **Absolute change:** -0.04 units NR **Relative change:** Relative reduction rate = 8.0% (-8.0%) **Narrative results**: F(1,72)=3.30; p=0.036 Favorable? Yes Statistical significance: Yes **Outcome: Inhalants use** Measure: Self-reported past year use of inhalants Baseline Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 72 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Community characteristics: rural and small town/city communities			Int (n=NR): 0.04 units NR Comp (n=NR): 0.06 units NR **Absolute change**: -0.02 units NR **Relative change:** Relative reduction rate=28.3% (-28.3%) **Narrative results**: F(1,72)=3.18; p=0.039 Favorable? Yes Statistical significance: Yes **Outcome: Methamphetamine use** Measure: Self-reported past year use of methamphetamines Baseline Int (n=5475 Spoth 2011): NR Comp (n=5262 Spoth 2011): NR Follow-up: 72 months Int (n=NR): 0.03 units NR Comp (n=NR): 0.04 units NR **Absolute change:** -0.01 units NR **Relative change**: Relative rate change =31.4% (-31.4%) **Narrative results:** F(1,72) =4.55; p=0.018 Favorable? Yes Statistical significance: Yes **Outcome: Substance Use Intentions** Measure: Self-reported substance use plans (Redmond 2009) Baseline Int (n=NR): NR Comp (n=NR): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up: 42 months (9th grade) Int (n=NR): 1.50 units Comp (n=NR): 1.54 units **Absolute change:** NR **Relative change:** NR **Narrative results:** No significant difference F = 0.79 Favorable: No effect Statistical significance: No
Author (Year): Stanton et al. (2004) **Location:** USA, Maryland, Baltimore **Years for Study:** 1999 and 2000 **Period for Study:** NR **Study Design:** Group RCT CG Suitability: Greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Unclear c) Blinding - Unclear d) Outcomes - Low e) Selective - Low	**Setting:** Mix (community or home - if missed intervention session) **Urbanicity:** Urban **Eligibility:** All youth living at 35 low-income urban community (including public housing) sites; eligible to enroll even if their parent or guardian was unwilling to participate **Recruitment:** community recruiters in 3 waves (used local recreation center staff and housing development tenant association members)	**Brief description of interventions and content:** Base intervention: Focus on Kids (FOK), an adolescent risk-reduction intervention; 8-session, theory-based, small group, face-to-face risk-reduction intervention. Components: games, discussions, homework assignments, videotapes Intervention 1: (FOK+ImPACT) after FOK, ImPACT intervention (parental monitoring) without boosters; 1-session (20 min videotape/ interactive role-play discussion with live feedback) Intervention 2: (FOK+ImPACT+ FOK booster) after FOK, ImPACT intervention (parental monitoring) with four FOK session boosters in small groups; 1-session (20 min	**Brief description:** Self-report past 6 months Youth Health Risk Behavior Inventory: 16 items (drug-use delinquent, and sexual risk); no biologic/other confirmation Substance(s)* Tobacco (smoking), alcohol, cannabis, other drugs Polysubstance measures? No Outcome types (Type YES or NO next to each outcome) Intentions? NO Initiation? NO Use? YES SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? YES Mental health? NO Morbidity? NO Mortality? NO	To control for type I error - least significant differences (LSDs) multiple comparisons procedure Intraclass correlation coefficient (ICC), adjusted for cluster randomization, determined for each behavior and construct subscale score. A corrected independent sample *t* test, adjusting for ICC, was performed to adjust the test statistics for the group difference. Intervention effects: (1) **overall intervention** = (1 vs 2) and (1 vs 3) (FOK only vs FOK+ImPACT) & (FOK only vs FOK + ImPACT + boosters) (2) **overall ImPACT additive** = 1 vs (2 & 3) (FOK only and FOK + ImPACT with/without boosters) (3) **FOK boosters' additive effect** = 2 vs 3 (FOK + ImPACT by boosters' presence or absence)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	(Wave 1 - 8 sites, wave 2 - 10 sites, and wave 3 - 17 sites) **Inclusion/Exclusion**: NR Sample size: Baseline 817 Int 496 FOK+ImPACT 258 FOK+ImPACT+booster 238 Control 321 Follow-up (24 mth) Total: 60% (494/817) Int 59% (295/496) Control 62% (199/321) Loss to f/u Total: 40% (323/817) Int 41% (201/496) Control 38% (122/321) **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: NR Education: NR Employment NR Income: NR Marital status: NR Other NR	videotape/ interactive role-play discussion with live feedback) **Intervention/program name:** Focus on Kids (FOK) & Informed Parents and Children Together (ImPACT) [FOK+ ImPACT] Substance(s) focused* General **Format:** face-to-face group **Intervention intensity:** FOK+ImPACT+boosters = FOK boosters, four 90-minute sessions at 7, 10, 13, and 16 months; if booster session missed at community completed at home visit Number of sessions or modules: FOK+ImPACT (9 = 8+1) FOK+ImPACT+booster (13= 9+4) Number of hours per session: FOK+ImPACT = 1.5 FOK+ImPACT+booster = 1.5 Total hours of intervention: FOK+ImPACT = 13.5h = 9(1.5) FOK+ImPACT+booster = 19.5h= 13.5h + 4(1.5h) **Implementer(s)** 2 interventionists for FOK, 2 for ImPACT	Equity (focused on one historically disadvantaged group)? YES Other outcomes? Selling drugs, delinquent behaviors, sexual risk behaviors, risk perception (subscales: self-efficacy, response efficacy, severity, vulnerability, intrinsic rewards, extrinsic rewards, and response cost)	Intervention 1: FOK+ImPACT (no booster) – 1 vs 2 **Outcome: Tobacco use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=39): 25.3% Comp (n=53): 26.6% Follow-up (in months): 24 Int (n=39): 12.1% Comp (n=53): 22.7% **Absolute change:** -9.30 pct pts **Relative change:** -41.81% **Narrative results**: substance abuse behaviors differed significantly (use of cigarettes and other illicit drugs); risk behaviors lower among youth whose parents were in ImPACT enhanced Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.008 **Outcome: Alcohol use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=68): 44.2% Comp (n=70): 35.2% Follow-up (in months): 24 Int (n=68): 26.2% Comp (n=70): 27.3% **Absolute change:** -10.1 pct pts **Relative change**: -23.5%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study Population: Youth Age: 14 (median), 13 to 16 (baseline) Grade level(s): NR Sex: 60% female, 40% male Race/ethnicity: 100% African American Other **Community characteristics:** NR	**Intervention duration:** FOK+ImPACT = NR FOK+ImPACT+booster = NR + 16 months (last booster) **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes **Comparison group:** Youth received Focus on Kids (FOK), an adolescent risk-reduction intervention; 8-session, theory-based, small group, face-to-face risk-reduction intervention. Components: games, discussions, homework assignments, and videotapes Parents - attention control "GoalforIT Components: 20 min video on establishing career goals, scripted text discussion		**Narrative results:** risk behaviors lower among youth whose parents were in ImPACT enhanced Favorable (Yes/No/No effect): Yes Statistical significance: No, p=.850 **Outcome: Cannabis use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=38): 24.7% Comp (n=48): 24.1% Follow-up (in months): 24 Int (n=38): 22.1% Comp (n=48): 26.8% **Absolute change:** -5.3 pct pts **Relative change:** -19.5% **Narrative results**: risk behaviors lower among youth whose parents were in ImPACT enhanced Favorable (Yes/No/No effect): Yes Statistical significance: No, p=.401 **Outcome: Other illicit drug use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 1.3% Comp (n=): 5.6% **Absolute change (post):** -4.30 pct pts

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Relative change (post): -76.7% **Narrative results**: substance abuse behaviors differed significantly (use of cigarettes and other illicit drugs); risk behaviors lower among youth whose parents were in ImPACT enhanced Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.059 **Outcome: disciplinary actions (suspension)** Measure: mean no. days suspended Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 0.60 Comp (n=): 1.17 **Absolute change (post):** -0.57 pts **Relative change (post**): -48.7% **Narrative results:** marginal significance difference; risk behaviors lower among youth whose parents were in ImPACT enhanced Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=0.098, marginal **Intervention 1: FOK+ImPACT+booster) – 1 vs 3** **Outcome: Tobacco use** Measure: percentage of participants (proportion) past 6 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=28): 19.9% Comp (n=53): 26.6% Follow-up (in months): 24 Int (n=28): 12.9% Comp (n=53): 22.7% **Absolute change:** -3.1 pct pts **Relative change:** -18.0% **Narrative results**: differed in a protective fashion, substance abuse behaviors differed significantly (use of cigarettes, marijuana) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.016 **Outcome: Alcohol use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=55): 39.0% Comp (n=70): 35.2% Follow-up (in months): 24 Int (n=55): 26.4% Comp (n=70): 27.3% **Absolute change:** -4.70 pct pts **Relative change**: -12.7% **Narrative results:** NR Favorable (Yes/No/No effect): Yes Statistical significance: No, p=.887 **Outcome: Cannabis use** Measure: percentage of participants (proportion) past 6 months Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=36): 25.5% Comp (n=48): 24.1% Follow-up (in months): 24 Int (n=36): 14.3% Comp (n=48): 26.8% **Absolute change:** -11.9 pct pts **Relative change:** -49.5% **Narrative results:** differed in a protective fashion, substance abuse behaviors differed significantly (use of cigarettes, marijuana) Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.019 **Outcome: Other illicit drug use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 1.4% Comp (n=): 5.6% **Absolute change (post):** -4.20 pct pts **Relative change (post):** -89.2% **Narrative results:** differed in a protective fashion, marginal significance difference Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.073 **Outcome: disciplinary actions (suspension)** Measure: mean no. days suspended

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 0.69 Comp (n=): 1.17 **Absolute change post):** -0.48 pts **Relative change (post):** -41.0% **Narrative results**: NR Favorable (Yes/No/No effect): Yes Statistical significance: No, p=.174 **Intervention 1: FOK+ImPACT (with or without booster) – 1 vs 2 and 3** **Outcome: Tobacco use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=67): 22.7% Comp (n=53): 26.6% Follow-up (in months): 24 Int (n=67): 12.5% Comp (n=53): 22.7% **Absolute change:** -6.30 pct pts **Relative change:** -30.3% **Narrative results**: After adjusting for ICC, the substance abuse behaviors differed significantly (use of cigarettes, marijuana, and other illicit drugs); risk behaviors lower among youth whose parents were in ImPACT Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.003

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Alcohol use Measure: percentage of participants (proportion) past 6 months Baseline Int (n=123): 41.7% Comp (n=70): 35.2% Follow-up (in months): 24 Int (n=123): 26.3% Comp (n=70): 27.3% **Absolute change:** -7.50 pct pts **Relative change:** -18.6% **Narrative results**: risk behaviors lower among youth whose parents were in ImPACT Favorable (Yes/No/No effect): Yes Statistical significance: No, p=.844 **Outcome: Cannabis use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=74): 25.1% Comp (n=48): 24.1% Follow-up (in months): 24 Int (n=74): 18.3% Comp (n=48): 26.8% **Absolute change:** -9.50 pct pts **Relative change:** -35.9% **Narrative results**: After adjusting for ICC, the substance abuse behaviors differed significantly (use of cigarettes, marijuana, and other illicit drugs); risk

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				behaviors lower among youth whose parents were in ImPACT Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.056 **Outcome: Other illicit drug use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 1.4% Comp (n=): 5.6% **Absolute change (post):** -4.20 pct pts **Relative change (post):** -75.0% **Narrative results**: After adjusting for ICC, the substance abuse behaviors (other illicit drugs) differed significantly; lower among youth whose parents were in ImPACT Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.015 **Outcome: disciplinary actions (suspension)** Measure: mean no. days suspended Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 0.65 Comp (n=): 1.17

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Absolute change (post): -0.52 pts **Relative change (post): -45.2%** **Narrative results**: Risk behaviors lower among youth whose parents were in ImPACT Favorable (Yes/No/No effect): Yes Statistical significance: Yes, p=.046
				FOK+ImPACT (with vs without booster) – 2 vs 3. No significant differences determined on any substance use behaviors or mean no. days suspended. **Outcome: Tobacco use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=28): 19.9% Comp (n=39): 25.3% Follow-up (in months): 24 Int (n=28): 12.9% Comp (n=39): 12.1% **Absolute change:** +6.20 pct pts **Relative change:** +28.0% **Narrative results**: NR Favorable (Yes/No/No effect): Yes, without boosters had higher reduction rate than boosters Statistical significance: No, p=.859 **Outcome: Alcohol use** Measure: percentage of participants (proportion) past 6 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=55): 39.0% Comp (n=68): 44.2% Follow-up (in months): 24 Int (n=55): 26.4% Comp (n=70): 26.2% **Absolute change:** +5.40 pct pts **Relative change:** +14.2% **Narrative results:** NR Favorable (Yes/No/No effect): Yes, without boosters had higher reduction rate than boosters Statistical significance: No, p=.968 **Outcome: Cannabis use** Measure: percentage of participants (proportion) past 6 months Baseline Int (n=36): 25.5% Comp (n=38): 24.7% Follow-up (in months): 24 Int (n=36): 14.3% Comp (n=38): 22.1% **Absolute change:** -8.60 pct pts **Relative change:** -37.3% **Narrative results:** NR Favorable (Yes/No/No effect): Yes, boosters had higher reduction rate than without boosters Statistical significance: No, p=.141 **Outcome: Other illicit drug use** Measure: percentage of participants (proportion) past 6 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 1.4% Comp (n=): 1.3% **Absolute change (post):** +0.10 pct pts **Relative change (post):** +7.7% **Narrative results:** NR Favorable (Yes/No/No effect): No effect Statistical significance: No, p=.954 **Outcome**: **disciplinary actions (suspension)** Measure: mean no. days suspended Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 24 Int (n=): 0.69 Comp (n=): 0.60 **Absolute change (post):** +0.09 pct pts **Relative change:** NR **Narrative results:** NR Favorable (Yes/No/No effect): No effect Statistical significance: No, p=.665
Author (Year): Stormshak et al. (2011) Related Paper: Van Ryzin et al., 2012	**Setting**: mix (school or home) **Urbanicity:** urban	**Brief description of interventions and content:** Family resource center (FRC) - first level, universal intervention	**Brief description** youth self-report Antisocial behavior 11 items (lying to parents, staying out, all night without permission,	Intent to treat analysis; gender and ethnicity were used as covariates in the analyses.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Location: USA, Oregon **Years for Study:** Started et al., 2005 **Period for Study**: Stormshak et al., 36 months 3 years (6th-8th) Van Ryzin et al., 48 months intervention 4 years (6th – 9th grade) **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization - Unclear Low b) Concealment - Low c) Blinding - Low d) Outcomes - Low e) Selective - High .	**Eligibility:** All 6th grade (n=740) students in selected school sites **Recruitment:** 3 public middle schools in ethnically diverse urban area **Inclusion/Exclusion:** NR Sample size: Baseline 593 Int 65% (386/593) Control 35% (207/593) Follow-up (Wave 3) 81% (481/593) Int 74% (287/386) (full) 42% (163/386) (partial) 51% (197/386) Control 83% (172/207) Loss to f/u Int 26% (99/386) Control 17% (35/207) **Study population: Parents and Caregivers** Age: NR Sex: NR	in participating public middle schools. Components: pamphlets, books, and other information about parenting FCU - brief three-session meetings with caregivers. 1. initial interview, practitioner facilitates discussion about goals and concerns with parents and about their personal motivation for change. 2. brief assessment packet given to parent, child, and teacher and a videotaped family interaction assessment. 3. feedback session to discuss results of assessment (a) providing motivation to change (b) identifying appropriate resources from family-based intervention options. feedback session received in 7th grade (n =138), 8th (n=23) or 9th (n=2) grade (last only in Van Ryzin, et al (2012) study) **Intervention/program name:** Family Check-Up (FCU) Substance(s) focused*	stealing, carrying a weapon, and physical aggression) Engagement status: (1=comply, 0=noncomply) reflect family participation in FCU and further intervention services as warranted Child ethnicity: European American families = reference group in CACE analyses Substance(s)* Alcohol, Tobacco, Cannabis Polysubstance measures? No) Outcome types Intentions? No Initiation? No Use? YES SU disorder? No Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? No Mental health (depressive symptoms; anxiety; etc.)? YES (antisocial behavior) Morbidity? No Mortality? No Equity (stratified analysis; focused on one historically disadvantaged group)? YES	Count (Alcohol use, tobacco use, and marijuana use) and continuous (antisocial behavior) outcomes Latent growth modeling (LGM) examines intervention effect for engagers and change in outcomes over time within Complier average causal effect (CACE) analytic framework. N For compliers, negative coefficients indicate intervention had significantly less steep rate of change across time compared with control **Stormshak (2011) – Wave 3 data** **Outcome: Antisocial behavior** Measure: Scale range: 1 (never) to 6 (> 20 times) based on 11 items Baseline Int (n=386): NR Comp (n=207): NR Follow-up (in months): 24 Int (n=386): NR Comp (n=207): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: significant intervention effects for all four outcomes, with intervention predicting significantly less growth; (Figure 2) compliers in intervention maintain flat level but control had a steep increase Favorable (Yes/No/No effect): Yes

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Race/ethnicity: NR Education: NR Employment NR Income: NR Marital status: NR **Study Population: Youth** Age: 11.88 years Grade level(s): 6th grade (baseline), 80% were 7th and 8th (at intervention) Sex: 51% male, 49% female Race/ethnicity: European American 36.1%, Latino / Hispanic 18%, African American 15.2%, Asian American 7.1%, Native American 2.4%, Pacific Islander 1.9%,, biracial / mixed ethnicity 19.2% **Community characteristics** School sites: Title I, served at-risk population of youth and families (35%, 89%, and 39% of families received free or reduced-price lunch), and about 20% of school population	General **Format:** face-to-face one-on-one **Intervention intensity:** NR Number of sessions or modules: 3 Number of hours per session: NR Total hours of intervention: 146 min (or 2.5 hr) average (Stormshak) 262 minutes (4.4 hours) average (Van Ryzin) Additional components (things outside the sessions/modules) Following FCU, parents who needed additional support offered adaptive, tailored interventions that targeted specific parenting skills or home-to-school plan **Implementer(s)** Trained, educated, and experienced parent consultants; ethnical matched when possible **Intervention duration:** NR **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No	Other outcomes? NR	Statistical significance: Yes **Outcome: Alcohol use** Measure: Scale range: 0 (never) to 11 (10–20 drinks), or to 13 (41+ drinks) based on frequency in past month Baseline Int (n=386): NR Comp (n=207): NR Follow-up (in months): 24 Int (n=386): NR Comp (n=207): NR **Absolute change:** NR **Relative change:** NR **Narrative results**: significant intervention effects for all four outcomes, with intervention predicting significantly less growth; (Figure 2) compliers in intervention maintain flat level but control had a steep increase Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Tobacco use** Measure: Scale range: 0 (never) to 5 (5 cigarettes), to 12 (1 pack), or to 16 (5+ packs) based on frequency in past month Baseline Int (n=386): NR Comp (n=207): NR Follow-up (in months): 24 Int (n=386): NR Comp (n=207): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	qualified for special education services.	Parent and child (either in the same session or not)? (Yes) Parent and child in the same session/activity? (Yes) **Comparison group:** Middle school services as usual "school as usual," included regular services offered by schools, but no access to any of intervention services available to families in intervention condition.		**Absolute change:** NR **Relative change:** NR **Narrative results**: significant intervention effects for all four outcomes, with intervention predicting significantly less growth; (Figure 2) compliers in intervention maintain flat level but control had a steep increase Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Cannabis Use** Measure: Scale range: 0 (never) to 6 (6 times), or to 13 (41+ times) based on frequency in past month Baseline Int (n=386): NR Comp (n=207): NR Follow-up (in months): 24 Int (n=386): NR Comp (n=207): NR **Absolute change:** NR **Relative change:** NR **Narrative results:** significant intervention effects for all four outcomes, with intervention predicting significantly less growth; (Figure 2) compliers in intervention maintain flat level but control had a steep increase Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Overall study analysis (N=593)** Means suggest an increase in problem behavior from sixth to eighth grades for

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				all four outcomes (antisocial behavior and substance use). Correlations in Table 2 reveal a general pattern of moderate correlations between the variables both within time and across outcomes. CACE analysis – for compliers and non-compliers, all outcomes (antisocial behavior, alcohol use, tobacco use, and marijuana use) statistically significant from 6^{th} – 8^{th}. Noncompliers - For antisocial behavior, boys and African American and other ethnicity (non-European) youth showed significantly higher initial levels Compliers - For antisocial behavior, boys and African American and other ethnicity (non-European) youth showed significantly higher initial levels. African Americans showed greater declines in alcohol use but greater growth in marijuana use relative to European American youth. Youth in Other ethnicity group exhibited significantly greater growth in tobacco use relative to European American. Effect size (Cohen's d, large=.80): antisocial behavior d = 1.42, cigarette use d = 0.75; alcohol use d = 1.69; and marijuana use d = 1.10. **Van Ryzin (2012) - Wave 4 data**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				For compliers, intervention relatively flat level over time for antisocial behavior and alcohol use, control steep increase. Effect size (Cohen criteria) calculations not completed for count-based data, such as alcohol use. Large effect size for antisocial behavior (.86)
Author (Year): Tingey et al. (2021), protocol paper Tingey et al. (2017) **Location:** USA, Southwest (reservation) **Years for Study**: 2015–2020 (actual implementation 2016-2018) **Period for Study:** 72 monoths (3 cohorts 2016, 2017, 2018) (assessed 3 months, 9 months, 12 months) **Study Design:** Individual RCT **CG Suitability:** Greatest	**Setting:** Mix (Community-home) **Urbanicity:** Rural (reservation) **Eligibility:** Ages 11–19, self-identified as Native American ethnicity, enrolled members, or residents of participating Tribal community on a rural reservation; written informed consent (parent/guardian consent if 11–17 years old) **Recruitment**: Enrollment from May 2016 through June 2018, non-probability sampling through public postings in	**Brief description of interventions and content:** Content and skills delivered to youth (self-selected peer group) via summer basketball camp & at-home post-camp session with parent/trusted adult Included education and role-playing, a problem-solving model, communication with peers and parents/trusted adults, sexual partner negotiation skills, and decision making. **Intervention/program name:** Respecting the Circle of Life program (RCL) Substance(s) focused* General **Format:** face-to-face group	**Brief description:** YHRBI, self-report on future intention: Being in this program makes me think twice before using alcohol or drugs. Outcome measures based on individual questions most relevant to substance use than multi-item scales. Mean (SE) of Likert Scale (Range 1-5): Strongly Agree (1), Kind of Agree (2), Don't Know (3), Kind of Disagree (4), Strongly Disagree (5) Lower scores = better Collected: 3, 9, 12 months All outcome variables were analyzed for the full sample and by subgroup of sex and	Baseline equivalence examined at each time point for full sample and for each subgroup to ensure that attrition did not impact study groups differentially and that any missing data were missing at random. Linear regression, controlling for baseline age and sex, to test between study group differences in outcomes at baseline, 3-, 9-, and 12-month post-intervention. Models were stratified by sex and age (11− 12, 13− 14, and 15+ years of age) to examine differences within these subgroups. **Outcome: future intention to use alcohol and drugs (Table 3)** Measure: scale, adjusted means **Overall** Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 12 Int (n=207): 1.75 (0.07)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment (ROB2) a) Randomization – High b) Deviations – Low c) Missing data– Low d) Outcomes measurements- Low e) Selective – Low Overall bias: High	community gathering spots (i.e., supermarket, daycares, fitness center, etc.), through public service announcements on the local radio, by print advertising in the local newspaper, during public gatherings (i.e., health fairs, parades, etc.) and through local schools **Inclusion/Exclusion:** above Sample size: Baseline 534 Int 268 Control 266 Follow-up 78% (417/534) Int 77% (207) Control 79% (210) Loss to f/u 22% Int 23% Control 21% **Study population: Parents and Caregivers (Total)** Age: NR Sex: NR	**Intervention intensity:** daily over 8 days Number of sessions or modules: 8 group, 1 private Number of hours per session: youth only (~2h) youth/parent (~1.5h-2h) Total hours of intervention: ~18h (16h youth only, 2h youth/parent) Additional components (things outside the sessions/modules) NR **Implementer(s)** 2 trained facilitators from the participating Tribal community. parent child session delivered by AI community health worker **Intervention duration:** eight-day camp + 1 post camp session within 3 months **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes (parents only received post camp session at home)	age (11– 12, 13– 14 and 15+ years of age; Table 2). Substance(s)* alcohol/drugs Polysubstance measures? YES Outcome types (Type YES or NO next to each outcome) Intentions? YES Initiation? NO Use? NO SU disorder? NO Educational outcomes (test score; attainment; grade retention; disciplinary actions; etc.)? NO Mental health (depressive symptoms; anxiety; etc.)? NO Morbidity? NO Mortality? NO Equity (stratified analysis; focused on one historically disadvantaged group)? YES (gender, native American) Other outcomes? risk and protective factors for substance use based on relationship categories (peers, parents, and sexual partners)	Comp (n=210): 2.03 (0.07) **Absolute change:** -0.28 pts **Relative change:** -13.79% **Narrative results**: (lower score = better) youth in RCL program had statistically significantly scores in response to if program they received made them think twice about using alcohol or drugs at both 9- and 12-month follow-up; AMD (95% CI) = – 0.28 (– 0.48 to – 0.08) Favorable (Yes/No/No effect): Yes Statistical significance: 0.0061 at p < 0.01 **Gender** Girls Int (NR): NR Comp (NR): NR Follow-up (in months): 12 Int (n=108): 1.72 (0.10) Comp (n=113): 2.10 (0.10) **Absolute change:** -0.37 pts **Relative change:** -18.10% **Narrative results**: (lower score = better) Girls in RCL program had statistically significantly scores in response to whether the program they received made them think twice about using alcohol or drugs at both 9- and 12-month follow-up; AMD (95% CI) = – 0.37 (– 0.65 to – 0.09) Favorable (Yes/No/No effect): Yes Statistical significance: p = 0.01 **Boys**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Race/ethnicity: Native American Education: NR Employment NR Income: NR Marital status: NR Other NR **Study Population: Youth (Total)** Age: range=11–19 37.8 % 11– 12, 39.5 % 13– 14, 22.7 % 15–19 Grade level(s): NR Sex: 47.4 % male, 52.6% female Race/ethnicity: 100% Native American **Community characteristics:** NR	Parent and child in the same session/activity? Yes (post camp only) **Comparison group:** Delivered via an eight-day to youth via summer camp at separate facility from intervention to reduce the potential for contamination. At-home post-camp lesson with parent/trusted adult From protocol paper: Lesson content: (1) knowledge about food labels and general nutrition; (2) information about different types of physical activity; (3) activities to encourage youth to eat healthy; and (4) relaxation techniques.		Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 12 Int (n=99): 1.79 (0.10) Comp (n=97): 1.96 (0.10) **Absolute change:** -0.18 pts **Relative change:** -8.67% **Narrative results:** For boys, no statistically significant differences between intervention and control in program making them think twice about using alcohol or drugs at any follow-up time point. AMD (95% CI): −0.18 (-0.46− 0.11) Favorable (Yes/No/No effect): No Statistical significance: 0.2195 **Age Group** 11− 12 Years Int (n=): NR Comp (n=): NR Follow-up (in months): 12 Int (n=77): 1.73 (0.11) Comp (n=76): 1.88 (0.11) **Absolute change:** -0.15 pts **Relative change:** -7.98% **Narrative results**: AMD (95% CI) = − 0.15 (-0.46− 0.15) Favorable (Yes/No/No effect): No/No effect Statistical significance: 0.3169 13− 14 Int (n=): NR Comp (n=): NR Follow-up (in months): 12

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=79): 1.67 (0.13) Comp (n=89): 2.28 (0.12) **Absolute change:** -0.61 pts **Relative change:** -26.75% **Narrative results:** For youth ages 13– 14 receiving RCL the impact on this variable demonstrated at all follow-up time points. AMD (95% CI) = – 0.61 (– 0.96 to – 0.26) Favorable (Yes/No/No effect): Yes Statistical significance: p = 0.0007 15+ Int (n=): NR Comp (n=): NR Follow-up (in months): 12 Int (n=51): 1.92 (0.13) Comp (n=45): 1.81 (0.14) **Absolute change:** +0.11 pts **Relative change:** +6.08% **Narrative results**: For youth ages 15 and older, no statistically significant differences between intervention and control in program making them think twice about using alcohol or drugs at any follow-up time point. AMD (95% CI) = 0.11 (-0.26– 0.49) Favorable (Yes/No/No effect): No/No effect Statistical significance: 0.5556
Author (Year): Werch et al. (1998)	**Setting**: Mix (consultation setting [not clear where	**Brief description of interventions and content:**	**Brief description:** 77-item Youth Alcohol and Drug Survey	Not intent to treat, 4 items omitted due to inconsistent responses on alcohol consumption

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Location: USA, Florida, Jacksonville **Years for Study**: 1995 Period for Study (total time in months): 13 months (1 month intervention + 12 months follow-up) **Study Design:** Individual RCT **CG Suitability**: Greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Low c) Blinding - High d) Outcomes - High e) Selective - High	consultation took place] + home) **Urbanicity**: Urban Eligibility: 6th grader at selected middle school with informed consent **Recruitment:** 6th grade students from a middle school in economically disadvantaged inner city of Jacksonville, Florida **Inclusion/Exclusion:** above Sample size: Baseline: 211 Int: 106 Control: 105 Follow-up: 68% (143/211) Int (73/143) Control (70/143) Loss to f/u: 32% **Study population: Parents and Caregivers** Age: NR	1 consultation + 1 letter + 2-9 family-lesson worksheets 1) brief one-on-one health consultation by nurse on why and how child should avoid alcohol 2) physician endorsed parent (guardian) letter (1–2 page) with key facts for them to read and discuss avoiding alcohol with kids 3) based on risk factor - up to nine physician-endorsed family-based prevention lessons including 2-4 pages of exercises (facts/activities) parents and children completed together, and contract for parent and child to sign, identifying a specific behavioral task for child to work on throughout week. **Intervention/program name:** Start Taking Alcohol Risk Seriously (STARS) for Families Programs Substance(s) focused* alcohol **Format:** both (face-to-face and workbook) **Intervention intensity**: mailed two lessons at a time, each week.	Alcohol consumption measures included lifetime use (ever used); 30-day and 7-day frequency of use; 30-day and 7-day quantity of use; and "heavy drinking (consuming 5 or more drinks) in a row during last 30-days and two weeks. Alcohol use initiation stages: during last year did you start drinking alcohol (precontemplation, contemplation, preparation, action, maintenance) Substance(s)* alcohol Polysubstance measures? No Outcome types Intentions? Yes, contemplation, preparation Initiation? Yes, precontemplation to action Use? Yes SU disorder? No, unless heavy drinking counts Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity (focused on one historically disadvantaged group)? Yes (economically disadvantaged)	Pretest and 1 -year follow-up drug use and project process data (i.e., student and parent feedback on interventions) analyzed using chi-square analyses for dichotomous variables, and t-tests and ANCOVAs for continuous measures. ANCOVAs performed with pretest scores serving as covariates. Most 6th grade students reported not having used alcohol, ANCOVAs analyzing subset reporting current alcohol use at end **Outcome: Alcohol use initiation (precontemplation stage)** Measure: Percentage (proportion) did not try alcohol last year Baseline Int (n=106): 85% Comp (n=105): 87% Follow-up (in months): 12 months Int (n=73): 93% Comp (n=70): 93% **Absolute change**: +2 pct pts **Relative change:** +2.5% **Narrative results:** No significant differences were found between the intervention and control groups using chi-square tests Favorable (Yes/No/No effect): No Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: NR Race/ethnicity: NR Education: NR Employment: NR Income: NR Marital status: NR Other: NR Data collected from Table 1, Intervention group (n=106) **Study Population: Youth** Age: 12.2 years Grade level(s): 6th grade Sex: 47% female; 53% male Race/ethnicity: 87% Black or African American; 11% White; 1% other Other: 77% in free lunch program; 32% have immediate family member with an alcohol or drug use associated problem; 65% had no prior alcohol or drug education during the last year Living arrangement 33% mother and father, 49% mother	**Number of sessions or modules:** 1 session + 2- 9 worksheets (5.5 mean) Number of hours per session: 1/3 hour for face-to-face (average time 16.9 min) + 2 to 9 self-paced exercises Total hours of intervention: NR Additional components (things outside the sessions/modules) NR **Implementer(s):** 6 nurses (received 1-day training) **Intervention duration:** 1 month (post testing at 1 month and follow-up at 12 months) **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes (family-based) **Comparison group:** 15 pg alcohol education booklet (Young People and Alcohol-What the Ads	Other outcomes? NR	**Outcome: Alcohol use intention (contemplation and preparation stages)** Measure: percentage (proportion) thinking of trying alcohol soon (contemplation), planning to start drinking soon (preparation) Baseline Int (n=106): NR Comp (n=105): NR Follow-up (in months): 12 months Int (n=73): 1% Comp (n=70): 1% **Absolute change:** 0 pct pts **Relative change:** 0% **Narrative results:** NR Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Alcohol use (Table 2)** Measure: percentage (proportion) 30-Day use Baseline Int (n=106): NR Comp (n=105): NR Follow-up (in months): 12 months Int (n=73): 7% Comp (n=70): 4% **Absolute change (post):** +3 pct pts **Relative change (post):** +75% **Narrative results**: No significant differences were found between the

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	only, 8% father only, 10% other; **Community characteristics:** NR	Don 't Tell You). Included information on alcohol's effects on body, risks of youth using alcohol, reasons why youth drink, reasons not to drink alcohol, how to refuse alcohol use offers, alternatives to drinking, and learning to feel good about yourself. Youth placed in quiet area during health consultations, asked to read material alone		intervention and control groups using chi-square tests Favorable (Yes/No/No effect): No Statistical significance: No **Outcome: Alcohol use (Table 2)** Measure: percentage (proportion) 7-Day use Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months Int (n=73): 8% Comp (n=70): 4% **Absolute change (post):** +4 pct pts **Relative change (post):** +100% **Narrative results**: No significant differences were found between the intervention and control groups using chi-square tests Favorable (Yes/No/No effect): No Statistical significance: No **Outcome: Alcohol use (Table 2)** Measure: percentage (proportion) 30-Day "heavy" Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months Int (n=73): 5% Comp (n=70): 1% **Absolute change (post):** +4 pct pts

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Relative change (post): +400% **(post only):** **Narrative results**: No significant differences were found between the intervention and control groups using chi-square tests Favorable (Yes/No/No effect): No Statistical significance: No **Outcome: Alcohol use (Table 2)** Measure: percentage (proportion) 2 week "heavy" Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months Int (n=73): 5% Comp (n=70): 4% **Absolute change:** +1 pct pts **Relative change:** +25% **Narrative results**: No significant differences were found between the intervention and control groups using chi-square tests Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Alcohol use (Table 3)** Measure: adjusted mean alcohol frequency Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=73): 0.31 Comp (n=70): 0.20 **Absolute change:** +0.11 **Relative change:** +55% **Narrative results:** No significant differences were at follow-up using ANCOVA tests with pretest scores used as covariates. Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Alcohol consumption (Table 3)** Measure: adjusted mean alcohol quantity Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 12 months Int (n=73): 0.26 Comp (n=70): 0.16 **Absolute change (post):** +0.10 **Relative change (post):** +62.5% **Narrative results**: No significant differences were at follow-up using ANCOVA tests with pretest scores used as covariates. Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Alcohol consumption (Table 3)** Measure: adjusted mean heavy alcohol use

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 12 months Int (n=73): 0.16 Comp (n=70): 0.10 **Absolute change (post):** +0.06 **Relative change (post):** +60.0% **Narrative results**: No significant differences were at follow-up using ANCOVA tests with pretest scores used as covariates. Favorable (Yes/No/No effect): No effect Statistical significance: No **Subset Current drinkers only (Table 4)** **Outcome: Alcohol use** Measure: adjusted mean alcohol frequency Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months Int (n=73): 2.96 Comp (n=70):2.72 **Absolute change (post):** +0.24 **Relative change (post):** +8.8% **Narrative results:** No differences were found on any of the three alcohol use measures between groups at 1 - year follow-up using ANCOVA Favorable (Yes/No/No effect): No effect Statistical significance: No

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Outcome: Alcohol use Measure: adjusted mean alcohol quantity Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months Int (n=73): 2.92 Comp (n=70): 3.57 **Absolute change (post): -0.65** **Relative change (post): -17.0%** **Narrative results**: No differences were found on any of the three alcohol use measures between groups at 1 - year follow-up using ANCOVA Favorable (Yes/No/No effect): No effect Statistical significance: No **Outcome: Alcohol use** Measure: adjusted mean heavy alcohol use Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 12 months Int (n=73): 2.32 Comp (n=70): 2.07 **Absolute change (post):** +0.25 **Relative change (post):** +12.0% **Narrative results:** No differences were found on any of the three alcohol use measures between groups at 1 - year follow-up using ANCOVA Favorable (Yes/No/No effect): No effect

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Statistical significance: No At post-test: ANCOVA results showed a significant difference on current frequency of use, with intervention subjects reporting less frequent alcohol use (rn = 1.86) than control subjects (rn = 3.66), F(1,22) = 5.34, p = .03.
Author (Year): Werch et al. (2003) **Location:** USA, Florida, Jacksonville **Years for Study:** 1996 - 1998 **Period for Study**: 36 months (24 months intervention, 12 months follow-up NOTE**:** additional papers with 12-month (Werth et al., 2000) and 24-month (Werth et al., 2001) data **Study Design:** Individual RCT **CG Suitability:** Greatest	**Setting:** Mix (wherever consultation took place school + home) **Urbanicity:** Urban **Eligibility:** 6th grader at selected middle school with informed consent **Recruitment:** 6th grade students from two middle schools (bused magnet and neighborhood) in economically disadvantaged inner city; students recruited by project staff fall 1996 **Inclusion/Exclusion**: Above Sample size:	**Brief description of interventions and content:** 2 consultations + up to 10 postcards + 4 family-lesson worksheets 6th grade *Fall semester*: one-on-one health consultation by nurse on why and how the child should avoid alcohol - as many as 12 risk & protective factors addressed based on risk (ex: students in preparation, action, or maintenance stage of initiating alcohol use given prevention message addressing emotional coping responses to deal with stress that could lead to alcohol use) *Spring semester*: mailed to parents/guardians physician endorsed prevention postcards on what to say to children on avoiding alcohol. (Mailed up to	**Brief description:** 'dipstick' saliva pipeline procedure to validate self-reported alcohol use 77-item Youth Alcohol and Drug Survey; alcohol consumption measures included lifetime use (ever used); 30-day and 7-day frequency of use; 30-day and 7-day quantity of use; and "heavy drinking (consuming 5 or more drinks) in a row in last 30-days and two weeks. SCALED DATA, NOT REPORTED in outcome summary b/c have actual data Alcohol use initiation: During the last year did you start drinking alcohol? (a) I did not try it last year (precontemplation)	Subject differences b/w two schools, school-site data analyzed as separate samples Pre-test and selected follow-up alcohol/drug use and risk/protective factor data analyzed using χ2 analyses for dichotomous variables and ANOVAs for continuous measures. F/u alcohol use outcome data analyzed using MANOVAs, 1st measures, 2nd risk/protective factors. MANOVAs used to control for type I errors over two dependent variable sets MANOVA and MANCOVA analyses examining collapsed school data due to small sample sizes for individual schools. Even with combining school data, power analysis concluded lack of power to detect small effect sizes. Post hoc t-tests conducted for significant interaction effects

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Risk of Bias Assessment a) Randomization - Low b) Concealment - Unclear c) Blinding - High d) Outcomes - High e) Selective - Low .	Baseline 650 magnet 388 Neighborhood 272 Intervention NR Control NR Follow-up: 78% (507/650) Total Intervention: 250 Int (magnet) 150 Int (neighborhood) 100 Total Control: 257 Control (magnet) 150 Control (neighborhood) 107 Loss to f/u: 22% **Study population: Parents and Caregivers** Age: NR Sex: NR Race/ethnicity: Education: NR Employment: NR Income: NR Marital status: NR Other: NR **Study Population: Youth** Age: NR Grade level(s): 6th grade (baseline), end 8th grade (f/u)	10 postcards based on youth stage status and risk/protective factors) 7th grade Fall semester: follow-up nurse consultation Spring semester: physician-endorsed family-lessons providing activities to enhance parent-child communication regarding prevention skills and knowledge. Contract in each lesson, child made promise to avoid alcohol each day during next week. One lesson/week for 4 consecutive weeks (2 risk, 2 protective) **Intervention/program name:** Start Taking Alcohol Risk Seriously (STARS) for Families Programs Substance(s) focused* alcohol **Format:** both (face-to-face and workbook) **Intervention intensity:** every semester nurse consultant or activities to complete; 6th grade - mailed postcards based on youth risk	(b) I am thinking of trying alcohol soon (contemplation) (c) I am planning to start drinking soon (preparation) (d) I started drinking during the last 6 months (action) (e) I have been drinking for longer than 6 months (maintenance) Two items were used to measure motivation to avoid alcohol during the next 30 days and year. Due to large # of risk factor measures, only most highly correlated with pre-test alcohol use measures selected as dependent variables (motivation to avoid drinking, expectancy beliefs, peer prevalence, influenceability and total risk factors for alcohol use) Total alcohol risk factors score added across nine categories for each subject, with total alcohol risk factors ranging from 0 (least risk) to 9 (greatest). Substance(s)* alcohol Polysubstance measures? No	**Not included in outcome summary: Table III. scale, mean alcohol use and risk measures over time by group and school** **Magnet School** **Outcome: Alcohol intentions (Table 1)** Measure: percentage (proportion) plan to drink in next 6 months Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=150): 5.4% Comp (n=150): 18.0% **Absolute change (post):** -12.6 pct pts **Relative change (post):** -70.0% **Narrative results:** significantly fewer intervention planning to drink than control, X211.53, 1 df, P=0.001. Favorable (Yes/No/No effect): Yes Statistical significance: Yes **Outcome: Alcohol intentions** Measure: plan to drink in future Narrative: less intentions to drink in future, greater motivation to avoid drinking and less total alcohol risk than control students, Ps < 0.05.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Sex: 46% female; 54% male Race/ethnicity: 58% Black or African American; 34% White; 8% other Other: 55% in free lunch program; 31% have immediate family member with an alcohol or drug use associated problem; (42%) had no prior alcohol or drug education in last year NOTE: Significant differences were found between students at two schools on six of the seven demographic measures and three of five alcohol use measures. **Students in neighborhood school sample:** more likely female (χ212.08,1 df, P=0.0005), African American (χ2120.10, 6 df, P=0.00001), older (t-test 7.39,423.32 df, P=0.001), receive free school lunch (χ2111.15, 1 df,	7th grade nurse consultant served as booster, weekly activities Number of sessions or modules: 2 consultations + 10 postcards + 4 family lessons Number of hours per session: 40 min for face-to-face+ postcards and lessons **Total hours of intervention:** NR Additional components (things outside the sessions/modules) Incentive for completing 7th grade activity worksheets **Implementer(s):** nurse (received 1-day training) **Intervention duration:** 24-months (6th and 7th grade) **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? Yes Parent and child in the same session/activity? Yes (family-based)	Outcome types Intentions? Yes Initiation? Yes Use? Yes SU disorder? No, unless heavy drinking counts Educational outcomes? No Mental health? No Morbidity? No Mortality? No Equity (stratified analysis; focused on one historically disadvantaged group)? Yes Other outcomes? Risk factors (influenceability, peer prevalence, expectancy beliefs, motivation to avoid, total alcohol risk) Present data by year in Table 3	**Outcome: Alcohol initiation (Table 1)** Measure: percentage (proportion) precontemplation; contemplation/preparation; action/maintenance Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=150): precontemplation: 87.2% contemplation: 1.3% action: 11.4% Comp (n=150): precontemplation: 79.3% contemplation: 2.0% action: 18.7% Absolute change (post only): precontemplation: +7.9 pct pts contemplation: -0.7 pct pts action: -7.3 pct pts Relative change (post): +9.9% -35.0% -39.0% **Narrative results:** fewer intervention students in more advanced stages of

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	P=0.00001), single parent/guardian home (χ234.61, 4 df, P=0.00001) and receive no prior alcohol or drug education in past year (χ247.19, 1 d.f.,P0.00001) than those in magnet school. **Community characteristics:** "economically disadvantaged"	**Comparison group**: Alcohol education booklet 6th grade: Young People and Alcohol-What the Ads Don 't Tell You; 7th grade The Truth About Alcohol. Included information about alcohol's effects on body and health, risks of using alcohol for youth, reasons why youth drink, reasons not to drink alcohol, ways of refusing alcohol use offers, alternatives to drinking, learning to feel good about oneself, stages of intoxication, types of drinkers, characteristics of alcohol abuse, other Q & A about alcohol. Placed in quiet area alone and asked to read material, approx. 10 min.		alcohol acquisition (i.e. contemplation–maintenance) than control Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1) Initiation outcome?** Measure: percentage (proportion) lifetime **(ever tried alcohol)** Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=150): 54.0% Comp (n=150): 61.7% **Absolute change (post): -7.7 pct pts** **Relative change (post): -12.5%** **Narrative results**: Not significant, but showed fewer intervention students using than control students Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)** Measure: percentage (proportion) 7-Day use Baseline Int (n=): NR Comp (n=): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up (in months): 36 months (12 months post intervention) Int (n=150): 10.7% Comp (n=150): 12.0% **Absolute change (post):** -1.3 pct pts **Relative change (post):** -10.8% **Narrative results:** Not significant, but showed fewer intervention students using than control students Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)** Measure: percentage (proportion) 30-Day use Baseline Int (n=): NR Comp (n=): NR Follow-up (in months) 36 months (12 months post intervention) Int (n=150): 11.3% Comp (n=150): 17.4% **Absolute change (post):** -6.1 pct pts **Relative change (post):** -35.0 Post only **Narrative results**: Not significant, but showed fewer intervention students using than control students Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: percentage (proportion) 30-Day "heavy" use Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=150): 4.7% Comp (n=150): 8.7% **Absolute change (post):** -4.0% pct pts **Relative change (post):** -45.9% **Narrative results**: Not significant, but showed fewer intervention students using than control students Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Length of drinking (Table 1)** Measure: percentage (proportion) length of drinking (Do not drink, ≤30 days to 6 months, 6+ months) Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=150): Do not drink 88.7 ≤30 days to 6 months 3.3% 6 months or more 8.0%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=150): Do not drink 78.7 ≤30 days to 6 months 6.0% 6 months or more 15.3% **Absolute change:** Do not drink -10.0 pct pts ≤30 days to 6 months -2.7 pct pts 6 months or more -7.3 pct pts **Relative change**: NR **Narrative results**: fewer intervention students drank alcohol for any length of time (i.e. 30 days to 6 months or more) than control Favorable (Yes/No/No effect): Yes Statistical significance: Approached significance (Ps = 0.06) **Table II. Scale, mean alcohol use and risk factor measures at 1-year follow-up by school and group.** **Narrative results:** alcohol use overall MANOVA (F(5,294)=2.82, P=0.01) and univariate test for intentions both significant; intervention students significantly less intentions to drink in the future (m=5.56, SD=2.75) than control (m=6.70, SD=3.77), F(1,298)=8.95, P=0.003. Alcohol use risk factors significant, F(5,294)= 2.68, P=0.02. Univariate tests - intervention students significantly greater motivation to avoid drinking (m=2.49, SD=1.17) than control (m=3.00, SD=1.79),

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				F(1,298)=8.41, P=0.004, and less total alcohol risk factors (m=7.73, SD=1.83) than control (m=8.26, SD=1.96), F(1,298)=5.78, P=0.01. **Neighborhood school** **Outcome: Alcohol intentions (Table 1)** Measure: percentage (proportion) plan to drink in next 6 months Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 36 months Int (n=100): 4.0% Comp (n=107): 8.4% **Absolute change (post):** -4.4 pct pts **Relative change (post):** -52.8% **Narrative results:** Fewer intervention students used less alcohol than control for all alcohol measures, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol initiation (Table 1)** Measure: percentage (proportion) precontemplation; contemplation/preparation; action/maintenance Baseline Int (n=NR): NR Comp (n=NR): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up (in months): 36 months (12 months post intervention) Int (n=100): precontemplation: 85.0% contemplation: 8.0% action: 7.0% Comp (n=150): precontemplation: 82.2% contemplation: 10.3% action: 7.5% **Absolute change (post):** precontemplation: +2.8 pct pts contemplation: -2.3 pct pts action: -0.5 pct pts **Relative change (post):** +3.4% -22.3% -6.7% **Narrative results:** fewer intervention students used less alcohol than control for all alcohol measures, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1) Initiation outcome?** Measure: percentage (proportion) lifetime (**ever tried alcohol)** Baseline Int (n=): NR Comp (n=): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Follow-up (in months): 36 months (12 months post intervention) Int (n=100): 38.0% Comp (n=107): 44.9% **Absolute change (post):** -6.9 pct pts **Relative change (post):** -15.7% **Narrative results**: fewer intervention students used less alcohol than control for all alcohol measures, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)** Measure: percentage (proportion) 7-Day use Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=100): 10.0% Comp (n=107): 11.2% **Absolute change (post):** -1.2 pct pts **Relative change (post):** -10.7% **Narrative results**: fewer intervention students used less alcohol than control for all alcohol measures, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: percentage (proportion) 30-Day use Baseline Int (n=): NR Comp (n=): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=100): 10.0% Comp (n=107): 13.2% **Absolute change (post):** -3.2 pct pts **Relative change (post):** -24.2% **Narrative results:** fewer intervention students used less alcohol than control for all alcohol measures, but differences not significant.10 Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)** Measure: percentage (proportion) 30-Day "heavy" use Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=100): 6.0% Comp (n=107): 9.3% **Absolute change (post): -3.3%** **Relative change (post): -35.9%** **Narrative results:** fewer intervention students used less alcohol than control

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				for all alcohol measures, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol consumption (Table 1)** Measure: percentage (proportion) Length of drinking (Do not drink, ≤30 days to 6 months 6+ months) Baseline Int (n=NR): NR Comp (n=NR): NR Follow-up (in months): 36 months (12 months post intervention) Int (n=100): Do not drink 87.0 ≤30 days to 6 months 9.0% 6 months or more 4.0% Comp (n=107): Do not drink 83.2 ≤30 days to 6 months 11.2% 6 months or more 5.6% **Absolute change:** Do not drink -3.8 pct pts ≤30 days to 6 months -2.2 pct pts 6 months or more -1.6 pct pts **Relative change:** NR **Narrative results:** fewer intervention students used less alcohol than control for all alcohol measures, but differences not significant.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Favorable (Yes/No/No effect): Yes Statistical significance: No **Table II. Scale, mean alcohol use and risk factor measures at 1-year follow-up by school and group.** Overall MANOVA for alcohol use risk factors significant (F(5,201)=2.18, P=0.05) and univariate test for total alcohol risk factors; intervention students having less alcohol risk (m=7.90, SD=1.87) than control (m=8.42, SD=1.83), F(1,205)=4.09, P=0.04. **Outcome: Alcohol use (Table 2)** Measure: mean (SD) intentions (4-16) Baseline Int (n=83): 4.60 Comp (n=93): 5.23 Follow-up (in months): 36 months (12 months post intervention) Int (n=100): 5.45 Comp (n=107): 5.61 **Absolute change: +**0.47 pts **Relative change:** NA **Narrative results**: mean alcohol use measures lower for intervention students than control, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol use (Table 2)**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: mean (SD) alcohol frequency (0-12) Baseline Int (n=83): 0.28 Comp (n=93): 23 Follow-up (in months): 36 months (12 months post intervention) Int (n=83): 0.46 Comp (n=93): 0.44 **Absolute change:** -0.03 pct pts **Relative change:** -14.2% **Narrative results**: mean alcohol use measures lower for intervention students than control, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol use (Table 2)** Measure: mean (SD) alcohol quantity (0-8) Baseline Int (n=83): 0.17 Comp (n=93): 0.19 Follow-up (in months): 36 months (12 months post intervention) Int (n=83): 0.39 Comp (n=93): 0.40 **Absolute change:** +0.01 pct pts **Relative change**: +8.9% **Narrative results**: mean alcohol use measures lower for intervention students than control, but differences not significant.

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Favorable (Yes/No/No effect): Yes Statistical significance: No **Outcome: Alcohol use (Table 2)** Measure: mean (SD) heavy alcohol use (0-8) Baseline Int (n=83): 0.19 Comp (n=93): 0.09 Follow-up (in months): 36 months (12 months post intervention) Int (n=83): 0.16 Comp (n=93): 0.22 **Absolute change:** -0.16 pct pts **Relative change:** -65.5% **Narrative results:** mean alcohol use measures lower for intervention students than control, but differences not significant. Favorable (Yes/No/No effect): Yes Statistical significance: No **COMBINED** MANOVAs and MANCOVAs with base-line measures used as covariates, analyzed with schools collapsed. Found nearly identical results for magnet school, with univariate tests showing intervention subjects with significantly less intentions to drink in future, greater motivation to avoid alcohol use and less total alcohol risk factors than control (Ps=0.05)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
Author (Year): Wolchik et al. (2002) **Location:** USA, Arizona, Phoenix **Years for Study**: Total: March 1, 1992 – March 2000 Initial Intervention: March 1, 1992 - December 31, 1993 6-year follow-up: April 1998 - March 2000 **Period for Study**: Total: 97 months (March 1992-March 200 – this is longest period, could have been shorter) F/u period: 72 months **Study Design:** Individual RCT **CG Suitability:** Greatest **Risk of Bias Assessment** a) Randomization - Low b) Concealment - Unclear	**Setting:** Community **Urbanicity:** Urban **Eligibility:** Families who participated in initial intervention (which include divorced families with children between 9 and 12 years in Maricopa County) **Recruitment:** Sent letters and telephone calls to randomly selected divorcees from computerized court records decrees. Supplemental recruitment methods (I.e., media, referrals); in-home visit **Inclusion:** (1) Primary residential parent = female; (2) neither mother nor any child in treatment for mental health problems; (3) mother not remarried, had no live-in boyfriend or plans to remarry during	**Brief description of interventions and content:** 2 intervention arms: Mother program (**MP**): focused on improving mother child relationship quality and effective discipline, increasing father's access to the child, and reducing interparental conflict Mother plus child program (**MPCP**): mother program w/children; improving effective coping, reducing negative thoughts about divorce stressors, and improving mother-child relationship quality **Intervention/program name:** New Beginnings Program Substance(s) focused* General **Format:** face-to-face group **Intervention intensity** Number of sessions or modules: MP: 11 mother group sessions+ 2 individual sessions MPCP: 11 mother group sessions+ 2 individual sessions, 11 child group sessions Number of hours per session: 1.75 hours per group session for each arm	**Brief description** Mental disorder and drug abuse or dependence: computer assisted parent and adolescent versions of Diagnostic Interview Schedule for Children; criteria for diagnosis: 1 or more disorders in past year, and 2 or more of the impairment items for disorder(s) rated as intermediate or severe Internalizing problems: standardized and averaged composite of parents (Child Behavior Checklist, 31-item subscale) & adolescents (27-item Child Depression Inventory, 28-item revised Children's Manifest Anxiety Scale) mean of standardized scores Substance(s)* Alcohol, cannabis, other drugs, polydrug Polysubstance measures? YES Outcome types Intentions? NO Initiation? NO Use? YES SU disorder? YES (Drug dependence or abuse) Educational outcomes? NO	Intent-to-treat, loss to f/u families included in all analyses Medium effect size (increment to R^2=0.13) and small effect size (increment to R^2=0.06), the power of test for group differences was above 99% and 97% Baseline covariate for all measures not assessed at baseline (e.g., alcohol use) = composite of child/mother report of externalizing and internalizing problems **Intervention #1: MPCP** **Outcome: alcohol and cannabis use** Measure: self-responded scale, # of times used (1=0 to 7=40) in past year Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=73): NR Comp (n=68): NR **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): Yes, substance use lower in intervention Statistical significance: No statistically significant difference by group or group baseline effects **Outcome: Other drug use**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
c) Blinding - Low d) Outcomes - Low e) Selective - High	the study; (4) custody expected to remain stable during study; (5) family resided within 1-hour drive of program delivery site; (6) mother & child fluent in English; (7) child not mentally handicapped or learning disabled; (8) any diagnosed ADHD child was taking medication **Exclusion:** (1) child scored >17 on the Children's Depression Inventory (2) endorsed an item about suicidal ideation, (3) scored >97th percentile on Externalizing Subscale of Child Behavior Checklist Sample size Baseline 240 Int 164 (MPCP = 83, MP = 81) Control = 76 6-YR Follow-up: 91% (218/240)	Total hours of intervention: MP: 19.25 hours + unknown time for individual sessions MPCP: 38.5 hours + unknown time for individual sessions Additional components (things outside the sessions/modules) NR **Implementer(s)** Trained (30 hours), educated (master's degree) clinicians for both intervention programs (9 MPCP 13 MP) **Intervention duration:** NR 11 group sessions + 2 individual sessions **Focus of intervention activities**: Both parents/caregivers and youth: Yes Parents only: No Parent and child (either in the same session or not)? MP: Yes MPCP: Yes Parent and child in the same session/activity? MP: NR MPCP: NR	Mental health? YES (mental disorders & internalizing problems) Morbidity? NO Mortality? NO Equity? NO Other outcomes? Any diagnosed disorder, sexual partners, externalizing problems (delinquent behavior, aggression, and hostility) Study has additional information on: Implementation? Twenty-six families (11%) assigned to condition dropped out of their intervention program. Participation rate not high Program Leaders received: Detailed manuals, extensive training, and intensive supervision; required to score more than 89% on content knowledge quizzes prior to each session. Independent raters scored program segment using videotapes of sessions (1=not complete to 3=complete). Mean (SD) session completion:	Measure: scale, sum of ratings for 13 other drugs (eg, heroin) Baseline Int (n=83): NR Comp (n=68): NR Follow-up (in months): 72 Int (n=73): NR Comp (n=68): NR **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): Yes, substance use lower in intervention Statistical significance: No statistically significant difference by group or group baseline effects **Outcome: Polydrug use** Measure: Actual mean and adjusted means are presented separately based on ANCOVAs; total # of different drugs, including alcohol, used in past year. Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=73)* Actual Mean: 1.52 (0.25) Adjusted Mean: 1.45 (0.34) *Comp (n=68)* Actual Mean: 1.65 (0.27)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Int 150 (MPCP = 73, MP = 77) Control = 68 Loss to f/u: 9% (22/240) Characteristics below from Table 1 baseline data, combined intervention arms together to calculate overall intervention group (N=150). Reported 6-yr f/u characteristics data narratively **Study population: Parents and caregivers** (baseline Intervention groups only, weighted by sample size: rounded numbers except for age) Mother data Age: 37.8 mean Sex: 100% women Race/ethnicity: White, non-Hispanic – 89% Hispanic – 6% Black – 1% Asian American – 1% Other – 2%	**Comparison group:** Literature control condition- books on post-divorce adjustment to mothers and children as well as syllabi to guide the reading	mother - 2.86 (0.39) and child-3.00 (0.02) Barriers? 26 Participants dropped out: insufficient time (n=8), transportation problems (n=5), dissatisfaction with program (n=6), and other (n=7) (eg, significant physical problems, life stressors, unknown) Potential benefits? NR Potential harms? NR Evidence gaps? Sample almost exclusively middle-class and white; participating mothers better educated, had higher incomes, and had fewer children. Need to be adapted to ethnically and economically diverse samples	Adjusted Mean: 1.72 (0.34) **Absolute change**: Actual Mean: -0.13 Adjusted Mean: -0.27 **Relative change:** Actual Mean: -7.9% Adjusted Mean: -15.7% **Narrative results**: NR Favorable (Yes/No/No effect): Yes, substance use lower in intervention Statistical significance: not significant group interaction (p = .44), or group baseline interaction **Outcome: diagnosed drug dependence or abuse** Measure: proportions (frequencies) Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=73): 4.1% (95% CI, 0%-8.6%) Comp (n=68): 2.9% (95% CI, 0%-6.9%) **Absolute change:** 1.2 pct pts **Relative change:** +41.4% **Narrative results**: No significant difference for diagnosis of drug abuse or dependence Favorable (Yes/No/No effect): No Statistical significance: No significant difference

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Education: 14.5 mean years Employment NR Income: $27195/year annual mean Marital status: 100% divorced Other Sole legal custody: 63% # of children at home: 2.3 Father data Age: 40.0 mean Race/ethnicity: White, non-Hispanic – 85% Hispanic – 9% Black – 3% Asian American – 1% American Indian – 1% Other – 1% Education: 14.0 mean years Employment NR Income: NR Marital status: Remarried – 13% Other Years since separation – 2.2 Years since divorce – 1.0			**Outcome: Drug dependence or abuse symptoms** Measure: actual and adjusted means of baseline comparison of symptom count Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=73)* Actual Mean: 1.47 (0.25) Adjusted Mean: 1.39 (0.40) *Comp (n=68)* Actual Mean: 1.66 (0.34) Adjusted Mean: 1.74 (0.41) **Absolute change:** Actual Mean: -0.19 Adjusted Mean: -0.35 **Relative change:** Actual Mean: -11.4% Adjusted Mean: -20.1% **Narrative results**: NR Favorable (Yes/No/No effect): Yes, less symptom count for intervention Statistical significance: No significant difference, group interaction p = 0.39 **Outcome: diagnosed mental disorders** Measure: last 12-month prevalence, proportions (frequencies) and adjusted OR Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
	Study Population: Youth Age: 10.8 (baseline) (16.9 years; range 15.1 – 19.1 f/u) Grade level(s): NR Sex: 48% females, 52% males Race/ethnicity: NR Other 38% received counseling after initial intervention Follow-up data only: 80% lived with mothers; 11% lived with fathers; 9% lived independently **Community characteristics:** NR			Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=73): 11.0% (95% CI, 3.8%-18.2%) Comp (n=68): 23.5%; (95% CI, 13.8%-33.2%) **Absolute change:** -12.5 pct pts **Relative change:** -53% **Narrative results**: adjusted OR, 4.50 (95% CI, 1.53-13.70) Favorable (Yes/No/No effect): Yes, reduced 1-yr prevalence Statistical significance: Yes, p=.007 **Outcome: diagnosed mental health symptoms** Measure: actual means of symptom count Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=73)* Actual Mean: 17.57 (1.07) *Comp (n=68)* Actual Mean: 17.28 (1.38) **Absolute change:** Actual Mean: +0.29 **Relative change:** Actual Mean: +1.7%

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: Variables with significant interactions the adjusted means are dependent on level of the covariate; group interaction p-value = .35 Favorable (Yes/No/No effect): Yes, stronger for those with higher baseline problems, they had fewer symptoms Statistical significance: *P*=.02, significant group x baseline interactions symptom count **Outcome: any diagnosed disorders** Measure: adjusted OR, proportions (frequencies) Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=73): 15.1%; (95% CI, 6.9%-23.3%) Comp (n=68): 23.5%;(95% CI, 13.8%-33.2%) **Absolute change:** -8.4 pct pts **Relative change:** -35.7% **Narrative results**: adjusted OR 2.83 (95% CI, 1.07-7.81) times higher in control Favorable (Yes/No/No effect): Yes, lower odds in intervention Statistical significance: significant group difference, *P*=.04 **Outcome: internalizing problems**

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: actual and adjusted means of baseline comparison of symptom count Baseline Int (n=83): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=73)* Actual Mean: -0.02 (0.12) Adjusted Mean: -0.06 (0.13) *Comp (n=68)* Actual Mean: 0.04 (0.13) Adjusted Mean: 0.08 (0.13) **Absolute change:** Actual Mean: -0.06 Adjusted Mean: -0.14 **Relative change:** Actual Mean: -1.50% Adjusted Mean: -1.75% **Narrative results: NR** Favorable (Yes/No/No effect): No Statistical significance: group interaction p= .38 **Intervention #2:** MP **Outcome: alcohol use** Measure: self-responded scale, # of times used (1=0 to 7=40) in past year Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=77): NR Comp (n=68): NR **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): Yes, stronger for those with higher baseline problems Statistical significance: significant group baseline interaction effects (*P*=.005) **Outcome: cannabis use** Measure: self-responded scale, # of times used (1=0 to 7=40) in past year Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=77): NR Comp (n=68): NR **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): Yes, stronger for those with higher baseline problems. Statistical significance: significant group baseline interaction effects (*P*=.02) **Outcome: Other drug use** Measure: scale, sum of ratings for 13 other drugs (eg, heroin)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=77): NR Comp (n=68): NR **Absolute change: NR** **Relative change: NR** **Narrative results: NR** Favorable (Yes/No/No effect): Yes, stronger for those with higher baseline problems Statistical significance: significant group baseline interaction effects other drug use (*P*=.01) **Outcome: Polydrug use** Measure: Actual mean and adjusted means are presented separately based on ANCOVAs; total # of different drugs, including alcohol, used in past year. Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=77)* Actual Mean: 1.86 (0.28) Adjusted Mean: 1.78 (0.42) *Comp (n=68)* Actual Mean: 1.65 (0.27) Adjusted Mean: 1.74 (0.44)

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Absolute change: Actual Mean: 0.21 Adjusted Mean: 0.04 **Relative change:** Actual Mean: 12.7% Adjusted Mean: 0.04/1.74= 2.3% **Narrative results:** NR Favorable (Yes/No/No effect): Yes, for those at higher risk from baseline, significantly less use than those not at high risk Statistical significance: significant group baseline interaction effects, but no significant group interaction p=.90 **Outcome: diagnosed drug dependence or abuse** Measure: proportions (frequencies) Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=77): 5.3% (95% CI, 0.3%-10.3%) Comp (n=68): 2.9% (95% CI, 0%-6.9%) **Absolute change:** +2.4 pct pts **Relative change:** +82.8% **Narrative results**: NR Favorable (Yes/No/No effect): No Statistical significance: No significant difference **Outcome: Drug dependence or abuse symptom**

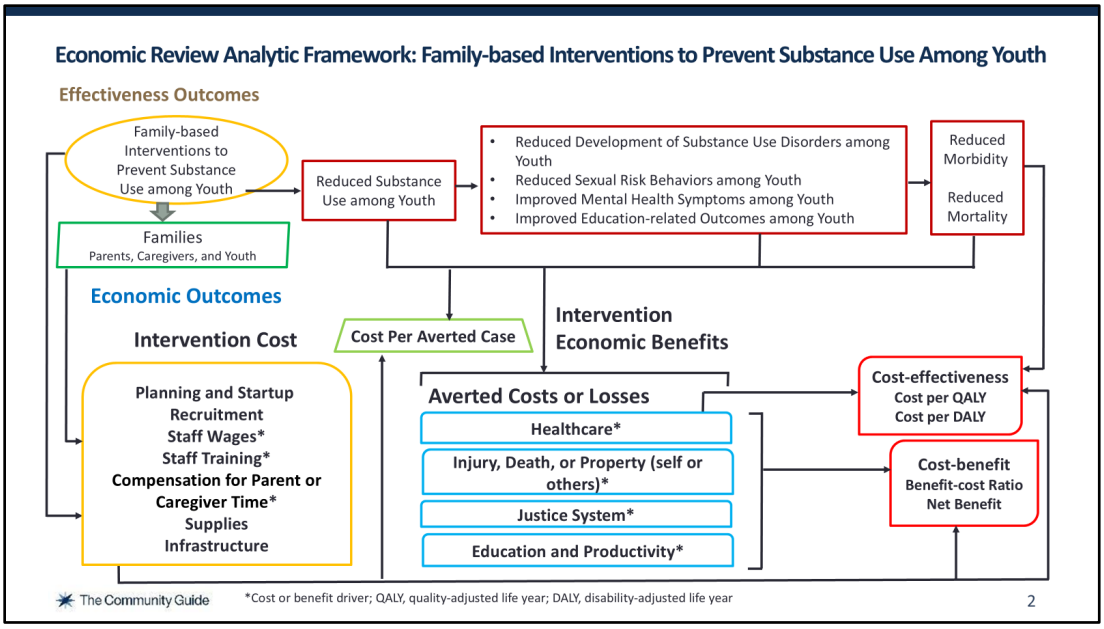
Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Measure: actual and adjusted means of baseline comparison of symptom count Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=77)* Actual Mean: 1.82 (0.43) Adjusted Mean: 1.70 (0.63) *Comp (n=68)* Actual Mean: 1.66 (0.27) Adjusted Mean: 1.80 (0.65) **Absolute change***:* Actual Mean: 1.82-1.66= +0.16 Adjusted Mean: 1.70-1.80= -0.10 **Relative change:** Actual Mean: 0.16/1.66= +9.6% Adjusted Mean: -0.10/1.80= -5.6% **Narrative results:** NR Favorable (Yes/No/No effect): Unclear (adjusted if favorable) Statistical significance: group interaction p = .85 **Outcome: diagnosed mental disorders** Measure: last 12-month prevalence, proportions (frequencies) and adjusted OR Baseline Int (n=81): NR

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Comp (n=76): NR Follow-up (in months): 72 Int (n=77): 18.4% (95% CI, 9.7%-27.1%) Comp (n=68): 23.5%; (95% CI, 13.8%-33.2%) **Absolute change:** -5.1 pct pts **Relative change:** -21.7% **Narrative results**: adjusted OR, 1.94 Favorable (Yes/No/No effect): Yes, lower in intervention group Statistical significance: No significant group difference **Outcome: diagnosed mental health symptoms** Measure: actual and adjusted means of baseline comparison of symptom count Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=77)* Actual Mean: 18.50 (1.12) *Comp (n=68)* Actual Mean: 17.28 (1.38) **Absolute change:** Actual Mean: +1.22 **Relative change:** Actual Mean: +7.1%

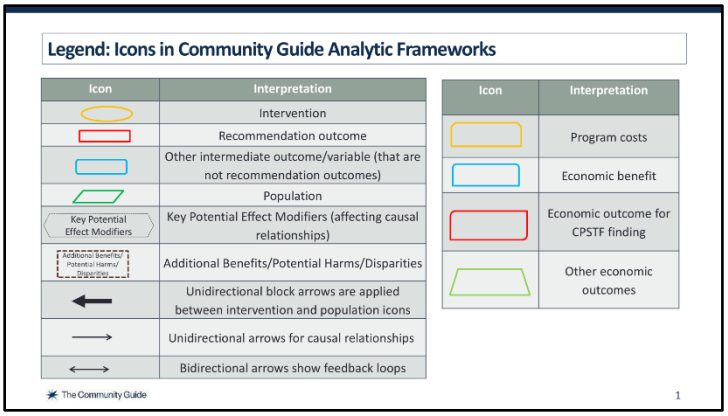
Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Narrative results: Variables with significant interactions the adjusted means are dependent on level of the covariate; group interaction p-value = .57 Favorable (Yes/No/No effect): Yes, stronger for those with higher baseline problems, they had fewer symptoms Statistical significance: *P*=.005, significant group x baseline interactions symptom count **Outcome: any diagnosed disorders** Measure: proportions (frequencies) Baseline Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 Int (n=77): 19.7% (95% CI, 10.8%-28.6%) Comp (n=68): 23.5%;(95% CI, 13.8%-33.2%) **Absolute change:** -3.8 pct pts **Relative change:** -16.2% **Narrative results:** NR Favorable (Yes/No/No effect): Yes, rates are lower in intervention Statistical significance: No significant difference **Outcome: internalizing problems** Measure: actual and adjusted means of baseline comparison of symptom count Baseline

Study	Population Characteristics	Intervention Characteristics	Outcomes	Results
				Int (n=81): NR Comp (n=76): NR Follow-up (in months): 72 *Int (n=77)* Actual Mean: -0.02 (0.11) Adjusted Mean: -0.06 (0.11) *Comp (n=68)* Actual Mean: 0.04 (0.13) Adjusted Mean: 0.09 (0.12) **Absolute change:** Actual Mean: -0.06 Adjusted Mean:-0.15 **Relative change:** Actual Mean: -1.5% Adjusted Mean: -1.7% **Narrative results:** NR Favorable (Yes/No/No effect): No Statistical significance: group interaction p = .34 **Comparison of MPCP and MP:** No significant main or interaction effects found for any outcomes; mental health outcomes (p = .13 to .95) and substance use outcomes (p = .16 to .99)

Appendix E
Analytic Framework (Economic Review)
Substance Use: Family-based Interventions to Prevent Substance Use among Youth



Analytic Framework Text Description



The analytic framework postulates that the intervention implemented for parents, caregivers, and the youth within their families reduce substance use among youth and other risk behaviors, thus reducing morbidity and mortality.

The framework goes on to show the intervention cost is composed of cost planning and startup, recruitment, staff wages, staff training, and compensation for parent or caregiver time, supplies, and infrastructure. Among these costs, it is postulated that staff training, staff wages, and compensation for parent or caregiver time are the drivers of intervention cost magnitude. Effective interventions that prevent substance use and other risk behaviors lead to economic benefits in terms of healthcare cost averted, averted costs of injuries and death, averted costs to the justice system, and averted losses in education attainment and productivity at worksites when youth enter the workforce. It is postulated that all the mentioned benefits are drivers of total benefit because of the intervention.

The framework further postulates that reduced morbidity and mortality lead to increased number and quality of life years lived. Cost-effectiveness is defined as the net cost per quality-adjusted life years gained or the net cost per disability-adjusted life years averted. Cost-benefit is defined as the ratio of benefit to cost or net benefit which is the difference between benefits and cost. The Community Preventive Services Task Force issues an economic statement based on cost-effectiveness or cost-benefit evidence.

Appendix F
Search Strategy (Economic Review):

Substance Use: Family-based Interventions to Prevent Substance Use among Youth

Databases searched for this review included Medline, EconLit, PsycINFO, Cochrane, CINAHL, and ERIC, with search period from inception of databases through October 30, 2023.Two team members independently screened each paper identified to determine eligibility. Uncertainties and disagreements were resolved by consensus among review team members.

Overall Search Results

Databases	Date	Results	Duplicates	Final Results
Medline (OVID) 1946 –	10/30/23	550	5	545
EconLit (EbscoHost)	10/30/23	26	7	19
PsycINFO (OVID) 1806-	10/30/23	261	100	161
Cochrane Library	10/30/23	201	76	125
CINAHL (EbscoHost)	10/30/23	290	194	96
ERIC (ProQuest)	10/30/23	121	12	109
Total		1449	394	1055

Ovid MEDLINE(R)

1 Adolescent/ 2224284

2 (adolescen* or teen* or youth).ti,ab. 427800

3 1 or 2 2336705

4 exp family/ or exp parents/ or family relations/ or parent-child relations/ or parenting/ 370939

5 (family or families or parent*).ti,ab. 1536886

6 4 or 5 1710918

7 ((parent adj2 training) or (clinical adj2 trials) or intervention*).mp. 1870187

8 6 and 7 157578

9 ((alcohol* or drug or prescription or opiate* or substance) adj2 (abuse or misuse)).ti,ab. 70140

10 (marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine or amphetamine).ti,ab. 450404

11 exp Alcoholism/ or exp Illicit Drugs/ or exp Tobacco Smoking/ or exp Substance-Related Disorders/ 323129

12 or/9-11 728456

13 3 and 12 118775

14 8 and 13 4859

15 exp animals/ not humans.sh. 5163742

16 14 not 15 4857

17 exp "Costs and Cost Analysis"/ 266732

18 exp Cost-Benefit Analysis/ 93247

19 exp Quality-Adjusted Life Years/ 15873

20 (cost-effective* or cost-benefit* or cost or QALY or DALY or quality-adjusted life year* or disability-adjusted life year* or return on investment or ROI).ti,ab. 585916

21 exp economics/ 666142

22 exp budgets/ 14152

23 exp cost savings/ 12746

24 budget*.ti,ab,kf. 36704

25 (economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed).ti,ab,kf. 1247739

26 or/17-25 1685924

27 16 and 26 568

28 limit 27 to english language 550

EconLit (EbscoHost)

S36 S33 AND S35

S35 S30 AND S34

S34 TX ((marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine* or amphetamine*)) OR TX (((alcohol* or drug or prescription or opiate* or substance) N2 (abuse or misuse)))

S33 S31 AND S32

S32 TX ((parent* N2 training) Or (clinical N2 trial*) OR intervention)

S31 TX (family Or families OR parent* OR "family relations" OR "parent child relations")

S30 AB (adolescen* or teen* or youth) OR TI (adolescen* or teen* or youth)

PsycINFO (OVID) 1806-

APA PsycInfo <1806 to October Week 3 2023>

1 (adolescen* or teen* or youth).ti,ab. 349971

2 exp family/ or exp parents/ or family relations/ or parent child relations/ or parenting/ 367757

3 (family or families or parent*).ti,ab. 620699

4 2 or 3 716574

5 ((parent adj2 training) or (clinical adj2 trial*) or intervention*).mp. 549416

6 4 and 5 123510

7 ((alcohol* or drug or prescription or opiate* or substance) adj2 (abuse or misuse)).ti,ab. 62579

8 (marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine* or amphetamine*).ti,ab. 122981

9 exp Alcoholism/ or exp Drugs/ or "Substance Use Disorder"/ or Tobacco Smoking/ 490411

10 or/7-9 567696

11 1 and 10 43144

12 6 and 11 3219

13 exp animals/ not humans.sh. 378226

14 12 not 13 3216

15 exp "Costs and Cost Analysis"/ 49800

16 (cost-effective* or cost-benefit* or cost or QALY or DALY or quality-adjusted life year* or disability-adjusted life year* or return on investment or ROI).ti,ab. 77905

17 exp economics/ 93041

18 exp budgets/ 1452

19 budget*.ti,ab. 10038

20 (economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed).ti,ab. 315564

21 or/15-20 365359

22 14 and 21 267

23 limit 22 to english language 261

Cochrane Library

#1 MeSH descriptor: [Adolescent] this term only 125922

#2 (adolescen* OR teen* OR youth):ti,ab 41210

#3 #1 OR #2 150565

#4 MeSH descriptor: [Family] explode all trees 13439

#5 MeSH descriptor: [Parenting] explode all trees 1857

#6 MeSH descriptor: [Family Relations] this term only 327

#7 MeSH descriptor: [Parent-Child Relations] this term only 1432

#8 (family OR families OR parent*):ti,ab 87245

#9 #4 OR #5 OR #6 OR #7 OR #8 91668

#10 ((parent NEAR/2 training) or (clinical NEAR/2 trials) or intervention*) 915240

#11 #9 AND #10 62076

#12 ((alcohol* or drug or prescription or opiate* or substance) NEAR/2 (abuse or misuse)):ti,ab 7475

#13 (marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine or amphetamine):ti,ab 46451

#14 MeSH descriptor: [Alcohols] explode all trees 41935

#15 MeSH descriptor: [Illicit Drugs] explode all trees 304

#16 MeSH descriptor: [Tobacco Smoking] explode all trees 503

#17 MeSH descriptor: [Substance-Related Disorders] explode all trees 19846

#18 #12 OR #13 OR #14 OR #15 OR #16 OR #17 102972

#19 #3 AND #18 13859

#20 #11 AND #19 1260

#21 (cost-effective* or cost-benefit* or cost or QALY or DALY or quality-adjusted life year* or disability-adjusted life year* or return on investment or ROI):ti,ab 65315

#22 MeSH descriptor: [Costs and Cost Analysis] explode all trees 14632

#23 MeSH descriptor: [Cost-Benefit Analysis] explode all trees 9866

#24 MeSH descriptor: [Quality-Adjusted Life Years] explode all trees 1945

#25 MeSH descriptor: [Economics] explode all trees 18332

#26 MeSH descriptor: [Budgets] explode all trees 56

#27 MeSH descriptor: [Cost Savings] explode all trees 538

#28 budget*:ti,ab 1458

#29 (economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed):ti,ab 107528

#30 #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 113636

#31 #20 AND #30 201

CINAHL (EbscoHost)

S20 S12 AND S18 Expanders - Apply equivalent subjects

Narrow by Language: - english

Search modes - Boolean/Phrase

S19 S12 AND S18

S18 S15 OR S16 OR S17

S17 TI ((economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or

finances or financed)) OR AB ((economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed))

S16 TI ((cost-effective* or cost-benefit* or cost or QALY or DALY or quality-adjusted life year* or disability-adjusted life year* or return on investment or ROI)) AND AB ((cost-effective* or cost-benefit* or cost or QALY or DALY or quality-adjusted life year* or disability-adjusted life year* or return on investment or ROI))

S15 S13 OR S14

S14 (MH "Costs and Cost Analysis") OR (MH "Cost Benefit Analysis")

S13 (MM "Cost Effectiveness Analysis") OR (MH "Quality-Adjusted Life Years") OR (MH "Disability-Adjusted Life Years") OR (MH "Economics") OR (MH "Cost Savings") OR (MH "Budgets")

S12 S6 AND S11

S11 S2 AND S10

S10 S7 OR S8 OR S9

S9 (MH "Alcoholism") OR (MH "Street Drugs+") OR (MH "Smoking+") OR (MH "Substance Use Disorders+")

S8 TI ((marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine* or amphetamine*)) OR AB ((marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine* or amphetamine*))

S7 TI (((alcohol* or drug or prescription or opiate* or substance) N2 (abuse or misuse))) OR AB (((alcohol* or drug or prescription or opiate* or substance) N2 (abuse or misuse)))

S6 S4 AND S5

S5 TX ((parent* N2 training) OR (clinical N2 trial) OR intervention*)

S4 ((MH "Family+") OR (MH "Parents+") OR (MH "Family Relations") OR (MH "Parent-Child Relations") OR (MH "Parenting")) OR TI ((family OR families OR parent*)) OR AB ((family OR families OR parent*))

S3 (MH "Family+") OR (MH "Parents+") OR (MH "Family Relations") OR (MH "Parent-Child Relations") OR (MH "Parenting") Results (271,786)

S2 (MH "Adolescence+") OR TI ((adolescen* or teen* or youth)) OR AB ((adolescen* or teen* or youth)) Results (666,303)

S1 (MH "Adolescence+")

ERIC (ProQuest)

MAINSUBJECT.EXACT.EXPLODE("Adolescents") OR noft((adolescen* OR teen* OR youth))

Set#: S2

MAINSUBJECT.EXACT.EXPLODE("Family (Sociological Unit)") OR MAINSUBJECT.EXACT.EXPLODE("Parents") OR MAINSUBJECT.EXACT.EXPLODE("Parent Child Relationship") OR MAINSUBJECT.EXACT.EXPLODE("Child Rearing") OR noft((family OR families Or parent*))

Set#: S3

noft(((parent* NEAR/2 training) OR (clinical NEAR/2 trial*) OR intervention*))

Set#: S4

[S2] AND [S3]

Set#: S5

noft(((alcohol* or drug or prescription or opiate* or substance) NEAR/2 (abuse or misuse)))

Set#: S6

noft((marijuana or smoking or opiate* or vaping or tobacco or cocaine or heroin or methamphetamine* or amphetamine*))

Set#: S7

MAINSUBJECT.EXACT.EXPLODE("Alcoholism") OR MAINSUBJECT.EXACT.EXPLODE("Drug Abuse") OR MAINSUBJECT.EXACT.EXPLODE("Smoking") OR MAINSUBJECT.EXACT.EXPLODE("Substance Abuse")

Set#: S8

: [S5] OR [S6] OR [S7]

Set#: S9

[S1] AND [S8]

Set#: S10

[S4] AND [S9]

Set#: S11

MAINSUBJECT.EXACT.EXPLODE("Cost Effectiveness") OR noft((cost-effective* or cost-benefit* or cost or QALY or DALY or quality-adjusted life year* or disability-adjusted life year*

Set#: S12

MAINSUBJECT.EXACT.EXPLODE("Economics") OR MAINSUBJECT.EXACT.EXPLODE("Budgets") OR noft((economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic*

or expenditure or expenditures or expense or expenses or financial or finance or finances or financed)) OR noft(budgets)

Set#: S13

[S11] OR [S12]

Set#: S14

[S10] AND [S13]

Set#: S15

: ([S10] AND [S13]) AND la.exact("ENG")

Results: 121

Appendix G
Included Studies (Economic Review):
Substance Use: Family-based Interventions to Prevent Substance Use among Youth

1. Barton AW, Beach SRH, Wells AC, Ingels JB, Corso PS, et al. The protecting strong African American families program: A randomized controlled trial with rural African American couples. *Prev Sci* 2018;19:904-913. https://doi.org/10.1007/s11121-018-0895-4

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Government reports evaluating multiple programs

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Appendix H

Summary Evidence Table (Economic Review): Substance Use: Family-based Interventions to Prevent Substance Use among Youth

This table outlines information from the studies included in the Community Guide economic review of family-based interventions to prevent substance use among youth. The table details study design and economic analysis, population and intervention characteristics, and economic outcomes considered in this review. Complete references for each study can be found in the Included Studies section of the Substance Use: Family-based Interventions to Prevent Substance Use Among Youth (thecommunityguide.org).

This review included studies from the peer-reviewed literature and two government reports from Washington State Institute for Public Policy (WSIPP) and the Substance Abuse and Mental Health Services Administration (SAMHSA 2008). The peer-reviewed studies are listed first, followed by a description of the methods used by WSIPP and SAMHSA 2008 along with results from the specific programs they evaluated.

Abbreviations Used in This Document:

- Economic outcomes:
  - QALY: quality-adjusted life year
- Other terms:
  - a.k.a, also known as
  - FPL, federal poverty line
  - GED, general education development
  - NGO, non-government organization
  - NR: not reported
  - PSA, probabilistic sensitivity analysis
  - SAMHSA, Substance Abuse and Mental Health Services Administration
  - WSIPP, Washington State Institute for Public Policy

Notes:

Quality of economic estimates – Studies are assessed to be of good, fair, or limited quality. This valuation is based on two domains: Quality of Capture, and Quality of Measurement. Read more Methods Manual - Part 2: Economic Review Process | The Community Guide

Race/ethnicity of the study population: The Community Guide only summarizes race/ethnicity for studies conducted in the United States.

Study Information	Study and Population Characteristics	Program Name Intervention & Comparison	Effectiveness	Intervention Costs	Intervention Benefits	Economic Summary Measure
Author (Year): Barton et al. (2018) **Design**: RCT **Economic Outcome:** Intervention cost **Substances Focus:** Alcohol, tobacco, cannabis **Funding Source:** National Institute on Drug Abuse **Monetary Values:** Assumed reported in 2014 U.S. dollars.	**Location:** Georgia, USA **Setting:** Home **Population:** Low-income African American families (couples) with children 9-14. Families recruited by phone or advertisements in community and from school lists. **Sample Size (families):** Intervention 172 Usual care 174 **Characteristics:** **Mean parent age:** Male 39.9 y and Female 36.6 y **Mean child age:** 10.9 y **Race:** African American 100%	Protecting Strong African American Families (ProSAAF) **Intervention:** African American facilitator provided skills training, behavior rehearsal and feedback, and reinforcement. Primary focus on couple and outcomes of couple relation functioning, coparenting, and parenting process. Secondary outcomes were related to youth including substance use. Facilitator-led 6 2-hour sessions over 6 weeks in homes. End of each session, facilitator met with youth separately for 15 minutes on peer pressure or understanding parents, followed by another 15-min of joint activity with parent-child in discussion or a game. **Comparison:** Informational materials on marriage	Improved couple satisfaction, communication, and confidence at 9 months. Odds of reporting substance use were 89% lower for youth in the ProSAAF condition, and count of conduct problems was 44% lower for ProSAAF youth (Beach 2016). **Data Source:** Effectiveness in couple rations based on validated instruments. Substance use based on self-report.	**Intervention cost**: $1,927 per family (Min $725, Max $3,248) **Components of intervention cost:** Facilitator wages, travel, training; supplies, equipment, and overheads; financial incentives for participation. **Source:** Study records, facilitator logs, expenditure receipts. **Quality:** Good	**NR**	**NR**

	Median parent education attainment: High School or GED Urbanicity: 100% rural **Income:** 51% below 100% of FPL **Time Horizon:** intervention length was 6 consecutive sessions over 6 weeks plus 2 boosters.					
Author (Year): Bauman et al. (2001) **Design**: RCT **Economic Outcome:** Intervention cost **Substances Focus:** Alcohol, tobacco **Funding Source:** National Institute on Drug Abuse **Monetary Values:** Assume	**Location:** National, USA **Setting:** Home **Population:** Families with children 12 to 14 years old were recruited from randomly picked list of 2395 phone numbers. **Sample Size (youth):** Total NR **Intervention size in analysis:** cigarettes use 400; chewing tobacco 505; alcohol 193. **Control size in analysis:** cigarettes	Family Matters **Intervention:** Booklet materials focused on alcohol and tobacco use prevention followed by telephone discussion led by health educators. Booklet 1 taught negative consequences of youth substance use and what families can do to prevent use. Booklet 2 covered family characteristics in terms of supervision, support, communication, skills. Booklet 3 covered what families can do to discourage substance use through monitoring, rule setting, and mutually agreed sanctions. Booklet 4 covered social and peer pressures and building resistance.	16.4% significantly fewer smoking initiators at 1-year follow-up versus control. Non-whites had no effect due to intervention. Alcohol initiation at 1-year follow-up was 11.1% lower for intervention versus control, but not significant. Note baseline alcohol use was high for both groups. No difference in chewing tobacco **Data Source:**	**Intervention cost per family**: $140 **Components of intervention cost:** NR **Source:** NR **Quality:** Fair	**NR**	**NR**

d reported in 1998 U.S. dollars.	use 428; chewing tobacco 570; alcohol 223. **Characteristics:** Urbanicity: Mixed **Time Horizon:** Baseline interviews June 1996 through February 1997. First booklet mailed July 1997 and final parent-child dyad completed program in September 1997. 4 booklets covered in sequence. Sessions not reported.	**Comparison:** No treatment	Self-report.			
Author (Year): Corso et al. (2013) **Design**: RCT **Economic Outcome:** Intervention cost **Substances Focus:** Alcohol, cannabis, tobacco	**Location:** Georgia, USA **Setting:** Community facilities **Population:** African American 10th graders in public school rosters and caregiver dyads chosen from 6 rural Georgia counties with large African American populations. Cost	Strong African American Families - Teen (SAAF-T) **Intervention:** Targets adolescent skill building, parenting skills training, and family interactions training to prevent substance abuse and sexual risk behavior. 5 weekly meetings at community facilities. Concurrent sessions for youth and parents separately followed by joint parent-youth session where they practice what they learned in separate sessions.	Baseline at age 16 y and post test at 17 y 10 m. 32% reduction in composite substance use and 47% decrease in substance use problems versus control (Brody 2012). **Data Source:** Self-report.	**Mean societal cost per site** **By multiple imputation** SAAF-T $16,251 ACI $14,102 **By PSA (random selection)** SAAF-T $16,405 ACI $13,854 **By PSA (bootstrap selection)** SAAF-T $16,419 ACI $13,836	**NR**	**NR**

Funding Source: NR **Monetary Values:** Reported in 2009 U.S. dollars.	data was for 16 sites in 4 counties. **Sample Size (families):** Intervention 102 Control 97 **Characteristics:** African American 100% **Mean age** Parent 42.6 y Child 16 y **Percent female** Parent 94% Child 60% **Parent education less than High School** 28% **Income** Mean annual household income $24,502 Percent below 100% of FPL 64% Urbanicity: Rural **Time Horizon:** Intervention took place in 2009. 5 weekly 2-hour meetings.	**Comparison:** Attention control intervention (ACI) focused on healthy diet and exercise		**Components of intervention cost:** Wages, training, client transport and childcare, catering, supplies, overheads, participant time. **Source:** Trial and administrative records **Quality:** Good		
Author (Year): Crowley et al. (2014)	**Location:** Iowa, Pennsylvania, USA **Setting:** School	Strengthening Families Program (SFP) in Grade 6 and one school-based intervention in Grade 7:	**Grade 6 to grade 12 opioid misuse prevalence versus control:**	**Mean societal cost per participant** SFP+LST $457 SFP+All Stars $532	**Societal cost-savings per averted case of opioid misuse**	**Authors state SFP+LST is cost-effective:**

Design: RCT **Economic Outcome:** Intervention cost and cost per intermediate health outcome **Substances Focus:** Benefits modeled for opioids **Funding Source:** National Institute on Drug Abuse **Monetary Values:** Assumed reported in 2006 U.S. dollars.	**Population:** Communities for the PROSPER trials chosen based on: school enrollment 1301 to 5200; ≥15% eligible for reduced school lunch; ≤50% employed at or attending college/university; no other ongoing university-sponsored youth programs. **Sample Size (students):** Intervention Life Skills Training 1,166 All Stars 1,936 Project Alert 924 Control 5,292 (No details) **Characteristics:** White 98% Dual parent 50.2% Child female 50% Child mean age 11.9 y Urbanicity: Rural Household Annual Income $50,174	Life Skills Training (LST), All Stars, or Project Alert. **Intervention:** Multiple interventions delivered within the PROSPER delivery system: SFP plus school-based intervention: SFP +LST SFP+All Stars SFP+Project Alert. SFP develops parenting skills, parent–child relationships, and adolescent skills. LST develops youth attitudes, norms, information, and substance use resistance and refusal skills. All Stars is school-based program for adolescents age11-14 designed to prevent substance abuse and other high risk behaviors as well as promote healthy and positive behaviors of decision-making, goal setting, and peer pressure resistance. Project ALERT is school-based substance use prevention program to identify and resist the internal and social pressures that encourage substance use. **Comparison:** No intervention	SFP+LST -9.3 SFP+All Stars -5.3 SFP+Project Alert +0.9. **Change in probability that a youth would report miusing prescription before grade 12 versus control:** SFP+LST -9.5 (significant) SFP+All Stars -7.6% (significant); SFP+Project Alert -1.6% (Not significant) Note SFP+Project SFP was not effective and hence not considered for further economic analysis. **Data Source:** Self-report.	**Components of intervention cost:** Wages, family financial incentives, supplies, volunteer and in-kind donations. **Source:** Budget data, trial records, volunteer time. **Quality:** Good **Incremental intervention cost to prevent 1 prescription opioid misuse before Grade 12:** SFP+LST $3,959 SFP+All Stars $4,923 **Quality:** Good	$7,500 **Components of intervention benefit:** healthcare, productivity, crime, mortality **Source and Method:** Societal burden literature for opioid misuse **Quality:** Good	Cost to avert opioid misuse ($3,959) < societal savings from averted opioid misuse ($7,500) **Authors state SFP+All Stars is cost-effective:** Cost to avert opioid misuse ($4,923) < societal savings from averted opioid misuse ($7,500) **Quality:** Good

	Time Horizon: Pre-test from 2002-2010 during 6th grade. Follow-up through grade 12. Family component Strengthening Families Program (SFP) offered in Grade 6 and the school-based interventions offered in Grade 7. Follow-up in grades 7 though 12.					
Author (Year): Dembo et al. (2002) **Design**: Pre to Post **Economic Outcome:** Intervention cost and intervention benefit **Substances Focus:** Alcohol **Funding Source:** National Institute on Drug Abuse	**Location:** Hiisborough County, Florida, USA **Setting:** Home **Population:** Recruited from juvenile offenders arrested on misdemeanor or felony charges in Hillsborough County Juvenile Assessment Center. Recruitment based on gender and race by White, Latino, African American. Latino and female oversampled. **Sample Size (participants):** Intervention	Family Empowerment Intervention (FEI) as part of Youth Support Project (YSP). **Intervention:** 24-hour access to YSP staff who provided access and referrals to community resources. Personalized home visits by consultants to: restore family hierarchy; set parent-child boundaries; encourage parent responsibility; set rules and consequences; improve parent skills; set parent expectations; improve problem-solving skills among youth; improve communications; improve family contacts with school, church, community activities. Family interventions delivered	No difference between intervention and control. Significant decrease in getting high or drunk on alcohol comparing FEI completers to all other youth and to non-completers. Data Source: Self-report.	**Mean cost per Family** $1,500 **Components of intervention cost:** NR **Source:** NR **Quality:** Fair	**Justice system savings due to averted incarcerations (diversion to FEI program)** $95 per day per person detained **Components of intervention benefit:** savings to justice system due to avoided incarcerations **Source and Method:** Hillsborough County Sheriff,	**Justice system 2-year net cost (savings – program cost):** $934,000 **Quality:** Limited

Monetary Values: Assumed reported in 2000 U.S. dollars.	315 Control NR **Characteristics:** **Race** African American 41% White 56% Other 3% **Ethnicity** Hispanic or Latino 26% Parent mother only 51% Child female 44% Child mean age 14.5 y Child in special education 44% Urbanicity: Urban Parent semi-skilled or unskilled occupation 37% **Reason for arrest:** Felony property 52% Misdemeanor property 41% Felony 17% Misdemeanor violence or drug 6% **Time Horizon:** Initial interviews September 1, 1994 through January 31, 1998. Three 1-hour meeting per week for 10	by trained consultants who were not therapists, where training and supervision was by licensed clinicians. **Comparison:** YSP services and referrals. Received monthy calls to maintain contact.			Public Defender, State Attorney's Office **Quality:** Limited	

	weeks (30 sessions) with entire family.					
Author (Year): Guyll et al. (2011) **Design**: RCT **Economic Outcome:** Cost-benefit **Substances Focus:** Methamphetamine **Funding Source:** National Institute on Drug Abuse, National Institute on Alcohol Abuse and Alcoholism **Monetary Values:** Assumed reported in 2006 U.S. dollars.	**Location:** Iowa, USA **Setting:** School, community **Population:** Communities for the PROSPER trials chosen based on: school enrollment 1,301 to 5,200; ≥15% eligible for reduced school lunch; ≤50% employed at or attending college/university; no other ongoing university-sponsored youth programs. **Sample Size (youth):** Intervention and Control Study 1 446 Study 2 2,679 **Characteristics (Study 1 and Study 2):** White 98% and 99% Mean mother age 37.2 y and 39 y Dual parent 86% and 87%	Iowa Strengthening Families Program (ISFP) and Strengthening Families Program+Lifeskills Training (SFP+LST) **Intervention:** ISFP in Study 1 and SFP+LST in Study 2. ISFP included both parents and adolescents focused on parenting skills, parent–child relationships, and adolescent skills. LST for adolescents only and concentrated on youth attitudes, norms, information, and substance use resistance and refusal skills. The SFP is an adaptation of ISFP where both parents and youth participate with the same focus areas as ISFP. **Comparison:** No intervention	**Number of methamphetamine use averted:** ISFP 0.039 SFP+LST 0.0178 **Data Source:** Self-report.	**Mean cost per youth** ISFP $990 SFP+LST $1,116 **Components of intervention cost:** Wages, training, advertisements, childcare, parent travel, overheads, family financial incentives for ISFP. Wages, training, supplies for LST. **Source:** Trial records **Quality:** Good **Intervention cost per averted case of methamphetamine use:** ISFP $25,385 SFP+LST $62,697 **Source:** Trial records **Quality:** Good	**Employer savings per averted case of methamphetamine use** $97,532 **Components of intervention benefit:** healthcare, productivity, worksite crime **Source and Method:** National Survey on Drug Use and Health (2001-2006). Prevented methamphetamine use from effectiveness analysis. BLS and Association of Certified Fraud Examiners for cost of employment-related behaviors.	**Benefit to Cost Ratio (benefit over cost per averted case of methamphetamine use)** ISFP 3.84 SFP+LST 1.56 **Quality:** Good

	Child female 52% and 46% Urbanicity: Rural Mean Household Annual Income $34,000 and $43,000 **Time Horizon:** Pretest for the 2 studies were in 1993 and 1998, respectively. ISFP had 7 sessions. SFP+LST had 22 sessions.				**Quality:** Good	
Author (Year): Haggerty et al. (2015) **Design**: RCT **Economic Outcome:** Intervention cost **Substances Focus:** Alcohol, cannabis, unspecified drugs **Funding Source:** National Institute on Drug Abuse	**Location:** Seattle, Washington, USA **Setting:** School, home for self-managed **Population:** White and African American parent and child in 8th grade in Seattle public schools **Sample Size (families):** Group sessions 118 Self-managed 106 Control 106 **Characteristics** White 51% African American 49% Parent female 80%	Staying Connected with Your Teen **Intervention:** Consists of 108-page workbook and 117-min video. Improve family management though guidelines, monitoring, and consistent and fair positive and negative consequences for behavior, and prevention if communication dropoff in high school. One arm was self-managed and second arm was group based. One chapter per week from workbook. Parent and child viewed video, separated to practice skills, and met again for structured family interaction tasks. Self-administered groups were mailed materials and given 10	Measurements taken at baseline (8th grade) and 9th and 10th grades and at age 20. For group sessions, there was small but significant reduction in young adult drug use frequency. For self-administered among Whites, there was significant reduction in young adult drug use frequency and not	**Mean cost per family** Group sessions cost $728 Self-administered sessions $254 **Components of intervention cost:** NR **Source:** NR **Quality:** Fair	**NR**	**NR**

Monetary Values: Reported in 2005 U.S. dollars.	Annual household income African American $7,807 White $21,970. Single parent African American 57% White 24% College graduate African American 13% White 61% Urbanicity: urban **Time Horizon:** Three 2.5-hr sessions and 4 2-hr sessions over 7 weeks during grade 8.	weeks to complete video and workbook, with phone discussions. **Comparison:** No intervention	significant for African Americans. **Data Source:** Self-report. Structural equations latent variable modeling			
Author (Year): Kuklinksi et al. (2015) **Design**: Model **Economic Outcome:** Cost-benefit **Substances Focus:** Alcohol, tobacco **Funding Source:** National Institute on Drug Abuse, National	**Location:** Colorado, Illinois, Kansas, Maine, Oregon, Utah, Washington, USA **Setting:** School, community **Population:** Students ages 10-14 years and their families in communities where schools agree to implement intervention. **Sample Size (students):**	Communities that Care (CTC) **Intervention:** 12 communities chose interventions they would implement. The family-based interventions that were implemented during grades 5 through 6 were (in order of decreasing frequency): Guiding Good Choices, Strengthening Families, Family Matters, Parenting Wisely, and Parents Who Care. School-based curriculum interventions included: All Stars, Life Skills Training, Lion's Quest for Adolescents, Program development	**Odds ratio for abstinence at Grade 12 from:** Delinquency 1.29 Alcohol use 1.43 Cigarette smoking 1.25 All odds ratios were significant. **Data Source:** Self-report. Generalized linear mixed model adjusting for baseline characteristics and demographics	**Mean cost per youth** $556 (Min $376, Max $761) **Components of intervention cost:** Staff wages, CTC and coalition staff wages, curriculum materials, program implementation, training, technical assistance, monitoring, incentives-meals-child care in certain communities	**Mean total benefits per youth:** $4,477 with 95% CI ($4,413, $4,540) **Components of intervention benefit:** Labor market earnings, and averted crime, healthcare, property loss, mortality, negative benefit of	**Benefit to Cost Ratio** 8.22 Low 8.08 and high 8.36 100% of Monte Carlo simulations showing benefits exceed cost. **Quality:** Good

Institute of Child Health and Human Development, National Cancer Institute, National Institute of Mental Health, Center for Substance Abuse Prevention, National Institute on Alcohol Abuse and Alcoholism **Monetary Values:** Reported in 2011 U.S. dollars.	Intervention 2,193 Control 1,797 **Characteristics** White 64% African American 3% Native American 5% Asian 1% Hispanic or Latino 20% Other 7% Child female 50% Urbanicity: Small to midsize towns **Time Horizon:** 5-year trial started in 2003 and ended in 2008. Follow-up in Grade 12, 3 years after support ended.	evaluation, Project Alert, Olweus Bullying Prevention, Project Topwards, No drug Abuse. After school interventions were: Stay Smart, Participate and Learn Skills, Big Brother/ Big Sister, tutoring, Valued Youth. **Comparison:** No intervention		**Source:** Invoices and documentation from participating communities, logs and documentation from CTC staff **Quality:** Good	deadweight loss due to tax. **Source and Method:** WSIPP model parameters and inputs based on program evaluation studies and program implementers. **Quality:** Good	
Author (Year): McCollister et al. (2014) **Design**: RCT **Economic Outcome:** Family financial incentives **Substances Focus:**	**Location:** Miami-Dade, Florida, USA **Setting:** School, community **Population:** Hispanic families with adolescents **Sample Size (families):** Intervention 109 Control 104	Familias Unidas **Intervention:** Objective of present study is to determine whether financial incentives sufficient to cover opportunity cost for parents and adolescent participation and engagement. Uses Caretaker Drug Abuse Treatment Cost Analysis Program (Caretaker DATCAP).	Participation was 88% for family sessions and 79% for group sessions. Attendance rate for the uncompensated Prado 2012 study was 49% for group sessions and 75% for family sessions.	**Opportunity cost per family** $571.57 with SD $409.39 **Components of intervention cost:** transport, time to participate, child-care, time on phone calls, work loss **Source:** Self-report on surveys	**NR**	**NR**

Unspecified subtances **Funding Source:** National Institute on Drug Abuse **Monetary Values:** Reported in 2009 U.S. dollars.	**Characteristics:** Hispanic or Latino 100% Annual household income < $30,000 86% Resident in US > 10 years 72% Urbanicity: Urban **Time Horizon:** Cost study ran from August through September 2009. Intervention was 4 months duration with booster every 6 months. 9 2-hour sessions for parents and 10 1-hour sessions for parents and adolescents together.	Familias Unidas is Hispanic-specific family-based intervention to prevent adolescent problem behaviors and substance use and HIV. Intervention improves awareness, promotes communication, and provides skills to raise adolescents in the US. **Comparison:** No intervention	Compensation appears to increase participation and engagement. **Data Source:** Self-report on surveys	**Quality:** Fair		
Author (Year): Segrott et al. (2022) **Design**: RCT **Economic Outcome:** Cost-effectiveness	**Location:** Wales, United Kingdom **Setting:** Community **Population:** Families with children age 10-14 y. Recruitment through fliers and information in schools, community events, community	Strengthening Families Program (SFP) adapted to United Kingdom **Intervention:** Universal provision with intensity based on need (risk). Structured intervention with manuals delivered through existing UK channels that tended to be targeted based on need. Objective was	Alcohol use and alcohol drunkenness past 30 days at 24 months increased but not significant (OR 1.11 and 1.46). Similalrly, there were no statistically significant differences	Total cost was for intervention and control £1,163,278. Per participant cost for intervention and control £1,240. **Components of intervention cost:** Staff time, training, participant time,	No difference in healthcare utilization or utilization of other services at 9, 15, and 24 months. No difference in quality of life for adults.	**Incremental EQ-5D for adults** -0.046 **Incremental cost** £904 Hence, intervention was dominated, that is QALY

Substances Focus: Alcohol, cannabis, tobacco, unspecified drugs **Funding Source:** Welsh government, Medical Research Council, NICE, Alzheimers Research trust, Alzheimers Socity, British Heart Foundation, Cancer Research UK, Scottish Government, Cardiff Strengthening Families Program, Wellcome Trust **Monetary Values:** Assumed reported in 2010 U.K. pounds	centers, and social media. Families were referred or self-referred. **Sample Size:** Intervention Families 361, Children 477 Control Families 354 Children 454 **Characteristics** White 99.6% Median parent age 37 y Parent female 22.3% Single parent 14.8% Child female 56.4% and 46% Median child age 12 y Urbanicity: Mixed Family affluence: Low 21.0%, Medium 48.8%, High 30.2% **Time Horizon:** Recruitment February 8, 2010 through June 18, 2012.7 weekly sessions of 2 hours each.	preventing alcohol misuse, followed by drug misuse, smoking, alcohol initation and problems, and school performance. Delivered by existing mult-agency trained staff responsible for supporting families or substance misuse prevention. 7 weekly sessions of 2 hours each. First hour for child and parent separately and second hour for parent/child joint session. Implemented in 56 programs/sites. **Comparison:** Usual services provided in area for family, school, mental health, substance use.	between groups or subgroups. **Data Source:** Self-report.	facilities and equipment, promotion and recruitment **Source:** Trial records and interviews with implementers **Quality:** Good	Increase of quality of life for children by 0.013 per child at 24 months. **Components of intervention benefit:** healthcare, quality of life **Source and Method:** healthcare cost from claims, quality of life from EQ-5D **Quality:** Good	were lost with increased cost. **Quality:** Fair

Author (Year): Spoth et al. (2002) **Design**: RCT **Economic Outcome:** Cost-benefit **Substances Focus:** Alcohol **Funding Source:** National Institute on Drug Abuse, National Institute of Mental Health **Monetary Values:** Reported in 1992 U.S. dollars.	**Location:** Iowa, USA **Setting:** School, community **Population:** Families of 6th graders in 33 rural schools in 19 contiguous counties in Iowa. **Sample Size (families):** Intervention ISFP 162 (117 attended) PDFY 153 (124 attended) Control 163 (No details) **Characteristics:** White 98.8% Mean mother age 37.2 y Mean father age 40.1 y Dual parent 86.1% Child female 54.8% Urbanicity: Rural 97% of mothers and 96.3% of fathers completed high school Median household income $34,000	Iowa Strengthening Families Program (ISFP) Preparing for the Drug Free Years (PDFY a.k.a. Guiding Good Choices) **Intervention:** ISFP and PDFY are small group with 7 sessions for ISFP and 5 sessions for PDFY. Both designed to enhance family protective factors and reduce family risk factors. Both were family focused but ISFP had more targeted sessions for children and more parent-child interactive activities. **Comparison:** No intervention	**Incremental alcohol disorders prevented per 100 families versus control:** ISFP 5.6 PDFY 2.7 **Data Source:** Life-time alcohol ever use extrapolated from self-reported alcohol use onset from birthdate to test date.	**Mean cost per family** ISFP $688.56 PDFY $555.67 **Components of intervention cost:** Wages, training, materials, family incentives, site management, facilitation, childcare, parent travel, advertisements **Source:** Project and trial records **Quality:** Good **Intervention cost per alcohol disorder prevented** ISFP $12,459 PDFY $20,439 **Source:** Trial records and effectiveness data **Quality:** Good	**Lifetime benefit per alcohol-use disorder prevented** $119,633 **Components of intervention benefit:** healthcare, mortality, crime, injury, property **Source and Method:** Based on annual cost of alcohol disorders published elsewhere. **Quality:** Good	**Benefit to Cost Ratio (benefit over cost per averted alcohol disorder)** ISFP 9.60 PDFY 5.85 **Quality:** Good

	Time Horizon: 4 year study starting in 6th grade. Follow-up at grade 7, 8 and 10.					

Programs Evaluated by Washington State Institute for Public Policy (WSIPP)

WSIPP - Methods

Program Effect	Program Cost	Program Benefits	Cost-Benefit
Candidate studies are searched from peer-reviewed, government, and NGO sources. Studies are classed in decreasing order of strength for causal inference: experiment, natural experiment, quasi-experiment, other (which are excluded from review) Individual study effects adjusted for: • Methodological quality • Appropriateness to Washington population • Relevance for topic and cost-benefit assessment Effect size obtained from adjusted estimates by meta-analysis and meta-regression, where possible.	Cost of program drawn from peer-reviewed studies or program developers. If primary studies or reports unavailable for program cost, the resources necessary are derived from program description and the resources are costed based on unit prices in State of Washington. Uncertainty of program cost estimates defined as bands ranging from +/-10% to +/-50% Program cost calculated for lifetime of participants and appropriately discounted.	Adjusted effect sizes converted to monetizable natural units (e.g., averted number of alcohol disorders or dependencies, high school graduation) Persistence or decay of effects accounted through second measurement of effect (e.g., at 10-year follow-up) Common monetizable effects in WSIPP-evaluated programs included in present review • Substance use outcomes at end of middle school or at end of high school • Cannabis, opioids, and alcohol disordered use (DSM-defined abuse or dependency) • Regular (daily) tobacco use Other outcomes reported in substance use studies or outcomes associated with substance use • Test scores or high school graduation • Crime Benefit and cost impacts on various sectors of society/economy calculated for lifetime of participants starting from year of intervention, appropriately discounted Areas or sectors of impact in WSIPP-evaluated programs included in present review • Labor market earnings • Crime – for justice system and victims • Healthcare – associated morbidity and substance use treatment	Cost-benefit outcome calculated as the ratio of total benefits to total program cost. All cost-benefit input and outcome estimates are reported with their distributions, wherever possible • mean and standard deviation • mode and range Uncertainty of benefit to cost ratio expressed as probability that benefits will exceed cost, based on Monte Carlo simulations • random draws from key inputs and parameter values and repeated 10,000 times

		• Mortality • Property loss – alcohol related crashes • Deadweight loss of taxes – taxes to fund the program	

WSIPP – Programs

Program Name Monetary Values	Program and Population Characteristics	Program Cost Program Benefits	Cost-Benefit
CASASTART (California's Striving Together to Achieve Rewarding Tomorrows) **Setting:** Community **Substances Focus:** Alcohol, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars.	Program to prevent use of drugs, alcohol, or encounter with the juvenile justice system. Composed of intensive case management; family services such as counseling and parent training; community-enhanced policing; after-school activities; tutoring; mentoring; vouchers; and special events. Monitored by a case manager that coordinates the youth, their families, their teachers, police officers, social service agencies, and neighborhood residents. Intervention approximately 24 months. Targets youth aged 11 to 13 in neighborhoods with lower socioeconomic status.	**Program Cost** $14,768 per youth **Components:** Staff labor, staff training, parent or caregiver financial incentives **Quality:** Good **Program benefits** -$4,917 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** -0.33 Likelihood benefits exceed cost 9% **Quality:** Good
Communities That Care **Setting:** Community **Substances Focus:** Alcohol **Monetary Values:** Reported in 2022 U.S. dollars.	Coalition-based community prevention to prevent youth problem behaviors including underage drinking, tobacco use, violence, delinquency, school dropout, and substance abuse. Works through a community board to assess risk and protective factors among the youth in their community using a population-based survey of young people. The board works to implement tested and effective programs to address the issues and needs that are identified.	**Program Cost** $698 per youth **Components:** Staff labor, staff training, parent or caregiver financial incentives **Quality:** Good **Program benefits** $3,967 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 5.69 Likelihood benefits exceed cost 87% **Quality:** Good

Computer-based substance use prevention programs **Setting:** School, home, community **Substances Focus:** Alcohol, tobacco, cannabis **Monetary Values:** Reported in 2022 U.S. dollars	Uses technology to deliver interactive materials to teach youth about the dangers of drug and tobacco use, encourage resistance skills, and change attitudes towards substance use. These programs generally include quizzes, surveys, and feedback. They can be implemented in schools, at home, community centers, or primary care facilities. Project ASPIRE and Smoking Zine are two name-brand programs included in this evaluation.	**Program Cost** $84 per youth **Components:** NR **Quality:** Fair **Program benefits** $2,411 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 28.83 Likelihood benefits exceed cost 64% **Quality:** Fair
Familias Unidas **Setting:** School, home **Substances Focus:** Alcohol, tobacco, cannabis, unspecified substance, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars	Family-based prevention program designed to prevent substance abuse, risky sexual behavior, and behavior problems. Sessions are facilitated by two therapists or counselors and focus on positive parenting, family communication, parental monitoring, and adolescent risk (substance use, HIV) behaviors. Included both a general population as well as adolescents with behavior or delinquency problems. Involves eight parent group meetings and four family visits, either in homes or schools. Program duration ranges from six weeks to six months, with most included studies evaluating the three-month version. For Hispanic and Latino adolescents	**Program Cost** $1,756 per participant **Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $7,317 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 4.17 Likelihood benefits exceed cost 69% **Quality:** Fair
Family Matters **Setting:** Home **Substances Focus:** Alcohol, tobacco	Family-focused prevention program consisting of four booklets, describing activities for parents and youth to complete, mailed to participating families. Each booklet covers a different topic. The books are titled "Why Families Matter," "Helping Families Matter to Teens," "Alcohol and tobacco Rules Are Family Matters," and "Nonfamily Influences That Matter."	**Program Cost** $231 per family **Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $2,124 **Components:**	**Benefit-Cost Ratio** 9.19 Likelihood benefits exceed cost 73% **Quality:** Fair

Monetary Values: Reported in 2022 U.S. dollars	Two weeks after each booklet is mailed, parents receive a phone call from a health educator to encourage completion of activities. The average family completes the program over the course of several months.	Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	
Guiding Good Choices (formerly Preparing for the Drug Free Years) **Setting:** Community **Substances Focus:** Alcohol, tobacco, cannabis, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars	Program to improve parent-child interactions and reduce the risk for substance use initiation among middle school students. A trained group leader uses workbook and video-based discussion models to guide each session. Parents attend weekly group sessions lasting two hours for five weeks; youth accompany their parents to one of these sessions. The study in this evaluation included youth in 6th grade and their families.	**Program Cost** $776 per family **Components:** Staff labor, staff training, parent or caregiver financial incentives **Quality:** Good **Program benefits** $1,052 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 1.36 Likelihood benefits exceed cost 51% **Quality:** Good
New Beginnings for children of divorce **Setting:** Out-patient visit **Substances Focus:** Alcohol, cannabis, unspecified substance, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars	Parents attend group sessions in an outpatient setting to learn about problem-solving, discipline strategies, and other topics. Some programs also provide individual parent sessions, or both individual parent sessions and group therapy sessions for children. Weekly group sessions were provided for 10 or 11 weeks. On average, families received 17 hours of therapist time. Program to prevent adjustment problems for children whose parents have recently divorced. Programs served families with children who were 9 years old, on average.	**Program Cost** $853 per participant **Components:** Staff labor, staff training, parent or caregiver financial incentives **Quality:** Good **Program benefits** -$382 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 0.45 Likelihood benefits exceed cost 49% **Quality:** Good
Positive Family Support/Family Check-Up (a.k.a Adolescent Transitions) **Setting:**	Program is a three-tiered general prevention program implemented in middle schools. The first level is a universal school component that establishes a family resource center available to students and families.	**Program Cost** $51 per family **Components:** Staff labor, staff training, supplies, family resource center	**Benefit-Cost Ratio** 227.16 Likelihood benefits exceed cost 71% **Quality:** Fair

School **Substances Focus:** Alcohol, tobacco, cannabis, unspecified substance **Monetary Values:** Reported in 2022 U.S. dollars	A six-week prevention curriculum delivered to students introduces them to this family resource. The second and third tiers provide more intensive services targeted to students with behavioral or emotional problems. The central component of these targeted services is the Family Check-Up, which includes a family assessment and motivational interviewing. Participating families received between 6 and 12 hours of services. Delivery by a variety of school staff, including school counselors, school psychologists, school social workers, administrators, teachers, etc.	**Quality:** Fair **Program benefits** $11,652 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	
Project Northland **Setting:** School, home **Substances Focus:** Alcohol, tobacco, cannabis **Monetary Values:** Reported in 2022 U.S. dollars	Multilevel, universal intervention designed to prevent substance use among adolescents in middle school. The 6th grade home component targets parent-child communication via homework assignments, group discussions, and the establishment of a communitywide task force. The 7th grade school-based curriculum focuses on improving resistance skills and social norms regarding teen alcohol use, and includes class discussions, games, and role plays. The 8th grade components include the peer-led Powerlines curriculum, a mock town meeting, and a community action project. Targets families and their students in 6th, 7th, and 8th grades.	**Program Cost** $114 per youth **Components:** Staff labor, staff training, supplies **Quality:** Fair **Program benefits** $367 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 3.21 Likelihood benefits exceed cost 56% **Quality:** Fair
Project STAR (Students Taught Awareness and Resistance, a.k.a the Midwestern Prevention Project) **Setting:** School, community **Substances Focus:**	Comprehensive universal prevention program to prevent or reduce youth substance use. The school component is implemented at the transition to middle school and consists of 10-13 classroom lessons using active social learning techniques (e.g., role-playing and discussion) and homework, plus five booster sessions implemented in the following school year.	**Program Cost** $74 per youth **Components:** Staff labor, staff training, supplies **Quality:** Fair **Program benefits** $3,067 **Components:**	**Benefit-Cost Ratio** 41.37 Likelihood benefits exceed cost 72% **Quality:** Fair

Alcohol, tobacco, cannabis, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars	Parent, community, and mass media components are also implemented over a three- to five-year period to address multiple influences on youth substance use. Starts with school-based component during transition to middle school.	Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	
PROSPER (PROmoting School-community-university Partnerships to Enhance Resilience) **Setting:** School **Substances Focus:** Alcohol, tobacco, cannabis, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars	Community-university partnership model is a delivery system designed to help communities implement effective programs to prevent substance use and problem behaviors in youth. Local teams comprising staff from the university Cooperative Extension System, representatives and service providers from the public school system, youth and parents, and other community stakeholders. These teams implement one school-based program and one family-based program from a menu of effective programs. PROSPER teams offer technical assistance, coordination, and other supports. In addition, this intervention includes needs assessments, quality assurance, fundraising support, and evaluation.	**Program Cost** $402 per participant **Components:** Staff labor, staff training, parent or caregiver financial incentives, supplies, overhead, implementation **Quality:** Good **Program benefits** $352 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 0.88 Likelihood benefits exceed cost 44% **Quality:** Good
Strengthening Families for Parents and Youth 10-14 **Setting:** School **Substances Focus:** Alcohol, tobacco, cannabis, unspecified substance, illicit drugs **Monetary Values:** Reported in 2022 U.S. dollars	Program to Reduce behavior problems and substance use by enhancing parenting skills, parent-child relationships, and family communication. Trained group leaders use Strengthening Families curriculum and videos. Parents and youth attend weekly group sessions lasting two hours for seven weeks. Each session includes a separate, concurrent one-hour parent and youth skills-building session followed by a one-hour family session. The studies in this analysis included middle school students and their families.	**Program Cost** $653 per participant **Components:** Staff labor, staff training, supplies, parent or caregiver financial incentives **Quality:** Good **Program benefits** $3,836 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 5.87 Likelihood benefits exceed cost 60% **Quality:** Good

Strong African American Families **Setting:** Community **Substances Focus:** Alcohol **Monetary Values:** Reported in 2022 U.S. dollars	Program is a seven-week community-based program developed for African American youth ages 11-12 and their caregivers to prevent youth drug and alcohol abuse and postpone youth sexual involvement. Families meet in interactive small groups with trained facilitators once a week for 2 hours. Lessons are intended to promote regulated, communicative parenting (monitoring and setting limits, clear communication around expectations about alcohol and sex, and racial socialization), as well as youth protective factors. Duration is 7 weeks. Targets African American youth ages 11-12 years.	**Program Cost** $850 per family **Components:** Staff labor, staff training, supplies, implementation **Quality:** Fair **Program benefits** $1,944 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 2.29 Likelihood benefits exceed cost 56% **Quality:** Fair
Strong African American Families—Teen **Setting:** Community **Substances Focus:** Alcohol **Monetary Values:** Reported in 2022 U.S. dollars	Program is a five-week community-based program developed for 16 year old African American youth and their caregivers to deter youth substance use, conduct problems, and depressive symptoms. Families meet in interactive small groups with trained facilitators once a week for 2 hours. Lessons are intended to promote protective caregiving (setting limits, monitoring, racial pride and strategies for dealing with discrimination, monitoring and supporting academic achievement, and cooperative problem solving), as well as youth self-regulation. Duration is 6 weeks. Targets African American youth aged 16 years.	**Program Cost** $629 per family **Components:** Staff labor, staff training, supplies, implementation **Quality:** Fair **Program benefits** $2,279 **Components:** Crime, healthcare, labor market, property, mortality, deadweight loss **Quality:** Good	**Benefit-Cost Ratio** 3.62 Likelihood benefits exceed cost 59% **Quality:** Fair

Programs Evaluated in Substance Abuse and Mental Health Services Administration 2008 (SAMHSA 2008)

SAMHSA 2008 - Methods

Program Effect	Program Cost	Program Benefits	Cost-Benefit	QALY	Cost per QALY
Intervention effect – meta-analysis using data from WSIPP 2004,[1] Hansen 2005[2] (SAMHSA internal report), primary evaluation studies	Intervention Cost drawn from WSIPP 2004, primary evaluation studies, education and training resource,[3] Maryland governor's office on youth programs[4] No uncertainty.	Modeled outcomes from substance use outcomes to sectoral benefits using modified Rand model[5] No uncertainty.	Cost-benefit measured as benefit to cost ratio which is ratio of total benefits to program cost. No uncertainty.	QALY obtained by translating emergency department physician score on bending, grasping, lifting, cognitive, mobility, sensory, cosmetic, and pain dimensions in Databook on Nonfatal Injury.[6] Translation to QALY achieved using relationship between observable losses in quality of life and surveys measuring the losses on a 0 (death) to 1 (perfect health) scale. No uncertainty.	Cost per QALY gained = Net cost/QALY gained Net cost= program cost - averted healthcare cost No uncertainty

[1]Benefits and Costs of Prevention and Early Intervention Programs for Youth - Summary Report (wa.gov). wsipp.wa.gov/ReportFile/882/Wsipp_Benefits-and-Costs-of-Prevention-and-Early-Intervention-Programs-for-Youth_Appendix-A.pdf

[2]Hansen, W.B., et al., (2004). Analysis of the magnitude of effects of substance abuse prevention programs included in the National Registry of Effective Programs Through 2003: A core components analysis. Washington, DC. SAMHSA Internal document.

[3]Center for the Application of Prevention Technologies (CAPT) | EDC

[4]https://goccp.maryland.gov/

[5]School-Based Drug Prevention: What Kind of Drug Use Does It Prevent? | RAND

[6]Miller, Ted R. Databook on nonfatal injury: Incidence, costs, and consequences. The Urban Insitute, 1995.

SAMHSA 2008 – Programs

Program Name	Program and Population Characteristics	Program Cost Program Benefits	Cost-Benefit Cost per QALY
Adolescent Transitions (a.k.a Positive Family Support) **Setting:** School **Substances Focus:**	Program is a three-tiered general prevention program implemented in middle schools. The first level is a universal school component that establishes a family resource center available to students and families. A six-week prevention curriculum delivered to students introduces them to this family resource. The second and third tiers provide more intensive services targeted to students with behavioral or	**Program cost per youth** $1,200 **Components:** Staff labor, staff training **Quality:** Fair	**Benefit-Cost Ratio** 7.80 **Quality:** Fair **Cost per QALY Gained** $10,300 **Quality:** Fair

Alcohol, tobacco, cannabis, unspecified substance **Monetary Values:** Reported in 2002 U.S. dollars	emotional problems. The central component of these targeted services is the Family Check-Up, which includes a family assessment and motivational interviewing. Participating families received between 6 and 12 hours of services. Delivery by a variety of school staff, including school counselors, school psychologists, school social workers, administrators, teachers, etc.	**Program benefits** $9,500 **Components:** Crime, healthcare, mortality **Quality:** Good	
CASA Start (Californians Striving Together to Achieve Rewarding Tomorrows) **Setting:** Community **Substances Focus:** Alcohol, illicit drugs **Monetary Values:** Reported in 2002 U.S. dollars	Program to prevent use of drugs, alcohol, or encounter with the juvenile justice system. Composed of intensive case management; family services such as counseling and parent training; community-enhanced policing; after-school activities; tutoring; mentoring; vouchers; and special events. Monitored by a case manager that coordinates the youth, their families, their teachers, police officers, social service agencies, and neighborhood residents. Intervention approximately 24 months. Targets youth aged 11 to 13 in neighborhoods with lower socioeconomic status.	**Program cost per youth** $5,650 **Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $4,900 **Components:** Crime, healthcare, mortality **Quality:** Good	**Benefit-Cost Ratio** 0.9 **Quality:** Fair **Cost per QALY Gained** $173,000 **Quality:** Fair
Family Matters **Setting:** Home **Substances Focus:** Alcohol, tobacco **Monetary Values:** Reported in 2002 U.S. dollars	Family-focused prevention program consisting of four booklets, describing activities for parents and youth to complete, mailed to participating families. Each booklet covers a different topic. The books are titled "Why Families Matter," "Helping Families Matter to Teens," "Alcohol and tobacco Rules Are Family Matters," and "Nonfamily Influences That Matter." Two weeks after each booklet is mailed, parents receive a phone call from a health educator to encourage completion of activities. The average family completes the program over the course of several months.	**Program cost per family** $160 **Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $4,800 **Components:** Crime, healthcare, mortality **Quality:** Good	**Benefit-Cost Ratio** 30.0 **Quality:** Fair **Cost per QALY Gained** Cost-saving **Quality:** Fair
Guiding Good Choices (a.k.a. Preparing for the Drus Free Years) **Setting:** Community	Program to improve parent-child interactions and reduce the risk for substance use initiation among middle school students. A trained group leader uses workbook and video-based discussion models to guide each session. Parents attend weekly group sessions lasting two hours for five weeks; youth accompany their parents to one of these sessions.	**Program cost per Family** $710 **Components:** Staff labor, staff training, parent or caregiver financial incentives	**Benefit-Cost Ratio** 3.40 **Quality:** Good **Cost per QALY Gained** $25,406

Substances Focus: Alcohol, tobacco, cannabis, illicit drugs **Monetary Values:** Reported in 2002 U.S. dollars	The study in this evaluation included youth in 6th grade and their families.	**Quality:** Good **Program benefits** $2,500 **Components:** Crime, healthcare, mortality **Quality:** Good	**Quality:** Good
Strengthening Families **Setting:** School **Substances Focus:** Alcohol, tobacco, cannabis, unspecified substance, illicit drugs **Monetary Values:** Reported in 2002 U.S. dollar	Program to Reduce behavior problems and substance use by enhancing parenting skills, parent-child relationships, and family communication. Trained group leaders use Strengthening Families curriculum and videos. Parents and youth attend weekly group sessions lasting two hours for seven weeks. Each session includes a separate, concurrent one-hour parent and youth skills-building session followed by a one-hour family session. The studies in this analysis included middle school students and their families.	**Program cost per family** $880 **Components:** Staff labor, staff training, parent or caregiver financial incentives **Quality:** Good **Program benefits** $10,000 **Components:** Crime, healthcare, mortality **Quality:** Good	**Benefit-Cost Ratio** 11.0 **Quality:** Good **Cost per QALY Gained** Cost-saving **Quality:** Good
Project Northland **Setting:** School, home **Substances Focus:** Alcohol, tobacco, cannabis **Monetary Values:** Reported in 2002 U.S. dollars	Multilevel, universal intervention designed to prevent substance use among adolescents in middle school. The 6th grade home component targets parent-child communication via homework assignments, group discussions, and the establishment of a communitywide task force. The 7th grade school-based curriculum focuses on improving resistance skills and social norms regarding teen alcohol use, and includes class discussions, games, and role plays. The 8th grade components include the peer-led Powerlines curriculum, a mock town meeting, and a community action project. Targets families and their students in 6th, 7th, and 8th grades.	**Program cost per youth** $400 **Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $6,900 **Components:** Crime, healthcare, mortality **Quality:** Good	**Benefit-Cost Ratio** 17.0 **Quality:** Fair **Cost per QALY Gained** Cost-saving **Quality:** Fair
Project STAR (Students Taught Awareness and	Comprehensive universal prevention program to prevent or reduce youth substance use. The school component is implemented at the	**Program cost per youth** $400	**Benefit-Cost Ratio** 10.0

Resistance, a.k.a the Midwestern Prevention Project) **Setting:** School, community **Substances Focus:** Alcohol, tobacco, cannabis, illicit drugs **Monetary Values:** Reported in 2002 U.S. dollars	transition to middle school and consists of 10-13 classroom lessons using active social learning techniques (e.g., role-playing and discussion) and homework, plus five booster sessions implemented in the following school year. Parent, community, and mass media components are also implemented over a three- to five-year period to address multiple influences on youth substance use. Starts with school-based component during transition to middle school.	**Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $4,100 **Components:** Crime, healthcare, mortality **Quality:** Good	**Quality:** Fair **Cost per QALY Gained** $2,300 **Quality:** Fair
STARS for Families (Start Taking Alcohol Risks Seriously) **Setting:** School **Substances Focus:** Alcohol **Monetary Values:** Reported in 2022 U.S. dollars	Health promotion intervention designed to postpone alcohol. The two-year intervention includes a 20-minute nurse consultation, regular mailings to parents, and take-home lessons for parents and children. The program can be implemented in a variety of settings, including schools. Duration 2 years Targets at-risk middle and junior high school youth.	**Program cost per youth** $120 **Components:** Staff labor, staff training **Quality:** Fair **Program benefits** $490 **Components:** Crime, healthcare, mortality **Quality:** Good	**Benefit-Cost Ratio** 4.0 **Quality:** Fair **Cost per QALY Gained** Cost-saving **Quality:** Fair

References

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Prado G, Cordova D, Huang S, Estrada Y, Rosen A, Bacio GA, Jimenez GL, Pantin H, Brown C.H, Velazquez MR, and Villamar J. The efficacy of Familias Unidas on drug and alcohol outcomes for Hispanic delinquent youth: Main effects and interaction effects by parental stress and social support. *Drug and alcohol dependence* 2012;125:S18-S25. http://dx.doi.org/10.1016/j.drugalcdep.2012.06.011