Reducing Interrelated Risks for Substance Abuse, Delinquency and Violence: Effects of the Rainbow Days' Curriculum-Based Support Group Program

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Nonequivalent Control Group Study

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The evaluator is independent of the developer of the intervention under study and has no financial interest in the developer's organization or the intervention.

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Sections of less interest to reviewers are provided in the Appendix,
and figures, tables and charts are renumbered accordingly.

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ABSTRACT

The Rainbow Days Curriculum-Based Support Group (CBSG®) Program is 12-week preventive intervention that uses an educational support group process to deliver a coping and social skills curriculum to small groups of children assessed to be at elevated risk for substance abuse, delinquency, and violence due to their living in high-risk situations or exhibiting behaviors of concern. In 2003, a non-equivalent control group study (with random assignment of the intervention group) was conducted to determine if the intervention could decrease interrelated risks for substance abuse, delinquency, and violence among elementary students using measures identified by the Center for Substance Abuse Prevention (CSAP) in its Core Measures Initiative (CSAP, 1998). Risk measures were: substance use, rebellious behavior, anti-social attitudes; a protective factor, anti-substance-use attitudes and intentions, was also measured. Data were obtained from 661 elementary students ages 8-11 (164 interventions; 497 controls) using a questionnaire consisting of 28 items measuring demographics and the previously mentioned variables. The questionnaire was completed prior to and after the 12-week small group intervention. The data were analyzed using chi square and regression analyses. Immediate effects were found for all intervention variables: reduction in self-reported 30-day use of inhalants; improved anti-substance-use attitudes and intentions; reduced anti-social attitudes; and reduced rebellious behavior. Effects were strongest for those at extremes of the pretest score distributions. Missing data was less than 10%, and analyses using the multivariate normal model for data imputation confirmed the original findings. The intervention was associated with significant improvements on all four outcome measures.

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STUDY OVERVIEW and LOGIC MODEL

Multiple longitudinal studies have shown that the early predictors of substance abuse, delinquency, and violence are interrelated, that they appear within the elementary school years, and that the earlier these risk factors appear, the more predictable the progression toward deviant behavior becomes. This body of research also demonstrates that interventions to prevent, delay or mitigate risks during the elementary developmental period can significantly reduce future involvement in self-defeating and dangerous behaviors and the negative life consequences associated with such behaviors (Anthony and Petronis, 1995; Arthur, et al., 2002; Clark, et al., 2002; Derzon, 2001; DeWit, et al., 2000; Dinwiddie, 1994; Dishon, et al., 1999; Farrington, 1995; Farrington, et al., 2001; Hawkins, et al., 1992, 1995, 1998, 2000; Huizinga, et al., 1994; Johnston, et al., 1997; Chou, et al., 1992; Grant and Dawson, 1997; Gruber, et al., 1996; Kurtzman, et al., 2001; Lipsey and Derzon, 1998; McGue et al., 2001; Office of the Surgeon General, 2001; Thornberry, et al., 1995; and White, et al., 1999). More recent research has confirmed and strengthened the findings of previous studies (Alltucker, et al., 2006; Australian Institute of Families and Crime Prevention, 2003; Clark, et al., 2005; Ellickson, et al., 2003; and Wasserman, et al., 2003). See Appendix A for "Research in Support of Logic Model."

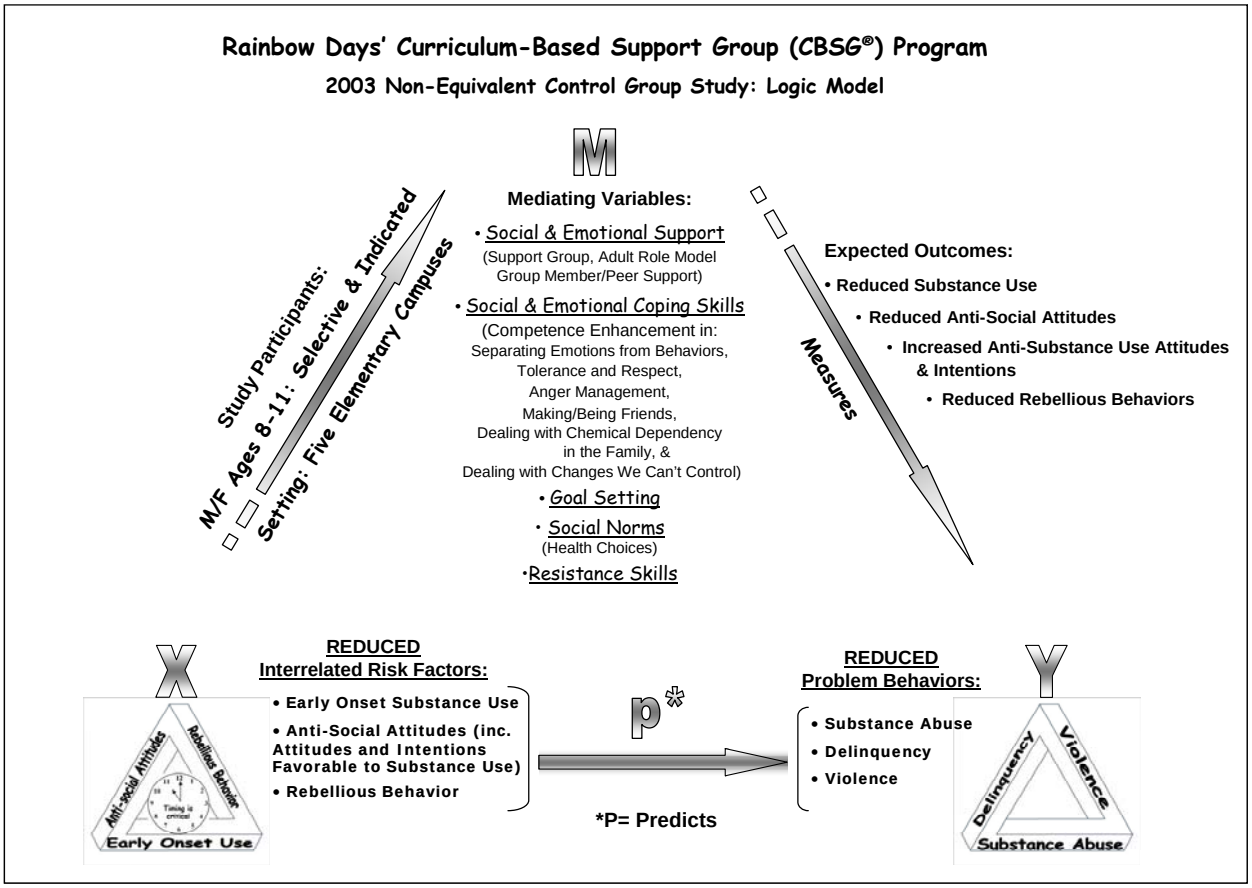
Study Purpose: While there are several universal evidence-based programs for use with elementary-aged children and in elementary school settings, few are available for selective and indicated populations in Grades 2-5. The objective of the 2003 Nonequivalent Control Group Study, which is the subject of this report, was to determine if the Rainbow Days' Curriculum-Based Support Group (CBSG®) Program (intervention) could reduce risk factors for substance use and abuse, delinquency, and violence in elementary students,

assessed as being a elevated risk for such problems, using measures identified by the Center for Substance Abuse Prevention (CSAP) in its Core Measures Initiative (CSAP, 1998).

Logic Model: The intervention is based on the "mediating variable framework" (Hansen & McNeal, 1996; Baranowki et al., 1997, 1998), which states that in the risk-effect relationship (X-p*-Y) risk factors are not "causes"; they are "predictors." By targeting the reduction of interrelated risk factors (X) and intervening with specific populations at specific times within the developmental pathway with research-based mediating variables (M), a program that produces significant changes in known precursors to the targeted risk factors is predicted (p*) to impact the long term goal (Y). Figure 1 depicts the study Logic Model.

Figure 1

2003 Non-Equivalent Control Group Study: Logic Model

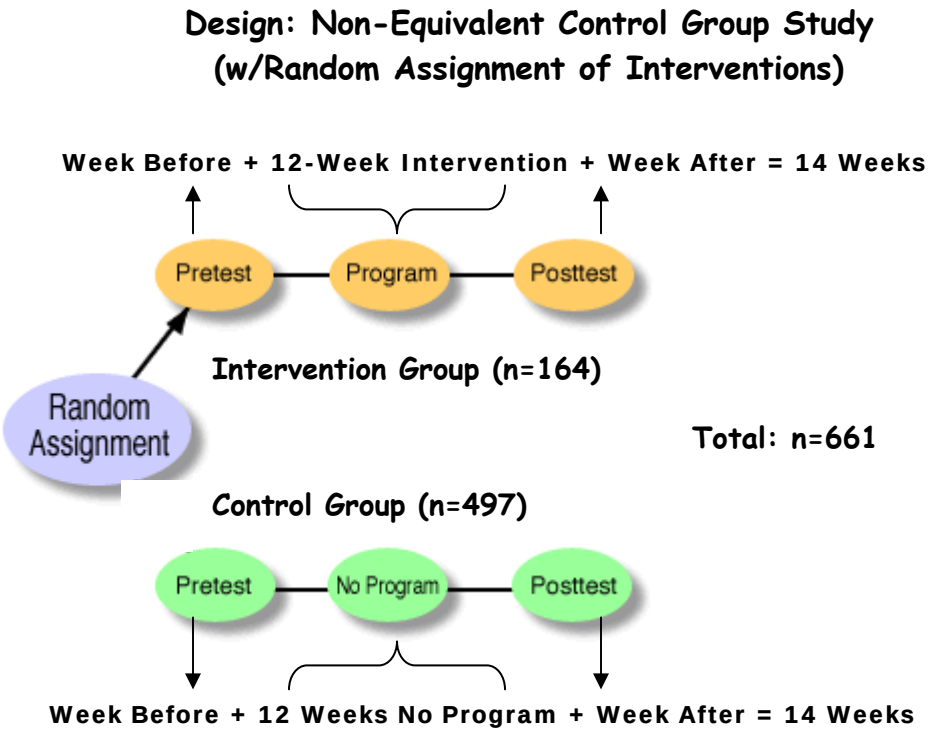


To read: Start at X; follow the up-arrow to M; then follow the down-arrow to Y.

METHODS:

Design: The study employed a non-equivalent control group design with random assignment of the Intervention group. Figure 2 depicts the study design:

Figure 2



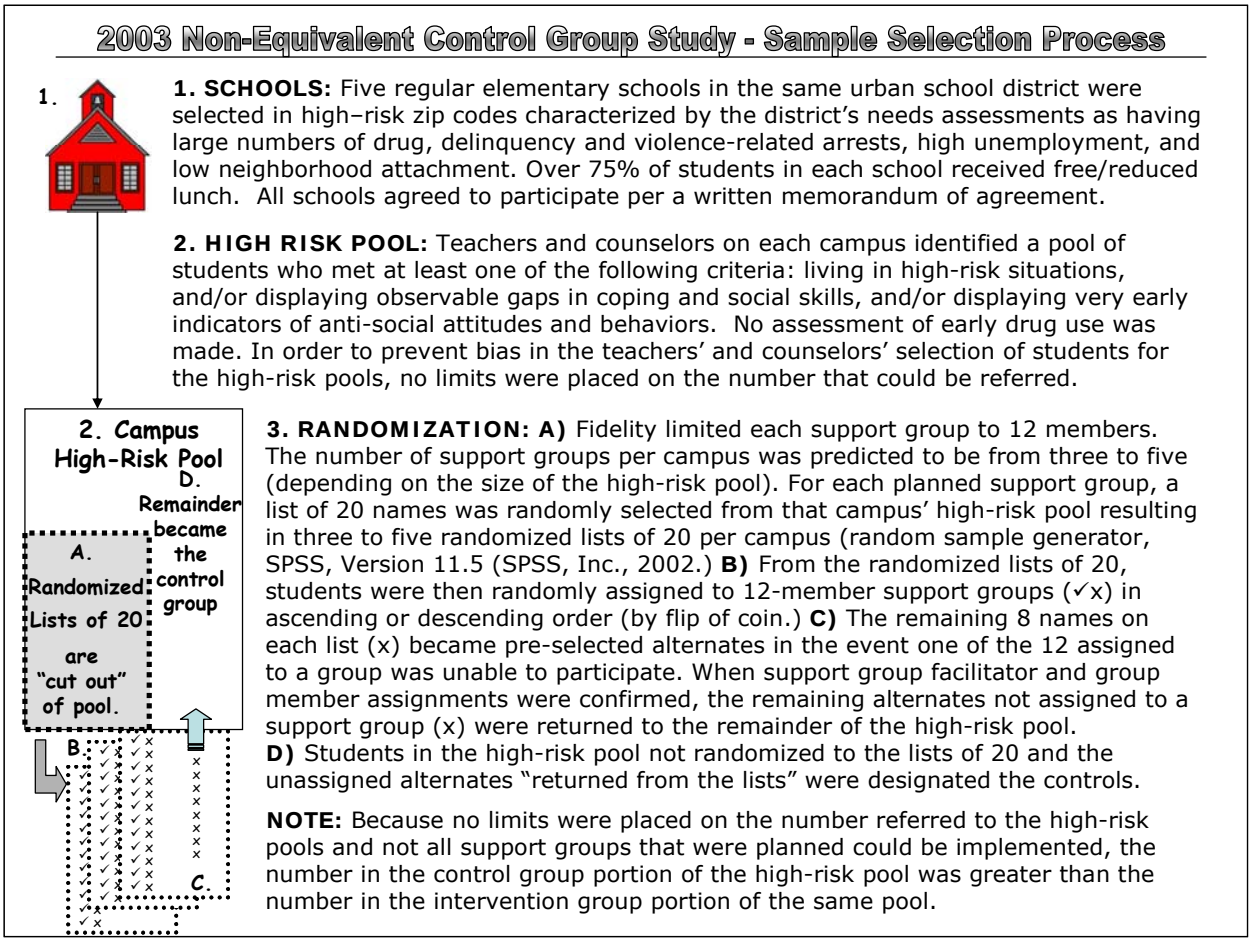
Process: The study was conducted in five urban elementary schools in the Spring and Fall semesters of 2003. All students, ages 8-11, in Grades 2-5 in the five schools participated in the study, completing both the pre and post surveys. The intervention groups on each campus were randomly selected by the evaluator from pools of students identified by school counselors and faculty as being at elevated risk for early substance use and future delinquency and violence (selective and indicated populations.) Randomization was accomplished using the random sample generator with SPSS, Version 11.5 (SPSS, Inc., 2002). All students not participating in the intervention became the controls, resulting in a non-equivalent number in the interventions (164) and controls (497). Follow-up was

planned; however, district-wide reorganization altered campuses to the point follow-up became impossible; therefore only immediate results are reported.

Study Sample: Study participants were a total of 661 male and female children ages 8-11, enrolled in the full-time, regular academic program in Grades 2 through 5 in five elementary schools in a large urban school district in the Southwest. The sampling procedure is depicted and explained in Figure 3.

Figure 3

2003 Non-Equivalent Control Group Study: Sample Selection Process



Challenges in the Sample Selection Process: Several factors impacted the potential number of groups to be conducted per campus: size of the high-risk pool on that

campus, the limit of 12 students per group, the number of trained facilitators available, the number of trained bi-lingual facilitators required, school schedules, available space for group meetings, and travel distance between campuses. The sampling protocol depicted in Figure 3 depicts the study's most challenging features. A description of the key challenges and the solutions devised to address them are described below:

- Challenge: To identify the selective and indicated populations on each campus across four grade levels for five campuses (over 1,500 students ages 8-11).
- Solution: Provide a protocol to be used by school personnel (primarily teachers) to use in identifying students living in high-risk situations and/or demonstrating behaviors of concern. Students assessed to live in high-risk situations or demonstrate behaviors of concern would form a "high risk pool" from which the evaluator would randomly select 12-member groups. Counselors would manage the assessment process on each campus. Orientation and training was provided to school personnel in the use of the protocol. A copy of the "High Risk Pool Protocol" is included in Appendix C.

- Challenge: To plan the number of support groups that could be conducted on each campus, which was hampered by the limitations of resources and the compounding features of school schedules and logistics, including:
    - Number of trained facilitators available to the study, who due to their own schedules were not available at all times;
    - Need for bilingual facilitators, which could not determined until the random assignments of students to support groups could be made, and the bilingual needs of each support group assessed;
    - School schedules, which determined when groups could be offered, and frequently conflicted between or across the five campuses;
    - Available space for support groups , which varied by school schedules;

  - Distance between campuses, which impacted facilitator distribution across schools due to travel time;

- Solution: Plan the total number of support groups that could potentially be conducted on the campus in the optimum conditions and use that number to develop a template for implementation delivery that would estimate the total number of students that could potentially be served in the intervention group. Make corrections to the plan once random sampling was completed.

- Challenge: To randomize students in the high-risk pool on each campus into intervention and control groups in a manner that would allow for further random assignment of students to 12-member support groups, keeping in mind the need to minimize the unfilled seats in each group and the fact that some students who were randomized to the support groups would most probably not be able to participate for a variety of reasons.
- Solution: Start with the high-risk pool of students on each campus:
  - For each planned support group on a campus, a list of 20 names was randomly selected from the campus' high-risk pool.
  - Students in the high risk pool not randomized to the lists of 20 were designated the controls.
  - From the randomized lists of 20, students were randomly assigned to 12-member support groups.
  - The remaining 8 names on each list served as pre-selected alternates in the event a student assigned to a 12-member group was unable to participate. NOTE: This decision meant generating multiple 20-name randomized lists per campus, based on the optimal projected number of support groups that could be attempted.

- Treat the remaining non-randomized students in the high-risk pool as the controls.
- Before support group services began, and only when both support group facilitator and support group member assignments were confirmed, "return the unused" alternates on the 20-name lists to the control group, i.e., to the campus high-risk pool (so as preserve the integrity of the high-risk pools from which the random samples were extracted.)

- Challenge: Because no limits were placed on the numbers of students that counselors could include in the high-risk pools (a selection bias prevention measure) - and the number of 12-member intervention support groups that could be formed on any one campus was limited by a number of resource distribution and logistical factors - the number in the control group was greater by a ratio of three to one than the intervention group (intervention n=164; control n=497) and only 25% of the students in the high-risk pool could be served.
- Solution: To determine scientifically that this numerical size difference was not shown to affect the equivalence of the two groups. As is demonstrated in the following section, the two groups were not found to differ significantly with regard to age, gender, ethnicity or prior substance use. Further, their respective pretest means were not found to differ significantly. The Selection Probability of High Risk Students across Schools is provided in Table 1 below.

Equivalence of the Intervention and Control Groups: The "Selection Probability of High Risk Students across Schools" is provided in Table 1.

Table 1

Selection Probability of High-Risk Students across Schools:

	School 1[2]	School 2[2]	School 3[1]	School 4[2]	School 5[2]	Total
Interventions	34	20	7	34	69	164
Controls	90	114	44	77	172	497
Total	124	134	51	111	241	661
Sel. Prob.	.27	.15	.14	.31	.29	.25

1= One semester of participation; 2= 2 semesters of participation

Range from .14-.31, overall .25.

Even with the variation in selection probability across schools contributing to the numerical imbalance between the interventions and controls, the randomization protocol qualifies as random assignment inasmuch as each student in the high-risk pools had a nonzero chance of assignment to each condition (Shadish, Cook & Campbell, 2002). Additionally, the practical factors of scheduling within schools led to a variation in selection probability across schools, as noted in Table 1.

Demographics**:** Self-reported demographic data was collected on 661 male and female students in Grades 2-5 from January 2003 through December 2003, with a total of 164 in the intervention group (92 males, 56%), and 497 in the controls (293 males, 59%). The following describes the sample as determined from self-report:

Age: Male and female participants ranged in age from 8 to 11. Exact age could not be determined because the questionnaire did not ask the children how old they were in years and months but instead asked the children to respond to the question "How old are you?" by checking off a box in one of four categories: 1) 8 to 9; 2) 10 to 11; 3) 12 to 13; or

4) 14 to 15. Determining age in this fashion would not allow the variable to be used as continuous data, but instead age had to be used as a categorical variable. The two age groups in the study (8 to 9; 10-11) did not differ significantly (χ^2 (1, N = 661) = 2.44, p<.12) (see Table 2).

Table 2

Age Ranges of Participants

Experimental Condition	Age Range	N
Control	8 to 9	312
	10 to 11	185
	TOTAL	**497**
Intervention	8 to 9	114
	10 to 11	50
	TOTAL	**164**
	Grand Total	661

Gender: The total of 661 subjects yielded no significant differences in gender (χ^2(1, N = 661) = .41, p<.52) (see Table 5). Fifty-six percent of the CBSG groups were males compared to 59% in the control group (see Table 3).

Table 3

Gender of Participants

Condition	Gender	N for age groups 8 to 9 and 10 to 11 only
Control	Males	293 (59%)
	Females	204 (41%)
Intervention	Males	92 (56%)
	Females	72 (44%)

Race/Ethnicity: Children were asked to categorize their race/ethnicity as either:

- Black or African American (Not Hispanic/Latino)
- Hispanic/Latino
- White (Not Hispanic/Latino)
- Asian-American (Not Hispanic/Latino)
- other (Not Hispanic/Latino)

Table 4 shows the breakdown of racial categories by group. The two groups showed similar percentages across the five categories: African American/Black, Hispanic, Anglo, Asian or other. The same racial breakdown in the intervention and controls was reflective of the population of students in the schools served.

Table 4

Breakdown of Racial Categories by Group

Ss between the ages of 8 to 9 and 10 to 11 only		
Racial Category	**Control**	**Intervention**
Black	176 (35%)	54 (33%)
Hispanic	229 (46%)	83 (51%)
White	60 (12%)	16 (10%)
Asian	14 (3%)	4 (2%)
Other	18 (4%)	7 (5%)
TOTALS	497	164

Chi square analysis did not reveal any significant differences in frequencies between control and intervention children ($\chi^2(4, N = 661) = 1.40, p<.84$) (see Table 5).

Table 5

Demographic Characteristics of Intervention and Control Groups Following Intervention Randomization (N = 661)

		Boys	Girls	χ^2 prob
Age Categories		CBSG	Controls	.12
	8-9	114	312	
	10-11	50	185	
Gender	CBSG Groups	92	72	.52
	Controls	293	204	
Race/Ethnicity		CBSG	Controls	.84
	Black	54	176	
	Hispanic	83	229	
	White	16	60	
	Asian and Other	4	14	
	Other	6	18	
Language Spoken at Home		CBSG	Controls	.39
	English	77	249	
	Spanish	19	55	
	Both	64	189	
	Other	4	4	

Language Spoken at Home: The two groups were not found to differ significantly for language spoken at home ($\chi^2(3, N = 661) = 3.03, p<.39$), which included the four language categories of English, Spanish, both, or other language.

High-Risk Environment or Situations: Intervention Group Only

The following reflects support group members' self-report of personal high-risk situations as recorded by support group facilitators. Percentages were calculated for the cumulative numbers across all five campuses. The percentages are as follows:

- 10% Homelessness
- 44% Living in extreme poverty
- 73% Having a substance abusing parent/sibling/family member

- 12% Having a parent/sibling/family member in prison/jail/criminal justice system
- 26% Experiencing family separation/divorce
- 44% Living in a home where there is family violence
- 20% Living in a high-crime neighborhood
- 69% Very familiar with illicit drug terms

As reflected in the percentages, a significant number of group members reported more than one situation in their lives.

Intervention: The same procedure was followed in both the Spring and Fall implementations. The intervention was conducted in two 12-week cycles, one each in the Spring and Fall semesters of 2003 in the five schools, with a total of 164 (92 males, 56%) randomly selected to participate in the in the intervention group.

School District-Imposed Limitations: The school district placed certain limitations on the study implementation, including requiring that the district have:

- Pre-approval rights over the study instrument content and administration;
- Sole ownership of the parental permission process.

The district further stipulated that:

- No student or group of students in any of the participating schools be tested (participate in the pre/post survey) separately from the rest of their class; and
- The pre/post survey was to be conducted in the homeroom period for each grade level (all grades were in contained classrooms with an assigned homeroom teachers). Per the school district stipulation, pre and post surveys (the same instrument) were administered to all students in Grades 2-5 in their homeroom classes by trained administrators with no other contact with the students.

Parental Permission: District officials determined that the intervention met the criteria established by the U. S. Department of Education's Principles of Effectiveness, and the district's guidelines for prevention education and social support services. Therefore, no further permission to participate in the intervention was required. District officials also determined that all questions in the study survey were similar to questions used in schools' own surveys already approved by the district administration and parents.

However, individual schools conducted their own parental permission process via distribution of a passive permission form to all parents of all students, to be signed and returned to the school by parents only if they did not want their children to participate in the survey. Schools informed parents in writing about the nature and extent of the study and study survey instrument, including the content, purpose and confidentiality of the survey. Parents not wanting their children to participate in the survey were to sign and return the permission form to the school. For parents wanting their children to participate in the survey, no signature or return of the form was required.

Intervention Description: The intervention is an educational support group program designed to increase resiliency and reduce risk factors in children and youth ages 4-15 who are living in adverse family situations (including: parental/sibling substance abuse; parents/siblings in the criminal/juvenile justice systems; family violence; homelessness; placement in foster care; residing in a group home; parents/siblings with HIV/AIDS; parents/siblings with mental health problems; and/or poverty.) The curriculum provides a combination of substance abuse prevention, youth development, and coping and social skills education delivered in a course of 12 weekly one-hour support group sessions. Groups are led by trained, caring adult facilitators who provide emotional support and serve as role models and mentors. The support group modality provides for: small group numbers; emotional and social safety based on rules that include confidentiality; opportunities for bonding with peers and facilitator; and additional time for discussion, interactive activities,

and skills practice. Topics include: self-concept, feelings, anger, dreams and goal setting, healthy choices, friends, peer pressure, life challenges, and family chemical dependency. The last session includes a public commitment to staying drug free and true to life goals. The intervention is based on the cognitive-behavioral and competence enhancement models of prevention.

Student Participation: No students were excluded by the school or study or intervention, and no parents requested that their children not participate. Participation proceeded as follows:

- Both the intervention and control groups continued in their schools' regular classroom education programs throughout the study;
- The intervention group received the 12-week intervention; the control group did not, receiving only their regularly scheduled classes
- No additional prevention education services over and above that provided to all regular students, of which both the intervention and control groups were a part, were provided to either the intervention or control group during the duration of the study.

Intervention Group Timing and Duration: All intervention support group sessions were the length of one regular school class period and were conducted one time a week on a regular schedule, with the intervention group excused from their regular academic classes to attend intervention group sessions. Students from several classes participate in the same group together; no group included more than two students from any classroom (to minimize risk of contamination of the control group). Groups included both genders; however, due to randomization, gender mix could not be predetermined, which is recommended in regular implementation.

Intervention Facilitators: The matching of facilitators to group makeup is prescribed in regular intervention implementation; however, school schedules as well as the need for bilingual facilitators were the driving forces in facilitator assignments. All intervention support group facilitators and co-facilitators were trained by the intervention developer, and all were experienced in working with elementary aged youth and in working on school campuses.

- Facilitators = 6: 2 female; 5 males; two African-American; two Anglo/White, three Latino/Hispanic. Three facilitators were bilingual (Spanish/English) one female; two males.
- The percent of male facilitators was intentional and important to the implementation. The intervention support group facilitator serves as a role model and mentor. Large numbers of children participating in the intervention were from single female-headed households and all lived in high crime areas where positive male role models were not the norm.
- Co-facilitators = 2: Only two (2) sites had co-facilitators, and in both of these sites, an Anglo female and a Spanish-speaking, Hispanic/Latino male co-facilitated group sessions.

MEASURES

Four measures were selected for study:

1. Substance use
2. Anti-substance-use attitudes and intentions;
3. Anti-social attitudes, and
4. Rebellious behaviors.

The measures were selected based on research available at the time of the study (prior to 2003) which demonstrated that these four risk factors cluster, i.e., are co-occurring within key developmental stages of youth development, are amenable to change, and can provide useful targets for preventive interventions during these stages of development (Anthony and Petronis, 1995; Derzon, 2001; Hawkins, et al., 1992, 1995, 1998, 2000; Farrington, 1995; Farrington, et al., 2001; Huizinga, et al., 1994; Lipsey and Derzon, 1998; McGue, 2001; Office of the Surgeon General, 2001; Thornberry, et al., 1994; Tolan and Thomas, 1995; White, et al., 1999). Findings from more recent studies, subsequent to research for the study was undertaken, bear out and strengthen these same findings regarding the strength of the selected measures (Alltucker, et al., 2006; Australian Institute of Families and Crime Prevention, 2003; Clark, et al., 2005; Ellickson, et al., 2003; and Wasserman, et al., 2003)

Selection of Scales:

As a preamble to this section, it is important to note that in 2002, when preparations for the 2003 study were underway, scales in the public domain that were appropriate for use with ages 8-11 were scarce. In an effort to secure scales that could be compared with other research being conducted in the field at the time, selection of scales for the study was influenced by recommendations from Dr. Karol Kumpfer, Associate Professor in the Department of Health Promotion and Education, University of Utah and former director of the Center for Substance Abuse Prevention (CSAP.) Her recommendations were guided by

her involvement in the CSAP Core Measures Initiative, which she chaired in 1998. In October 1998, the Center for Substance Abuse Prevention (CSAP) began convening nationally-recognized researchers to apply their expertise to the development of a core compendium of evaluation measures, and published the first set of guidelines in 1999. The purpose of the initiative was to promote the consistent use of proven program measures in the field of prevention, facilitate data coordination and linkages, reduce the burden of individual researchers in the field who would each otherwise have to identify and select valid and reliable instruments on their own, and enhance the use of common instruments for cross-site evaluations.

The four scales were adopted for use in the study based on the following criteria:

- Each selected scale directly correlated to one the four study measures
- Each was recommended by Dr. Kumpfer and found in the CSAP Core Measures Initiative guidelines (CSAP, 1998).
- Each was available either in the pubic domain or available for use with permission
- Each was short in length so as to be appropriate for use with ages 8-11, and when collected into a survey instrument, could be completed by ages 8-11 in 30 minutes or less, the time available for administration of the survey instrument in the school setting, and a testing duration appropriate for the participant ages.

1. Self-Reported Substance Use (Past 30 days):

Five independent items were adapted from the Monitoring the Future (MTF) Study (Johnston, O'Malley & Bachman, 2001), which is in the public domain. The items ask about the frequency and quantity of use of various substances in the past 30 days. The items' original wording was used with explanations added to address 8-11 year old needs (note that such terminology was appropriate for use at the time of the study):

1. During the past 30 days (month) how many days have you used alcohol?
2. During the past 30 days (month) how many days have you used marijuana or pot?
3. During the past 30 days (month) how many days have you used inhalants – sniffed or breathed in fumes or smells from white-out, glue, markers, gasoline, or used poppers, rush, or whippets? (Your own asthma inhaler does not count.)
4. During the past 30 days (month) how many days have you used other illegal drugs?
5. During the past 30 days (month) how many days have you used any type of tobacco (cigarettes, chewing tobacco, snuff, cigars, or pipe tobacco)?

Response Options: 0 days; 1-2 days; 3-4 days; 5 or more days.

Each item is independent analyzed:

Scoring Range = 0-3 Possible Score Range = 0-3

0 = *0 days*; 1 = *1-2 days*; 2 = 3-4 days; 3 = *4-5 days*

Higher scores indicate more increased frequency of use.

Validity: The CSAP Core Measures (CSAP 1999) recommended use of the self-reported drug use questions from MTF for students in Grades 8, 10 and 12; however, no substance use questions were recommended for younger students. With regard to construct validity, the CSAP Core Measures Task Force indicated that, "self-reported substance use has been found to relate consistently to a number of other variables tapping attitudes and beliefs related to use, such as delinquency, truancy and grades in school (Osgood et al., 1988.)" MTF is an ongoing study of the behaviors, attitudes, and values of American secondary students, college students and young adults. Each year, 50,000 8th, 10th and 12th grade students are surveyed (12th graders since 1975, and 8th and 10th graders since 1991). The MTF Study has been funded under a series of investigator-initiated competing research grants from the National Institute on Drug Abuse (NIDA), as part of the National

Institutes of Health (NIH). MTF is conducted at the Survey Research Center in the Institute for Social Research at the University of Michigan. According to findings stated in the Texas School Survey of Substance Use among Students: Grades 4-6, 2002, data show clearly that early use of substances predicts use in secondary school (Liu, 2003.)

Reliability: Reliability of substance use items are rarely reported as they are typically analyzed separately by drug or drug category. Measures of substance use do not constitute scales, which comprise sets of similar questions tapping various facets of a given construct, and for which tests of homogeneity can be conducted as a key indicator of reliability. Instead, substance use tends to be assessed by means of single items, which cannot be tested for homogeneity.

2. Anti-Substance-Use Attitudes and Intentions – 10 Item Scale:

With permission, 10 items were extracted without change from the Individual Protective Factors Index (IPFI) to assess attitudes and intentions about alcohol, tobacco, and other drug (ATOD) use (Springer & Phillips, 1997). The items are:

1. I might smoke cigarettes when I get older.*
2. Grown ups have more fun when they drink.*
3. I will probably drink alcohol when I am old enough.*
4. It is ok to use drugs if you don't get caught.*
5. Drugs like marijuana and cocaine should be ok for kids to use.*
6. If I have a choice I might try drugs.*
7. Marijuana makes you happy.*
8. People usually drink alcohol at parties.*
9. I can't wait to be old enough to drink.*
10. I am curious about alcohol and drugs.*

Scoring Range = 1-4 Possible Score Range = 10-40

Response Options: 1=*No, never*; 2=*I don't think so*; 3=*Maybe*; 4=*Yes, definitely*
*Reversed Scored: the reverse scoring for these items results in higher scores indicating more negative attitudes and intentions toward ATOD use.

IPFI Survey: The IPFI (Springer & Phillips, 1997) is a 71-item self-administered questionnaire that measures adolescent resiliency as defined by ten attitudinal orientations in three major domains (social bonding, personal competence, and social competence). It includes those dimensions most prominently referenced in the literature on protective factors associated with healthy personal and social development among youth and in high-risk environments (Springer & Phillips, 1997.) The IPFI was originally designed for youth in the 10-16 age range. The validation sample included 2,416 youth in 15 sites nationally.

Six (6) items in the 10-item anti-substance-use attitudes and intentions scale are associated with attitudes:

- Grown ups have more fun when they drink.
- Marijuana makes you happy.
- Drugs like marijuana and cocaine should be ok for kids to use.
- People usually drink alcohol at parties.
- I am curious about alcohol and drugs.
- It's okay to use drugs if you don't get caught.

Four (4) more of the 10 items are associated with intentions:

- I might smoke cigarettes when I get older.
- I will probably drink alcohol when I am old enough.
- If I have a choice I might try drugs.
- I can't wait to be old enough to drink.

Reliability: The IPFI manual reports reliability for ten dimensions (school, family, pro-social norms, self-concept, self-control, positive outlook, self-efficacy, assertiveness, confidence and cooperation/contribution), but not for its anti-substance-use attitudes and

intentions scale. In a communication from Dr. Liz Sale following the completion of the study (email of February 23, 2004), she reported a coefficient alpha of .65 calculated on nine of the items excluding Item 10 about personal curiosity about drugs. According to Sale, the coefficient alpha is not reported because it is not an appropriate statistic to use given that the scale is assessing different substances, and the attitudes that youth have toward using cigarettes may be appropriately different from their attitudes toward alcohol, or in turn illegal drugs. Therefore, one would not necessarily expect that a particular youth would answer each item in a scale similarly, which is what one expects when using coefficient alpha as the measure of reliability. In our sample, an alpha coefficient of .65 is noted for the entire sample of 8-11 year olds (pretest). For the 8-9 year olds it was .66, and .62 for 10-11 year olds (pretest). For the posttest, the overall alpha was .64. For the 8-9 year olds the alpha was .63, it was .66 for the 10-11 year olds.

Validity: In terms of construct validity, the IPFI manual reports correlations of the measure with seven dimensions under the personal competence and social competence domains. For the personal competence domain, the 10-item anti-substance-use attitudes and intentions measure correlated .305 with self concept, .438 with self control, .412 with self efficacy, and .433 with positive outlook. For the social competence domain, the 10-item anti-substance-use attitudes and intentions measure correlated .323 with assertiveness, .297 with confidence, and .351 with cooperation.

3. Anti-Social Attitudes (Conduct Problems) – 4 Item Scale.

Four items were adapted from the Student Survey of Risk and Protective Factors (Hawkins, Catalano, & Pollard, 2001), which is in the public domain, to assess students' attitudes toward "moral order." The four questions were:

1. I think it is ok to take something without asking if you can get away with it.
2. I think it is all right to cheat at school.

3. I think it is all right to beat up people if they start a fight.
4. You should tell the truth even if you are going to get in trouble.*

Scoring Range = 0-2 Possible Score Range = 0-8

0 = *Never*; 1 = *Sometimes*; 2 = *Always*

*Reverse Scored Higher scores indicate more anti-social attitudes.

Item Adaptation: The original Student Survey of Risk and Protective Factors (Hawkins, Catalano, & Pollard, 2001) was scored on a 1-4 range as follows, with the capitalized words designating a stronger response. The interpretation of the range is to be explained by the survey administrator as meaning:

- NO = Absolutely not
- no = I don't think so
- yes= I think so
- YES= Absolutely yes

The subtlety of weighting the big "NO" vs. the little "no" and the big "YES" vs. the little "yes" escaped many students and proved not to be reliable in eliciting students intended responses in our pilot tests. Attempts to retain the 1-4 range by adding the word "absolutely" to the "NO' and "YES" responses did not appear to improve children's understanding as the word "absolutely" was difficult for many to read. The response options found to work best were: "Never", "Sometimes" and "Always."

Reliability**:** The CSAP Core Measures Task Force (CSAP 1999) recommended the 4-item anti-social attitudes scale from the Student Survey of Risk and Protective Factors for younger students: This four-item scale "uses simple sentence structure to assess, not so much the respondent's attitudes toward or tolerance of others' antisocial behaviors (both reasonable interpretations of a construct broadly titled 'antisocial attitudes'), but the extent to which the respondent has adopted mainstream values. To this extent that this captures

what is meant by antisocial attitudes in younger populations, the instrument has good face validity and other acceptable properties." The Task Force also indicated that the measure has shown high concurrent validity with drug and alcohol use and delinquency, and the scale was been normed with different ethnic populations (CSAP, 1999). Hawkins, Catalano, and Pollard (2001) report a reliability of 0.73.

4. Rebellious Behavior – 3-Item Scale: Three items were adapted from the same Student Survey of Risk and Protective Factors (Hawkins, Catalano and Pollard, 2001), which is in the public domain, to assess rebellious behavior. The items assess students' willingness to seek out rebellious behavior. The three items were:

1. I do the opposite of what people tell me, just to get them mad.
2. I like to see how much I can do before I get in trouble.
3. I don't follow rules that I don't like.

Scoring Range = 0-2 Possible Score Range = 0-6

0 = *Never*; 1 = *Sometimes*; 2 = *Always*

Item Adaptation: The 3-item scale for rebellious behavior from the Student Survey of Risk and Protective Factors (Hawkins, Catalano and Pollard, 2001) used four response options: "Very false," "Somewhat false," "Somewhat true," "Very true." The original response options proved to require a great deal of explanation in order for students to understand the intent of the questions; their understanding of "true" and "false" was that these were absolute terms. The response options that worked best were the same as used with the antisocial attitudes scale: "Never," "Sometimes," and "Always."

Validity: The CSAP Core Measures Task Force (CSAP, 1999) recommended the 3-item rebellious behavior scale from the Student Survey of Risk and Protective Factors for younger students, indicating that the scale "has an acceptable coefficient alpha of .78. It is

a 3-item scale that speaks fairly directly to the respondent's desire not to conform." The Task Force also indicated that the 3-item scale has shown high concurrent validity with drug and alcohol use and delinquency, and the scale has been normed with different ethnic populations (CSAP, 1999).

Intercorrelations among Outcome Measures: The intercorrelations (Pearson r) among the risk factors (rebellious behavior, anti-social attitudes), protective factor (anti-substance-use attitudes and intentions), and prior 30-day substance use (yes, no) are presented in Table 6. The first column presents the findings from the available case analyses (ACA). The next five columns present those correlations derived from the five imputed data sets, with the average of the imputed correlations given in the last column.

Table 6.

Intercorrelations among Outcome Measures on the Pretest

Prior 30-Day Use with Risk and Protective Factors

		Correlations from Imputed Data Sets					
Measures	ACA	1	2	3	4	5	Average
Anti-Substance-Use Attitudes & Intentions							
Anti-social Attitudes	-.16	-.15	-.15	-.16	-.15	-.17	-.156 (.009)
Rebellious Behavior	-.20	-.20	-.20	-.19	-.20	-.19	-.197 (.005)
Prior 30-Day Use	-.265	-.266	-.267	-.268	-.268	-.270	-.267 (.001)
Anti-social Attitudes							
Rebellious Behavior	+.392	+.397	+.397	+.398	+.394	+.392	+.395 (.002)
Prior 30-Day use	+.243	+.241	+.240	+.238	+.242	+.240	+.240 (.001)

NOTE: All correlations are significant at or beyond the $p<.01$ level of significance, two tailed. Ns range from 570-657 in the available case analyses; all imputed data sets have N = 661. Prior 30-day substance use on the pretest was scored as either Yes or No.

Anti-substance-use attitudes and intentions scores correlated significantly and negatively with the two risk factor scores and prior 30-day substance use. The two risk factors correlated positively among themselves and with prior 30-day substance use. This pattern of correlations among the various scores is consistent with that found in previous prevention research literature (Arthur, et al, 2002; CSAP, 2003; Springer and Phillips, 1997).

The pattern of intercorrelations from the ACA is remarkably similar to that found in each of the five imputed data sets, and in their averages (with small variation noted.) Further, exactly the same pattern of statistical significance and magnitude is observed among the posttest measures.

Reliability of Measures: Information on the internal consistency and reliability (alpha) is presented in Table 7 for the total sample, ages 8-9 and 10-11, and for both pretests and posttests.

Table 7.

Spring – Fall, 2003
Coefficient Alpha Reliabilities – All Participants

	Pretest	n	Posttest	n
Protective Factors				
Anti-Substance Use Attitudes/Intentions (10)	.65	647	.64	552
Ages 8-9	.66		.63	
Ages 10-11	.62		.66	
Risk Factors				
Anti-Social Attitudes (4)	.55	657	.55	580
Ages 8-9	.57		.55	
Ages 10-11	.53		.55	
Rebellious Behavior (3)	.50	656	.48	570
Ages 8-9	.50		.50	
Ages 10-11	.51		.44	
Self-Report Substance Use (5)	.85	660	.66	581
Ages 8-9	.84		.72	
Ages 10-11	.88		.44	

NOTE: Number of items per subscale is given in parentheses.

For anti-substance-use attitudes and intentions scale, the alphas for the pretest and posttest scores were .65 and .64 respectively. The alphas for the two age groups were of the same magnitude for both measures.

For the two risk factors, the pretest and posttest alphas were lower. Alphas for anti-social attitudes were .55 for both pretest and posttest. Similar magnitudes were found for both age groups. For rebellious behavior, the overall sample alphas were .50 and .48, again with similar values for the two age groups.

For the composite self-reported prior 30-day substance use scale, the alphas were the highest seen for the pretest at .85 overall and .84 and .88 for the two age groups. The alphas were lower for the posttest.

These coefficient alphas must be interpreted in light of the study population. The nature of the sample must be considered, specifically the age of the study participants. Reliability is driven by variance (Thompson, 2003.) Typically, greater score variance leads to greater score reliability, and so more heterogeneous samples often lead to more variable scores, and thus to higher reliability. In the present study, with the younger population (8-11), there was a lack of variability, i.e., floor and ceiling effects. Many students reported no rebellious behavior, no anti-social attitudes, very high anti-substance-use attitudes and intentions, and no prior substance use. This is a characteristic finding in studies of prevention with young children as they have been found to show strong anti-substance use and attitudes and intention to be begin with (cf., Bell et al., 2005). It is important to note that the original pool of students, from which the random sample was taken, was comprised of students that counselors assessed to be at elevated risk due to their exposure to high-risk environments and/or attitudes and behaviors already evident in the classroom. The presence of observable attitudes and behaviors was not a requirement for participation in the intervention.

Survey Instruments:

Student Pre-Post Survey:

The questionnaire is comprised of 28-items (Appendix E).

Item Nos.	Student Pre/Post Survey: Content
1-4	Demographic Information
5-8	Anti-social Attitudes
9-11	Rebellious Behavior
12-16	Substance Use (Self-reported Prior 30 Day Use)
17-26	Anti-Substance-Use Attitudes and Intentions
27-28	Previous Participation in the CBSG® Program

Items 1-4: Demographic data: Basic information for gender, race/ethnicity, language most spoken at home, and age range.

Items 27-28: Exclusion of previous participants: Two questions to identify students who had participated previously in the CBSG® Program to ensure they were not inadvertently included in the study.

NOTE: The Pre/Post Survey Administration Protocol is in Appendix E.

Other Data Collection Instruments:

Referring Individual's Assessment of Student Risks and Improvement: School personnel completed the "Referring Individual's Assessment of Student's Needs/Risks" (Appendix H.) Both high-risk situations and behaviors of concern were captured. After the 12-week intervention, the referring individuals (overwhelmingly teachers) complete the "Referring Individual's Assessment of Student Improvement" (Appendix I). The list of items were the same, with the exception the high-risk family situations, which appeared only on the pre-assessment. Impacting these adverse family situations was beyond the scope of the intervention. The section devoted to assessing high-risk situations in the pre-assessment was replaced with space for the referring individual to report: "The most

significant improvement I see in this child is_____:"; and "I am glad I referred this child: yes, no; if no, please explain:". Referring individual were instructed to observe the child for two weeks prior to completing the post-assessment.

Facilitator's Pre-Assessment of Student's Behaviors, Knowledge, Skills: Support group facilitators assessed each child's behavior, knowledge and skills twice: once after the third week of group sessions (pre) and once after the 12th and final week of the implementation (post). Allowing three weeks to elapse prior to the facilitator making an assessment gave the facilitator the time needed to interact with the group members individually, observe the student's interaction with other group members, and observe any major social skills deficits, attitudes, behavior or personal esteem issues. This period also allowed the facilitator to build trust with the participants, which is evident in that group members self-reported personal high-risk situations. The pre and post assessment tools (Appendix J and K) were identical with regard to the behaviors, knowledge and skills observed but differed in the following respects:

- The pre assessment included a list of high-risk situations (identical to those used in the high-risk pool selection process) for documentation of any student self-disclosures regarding personal high-risk situations. Because the high-risk assessment by the school teachers (the high-risk pools) was not available to the study, the items were included in the facilitators pre observation form. Space was provided for the facilitator to respond to, "The most significant need I see in this child is_____:"
- The post assessment excluded the high-risk situations as these were beyond the control of the facilitator and were not expected to change significantly over the 12-week program. These were replaced with space for the facilitator to respond to, "The most significant need I see in this child is_____:"; "The most

significant improvement I see in this child is_____:"; and "I referred this child to the school counselor: yes, no; if yes, please explain:".

- The assessment form included 15 items assessing participant behavior, knowledge and skills:

    1. Sense of ease and comfort as a member of the group.
    2. Confidence and willingness to contribute ideas.
    3. Confidence and willingness to share feelings.
    4. Desire to pay attention and cooperate.
    5. Effort to remember and use group rules.
    6. Effort to use self-control.
    7. Ability to name (identify) different feelings.
    8. Ability to verbalize (talk about) ideas and feelings.
    9. Ability to accept others' differences.
    10. Ability to manage/control frustration and anger.
    11. Ability to identify each other's unique/special qualities.
    12. Understanding what it takes to be a true friend.
    13. Knowledge of dangers associated with substance use.
    14. Knowledge of steps to resist external pressure/influence.
    15. Knowledge of "I am, I can, I have, I will, I believe."

Scoring Range: 0-5 Possible score range: 0-75

0= *Never;* 1= *Rarely;* 2-3=*Sometimes;** 4= *Often;* 5=*Always*

The higher the score the more positive the behavior.

*The score option "sometimes" was given a range of 2-3 as facilitators indicated a need to weight or shade this response in order to more closely reflect their intentions.

The pre- and post comparison of these items is presented in the Results section.

Group Participant Evaluation: As part of the last group session, each group member completed a "Participant Evaluation" (Appendix L).

Counselor Post Intervention Survey – "Counselor Feed Back": Counselors completed a post intervention survey (Appendix M) about what worked and didn't work with regard to the study implementation and the value of the intervention to the participants and the school.

ANALYSIS

Chi square analyses of the pretest data showed the intervention and control groups were comparable by age, gender and ethnic distribution. Following randomization, the two groups did not differ significantly on mean pretest scores for rebellious behavior, anti-social attitudes, anti-substance-use attitudes and intentions, and prior 30-day use measures ($F(4,631)=1.35$, $p=.25$), using a MANOVA procedure. The study was designed to examine overall effects for this high-risk student population. The district requirement that all students in Grades 2-5 be tested (complete the study survey) together in their homerooms, with no student or group of students being tested (completing the study survey) separately from their classmates, resulted in a third group: the balance of the student body in Grades 2-5 not participating in the study, but who also completed the pre/post survey. Data from the third group were not released by the schools; therefore they could not be included in the study.

Equivalence of Intervention and Control Groups

Control and intervention subjects were compared across the mean pretest values on the four outcome measures (see Table 8). To take into account the correlations between the outcome measures, a multivariate analysis of variance (MANOVA) was run. The two factors were group and outcome measure. Summarized briefly, the MANOVA analysis revealed that no statistically significant differences were found between the groups on the four outcome measures ($F(6, 631) = 1.35$, $p = .25$). Comparison of intervention and control groups on pretest subscales in shown in Table 8 on the next page.

Table 8

Comparison of Intervention and Control Groups on Four Pretest Subscales

	CBSG (n=147)	Controls (n=452)
Protective Factors		
Anti-Substance Use Attitudes And Intentions	38.09 (4.84)	39.18 (3.82)
Risk Factors		
Anti-Social Attitudes	4.90 (1.54)	4.75 (1.24)
Rebellious Behaviors	4.13 (1.45)	3.96 (1.32)
Substance Use	5.43 (1.69)	5.25 (1.25)

NOTE: Ns range from 137-147 for intervention groups, 405-433 for controls.

Data Analysis

For the data analyses, respondents were matched from pretest to posttest by the school, grade, teacher's name and their individual student identification codes entered on the survey form. Student identification data were blinded to the project evaluator. The analyses addressed four separate research questions:

Compared to the control group, does the intervention lead to:

1. lower rebellious behavior?
2. lower anti-social attitudes?
3. increased anti-substance use attitudes and intentions?
4. lower level of self-reported substance use in the past 30 days?

Preliminary analyses indicated that analysis of covariance was not warranted because the homogeneity of the regression slope assumption could not be met. Therefore, a regression approach outlined by Kerlinger and Pedhazur (1973) was used. This included use of the Johnson-Neyman technique (Johnson and Neyman, 1936) to determine regions of statistical significance under the two regression curves.

All analyses were run with SPSS, version 14. Ns vary slightly as all available cases with complete data were used in each analysis. For each measure, the Johnson-Neyman (1936) technique was used to calculate values of the covariate where significant differences between the two groups on the posttest measure (regions of significance) were found. Preliminary regression analyses were run to examine potential effects related to age, gender, ethnicity and prior substance use (yes, no). None of these was found to be significant predictors of any of the outcome measures.

Data are reported in a format outlined by Kerlinger and Pedhazur (1973) for a regression model with one categorical grouping variable (coded 1 for the intervention group, and 0 for the control group), one continuous variable (pretest score) and their interaction (formed by multiplying the two vectors).

The regression equation is of the form: $Y = a + b_1X_1 + b_2X_2 + b_3X_1X_2 + e$, where X_1 is the grouping factor, X_2 is the prescore of interest, b_3X1X2 is the group by prescore interaction, a is the intercept, and e is the error term.

MISSING DATA

Overall, the amount of missing data in the sample was minimal. Across the spring and fall of 2003, 661 children participated in the evaluation: 164 in the CBSG intervention groups and 497 control children. Posttests were unavailable for at total 62 participants (9.3%): 17 (10.4%) subjects in the intervention groups and 45 (9.0%) subjects in the control group. These percentages were not found to differ significantly. Further, those in the intervention group not completing the posttest attended a similar number of classes as those who completed the posttest (Table 9).

Table 9

Attrition and Missing Data by Outcome by Group:
Percent of Matched Pre/Post Tests

Paired Data Ns and % by Group (Pretest and Posttest)

Outcome	CBSG	%	Controls	%
Anti-Substance Use Attitudes and Intentions	137	93.2%	405	90.0%
Anti-Social Attitudes	146	99.3%	430	95.1%
Rebellious Behavior	145	98.6%	420	93.0%
Self-Reported Substance Use	147	100%	433	95.7%

NOTE: Overall attrition was 62 participants, representing 9.3% of the original sample (Interventions = 164, Controls = 497). For all four subscales, a participant had to respond to each of the items (100%) for a total score to be calculated. No imputation was made for missing or out-of-range item response values.

For those in the intervention group, the percentage of participants with both pretests and posttests ranged from 93.2% for the Anti-Substance Use Attitudes and Intentions scale to 100% for the self-reported substance use scale. In the control group the range was 90% to 95.7% for the same two scales.

Compared to other evaluation studies of school-based substance use prevention programs, the observed rate of 90.4% with matched pretests and posttests is quite

favorable. For example, Botvin and his colleagues (Botvin et al., 2003) reported a post-test completion rate of 55.8% for 1,954 elementary school children participating in an evaluation of the Life Skills Training program.

To explore any potential bias related to these missing data, data imputation procedures under the multivariate normal model were employed (Schafer, 1997). Following recommended procedures, five data sets were created with imputed data, analyzed separately, and the statistical results were pooled and compared to the original findings. These pooled analyses yielded similar results for each outcome. Based on these findings, the missing data were not judged to have materially altered or biased the original findings from the available case analyses, nor their interpretation.

Missing Data Analyses: It is possible that study results can be biased to some extent by participant attrition and other forms of missing data. Posttests were unavailable for 17 (10.4%) of participants in the intervention and 45 (9%) of the control group, with other missing data at the variable level (scale scores were only computed if a student answered each item within a scale). All intervention participants completed the intervention; however, they were not in attendance or not in their homeroom when the posttest was administered. The missing data were imputed using the NORM software developed by Schafer (1997). This software implements multiple imputation with the multivariate normal model. According to Allison (2002),

> *For each variable with missing data we estimate the linear regression of that variable on all other variables of interest… The estimated regression equations are then used to generate predicted values for the cases with missing data. Finally, to each predicted value, we add a random draw from the residual normal distribution for that variable* (p. 33).

In this study, 5000 iterations were used to generate the predicted values with the EM algorithm. The data set converged within 125 iterations. To generate five different data

sets as recommended by Schafer (1997) in data augmentation, 10,000 iterations were used and the imputations produced in every 2000th iteration were analyzed further. Analyses were run on all five data sets, and then averaged (Fs, bs, Ses, prob). The averages were then compared to those from the original available case analyses.

The regression model included the variables of group (CBSG, control), prescore (anti-substance-use attitudes and intentions, rebellious behavior, or anti-social attitudes) and group by prescore interaction. The analyses of the five imputed data sets focused on the outcome measures of anti-substance-use attitudes and intentions, anti-social attitudes, and rebellious behavior. These missing data analyses were not completed for the inhalant findings as these were derived from a single item.

Overall Regressions

The regression analyses of the five imputed sets indicated for the three outcome measures are summarized separately.

Anti-Substance-Use Attitudes and Intentions (Imputed parameters)

Equation	Data Set 1	Data Set 2	Data Set 3	Data Set 4	Data Set 5	Average
Intercept	20.437 (1.46)	20.437 (1.46)	20.68 (1.45)	20.87 (1.47)	20.869 (1.45)	20.66 (0.22)
Group	8.50 (2.57)	8.50 (2.57)	8.84 (2.59)	8.21 (2.52)	9.10 (2.53)	8.63 (0.34)
Pre Attitude	0.366 (.04)	0.366 (.11)	0.363 (.04)	0.352 (.04)	0.357 (.11)	0.361 (.006)
Interaction	-0.245 (.08)	-0.194 (.04)	-0.259 (.08)	-0.235 (.08)	-0.165 (.04)	-0.219 (0.038)
r^2	.101	.101	.099	.094	.097	.098 (.003)

The equation from the available case analysis: Y = 21.26 + 9.03 (group) + .61 (prescore) - .265 (group x prescore). The percentage of variance explained was 8.7%.

The equation derived from the five imputed data sets (average of 5 values):

Y = 21.66 + 8.63 (group) + .361 (prescore) - .22 (group x prescore interaction)

The average percentage of variance explained was 9.8%.

Each of the imputed data sets found the same pattern of statistical significance for the anti-substance-use attitude and intention variable. That is, all four predictors were found to be significant in each of the five data sets.

Rebellious Behavior (Imputed parameters)

Equation	Data Set 1	Data Set 2	Data Set 3	Data Set 4	Data Set 5	Average
Intercept	2.55 (.16)	2.55 (.16)	2.59 (.16)	2.70 (.16)	2.50 (.16)	2.58 (.075)
Group	0.72 (.31)	0.72 (.31)	0.43 (.32)	0.44 (.31)	0.74 (.31)	0.61 (.16)
Pre Rebellious Behavior	0.308 (.038)	0.308 (.038)	0.306 (.039)	0.286 (.039)	0.331 (.038)	0.308 (0.02)
Interaction	-0.155 (.07)	-0.155 (.07)	-0.093 (.07)	-0.111 (.07)	-0.182 (.07)	-0.139 (.036)
r^2	.10	.10	.10	.087	.11	.099 (.008)

The equation from available case analysis: Y = 2.61 + .789 (group) + .491 (prescore) - .189 (group x prescore). The average r^2 was .094.

The equation from the average of the five imputed data sets:

Y = 2.578 + .61 (group) + .139 (prescore) - .139 (group x prescore)

The average r^2 was .099.

The pattern of significant findings matched that found in the available case analysis.

Anti-Social Attitudes (Imputed parameters)

Equation	Data Set 1	Data Set 2	Data Set	Data Set 4	Data Set 5	Average
Intercept	2.75 (.21)	2.75 (.21)	2.78 (.22)	2.72 (.21)	2.81 (.22)	2.76 (.03)
Group	1.16 (.37)	1.16 (.37)	0.91 (.38)	1.18 (.38)	1.02 (.38)	1.09 (.12)
Pre Anti-Social	0.441 (.04)	0.441 (.04)	0.440 (.04)	0.449 (.04)	0.432 (.04)	0.44 (.006)
Interaction	-0.254 (.07)	-0.254 (.07)	-0.22 (.07)	-0.265 (.07)	-0.239 (.07)	0.246 (.07)
r^2	.15	.15	.15	.15	.14	.148 (.004)

The equation from available case analysis: Y = 2.749 + 1.467 (group) + .773 (pre anti-social score) - .329 (group x prescore)

The equation from the average of five imputed data sets:

Y = 2.76 + 1.086 (group) + ..44 (prescore) - .246 (group x prescore)

The percentage of variance explained by the full model (r^2) in the available case analysis was .149. It was .148 (SD = .004) from the average of the five imputed data sets.

The pattern of significant findings from the imputed data sets was consistent with the original analyses.

Impact of Missing Data

The rate of the missing data (γ) was calculated by Rubin's (1987) rules for multiple imputation inference, separately for the three outcome measures. This technique allows an assessment of the influence of missing data on statistical inference using MI procedures. The results are summarized in the following table.

Table 10

Rate of Missing Data on Gamma (γ)

Anti-Substance Use Attitudes and Intentions	
Intercept	.0142
Group	.054
Prescore	.017
Interaction	.027
Anti-Social Attitudes	
Intercept	.0003
Group	.0001
Prescore	.0006
Interaction	.0042
Rebellious Behavior	
Intercept	.011
Group	.0003
Prescore	.0001
Interaction	.025

As the results suggest, the rate of missing data (γ) is uniformly low to zero-order for all variables. Values of γ can range from 0 to 1.0, where 1.0 means 100% missing information. The maximum value is .054 or a 5.4% rate of missing data. And it is for a main effect of little interest, given the significant interactions. The other values are trivial – nearly 0. These results suggest that the missing data are ignorable and could be considered at least missing at random (Rubin, 1987).

IMPLEMENTATION FIDELITY:

Attendance in CBSG Program Intervention Sessions : The attendance records maintained by intervention facilitators were analyzed to assess the amount of participation across the 12-session program for the 164 participants. The average attendance was 10.63 sessions (*SD* = 0.72), representing 88.6%; 91.8% of the subjects completed 10 or 11 sessions; and 63.9% of the subjects completed 11 sessions of the 12 sessions, or 91.66% of the sessions. Participant attendance is shown in Table 11.

Table 11

Number of Intervention Sessions Attended,

Percent and Cumulative Percent

Sessions attended	Percent	Cum. Percent
7	0.6	0.6
8	1.9	2.5
9	7.6	10.1
10	23.8	32.9
11	63.9	96.8
12	3.2	100

The CBSG® Program attendance rate, in comparison to findings from several meta- analyses of school-based prevention programs, is quite favorable.

Implementation Fidelity Observations Two professionals, previously trained and experienced in delivery of the intervention, but not otherwise involved in the study, were trained in the use of a three-part observation tool detailing intervention standards and requirements in logistics, process and content. The observers conducted unannounced observations of all (100%) intervention facilitators, two observations per facilitator in the Spring and Fall semesters, a total of 19 observations. The content of the "Implementation Fidelity Observation Tool" is shown in Figure 4 (a copy of the tool is provided in Appendix G.) The study did not assess inter-rater reliability.

Summary of Observation Outcomes:

- 100% were observed two or more times.
- 88% of facilitators were observed three or more times
- Over 70% of the session's key points, which averaged 5 per session, were covered in 88% of the observed sessions.
- Failures to complete the observed sessions were less than .5%, and were due to interruptions over which the facilitator had no control (such as fire drills, visits to the campus by police or fire departments, a skunk on campus).
- 97% of facilitators scored a 4-6 (usually to always) on attending, empathy and genuineness.
- All facilitators were rated on their skills as a facilitator, which included:
    - Attending: "Did the facilitator use an open posture by giving full attention to all members of the group equally?" "Did the facilitator maintain culturally appropriate eye contact with all group members?"
    - Empathy: "Did the facilitator respond with understanding and acceptance with all group member equally?"
    - Genuineness: "Was the facilitator sincere and natural in all interactions with all group members equally?"

Figure 4

Fidelity Observation Form Content				
Session Data	**Group Room**	**Readiness/ Preparation**	**Key Points**	**Group Format**
▪ School Name ▪ Date, Time ▪ Facilitator o Gender o Race/Ethnic ▪ Co-Facilitator o Gender o Race/Ethnic ▪ # of Participants o Gender ▪ # of weeks since last session ▪ If more than 1 week, observer explains	▪ Type of room ▪ Unoccupied ▪ Private ▪ Child-approp. ▪ Prev. sessions in same room ▪ Only one group ▪ Distraction level o High o Moderate o Low o None ▪ Observer provides explanations and comments	▪ Facilitator Prep ▪ Room ready ▪ Facilitator on time ▪ Children on time ▪ Observer provides explanations and comments	▪ Key points for the session being observed ▪ Observer checks "yes" or "no" to indicate whether key points were covered ▪ If key points were added, the observer notes ▪ Observer provides explanations and comments	▪ Group format is printed on form: o Sunshine/Cloud o Guided Dis. o Activity/Game o Process/Share o Major Message ▪ Observer checks "yes" or "no" to indicate whether the format was followed ▪ Observer gives explanations and comments
Fac. Skills	**Co-Fac. Skills**	**Members**	**Comments**	**Observer Info**
▪ Discipline ▪ Unexpect. events ▪ Rapport/children ▪ Open posture ▪ Attention to all ▪ Acceptance ▪ Understanding ▪ Sincerity ▪ Translation(as appropriate)	▪ Discipline ▪ Unexpect. events ▪ Rapport/children ▪ Open posture ▪ Attention to all ▪ Acceptance ▪ Understanding ▪ Sincerity ▪ Translation(as appropriate)	▪ Followed rules/promises ▪ Recalled previous content ▪ Appeared to understand content ▪ Appeared involved and interested ▪ Appeared to enjoy the activity	Provides overall impression of the session and discusses any special circumstance that might have impacted the group process.	▪ Name ▪ Gender ▪ Race/Ethnicity ▪ Bilingual ▪ Arrived before session started ▪ Stayed until the end of session ▪ Avoided interactions that could interfere with the process ▪ Signature

Response options included: 1=Never; 2=Hardly Ever; 3=Sometimes; 4=usually; 5=Almost Always; 6=Always

Figure 9 (next page) provides a summary of implementation fidelity observations.

Figure 5

Curriculum-Based Support Group (CBSG)
Randomized Control Study
Spring and Fall Cycles, 2003

IMPLEMENTATION FIDELITY OBSERVATIONS

SUMMARY

INTRODUCTION: A non-equivalent randomized control group study was conducted to determine the effects of the Curriculum-Based Support Group (CBSG) program on male and female elementary students ages 8-11. The study was conducted in five elementary schools in a large urban school district in the Southwest. Intervention students were assessed by school personnel as being at increased risk for substance abuse, delinquency, and violence and were randomly assigned by the evaluator into groups of 12. The intervention was provided in two 12-week cycles during 2003: Cycle 1 - Jan through May, 2003; and Cycle 2 - September through December, with students meeting for one class period one time per week for 12 weeks. A maximum of 12 students were assigned to each support group, and groups were "closed" with regard to group membership, i.e., the same group of students met weekly with the same group facilitator (and co-facilitator in some cases), and no new students were added to a group after the second session. Students not assigned to the intervention served as the controls. All group facilitators in all sites were observed by professionals trained and experienced in the delivery of the CBSG Program, but with no other involvement in the study than to conduct observations of the intervention. Observers were trained in the use of a three-part "Fidelity Observation Tool." A copy of the tool is provided in Appendix G.

SPRING 2003 SITES = 4: **FALL 2003 SITES = 4:**

SPRING 2003 FACILITATORS = 5: LB, CC, RL, AL, and JV.

FALL 2003 FACILITATORS = 7: LB, CC, MH, RL, AL, JV and OFG (who substituted for CC)

SPRING 2003 CO-FACILITATORS = 2: Only two (2) sites required co-facilitators, and in both of these sites, an Angle female and a bilingual Hispanic/Latino male co-facilitated group sessions.

FALL 2003 CO-FACILITATORS = 0: No groups required co-facilitators in the Fall cycle.

Summary of Observation Outcomes:

- 93% of facilitators were observed two or more times.
- 88% of facilitators were observed three or more times
- Over 70% of the session's key points, which averaged 5 per session, were covered in 88% of the observed sessions.

- Failures to complete the observed sessions were less than .5%, and were due to interruptions over which the facilitator had no control (such as fire drills, visits to the campus by police or fire departments, a skunk on campus).
- 97% of facilitators scored a 4-6 (usually to always) on attending, empathy and genuineness.

CBSG facilitators participated in the Spring 03 CBSG Evaluation Project. Gender: 40% were female; 60% were male. With regard to race/ethnicity: 40% were Anglo; 40% were Hispanic/Latino; and 20% were African-American. With regard to language: 40% were bilingual.

Name	Gender		African-Am	Anglo	Hispanic/Latino	Bi-lingual
1. LB	F			X		
2. CC	F			X		
3. RL		M			X	X
4. AL		M	X			
5. JV		M			X	X
5 Total	**2**	**3**	**1**	**2**	**2**	**2**

FALL 2003 Facilitators' Gender, Race/Ethnicity and Language: A total of 7 trained CBSG facilitators participated in the Fall 03 CBSG Evaluation Project. OFG substituted for CC. A total of 5 trained CBSG facilitators participated in the Spring 03 CBSG Evaluation Project. Gender: 43% were female; 57% were male. With regard to race/ethnicity: 28.5% were Anglo; 43% were Hispanic/Latino; and 28.5% were African-American. Language: 43% were bilingual.

Name	Gender		African-Am	Anglo	Hispanic/Latino	Bi-lingual
6. LB	F			X		
7. CC	F			X		
8. OFG	F				X	X
9. MH		M	X			
10. RL		M			X	X
11. AL		M	X			
12. JV		M			X	X
7 Total	**3**	**4**	**2**	**2**	**3**	**3**

SPRING 2003 Facilitator Site Assignment:

Lead facilitators were assigned to sites based on scheduling availability. While this was not a formal "random assignment", it randomized assignments to the extent practicable, given the number of sites, available time slots and available facilitators. (Note: The "random" assignment of facilitators increased school frustration with the control study, as their facilitator preferences could not be honored.)

Co-facilitators were also assigned based solely on schedule availability. Co-facilitators were only assigned to sites with high numbers of Hispanic/Latino students. (Again, school

preferences could not be taken into consideration; however, the assignment of the co-facilitators appeared to be far less of an issue than the random assignment of the lead facilitators.)

Site	Facilitator	Co-facilitator
A	JV	N/A
B	LB	RL
C	CC AL RL	N/A N/A N/A
D	LB	JV

FALL 2003 Facilitator Site Assignment: Facilitators were again assigned to sites based on schedule availability only. OFG was not part of the original random assignment, but was a substitute for CC.

Site	Facilitator	Co-facilitator
A	AL	N/A
B	RL	N/A
C	CC OFG JV MH	N/A N/A N/A
D	LB RL	N/A

PERCENT of SPRING 2003 FACILITATORS OBSERVED = 100%: All facilitators conducting groups in the Spring Cycle of the CBSG Control Group Study were observed by two trained observers. *Observation Schedule attached.*

PERCENT of FALL 2003 FACILITATORS OBSERVED = 100%: All facilitators conducting groups in the Fall Cycle of the CBSG Control Group Study were observed by one trained observer. *Observation Schedule attached.*

SPRING 2003 OBSERVATIONS BY SITE: Two trained observers conducted a total of 14 observations at the four sites (elementary schools.)

11 observations were completed by **WM** (Anglo; English only) **at 4 sites.**

3 were completed by **MC** (Hispanic/Latina; bilingual) **at 3 sites.**

NOTE: Co-facilitators are included in lead facilitator observation numbers.

Site	Number of Observations	Who was Observed & Number of Observations
A	1	1- JV (1-WM)
B	3	3 – LB (2-WM &1-MC) and RL (co-facilitator) (1-WM & 1-MC)
C	1	1- LB & JV (co-facilitator)
D	9	4 - CC (3-WM & 1-MC) 3 – AL (3 – WM) 2 – RL (1-WM & 1-MC)
	14	**14**

FALL 2003 OBSERVATIONS BY SITE: Three trained observers conducted a total of 19 observations at the four sites (elementary schools.)

2 were conducted by **MM** (Anglo; English only) **at one site.**

4 were conducted by **MC** (Hispanic/Latina; bilingual) **at 2 sites.**

13 were conducted by **KP** (African-American; English only) **4 sites.**

Site	Number of Observations	Who was Observed & Number of Observations
A	3	3 – AL (3-KP)
B.	1	1 – RL (1-KP)
C	10	1 – CC (1-KP) 2 - OFG (2-KP) 3 – JV (1-MC & 2-KP) 4 – MH (1-MC & 3-KP)
D	5	3 – LB (1-MM; 1-MC; & 1-KP) 2 – RL (1-MM & 1-MC)
	19	**19**

Spring 2003 Observation of Lead Facilitators by Facilitator: (Note: Observation of co-facilitators is provided separately.)

100% of facilitators were observed twice as either facilitators or co-facilitators. One lead facilitator was observed once (and the same facilitator was also observed twice as a co-facilitator); one lead facilitator was observed twice (and three times as a co-facilitator); one lead facilitator was observed three times; two lead facilitators were observed four times. The 14 lead facilitator observations were distributed by facilitator as follows:

Facilitators	# Observations			Lead Facilitators	# Observations		
	WM	MC	Tot.		WM	MC	Tot.
LB	3	1	4	RL*	1	1	2
CC	3	1	4	AL	3	0	3
				JV*	1	0	1
Total:	**6**	**2**	**8**	Total:	**5**	**1**	**6**

*****Also observed as co-facilitators. See information below.

Fall 2003 Observation of Lead Facilitators by Facilitator: (Note: There were no co-facilitators in the Fall cycle.)

88% were observed two or more times. One facilitator was observed once (was terminated before end of group cycle and her replacement was observed twice.) Four facilitators were observed three times. One facilitator was observed four times. The 19 observations were distributed by lead facilitator as follows:

Facilitators	# Observations				Facilitators	# Observations			
	MM	MC	KP	Tot.		MM	MC	KP	Tot
LB	1	1	1	3	RL	1	1	1	3
CC			1	1	AL			3	3
OFG			2	2	JV	1		2	3
MH		1	3	4					
Total:	**1**	**2**	**7**	**10**	Total:	**2**	**1**	**6**	**9**

Spring 2003 Observation of Co-Facilitators: Co-facilitators present in the Spring cycle only.

Co-Facilitators	# Observations			Co-Facilitators	# Observations		
	WM	MC	Tot.		WM	MC	Tot.
RL	2	1	3	JV	1	1	2
Total:			3	Total:			2

TYPE OF ROOM/SETTING: The CBSG Model calls for "child-appropriate settings" that are private, non-distracting and ensure confidentiality.

SPRING 2003 – TYPE OF ROOM/SETTING: 100% of sites met 75% of criteria.

- **Child-appropriate** = Settings that are provided by schools within the school setting are deemed "child appropriate", providing for the safety of the child and not exposing the child to visually or verbally inappropriate surroundings/environment. **100% of settings were provided on school property within the school setting.**
- **Privacy and Confidentiality =** No activity is conducted concurrent with the support group sessions, providing for privacy and confidentiality for group member disclosures. **100% of the sites provided empty rooms where only group sessions were conducted;** however,

since more than one group session was conducted concurrently in the same room in one of the sites, privacy and confidentiality were compromised to some extent in this site. Therefore, **75% of sites provided for full privacy and confidentiality.**

- **Non-distracting =** The environment does not distract the attention of the group members from the group activity. **75% of the sites provided non-distracting settings** (Sites A, B and C.) In Site D, two or more groups were conducted in the same room. Although efforts were made to provide separate, same room settings do not meet the non-distraction requirement.

Site	Library	Classroom	Conference Rm.	Cafeteria
A			**X – 100%**	
B		**X-75%**		
C				**X – 100%**
C				**X – 75%**

SPRING 2003 - OBSERVERS' COMMENTS REGARDING SETTING/ENVIRONMENT:
Observers provided the following comments regarding room setting and environment.

Site	Room	Comments
A	Conference Rm	• Table/chairs in empty conference room. Quiet; private
B	Classroom	• Empty classroom; circle of desks; quiet and private; however, on one occasion room was very warm and group was moved to another classroom after Sunshine/Cloud (opening activity.)
C	Cafeteria	• Empty cafeteria; seating at lunch tables; quiet/private.
C	Cafeteria	• Cafeteria lunch tables; four groups took place in one room; noisy; fairly quite; hard to hear and children were easily distracted.

TYPE OF ROOM/SETTING: The CBSG Model calls for "child-appropriate settings" that are private, non-distracting and ensure confidentiality.

FALL 2003 – TYPE OF ROOM/SETTING: 100% of sites met 100% of criteria:

- **Child-appropriate** = Settings that are provided by schools within the school setting are deemed "child appropriate", providing for the safety of the child and not exposing the child to visually or verbally inappropriate surroundings/environment. **100% of settings were provided on school property within the school setting.**

- **Privacy and Confidentiality =** No activity is conducted concurrent with the support group sessions, providing for privacy and confidentiality for group member disclosures. **100% of the sites provided empty rooms where only group sessions were conducted;** and **75% of sites provided for full privacy and confidentiality** (cafeteria setting at Site D is still an issue. Cafeteria staffare more cooperative in respecting group privacy, but are still there)**.**

- **Non-distracting =** The environment does not distract the attention of the group members from the group activity. **75% non-distracting settings**. In Site D two or more groups were conducted in the same room; however, distance between groups kept distractions to a minimum to none. Some distraction was still evident as cafeteria staff still cleaned up and water fountain was noisy. However, there was a significant improvement over the Spring 2003 cycle in which proximity of groups made distractions an significant issue.

Site	Library	Classroom	Conference Rm.	Cafeteria
A		**X-100%**		
B		**X-100%**		
C				**X – 75%**
D	**X – 100%**			

FALL 2003 - OBSERVERS' COMMENTS REGARDING SETTING/ENVIRONMENT:
Observers provided the following comments regarding room setting and environment.

Site	Room	Comments
A	Classroom	• Table/chairs in empty conference room. Quiet; private
B	Classroom	• Empty classroom; circle of desks; quiet and private;
C	Cafeteria	• Empty cafeteria; seating at lunch tables; quiet/private. Cafeteria staff can be distracting; water fountain is noisy.
D	Library	• Empty library; seating at tables; quiet/private.

SPRING 2003 - ADHERENCE TO PRESCRIBED SESSION FORMAT: 100% of the prescribed sessions format was followed 93% of the time (in all but one of the sessions.)

Sunshine/Cloud		Guided Discussion		Activity/Game		Processing/Sharing		Major Message Ritual	
Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**		**X**		**X**	
X		**X**		**X**			**X**	**X**	
14		**14**		**14**		**13**	**1**	**14**	

FALL 2003 - ADHERENCE TO PRESCRIBED SESSION FORMAT: 80% of the required session format was followed in 18 of 19 session or 95% of the time.

Sunshine/Cloud		Guided Discussion		Activity/Game		Processing/Sharing		Major Message Ritual	
Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X		X		X	
X		X		X			X	X	
X			X			X		X	
X		X			X		X		X
X		X			X*	X		X	
X		X		X			X*	X	
X		X		X			X	X	
19		**18**	**1**	**17**	**2**	**15**	**4**	**18**	**1**

*Ran out of time

SPRING & FALL 2003 FACILITATOR SKILLS: Each facilitator (and co-facilitator) was observed to determine the extent of his/her skills in conducting/co-facilitating the CBSG sessions based on the following scale:

1=Never 2=Hardy Ever 3=Sometimes 4=Usually 5=Almost Always 6=Always

The following questions were answered by the observers using the assigned scale:

Attending:

- "Did the facilitator use an open posture by giving full attention to all members of the group?"
- "Did the facilitator maintain good eye contact with all group members?"

Empathy:

- "Did the facilitator respond with understanding and acceptance with all group members?

Genuineness:

- "Was the facilitator sincere and natural in all interactions with all group members?"

SPRING 2003 - Facilitators Skills Ratings: 98% scored a 5 or 6. Facilitators received excellent ratings on their posture, eye contact, understanding and acceptance and sincerity and natural behavior with all participants. For attending (posture and eye contact) 97% received a score of at least 5 or 6; for empathy (understanding and acceptance) 100% received a score of 5 or 6; for genuineness (sincerity and natural behavior) 100% received a score of 5 or 6.

Facilitator	Posture	Eye Contact	Understand/Accept	Sincere/Natural
LB	**6/ 6/ 6/ 6/**	**6/ 6/ 5/ 6/**	**6/ 6/ 5/ 6/**	**6/ 6/ 5/ 6/**
CC	**6/ 6/ 6/ 6**	**6/ 6/ 6/ 6**	**6/ 6/ 6/ 6**	**6/ 6/ 6/ 6**
RL	**6/ 6**	**6/ 6**	**6/ 6**	**6/ 6**
AL	**6/ 6/ 6/**	**6/ 6/ 6/**	**6/ 6/ 6/**	**6/ 6/ 6/**
JV	**6/ 6/ 4/**	**6/ 5/ 5**	**6/ 6/ 6**	**6/ 5/ 5**
Rated 5 or 6	**96% =** **(94%=6) (6%=4)**	**100%** = **(81%=6) (19%=5)**	**100% =** **(94%=6) (6%=5)**	**100% =** **(81%=6) (19%=5)**

SPRING 2003 - Co-facilitators Skills Ratings: Co-facilitators do not routinely have the opportunity to lead the group; therefore it is difficult to measure their skill levels in these areas. Observers' comments indicated that co-facilitators were involved and helpful, and scores are lower in some areas because co-facilitator did not assume leadership during the session and had little opportunity to demonstrate the skills being observed.

Co-Facilitator	Posture	Eye Contact	Understand/Accept	Sincere/Natural
RL	**6/ 6/ 4**	**6/ 6/ 4**	**6/ 5/ 6**	**6/ 6/ 6**
JV	**5/**	**4/**	**4/**	**5/**
Rated 5 or 6	**50%** (25%=5) (25%=4)	**50%** (50%=4)	**50%** (25%=5) (25%=4)	**75%** (25%=5)

FALL 2003 - Facilitators Skills Ratings: 97% scored 4 or better (usually to always); 67% scored a 5 or 6. Facilitators received lower ratings on their posture, eye contact, understanding and acceptance, and sincerity and natural behavior than in Spring 2003. This appears to be a difference in the interpretation of "style" by different observers, as well as specific performance issues.

Facilitator	Posture	Eye Contact	Understand/Accept	Sincere/Natural
LB	**6/6/4**	**6/ 6/3**	**6/ 6/4**	**6/ 6/4**
CC	**3**	**3**	**3**	**3**
OFG	**5/5**	**6/5**	**6/5**	**6/5**
MH	**6/4/4/4**	**6/5/4/4**	**6/4/4/4**	**6/4/4/4**
RL	**6/ 6/5**	**6/ 6/5**	**6/ 6/5**	**6/ 6/5**
AL	**5/4/6**	**3/4/6**	**4/5/6**	**4/5/6**
JV	**6/ 6/4/**	**6/ 5/ 5**	**6/ 6/ 6**	**6/ 5/ 5**
Rated 5 or 6	**63% = (42%=6) (21%=5) 32%=4)**	**68%** = **(42%=6) (26%=5) (16%=4)**	**68% = (53%=6) (16%=5) (26%=4)**	**68% = (42%=6) 26%=5) (26%=4)**

KEY POINTS:

SPRING 2003 - Number of Sessions Observed and of Key Points per Session: Session 1 and Session 12 were omitted from the observations. Session 1 is a "getting acquainted" session where students learn group rules and "try-on" the group process for the first time. Session 12 is a celebration session where group members evaluate the process and what they feel they have gained from participation in the group. Session 3 ("Feelings") was not observed due to scheduling conflicts.

Session	Title	# Observations	# of Key Points
2	"A Celebration of Me!"	1	3
4	"Dreams/Goal Setting"	2	3
5	"Decisions! Decisions! & Healthy Choices"	2	12 (7 Major/5 Minor)
6	"Communication"	2	6
7	"Resisting Peer Pressure"	3	3
8	"Family"	2	4
9	"Friends"	2	7
10	"Changes & Challenges"	1	6
11	"Chemical Dependency"	1	5

FALL 2003 - Number of Sessions Observed and of Key Points per Session: Session 1 and Session 12 were omitted from the observations. Session 1 is a "getting acquainted" session where students learn group rules and "try-on" the group process for the first time. Session 12 is a celebration session where group members evaluate the process and what they feel they have gained from participation in the group.

Session	Title	# Observations	# of Key Points
2	"A Celebration of Me!"	3	3
3	"Feelings and Self Control"	1	5
4	"Dreams/Goal Setting"	1	3
5	"Decisions! Decisions! & Healthy Choices"	2	12 (7 Major/5 Minor)
6	"Communication"	3	6
7	"Resisting Peer Pressure"	2	3
8	"Family"	1	4
9	"Friends"	1	7
10	"Changes & Challenges"	1	6
11	"Chemical Dependency"	4	5

SPRING 2003 - Key Points Covered During Sessions: 70% of the key points were covered in 89% of the sessions observed; 100% of key points were covered in 65% of the sessions observed. The vast majority of sessions have seven or less major points that facilitators are required to cover during the session. Session 5 has 12 points, 7 of which are major and five of which are minor; these sessions are noted below with the term "major pts."

Facilitator	Observation 1	Observation 2	Observation 3	Observation 4
LB	**3 pts/3 = 100%**	**3 pts/3 = 100%**	**3 pts/3 = 100%**	**3 pts/3 = 100%**
CC	**7 pts/7 = 100%**	**3 pts/3 = 100%**	**6 pts/6 = 100%**	**5 pts/5 = 100%**
RL	**7 major pts/5 = 71%**	**6 pts/5 = 83%**		
AL	**7 major pts/7 = 100%**	**3 pts/3 = 100%**	**7 pts/3 = 43%**	
JV	**6 pts/3 = 50%**	**4 pts/3 = 75%**	**7 pts/5 = 71%**	

FALL 2003 - Key Points Covered During Sessions: 70% of the key points were covered in 89% of the sessions observed; 100% of key points were covered in 65% of the sessions observed. The vast majority of sessions have seven or less major points that facilitators are required to cover during the session. Session 5 has 12 points, 7 of which are major and five of which are minor; these sessions are noted below with the term "major pts."

Facilitator	Observation 1	Observation 2	Observation 3	Observation 4
LB	**3 pts/3 = 100%**	**3 pts/3 = 100%**	**3 pts/3 = 100%**	**3 pts/3 = 100%**
CC	**7 pts/7 = 100%**	**3 pts/3 = 100%**	**6 pts/6 = 100%**	**5 pts/5 = 100%**
RL	**7 major pts/5 = 71%**	**6 pts/5 = 83%**		
AL	**7 major pts/7 = 100%**	**3 pts/3 = 100%**	**7 pts/3 = 43%**	
JV	**6 pts/3 = 50%**	**4 pts/3 = 75%**	**7 pts/5 = 71%**	

OVERALL SESSION COMMENTS: Open comments on observed process and outcomes.

Site A: 100% of observer's comments indicated positive process and outcomes; however, the site was visited only once.

Observer		Comments
WM **X 100%**	MC	• Group had not met for two weeks due to Spring Break schedules • Group loved the activity and seemed to have missed attending during the break

Site B: 80% of observers' comments indicated positive process and outcomes.

Observer		Comments
WM	MC **X 90%**	• Facilitator maintained an excellent tone of voice and disposition. • Co-facilitator (Robert) had good rapport with the group members. • Kids were great! • Only one issue: group ended abruptly with sufficient processing after activity
X		• Facilitators had to very flexible as there were many interruptions.

75%		• Facilitators did a great job of giving special attention to those who needed it. • Five participants arrived 20 minutes after group started; 3 left 20 minutes early to practice for a special school play and one returned for the last 10 minutes.
X 80%		• Group started 10 minutes late because counselor went to collect children. • The entire group was moved to another classroom after Sunshine & Cloud. • Facilitators were very flexible and made the transition as easy as possible.

Site C: 85% of observer's comments indicated positive process and outcomes; however, the site was visited only once.

Observer		Comments
WM **X 85%**	MC	• Group was very talkative. • Facilitator had to review the group promises many times (i.e., one person talks at a time.) • Other than this group progressed as expected.

Site D: 83% of observers' comments indicated positive process and outcomes. All group members were second graders.

Observer		Comments
	X 100%	• Facilitator reviewed the group rules. • Good job! • Excellent facilitator!
X 90%		• Two group members arrived 10 minutes after group had started • Otherwise went smoothly
WM	MC **X 20%**	• Participants were not reminded of group promises when they were breaking them. It would be a good idea to post them on the wall. • There was no introduction of the topic • Too many children, particularly since four groups were going on at the same time. It would be a good idea to limit the size of the group to 8 to 10 rather than 12 given the circumstances. • Facilitator seemed unprepared. • Facilitator dealt well with disruptive boy, although could have been more assertive.
X 100%		• Facilitator was attentive and kept the participants involved despite interruptions and distractions (school announcements, traffic in and out of the cafeteria and noise level.) • The participants did not seem to suffer from the disruptions and were exited to be in group, and sad to know they only had one group session left in the cycle.
X 100%		• Children truly enjoyed the role plays, the friendship walk and the friendship trust fall. • Good group
X 100%		• Good group • Lots of role play using refusal skills
X 100%		• Facilitator did a great job. • Reminded members of previous group's major messages that related to the

		session • Members recalled previous session information easily
X 100%		• Noted that all children were Hispanic (comment not scored). • Group was extremely talkative (comment not scored.) • Otherwise a good group.
X 40%		• Five group members arrived 10 minutes after group had begun. • There was a loud banging noise that continued off and on throughout the group. • There were many distractions and it was very hard to hear • Facilitator did a good job of trying to overcome noise and distractions • A challenging situation, but handled very well

Summary of Observers' Overall Comments:

- The facilitators did an excellent job in being flexible at all sites. Many times facilitators would show up and group would be cancelled because of testing or the room that group meets in would have to be switched. There were several times that more than one group had to meet in one room and it would be hard to hear.

- In several groups there were many interruptions due to children arriving late, leaving early or coming in and out of group for special projects and/or school productions.

- It would be helpful to have a co-facilitator at every group, due to group sizes, special needs of the children and discipline issues.

- All facilitators followed the session format at each visit.

- All facilitators and co-facilitators received a score of 4 or better with regards to attending, empathy & genuineness with the majority being 5 & 6's.

- The majority of facilitators covered all the key points for their session. Those that were not specifically covered seemed to be implied.

- Several facilitators did an excellent job of reminding children of previous session's major messages that fit with the current session. Children were also able to recall key points easily.

THREATS TO INTERNAL VALIDITY

Threats to internal validity refer to other possible causes or explanations for an observed causal effect for the intervention. These are presented here based on the scheme presented by Shadish, Cook and Campbell (2002), as adapted from the original one by Campbell and Stanley (1963).

Ambiguous Temporal Precedence. This refers to "lack of clarity about which variable occurred first and may yield confusion about which variable is the cause and which is the effect" (p. 55). This is a basic problem in correlational studies, but not experimental studies where a factor is deliberately manipulated. This is not judged to be an issue with the present study. The correlational data have to be interpreted with more caution on the issue of causation.

Selection. Selection refers to "systematic differences over conditions in respondent characteristics that could also cause the observed effect." (p. 55). Random assignment done properly definitionally eliminates selection bias. In the present study, some high-risk students were randomly selected for participation in the intervention; the balance of the high-risk group served as controls. Overall, the two groups were not found to differ significantly on age, gender, ethnicity, or 30-day prior substance use (yes, no) at pretest. Further the mean pretest values were not found to differ more than chance (not significant statistically). This pattern of findings is consistent with the interpretation that the observed intervention effects are not confounded with population differences.

History. History refers to "events occurring concurrently with the treatment that could cause the observed effects" (p55). In the present study both CBSG students and control students continued to attend their regular school curriculum and any scheduled universal, classroom-based prevention education services provided by the participating schools. Both groups were observed over the same time interval of 14 weeks in either the

spring or fall semesters. Any external event within schools, if it occurred, would probably affect both sets of students on the posttest. If such an event did occur, the effect would have been in each group still enabling a valid comparison of the groups. History is not judged to have been an issue in the present study.

Maturation. Maturation refers to "naturally occurring changes over time that could be confused with a treatment effect" (p55). This would include such things as getting older or more experienced. Maturation is controlled in a randomized experiment as it occurs in both treatment and control groups. Maturation threats can often be reduced by ensuring that all groups are generally of the same age so that individual maturation status is about the same. The participants were also from the same general location and school district so that local secular trends are not differentially affecting them (Murray, 1998). Research shows that substance use and abuse increase with age, and not decrease, which is clearly noted in the biennial survey of drug use in Texas schools (Liu, 2004).

Regression Artifacts. Originally coined "regression to the mean," regression artifacts can happen in situations where participants are selected based on either high or low scores on some pretest measure. There is a tendency for such participants to score less extremely on other measures, including a retest on the original measure (Campbell & Kenny, 1998). In the present study participants were placed in each campuses' high-risk pool by school counselors, and both the intervention and control groups were formed using procedures described earlier. If regression were to occur, it would occur in both groups and still enable a valid comparison between the groups. If anything, the measures used in this study will tend to deteriorate over time (e.g., increasing substance use, increasing rebellious behavior and the like) and not improve (lower substance use, lower rebellious behavior and the like).

Attrition. "Attrition (sometimes referred to as experimental mortality) refers to the fact that participants in an experiment or evaluation fail to complete the outcome measures

in part or in total. If different kinds of people remain to be measured in one condition versus another, then such differences could produce posttest outcome differences even in the absence of treatment" (p. 55). This differential attrition is not controlled by random assignment to conditions.

In the present study, a number of findings suggest that the missing information did not lead to serious bias in the intervention and control group analyses. First, the percentage of intervention and control participants who did not complete the posttest was not significantly different (9% vs. 10.4%). Second, these "non-responders" were found to be similar with regard to age, gender, ethnicity, and 30-day prior drug use. Third, the school district, in order to preserve the anonymity of all students, stipulated that no individual student or group of students could be separated out for testing, and that all students in grades 2-5 with parental permission must be tested at the same time in their regular classrooms. This meant that only those students attending school on the day of testing could participate in the survey. Essentially, the posttest non-completers were not in school on the day of the posttest. And fourth, the missing data analyses using multiple imputation techniques clearly showed the same pattern of significant findings as found in the original available case analyses. Attrition in this study was low and was not judged to bias the findings.

Testing. "Exposure to a test can affect scores on subsequent exposures to that test, an occurrence that can be confused with a treatment effect" (p. 55). The effect can be important, for example, if practice can improve test performance and the test-retest interval is short. In the present study both groups took the pretest and posttest on the same days, with the pretest on day 1 and the posttest 14 weeks later. If testing were an issue the effect would be found in both groups, and a valid comparison between the groups can be made.

Instrumentation. Instrumentation is concerned that the "nature of a measure may change over time or conditions in a way that could be confused with a treatment effect" (p. 55). In the present study the same instrument was given twice as recommended by other researchers (Shadish et al., 1997). This problem can be partially evidenced by finding significant age differences in the outcomes. The findings were not age related in the present study.

The reliability of the outcome measures was lower than desired. The lower reliability observed is probably due to two factors – the limited number of items per scale, particularly for the two risk factors, and the limited observed variability in this school population (ages 8-11). The latter reason is perhaps more salient in this study. Younger students generally report little or no presence of anti-social attitudes, rebellious behavior, or favorable substance use attitudes and intentions. The reporting of current substance is very low also. This limited variation found in the outcome measures is a characteristic finding in preventive interventions with young children, that is, they have strong anti-substance-use attitudes and intentions to begin with (Bell et al., 2005). This lack of variability is often found in other children's studies as well (cf., Gest et al., 2005). However, statistically significant effects were nonetheless found, and the observed reliability would not generally bias results toward the research hypotheses.

Threats to Internal Validity that Randomization Does Not Control For

As discussed by Cook and Campbell (1979), although randomization "rules out many threats to internal validity, it does not rule out all of them" (p.56). Most of these threats result from the fact that some people receive one treatment and others receive a different treatment or no treatment at all. In particular Cook and Campbell (1979) list one threat that may apply to this study, given that intervention and control groups were in the same schools. It is called "imitation of treatments," and can occur when the treatment and control occur in the same environment, and the treatment spills over into the control group,

for example, by participants talking with each other. In the present study this threat could be considered an issue. It is possible that the intervention group talked to their friends (some controls) about the intervention process and its activities, as they were in the same schools. Because the skills being taught and practiced in the intervention parallel those experienced by all students in their regular school classrooms, any "spillage" tends to have minimal impact. It is the small numbers and support group process that make the intervention different from the classroom experience, and that is difficult for students, particularly elementary students, to impart to one another. In addition, one of the tenants of the CBSG® Program's support group protocol is confidentiality. Group rules, with developmentally appropriate explanations of confidentiality, are developed in partnership with group members and agreed to by all group members. Program experience over 25 years has shown that because the group members create the rules and make group promises to each other to abide by those rules, the risk for cross pollination between group members and non-participants is significantly reduced. The program developer also notes that younger students take their commitment to confidentiality seriously. Therefore, the imitation of treatment risk is deemed not to have operated in an important way in the present study.

RESULTS:

Table 12
Regression Results for Anti-Substance Use Attitudes and Intentions, Rebellious Behavior, Anti-Social Attitudes, and Inhalant Drug Use

	b	SE_b	t	prob
Anti-Substance Use Attitudes and Intentions				
Intercept	21.26	1.63	13.03	.000
Group (1,0)	9.03	2.85	3.17	.002
Pre Score	0.345	0.05	7.08	.000
Group by Pre Score Interaction	-0.265	0.09	-3.08	.002
Rebellious Behavior				
Intercept	2.61	0.17	15.31	.000
Group (1,0)	0.79	0.34	2.33	.020
Pre Score	0.49	0.11	4.63	.000
Group by Pre Score Interaction	-0.19	0.08	-2.38	.018
Anti-Social Attitudes				
Intercept	2.75	0.22	12.39	.000
Group (1,0)	1.47	0.40	3.63	.000
Pre Score	0.77	0.11	6.92	.000
Group by Pre Score Interaction	-0.33	0.08	-4.12	.000
Inhalant Drug Use				
Intercept	0.95	0.03	31.29	.000
Group (1,0)	0.12	0.56	2.06	.040
Pre Score	0.08	0.03	2.95	.003
Group by Pre Score Interaction	-0.10	0.05	-2.12	.035

OUTCOME SUMMARY:

Outcome 1 – Protective Factor: Anti-substance-use attitudes and intentions

The significant group by pre-anti-substance use attitudes and intentions interaction ($p < .05$) showed higher anti-substance use attitudes and intentions at posttest for students who received the 12-week small group intervention compared with the controls. The effects were seen at the lower levels of the pretest score distribution. The overall regression model was statistically significant ($F (3, 538) = 17.17$, $p = .000$, with $r = .296$ and $r^2 = .087$).

Outcome 2: Risk Factor - Rebellious behavior

The significant group by pre-rebellious behavior interaction ($p < .05$) showed that lower rebellious behavior was found at posttest for students who received the 12-week small group intervention, compared with the controls. The effects were seen at the upper level of the pretest score distribution. The overall regression model was significant ($F (3, 561) = 19.49$, $p = .000$, $r = .307$, $r^2 = .094$) for the rebellious behavior scores.

Outcome 3: Risk Factor - Anti-social attitudes

The significant group by pre-anti social attitudes interaction ($p < .05$) showed that lower anti-social attitudes at posttest were found for students who received the 12-week small group intervention compared to the controls. The effects were seen at the upper levels of the pretest score distribution. The overall regression model was statistically significant ($F (3, 572) = 33.45$, $p = .000$, $r = .386$, $r^2 = .149$).

Outcome 4: Risk Factor - Self-reported substance use

The significant group by pre-inhalant use interaction ($p < .05$) showed less inhalant use at posttest for students who received the 12-week small group intervention compared to the higher use reported by the controls. The effects were seen at the higher levels of reported inhalant use on the pretest. The overall regression model was statistically significant ($F (3, 592) = 3.038$, $p = .029$, with $r = .123$ and $r^2 = .015$). Separate regression analyses of alcohol use, marijuana use, tobacco use, and other illegal drug use in the past 30 days were conducted. Generally the main effects of group and pre-use were not significant, and no significant findings related to the four-group by pre-score interactions were found for the other four categories of drugs.

OUTCOME DETAIL:

Outcome 1: Anti-Substance-Use Attitudes and Intentions

The overall regression model was statistically significant (F (3, 538) = 17.17, p = .000, with r = .296 and r^2 = .087. Each of the variables contributed significantly to the prediction of the post anti-substance-use attitude and intention scores as follows:

Model	b	SE_b	t	prob
Intercept	21.26	1.63	13.03	.000
Group (1, 0)	9.03	2.85	3.17	.002
Pre Attitude Score	0.610	0.12	5.06	.000
Group by Pre Attitude Interaction	-0.265	0.086	-2.75	.002

The significant (p = .002) interaction between group and pre anti-substance-use attitude and intentions score indicates the b weights for the regression of post anti-substance-use attitudes and intentions scores were significantly different for the intervention and control groups, resulting in nonparallel regression lines. Thus an additive model with the two main effects (group membership, prescore) does not adequately describe the data.

To analyze the nature of the interaction, separate regression equations were derived for each group using the equation $Y = a + b_1X_1 + e$, with X_1 being the pre anti-substance-use attitude and intentions score. These were found to be:

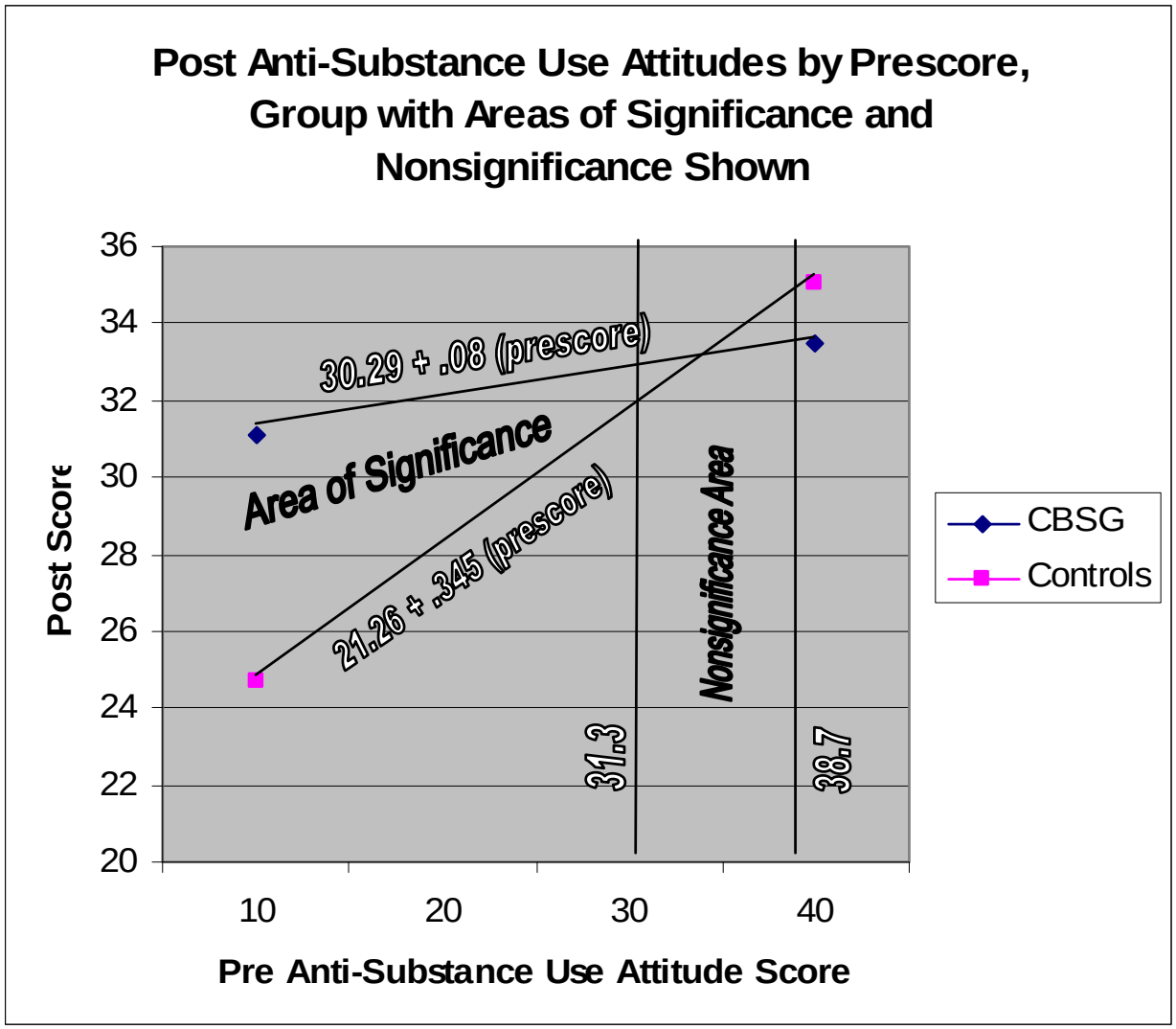
Intervention Y = 30.29 + .08 (Pre Anti-substance-Use Attitude/Intentions score)

Control Y = 21.26 + .345 (Pre Anti-substance-Use Attitude/Intentions score)

Inspection of Figure 6 indicates that children whose pre anti-substance-use attitudes and intentions scores were closer to the point of intersection of the regression lines differ less in their adjusted post scores than those whose scores were lower or higher. The point of

intersection was calculated to be 34.06. With the actual range of scores being 13 to 40, the interaction is considered disordinal since the regression lines intersect within this range.

Figure 6



NOTE: The regression lines intersect at 34.1 on the x-axis.

To determine in what range scores differ significantly between the two groups, the Johnson-Neyman (1936) technique was employed for F, α = .05, with 1 and N – 4 degrees of freedom. The two pre anti-substance-use attitude and intention score values marking the region of nonsignificance between groups were found to be 31.3 and 38.7. Values of post anti-substance-use attitude and intention scores for children with prescores in this

range are not significantly different between the intervention and control groups. There are two regions of significance, one for prescores above 38.7, and one for prescores below 31.3.

In these data, for children who scored below 31.3 on the prescore, the intervention children scored significantly higher on the post anti-substance-use attitude and intention measure than the control children. Although there is a region of statistical significance above 38.7, there were no actual scores in this region. This region is, therefore, not in the range of interest in this study.

Outcome 2: Rebellious Behavior

The overall regression model was significant ($F(3, 561) = 19.49$, $p = .000$, $r = .307$, $r^2 = .094$ for the rebellious behavior scores. Each of the variables in the model contributed to the prediction of post rebellious behavior as follows:

Model	b	SE_b	t	prob
Intercept	2.61	0.17	15.31	.000
Group (1, 0)	0.789	0.34	2.33	.020
Pre Rebellious Behavior	0.491	0.11	4.63	.000
Group by Prescore interaction	-.189	0.08	-2.38	.018

The significant group by pre-rebellious behavior interaction ($p = .018$) indicates that the b weights for the regression of post rebellious behavior scores on pre-rebellious behaviors are significantly different in the CBSG and control groups.

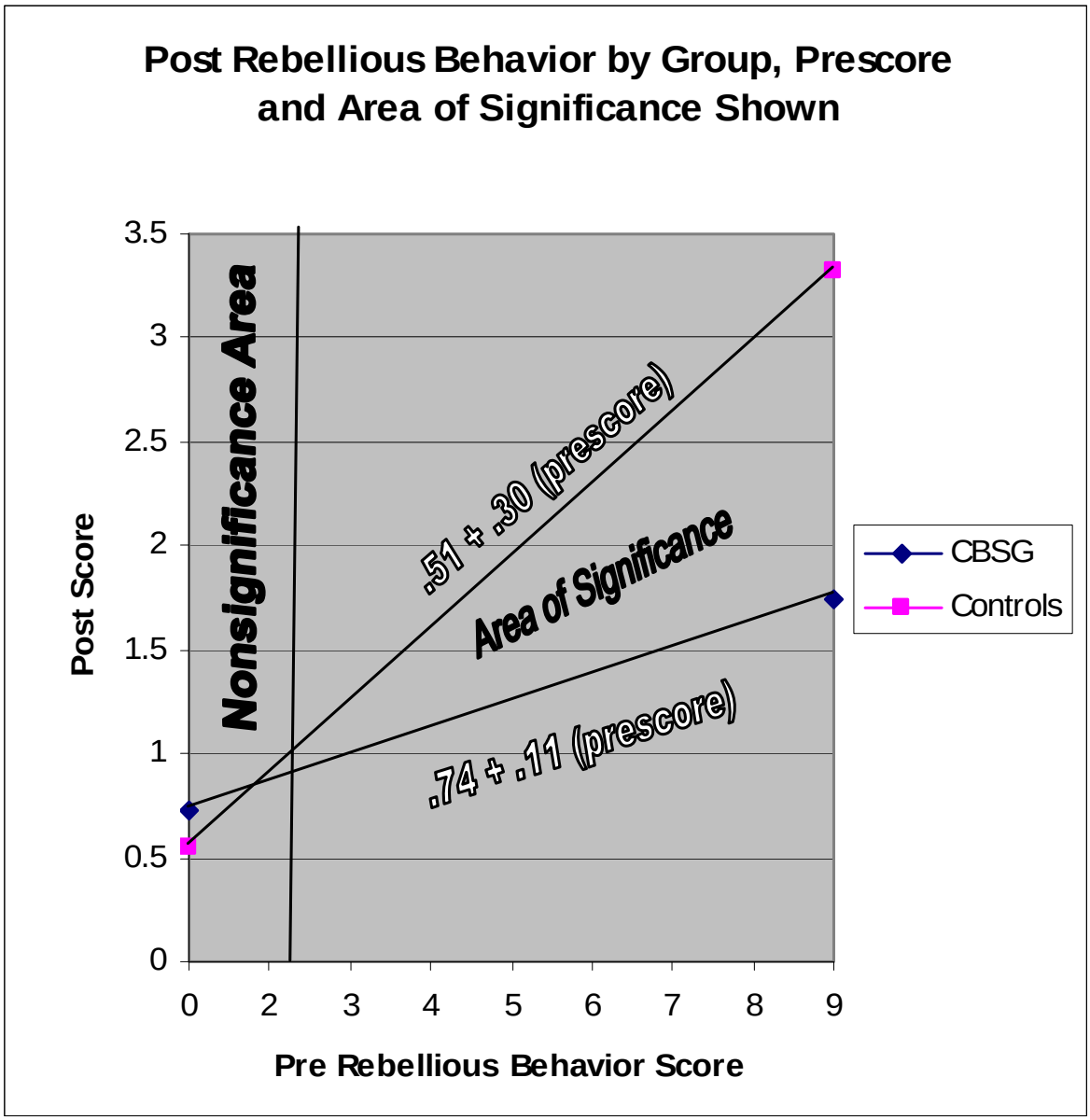
To analyze the nature of the interaction, separate regression equations were derived for each group. These are presented in Figure 7. The equations were found to be:

Intervention Y = 0.51 + .30 (pre-rebellious behavior)

Control Y = 0.74 + .11 (pre-rebellious behavior)

The point of intersection was found to be 1.17. The observed range of scores on this measure was 0 – 6. The interaction is then considered disordinal since the lines intersect within this range.

Figure 7



NOTE: The regression lines intersect at 1.17 on the x axis,

and the upper limit of non-significance is 2.52.

To determine what ranges of the pre-rebellious behavior scores for the two groups that differ or do not differ significantly, the Johnson-Neyman technique (1936) was again

employed for F, α = .05, with N-4 degrees of freedom. The two pre-rebellious behavior values bounding the area of nonsignificance were found to be -2.32 to 2.52. Values of post rebellious behavior scores for children whose prescores lie within this range are not significantly different between the intervention and control groups. There are two regions of significance, one for prescores above 2.52 and one for prescores below -2.32.

In other words, control group children scored significantly higher on the post measure of rebellious behavior compared to intervention children if their prescores were higher than 2.52. Conversely, if their prescores were lower than -2.32, controls scored significantly lower than intervention children. However, for practical purposes, the lower region is not in the range of interest as these scores are indicative no rebellious behavior.

Outcome 3: Anti-Social Attitudes

The overall regression model was statistically significant ($F(3, 572) = 33.45$, $p = .000$, $r = .386$, $r^2 = .149$. Each of variables contributed significantly to the prediction of post anti-social attitudes as follows:

Model	b	SE_b	t	prob
Intercept	2.749	0.222	12.39	.000
Group (1, 0)	1.467	0.404	3.63	.000
Pre Anti-Social	0.773	0.112	6.92	.000
Group by Pre Anti-Social Interaction	-.329	0.08	-4.12	.000

The interaction of group and prescores again indicated that the b weights for the regression of post anti-social attitude scores on prescores were significantly different in the intervention and control groups.

To analyze the interaction further, separate regression equations were computed for each group, and are plotted in Figure 6:

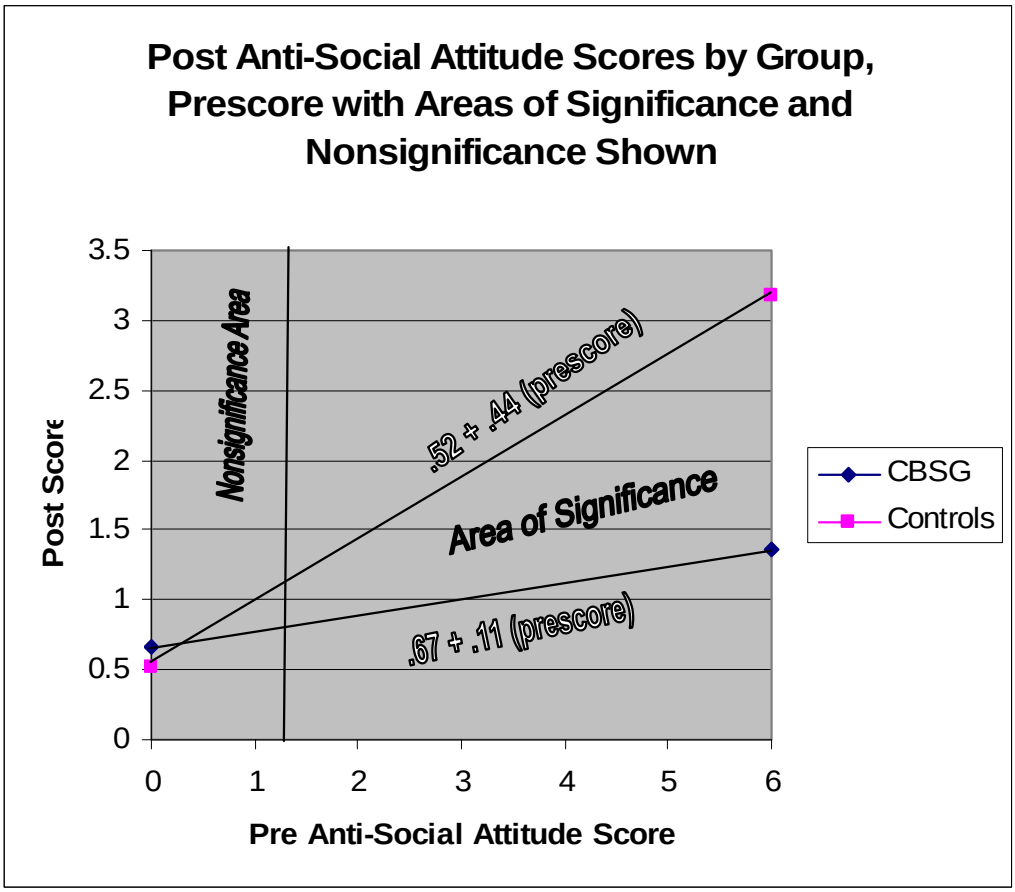
Intervention Y = 0.67 + .11 (prescores) (pre-antisocial)

Control Y = 0.52 + .44 (prescores) (pre-antisocial)

The point of intersection was computed as .80. Scores on this measure ranged from 0 to 8. Technically the interaction is disordinal since the lines intersect within the possible score range.

Inspection of Figure 8 shows a similar pattern as that found for rebellious behavior. Children who pre anti-social scores were closest to the intersection of the two regression lines differ less in their post scores, as compared to children who prescores were higher or lower. At the higher end of the prescores, control children scored higher in their post scores than the intervention children.

Figure 8



NOTE: The regression lines intersect at 0.08 on the x axis.

The upper limit of the non-significance is 1.14.

To again determine the areas of statistical significance and nonsignificance, the Johnson-Neyman technique was used for F, α = .05, with 1 and N-4 degrees of freedom. The region of nonsignificance was bounded by prescores in the range of -0.47 and 1.14. The region of significance for prescores was higher than 1.14. In other words, the control children scored significantly higher on the post anti-social measure if their prescores were higher than 1.14. If their prescores were lower than this, they scored lower than the intervention children. Scores in the lower range indicate virtually no anti-social attitudes on the scale used and are not within a range of interest to the evaluation.

Outcome 4: 30-Day Substance Use Results

The analyses of substance use were done separately by category (inhalants, alcohol, marijuana, tobacco, other illegal drugs). Only the inhalant use findings were statistically significant.

Use of Inhalants in past 30 Days

The overall regression model was statistically significant ($F(3, 592) = 3.038$, $p = .029$, with $r = .123$ and $r^2 = .015$). The pattern of findings is given below.

Model	b	SE_b	t	prob
Intercept	0.949	0.03	31.29	.000
Group (1, 0)	0.116	0.56	2.058 .	04
PreInhalant Use	0.08	0.027	2.947 .	003
Group by Pre Inhalant Use	-0.101	0.48	-2.117	.035

The two main effects (group, pre-inhalant use) were significant. But the significant interaction ($p = .035$) between group and pre-inhalant use indicated that the b weights for the regression of post inhalant use scores were significantly different for the intervention

and control groups. To analyze the nature of the interaction, separate regression lines were derived for each group. These were found to be:

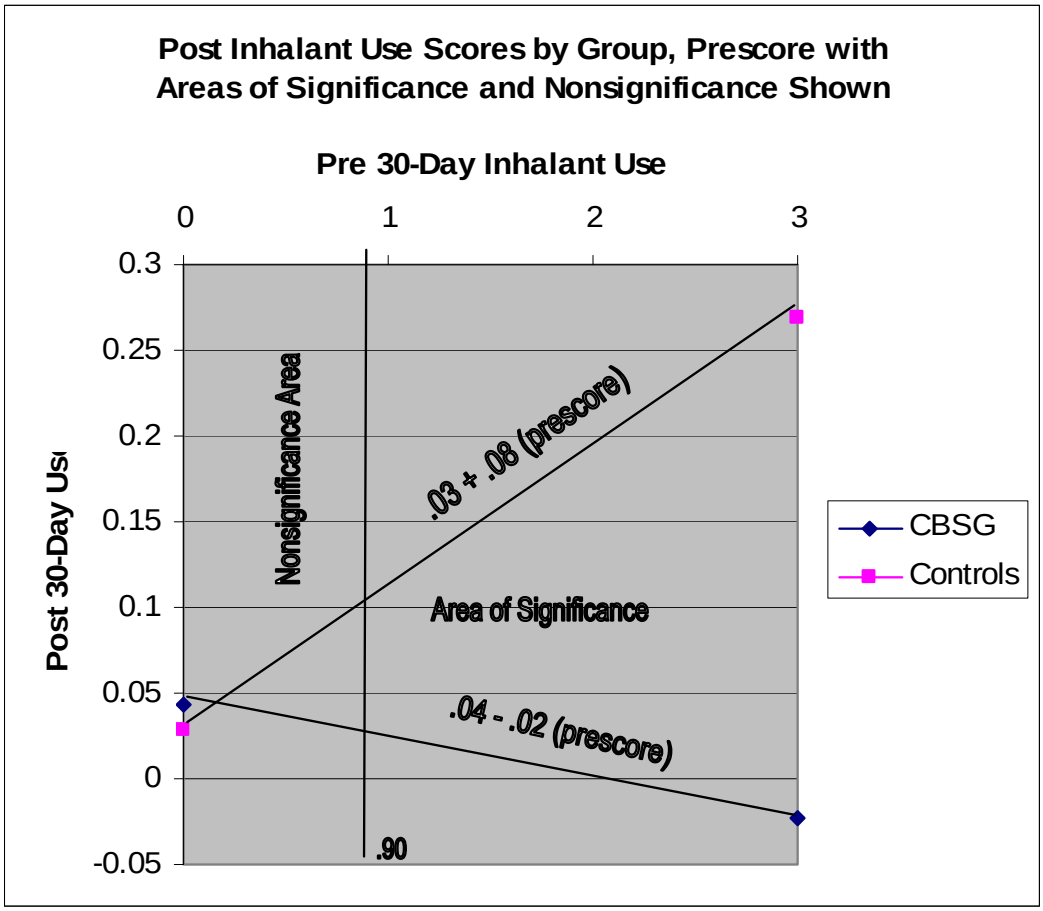
Intervention Y = 0.043 – 0.022 (pre inhalant use)

Control Y = 0.29 + .08 (pre inhalant use)

Inspection of Figure 9 indicates that the form is disordinal, with the intersection on the x-axis calculated to be 0.14.

Using the Johnson-Neyman technique (1936) for F, a = .05 with 1 and N-4 degrees of freedom, the range of score nonsignificance was found to be 0.90 and -0.44. Values of post inhalant use scores in this range do not differ significantly between the intervention and control groups. There are two regions of significance, one for scores above 0.90, and one for postscores below -0.44.

Figure 9



NOTE: The intersection is located at .14 on the x axis. The upper limit is .90.

There are no actual scores below a value of 0 and therefore are not of practical interest here. For scores above 0.90, the control group showed higher (more inhalant use) than the intervention group. For prescores in the range of 0 and 0.90 the two groups do not differ.

Alcohol, Tobacco, Marijuana, Other Illegal Drugs

Four separate regression analyses of alcohol use, marijuana use, tobacco and other illegal drugs in the past 30 days use did not find any significant findings related to the group by prescore interaction. Generally the main effects of group and preuse were not significant.

OTHER DATA:

Participant Evaluations: Of 164 students in the intervention, 155 (95%) completed 100% of the form. Results: 96% of participants found the intervention "helped a lot" or "really helped" in 24 of the 27 items on the survey.

Referring Individual's and Facilitator's Pre/Post Assessments: Comparison of post assessments with pre assessments showed both referring individuals and facilitators ratings were positive.

Findings from other data are published in a separate report.

DISCUSSION

The study employed a non-equivalent control design (with random assignment of the intervention group) in five urban elementary schools to determine if the Rainbow Days CBSG® Program could reduce substance use, rebellious behaviors and anti-social attitudes while increasing anti-substance-use attitudes and intentions in students ages 8-11 (Grades 2-5) who were assessed to be at elevated risk for future substance abuse, delinquency and violence.

The study was judged to have controlled for the majority of "threats to internal validity." The primary instrumentation concern was the observed lower reliability than desired for the outcome measures. This was due primarily to the lack of variation on the measures themselves because the majority of children did not self-report rebellious behavior, anti-social attitudes, pro-substance use attitudes and intentions, nor actual substance abuse.

The intercorrelations of the outcome measures were consistent with prior research. The risk factors of rebellious behavior and anti-social attitudes were found to correlate positively (and significantly) with substance use and negatively with anti-substance use attitudes and intentions (a protective factor). The anti-substance use attitudes and intentions measure was found to correlate negatively with self-reported drug use in the present study. In a study of over 10,000 school students in Grades 6, 8 and 11, Arthur et al. (2002) found the same pattern as reported here and they used the same two risk factor scales. Although the outcomes measures in the present study were limited in reliability to some degree, the results found were consistent with other studies.

The effects of the missing data (9-10% of the children did not complete the posttest) were evaluated using modern multiple imputation techniques under the multivariate normal model (Schafer, 1997). The results of these analyses indicated that any biasing effects of

missing data were not discernible. Therefore, the findings from the available case analyses can be considered unbiased.

Significant findings for anti-social attitudes, rebellious behavior, anti-substance-use attitudes and intentions, and 30-day inhalant use were found in favor of the intervention. The pattern of results was similar in all regression analyses. That is, the effects were strongest for those children at the extremes of the scales (higher rebellious behavior, higher anti-social attitudes, lower anti-substance use attitudes and intentions, and the self-reported 30-day use of inhalants).

While the reduction of inhalant use, the only substance to achieve significance, is an indicator of positive effect with children at higher-risk for substance use (those at the extremes of the scales), it remains to be seen if this finding is a predictable outcome for the intervention, or the result of the timing of the study (2003). Beginning in 2001, for the first time since the late 1990's, children's perceptions of harm associated with inhalant abuse have gone down, while use has gone up (National Institute on Drug Abuse Research Report, 2005; Williams and Storck, 2007). The William and Storck study (2007) found that inhalants are the substances most often used by children ages 9-14, with use beginning as early as age six. An important addition to this study would have been a post intervention follow-up to determine the duration of the effect, and an additional study replicating the effect.

The correlated risk reduction outcomes (rebellious behavior and anti-social attitudes), along with the increase in the protective factor outcome (anti-substance-use attitudes and intentions) indicate that the program may have potential for use with children at risk for other behavioral and mental health problems not directly targeted in this study. Follow-up to determine the duration of the effect and additional studies to replicate outcomes would improve confidence in the study's findings.

With regard to targeting selective and indicated populations ages 8-11, the study seems to have significant merit. Multiple longitudinal studies have shown that the early predictors of substance abuse, delinquency, and violence appear within this age range and that the earlier these risk factors appear, the more predictable the progression toward deviant behaviors becomes. This same research shows that intervention to prevent, delay or mitigate risks during this developmental period can significantly reduce involvement in self-defeating and dangerous behaviors and the negative life consequences associated with such behaviors. While there are several universal evidence-based programs for use with elementary-aged children and in elementary school settings, few are available for selective and indicated populations in Grades 2-5. The intervention appears to have the potential to fill a gap in the prevention education continuum for younger selective and indicated populations. Additional investigation may prove useful to the prevention field.

Limitations

This control group study found immediate effects at the end of 12 weeks of intervention; however, follow-up is needed to determine potential longer term effects.

For internal validity, the reliability of the outcome measures was lower than desired, but significant effects were nonetheless found, and the observed reliability would not generally bias results toward the research hypotheses. The lower reliability is probably due to two factors – the limited number of items per scale, particularly for the two risk factors, and the limited observed variability in this school population (ages 8-11). The latter reason is perhaps more salient in this study. Younger students generally report little or no presence of anti-social attitudes, rebellious behavior, or favorable substance use attitudes and intentions. The reporting of current substance use is very low also. This limited variation found in the outcome measures is a characteristic finding in preventive interventions with young children, that is, they have strong anti-substance-use attitudes

and intentions to begin with (Bell et al., 2005). This lack of variability is often found in other children's studies as well (cf., Gest et al., 2005).

There are several threats to external validity in this study. First, the intervention was implemented by the developer's staff; therefore, research is needed to examine the program's effects with facilitators independent of the developer. Second, the study's participants were all from an urban school district in the Southwest and were predominately African American/Black or Hispanic. It would be useful to replicate the study with other populations and in other settings (e.g., rural and suburban, and community sites such as homeless shelters, etc.).

The study examined the overall effects of the program with high-risk students. No attempt was made to formally consider the effects within particular subgroups of children based on age, gender, or ethnicity, income status, etc. Although preliminary analyses in the present study did not indicate that these variables would be significant covariates in the regression analyses, more formal consideration of the generalizability of the program to subgroups of the general population and in other settings seems warranted.

This evaluation relies solely on self-report measures derived from study participant pretests and posttests. The inclusion of other student data in the evaluation was desired (e.g., achievement, attendance, problem behavior reports, etc.); however, the schools would not permit the collection of other student data for the evaluation citing confidentiality reasons. The study did include some qualitative data from teachers, counselors, support group facilitators, and intervention participants.

CONCLUSIONS

This non-equivalent control group study demonstrates the effectiveness of the Rainbow Days CBSG® Program in reducing interrelated risks for future substance abuse, delinquency and violence with a population of elementary school children ages 8-11 in the short term. Effects were found for self-reported anti-social attitudes, rebellious behaviors, anti-substance-use attitudes and intentions, and prior 30-day use (inhalants), all of which are variables strongly associated with elevated risks for future substance abuse, delinquency and violence during this developmental period. The pattern of inter-correlations among the targeted variables suggests the validity of the underlying program model. That is, reductions in rebellious behavior and anti-social attitudes, coupled with improvements in anti-substance-use attitudes and intentions, should be associated with the program outcome showing decreases in subsequent substance use. Fidelity of the implementation was rated as high, and the study was judged to have controlled for the majority of threats to internal validity. The self-reported prior 30-day use of substances other than inhalants did not achieve significance, but low substance use is a predictable norm in the study cohort. Qualitative data from students, counselors and facilitators was generally positive and consistent with study outcomes. Future research is warranted to examine longer-term effects of the intervention, and additional experimental studies to replicate outcomes would improve confidence in the study's findings. Because there are few evidence-based prevention programs for selective and indicated populations in Grades 2-5, the intervention may have the potential to fill a gap in the prevention education continuum for these populations. Therefore, additional consideration should be given to determining the generalizability of the program to subgroups of the general population and in settings other than schools.

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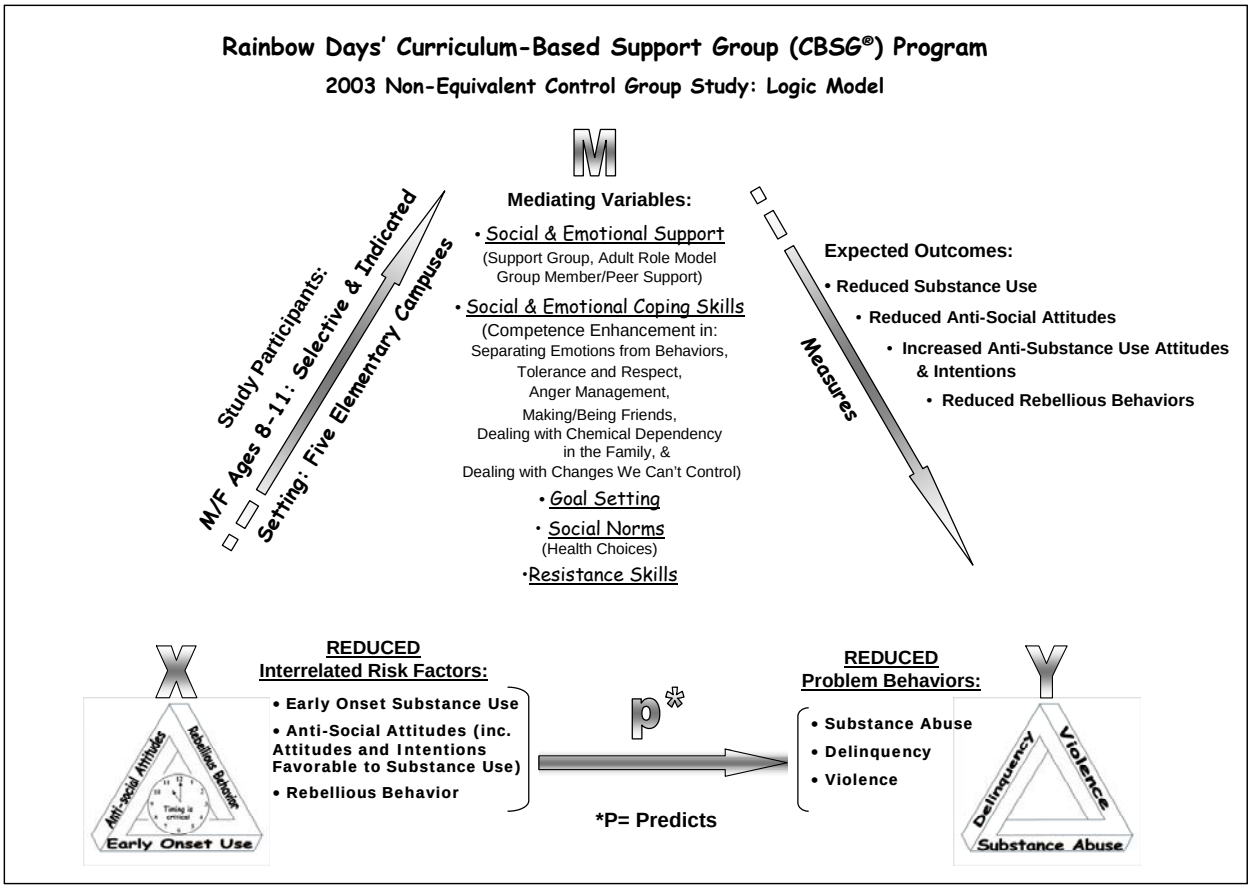
Reducing interrelated risk factors for substance abuse, delinquency and violence: Effects of the Rainbow Days' Curriculum-Based Support Group Program.

APPENDIX

APPENDIX A

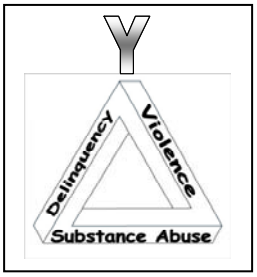
THEORY in SUPPORT of LOGIC MODEL

Logic Model:

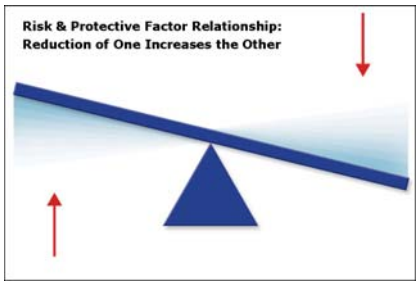


Note on Research Citations in the Following Section:

The study described in this report was conducted in 2003; the findings stated are based on analysis conducted in 2007. Research to support the study's theory was conducted prior to 2003; however, in 2003 and afterwards, additional research emerged that strengthened the understanding of interconnections among risks for substance abuse, delinquency and violence. Citations of both the research available prior to study and after the study are included in the following section. For ease of reading, only the first paragraph separates citations of research conducted prior to and subsequent to the study.



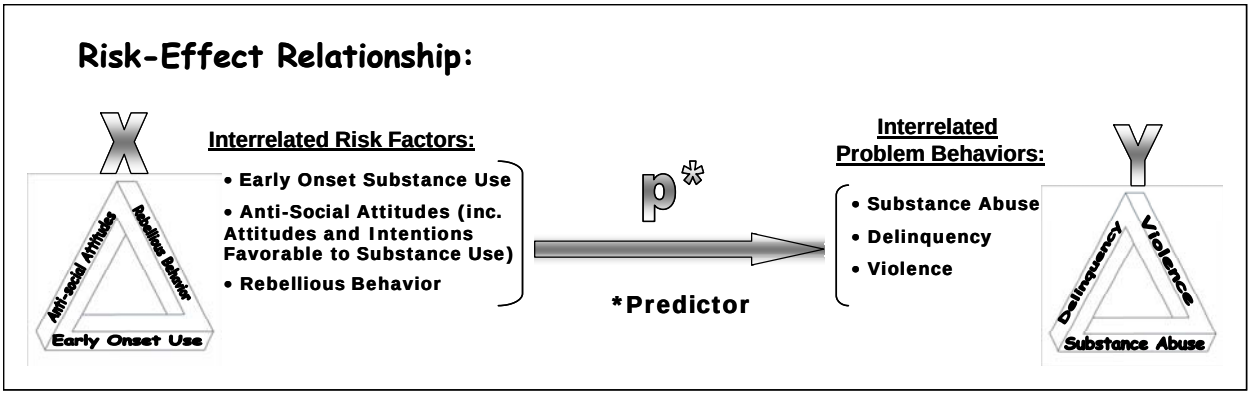
Interconnection: Substance abuse, delinquency and violence are major public health problems that threaten the behavioral health and personal success of significant numbers of our nation's youth (Office of the Surgeon General, 2001). The three problems are interconnected, with interrelationships observed across age, gender, and ethnic groups (Arthur, et al., 2002; Clark, et al., 2002; Farrington, 1995, 2001; Hawkins, et al., 1992, 1995, 1998, 2000; Huizinga, et al., 1994; Lipsey and Derzon, 1998; McGue et al., 2001; Office of the Surgeon General, 2001; Thornberry, et al., 1995; and White, et al., 1999). Research subsequent to the study being described herein has confirmed and strengthened the interconnection of these problems (Alltucker, et al., 2006; Australian Institute of Families and Crime Prevention, 2003; Ellickson, et al., 2003; and Wasserman, et al., 2003).



Risk and Protection: There is a risk and protective factor relationship that predicts that the reduction of one will increase the other. There are combinations and progressions of risk factors, which are not "causes," but consist of life situations and personal attitudes and behaviors that are *predictive* of substance abuse, delinquency and violence (Arthur, et al., 2002; Australian Institute of Families and Crime Prevention, 2003; Derzon, 2001; Farrington, et al., 2001; Farrington, 1995; Hawkins, et al., 1992, 1995, 1998, 2000; Office of the Surgeon General, 2001; Wasserman, et al., 2003). Conversely, there are protective factors that appear to reduce the probability that groups of young people faced with a risk or set of risks will become involved in substance abuse, delinquency and violence (Arthur, et al., 2002; Hawkins, et al., 1992, 1995; Office of the Surgeon General, 2001; Thornberry, et al., 1995; Wasserman, et al., 2003). A number of preventive intervention strategies based on the risk and protective factor paradigm appear to be effective in reducing or mitigating risk factors for these

problem behaviors (Farrington, et al, 2001; Hawkins, et al., 1992, 1995, 1998, 2000; Office of the Surgeon General, 2001; Wasserman, et al., 2003).

Risk-Effect Relationship



Predictors in the Risk-Effect Relationship: Targeting risk factors that are most predictive of targeted behaviors increases the likelihood of an intervention's success (Ellickson, et al., 2003; Hawkins, et al., 1992, 1995; Farrington, et al., 2001; Lipsey and Derzon, 1998). Among the strongest predictors of substance abuse, delinquency and violence are early onset substance use, antisocial attitudes and rebelliousness. Research demonstrates that these risk factors cluster, i.e., are co-occurring within key developmental stages of youth development, are amenable to change, and can provide useful targets for preventive interventions during these stages of development (Arthur, et al., 2002; Australian Institute of Family Studies and Crime Prevention, 2003, 2004; Clark, et al., 2005; Derzon, 2001; Hawkins, et al., 1992, 1995; Farrington, et al., 2001; Office of the Surgeon General, 2001). To clarify:

- Anti-social attitudes include favorable attitudes toward unconventional values and social deviance, including attitudes and intentions favorable toward substance use and abuse (which were measured separately in the study.)
- Rebelliousness includes both attitudes and behaviors, referred to as anti-social behaviors and rebellious behaviors.

- Early onset substance use has a more profound impact on future delinquency and violence than the reverse, (Australian Institute of Family Studies and Crime Prevention, 2003, 2004; Ellickson, et al., 2003; Farrington, et al., 2001). There is substantial agreement that the more serious a youth's involvement in substance use, the more serious his/her involvement in delinquency and violence will be, and vice versa (Australian Institute of Family Studies and Crime Prevention, 2002, 2003; Ellickson, et al., 2003; Farrington, et al., 2001; Huizinga, et al., 1994; Wasserman, et al, 2003). There is substantial evidence that interventions aimed at preventing or reducing early onset substance use can be effective in preventing or reducing delinquency and violence (Elllickson, et al., 2003; Farrington, et al., 2001; Hawkins, et al, 1992, 1995; Office of the Surgeon General, 2001).

Timing of the Intervention along the Developmental Pathway: Timing appears to be critical to the success of preventive interventions in that different risk factors emerge at different times in the course of development.

- There appears to be a predictable evolution across the developmental pathway from less serious to more serious deviant behaviors, which is observed in longitudinal studies on substance abuse, delinquency and violence (Australian Institute of Family Studies and Crime Prevention, 2002, 2003; Ellickson, et al., 2003; Farrington, et al., 2001; Huizinga, et al., 1994; Office of the Surgeon General, 2001; Wasserman, et al., 2003).
- Children's malleability to change decreases with age, and early interventions to divert children from pathways leading to persistent antisocial behavior appear to be most appropriate during the primary school years (Australian Family Institute, 2003; Clark, et al., 2005; Dinwiddie, 1994; Ellickson, et al., 2003; Farrington, et al., 2001; Kurtzman, et al., 2001; 2001 Office of the Surgeon General, 2001; Wasserman, et al., 2001).

- Early prevention efforts are more likely to have a greater impact than interventions undertaken after anti-social behaviors are observable, and early prevention efforts are more likely to be cost effective (Australian Family Institute, 2003; Farrington, et al, 2001; Office of the Surgeon General, 2001). To explain further:
    - The earlier that the risks for substance use, delinquency and violence appear developmentally, the more serious and extensive any future substance-using, delinquent and violent behavior can be expected to be (Australian Institute of Family Studies and Crime Prevention, 2002, 2003; DeWit, et al., 2000; Dishon, et al., 1999; Farrington, et al., 2001; Huizinga, et al., 1994; Johnston, et al., 1997; Office of the Surgeon General, 2001; Wasserman, et al., 2001).
    - Substance abuse, delinquency, and violence are typically thought of as adolescent problems; however, for many children, the onset of precursors to these behaviors begins well before the teenage years. Early onset substance use, frequently referred to as "experimentation," is the leading risk factor for future substance abuse, particularly when use begins below age 12 (Chou et al., 1992; DeWit, et al., 2000; Dishon, et al., 1999; Ellickson, et al., 2003; Grant and Dawson, 1997; Gruber, et al., 1996; Hawkins, et al, 1997; Johnston, et al., 1997).
    - As children move from infancy to early adulthood, there are critical periods in which they appear to be more vulnerable to particular influences and risk factors. For example, substance use from ages six to 15 is a risk factor for future delinquency and violence at ages 15-18, but substance use between the ages of 6 and 11 is a far more powerful predictor of future violence than it is at age 14 (Australian Institute of Family Studies and Crime Prevention, 2002, 2003; Ellickson, et al., 2003; Farrington, et al., 2001; Office of the Surgeon General, 2001; Wasserman, et al., 2003).

- Among the strongest risk factors for early onset substance use are the interrelated risk factors of anti-social attitudes, including attitudes and intentions favorable toward substance use, and rebelliousness (Anthony & Petronis, 1995; Clark, et al., 1997, 1998, 2004, 2004; Ellickson, et al., 2003; Grant and Dawson, 1997, Hawkins, et al., 1992, 1995, 1997).

Target Population – Selective and Indicated Child Populations: Children and youth who are at elevated risk for future substance abuse, delinquency and violence are defined as selective and indicated populations (Mrazak and Haggerty, 1994). Selective populations include individuals, or a sub-group of the general population, whose risk (imminent or lifetime) for developing a disorder is significantly higher than average. Indicated populations include individuals in high-risk environments and situations who have minimal but detectable signs or symptoms foreshadowing a disorder, or markers indicating pre-disposition, but do not meet diagnostic criteria for the disorder. Target population considerations include:

- High-risk Environments: There are several high-risk environments and situations that are predictive of future substance abuse, delinquency and violence, including: having substance abusing or addicted parents/siblings; having parents and/or siblings engaged in crime or violence; living in a homeless family or domestic violence center; or living in severe poverty; living in foster care; experiencing family separation or divorce; and living/going to school in decaying, disorganized and/or crime/drug affected neighborhoods (Alltukcer, et al., 2006; Arthur, et al., 2002; Bassuck, et al., 2001; Buckner, et al., 2004; Dannerbeck, 2005; Farrington, et al., 2001; Grant, 2000; Huang, et al., 1998; Johnson and Waldfogel, 2002; Kohlenberg, et al., 2002 ; Office of the Surgeon General, 2001; Wasserman et al., 2003; Widom and Maxfield, 2001).

- Risk factors in the family domain appear to have a greater impact on younger children, making such risks more relevant when planning preventive interventions (Office of the Surgeon General, 2001; Wassermann et al., 2003).
- Children and youth living in high-risk environments and situations are the least likely to receive adequate adult support for emotional or social needs or to possess basic coping and social skills, which are protective factors. These protective factor deficits increase children's risk for future behavioral health problems, including substance abuse, delinquency and violence (Bassuk, et al., 1996; Dishion et al., 1999; Farrington 1989 and 1995; Gerstein and Green, 1993; Hawkins and Catalano, 1992; Kohlenberg, et al., 2002; Kumpfer and Alvarado 1998; Lipsey and Derzon, 1998; Reid and Crisafulli, 1990; Widom, C. S. 2003; Zima, 1996; Zuckerman, et al., 1995).
- Children and youth living in high-risk environments and conditions don't have an equivalent "starting line" as their peers in the same race (circumstances), and therefore require a stronger dose of preventive intervention than their peers in the general, universal population to catch up (Eggert, et al., 1994; Kumpfer, et al., 1994, 1996, 1997; Schinke and Blythe, 1981; Schinke, 1982; Schinke and Gilchrest, 1977.) Eggert (1994) describes the need for a social-support-network and has shown significant outcomes for older indicated populations.
- According to Kumpfer (1994, 1996, 1997), youth living in high-risk environments and situations have different life experiences that set them apart with regard to needs, and such needs are in addition to, and may be more important than, their need for accurate information and skills instruction. For example, children need emotional and social support, which they are unlikely to receive in their high-risk environments and situations. They need emotional and social safety to discuss personal needs, issues and experiences, including confidentiality regarding personal disclosures, which is not an appropriate expectation in the regular school classroom. In addition, they have the need for the following educational supports, which may be

impossible to provide in the regular classroom in which skills and substance use education is often infused into the core curriculum and graded as part of the academic content:

- Consistency and predictability in the delivery setting, structure and process, including rituals to encourage positive habits
- Sense of belonging and opportunities for bonding
- Experiential and interactive processes and activities
- Additional time for personal reflection (thinking about it), discussion, questions, skills practice, and relating skills to real life situations
- The right to "pass" without judgment
- Feeling of ownership and personal control
- Individual emotional and social support from a caring adult role model, including proactive encouragement and attention
- Enjoyment of the learning process

o Selective and indicated populations of children and youth routinely lack coping and social skills, and lack awareness of accurate information regarding risks and social norms associated with substance use (Hawkins, et al., 1992, 1998; Herrenkohl, et al., 2001; Kumpfer, et al., 1994, 1996, 1997; Schinke and Blythe, 1981; Schinke, 1982; Schinke and Gilchrest, 1977.) Coping skills education focuses on the developmental integration of affect, behavior, and cognitive understanding, and the building of social and emotional competence. Children's ability to cope is reflected in their behavior and internal regulation. Coping is a function of the child's emotional awareness, affective-cognitive control, behavioral skills, and social-cognitive understanding (Lochman and Wells, 1996.) Teaching youth cognitive, social and emotional competencies, i.e., coping and social skills - such as separating feelings from behaviors, anger management, initiating and maintaining positive relationships, decision-making, and problem-solving, including resistance skills - can optimize

youth development and prevent psychosocial problems such as rebelliousness, substance use and delinquency. The provision of skills instruction and supportive practice, along with accurate information to address beliefs and expectations, can enhance youth development, increase protective factors and reduce risk factors for substance abuse, delinquency and violence (Catalano and Hawkins, 1996; Catalano et al., 1998; Dusenbury and Falco, 1995; Johnson and Johnson, 1996; Lochman and Wells, 1996; Botvin, et al., 1998; Caplan et al., 1992; Coie and Krehbiel, 1984; Lochman, 1992; Shure and Spivak, 1988). Early intervention to address shyness, anti-social attitudes, and poor self-control appears to have a greater impact than later intervention by altering children's developmental pathway away from problem behaviors toward positive behaviors (Ialongo, et. al., 2001).

Mediating Variables: For a preventive intervention to be successful, the intervening mediators must be closely aligned and must address risk and protective factors appropriate to a youth's stage of development (Hansen, 1992; Hansen and McNeal, 1996.) Several proven preventive intervention models for children and youth can serve as examples of effective, developmentally appropriate mediators:

- The cognitive-behavioral model was developed for selective and indicated populations of youth, addresses both social and psychological factors, and focuses on developing broad-based personal and social skills and increasing non-use attitudes using a small group process. The model includes: small groups of age/grade peers, accurate information, personal and social skills, formal problem-solving strategies, coping strategies to relieve stress and anxiety, communication skills, techniques for self control and peer pressure resistance, and fostering non-use attitudes and intentions (Schinke and Blythe, 1981; Schinke, 1982; Schinke and Gilchrest, 1977).

- The competence enhancement model is a variation on the cognitive-behavioral model that emphasizes teaching general personal and social skills in combination with selected components of the social influence model. The model provides: information on negative social and short-term psychological consequences, information on social influences to use, personal skills training to improve coping, critical thinking, problem solving, goal setting and decision making, social skills to improve interpersonal functioning such as anger management, resistance skills, and fostering of non-use attitudes and intentions (Botvin, et al., 1980, 1984, 1990, 1993, 1995 and 1997).
- The social influence model demonstrates that understanding social influences, learning skills to offset negative influences (resistance skills), and correcting misperceptions of social norms can help youth learn to stay drug free and increase non-use attitudes. The model includes: information on the immediate, negative social and short-term psychological consequence of substance use; information on social influences to use (media); correcting inflated perceptions of use (norms); training, modeling, rehearsal and reinforcement of resistance skills; and fostering non-use attitudes and intentions (Evans, 1976; Evans, et al., 1978; Flay, 1987; Hansen, 1992; Tobler and Stratton, 1997).
- The normative education model is a variation on the social influence model which demonstrates that when children and youth perceive that deviant behaviors are standard practices among their peers, this perception promotes deviance by establishing "negative normative beliefs" and reinforces behaviors that confirm those beliefs. Conversely, programs based on normative education strategies can help youth develop "positive normative beliefs" and reinforce behaviors that confirm those beliefs and thereby prevent substance abuse through social modeling and learning, including learning and rehearsing "resistance skills." (Hansen, 1992; Hansen and O'Malley, 1966).

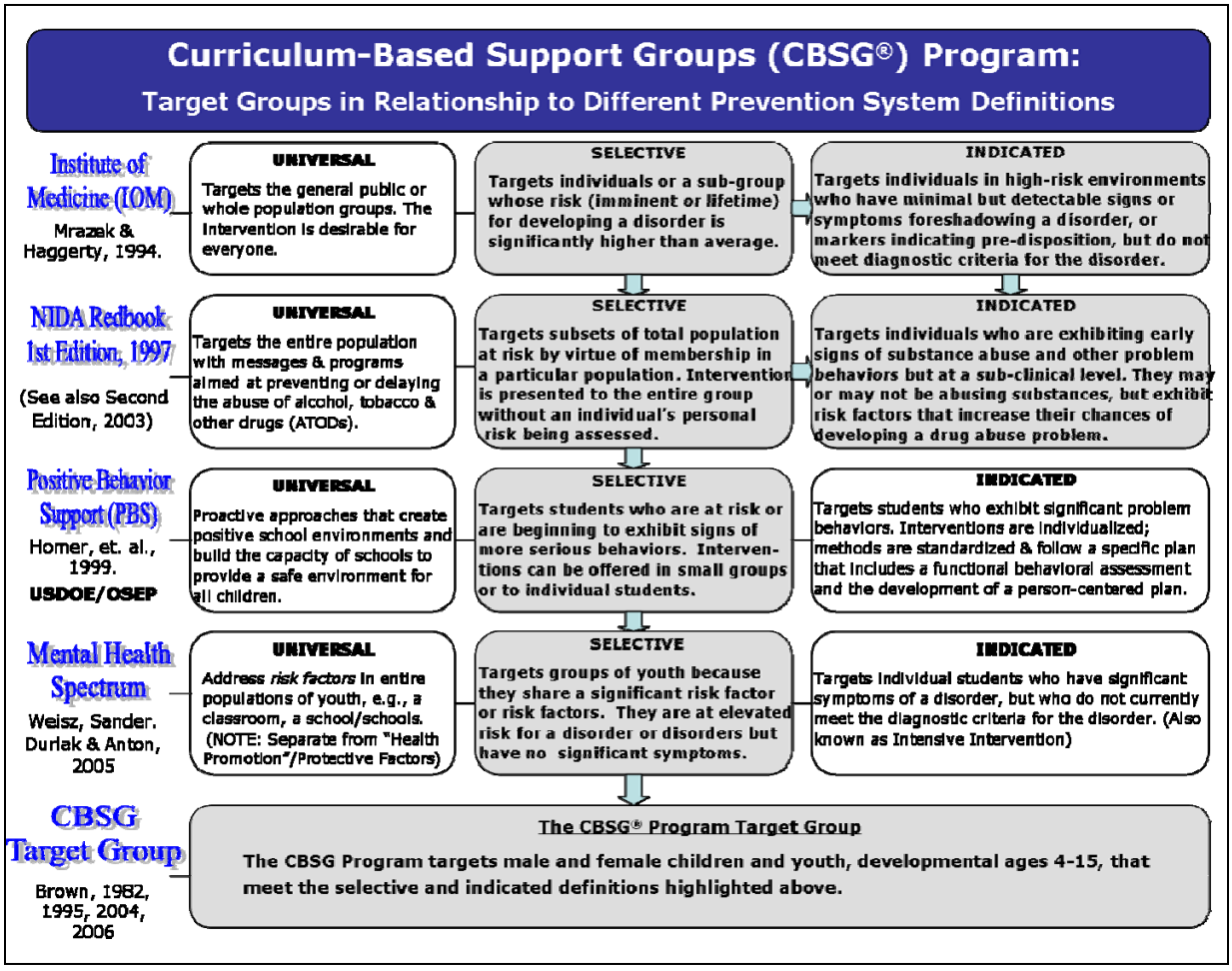
APPENDIX B
INTERVENTION DESCRIPTION

RAINBOW DAYS CURRICULUM-BASED SUPPORT GROUP (CBSG®) PROGRAM

The Rainbow Days' Curriculum-Based Support Group (CBSG®) Program is a multi-cultural preventive intervention that delivers a skills-based curriculum to selective and indicated populations of children ages 4-15 in small groups using a highly-structured support group process led by a trained facilitator/mentor who provides emotional support and guidance and serves as a role-model and mentor. The CBSG® Program was developed in 1982 and has been in continuous implementation since that time.

CBSG® Program Target Populations: Children and youth appropriate for inclusion in the CBSG® Program are those who meet the definitions in the shaded boxes (below).

Rainbow Days CBSG® Program Target Populations



CBSG Program® literature (Brown, 2002) defines an appropriate selective population as being: "children and youth living in high-risk situations that involve adverse childhood experiences." "High-risk situations" are defined as: having substance abusing or addicted parents/siblings; having parents and/or siblings engaged in crime or violence; living in a homeless family or domestic violence center; or living in severe poverty; living in foster care; experiencing family separation or divorce; and living/going to school in decaying, disorganized and/or crime/drug affected neighborhoods. The program defines an appropriate indicated population as children and youth (who may or may not live in high-risk situations) who display observable deficits in coping and social skills and/or early signs of anti-social attitudes and behaviors, including possible early (experimental) substance use. Specific coping skills deficits (among children for whom it is developmentally appropriate to expect such skills) include the lack of skills to: name feelings, ask for help, or use self-control in challenging situations such as dealing inappropriately with failure (blaming, anger, and acting out.). Observable attitudes and behaviors may include, but not be limited to: lacking a sense of belonging such as being a "loner" or being extremely shy or withdrawn; lacking a desire to cooperate; and lacking a willingness to participate. In order to avoid "deviant peer influences" (Dodge, et al., 2006; Dodge and Dishion, 2006), which can occur in programs serving indicated populations only, the CBSG® Program recommends serving a mix of selective and indicated populations. With regard to gender, race or ethnicity, research shows that the risk factors targeted by the CBSG® Program apply broadly to all children and youth, and are equally valid predictors of early onset substance use, delinquency and violence regardless of gender, race or ethnicity (Office of the Surgeon General, 2001). Evaluation to determine any program biases in gender, racial or ethnicity have shown that the program is not ethnically biased and can be used effectively with children of African American, Hispanic and Anglo heritage of either gender (Fulbright, 1995), which is also found in the current study.

Curriculum: To address the deficits in coping and social skills and substance abuse prevention education among selective and indicated youth populations, the CBSG® Program blends interrelated concepts, processes and content from the four models of prevention education: cognitive-behavioral; competence enhancement, social influences and normative education. NOTE: Only those elements included in the CBSG Program are depicted in the Figure on the next page, i. e., each of the four models includes elements not represented in the figure.

The CBSG® Program Curriculum: **Integrating Elements from Proven Prevention Models** Elements of Four Complementary Proven Models of Prevention Education			
Cognitive-Behavioral Small Groups for Selective & Indicated (Schinke)	**Competence Enhancement** Universal (Botvin)	**Social Influence** Universal & Selective (Evans, Flay, Hansen, et al.)	**Normative Education Model** Universal (Hansen)
▪ Small groups of age/grade peers (Support Group) ▪ Accurate information ▪ Focus on broad-based personal and social skills ▪ Use of a formal problem-solving strategy ▪ Coping strategies to relieve stress and anxiety ▪ Communication skills ▪ Techniques for self-control and peer pressure resistance ▪ Non-use attitudes & intentions	▪ Information on negative social and short-term psychological consequences ▪ Information on social influences to use ▪ Personal skills training: coping, critical thinking, problem solving, goal setting and decision making ▪ Social skills to improve interpersonal functioning such as anger management ▪ Resistance skills ▪ Non-use attitudes & Intentions	▪ Immediate negative social and short-term psychological consequences of use (Risks) ▪ Information on social influences to use (Media) ▪ Correcting inflated perceptions of use (Norms) ▪ Training, modeling, rehearsal and reinforcement of resistance skills ▪ Non-use attitudes & intentions	▪ Immediate negative consequences of use (Risks) ▪ Correcting erroneous beliefs about peer use (Norms) ▪ Training, modeling, rehearsal and reinforcement of resistance skills ▪ Pro-social bonds (Support Group process) ▪ Non-use attitudes

The CBSG® Program Educational Support Group: The CBSG® Program was developed for use with selective and indicated populations of children and youth to address the emotional and social support deficits, coping and social skills deficits, and substance abuse knowledge deficits identified in selective and indicated populations by a number of researchers (Hawkins, et al., 1998, 1992; Herrenkohl, et al., 2001; Kumpfer, et al., 1994, 1996, 1997; Schinke and Blythe, 1981). The "educational support group" group process is based in part on the small group instruction model (Jones and Pfieffer, 1975, 1979, 1980) and the experience of the program developer as a school educator and counselor. According to the developer (Brown, 1982), the educational support group modality provides the following:

- Small group numbers, which allow additional time for highly interactive and experiential activities, discussion, personal reflection, and skills practice;
- A standard format for all sessions and a structured process that is predictable and consistent, which children and youth can grasp quickly;
- Group rules that provide for confidentiality, explained in developmentally appropriate terms, and behavioral cues to help maintain rules voluntarily;
- Non-threatening inclusive processes that promote a sense of belonging and provide opportunities for bonding with other group members and the facilitator;
- The emotional and social support of a caring, trained group facilitator who serves as a mentor;
- Opening and closing rituals to embed pro-social self-talk messages

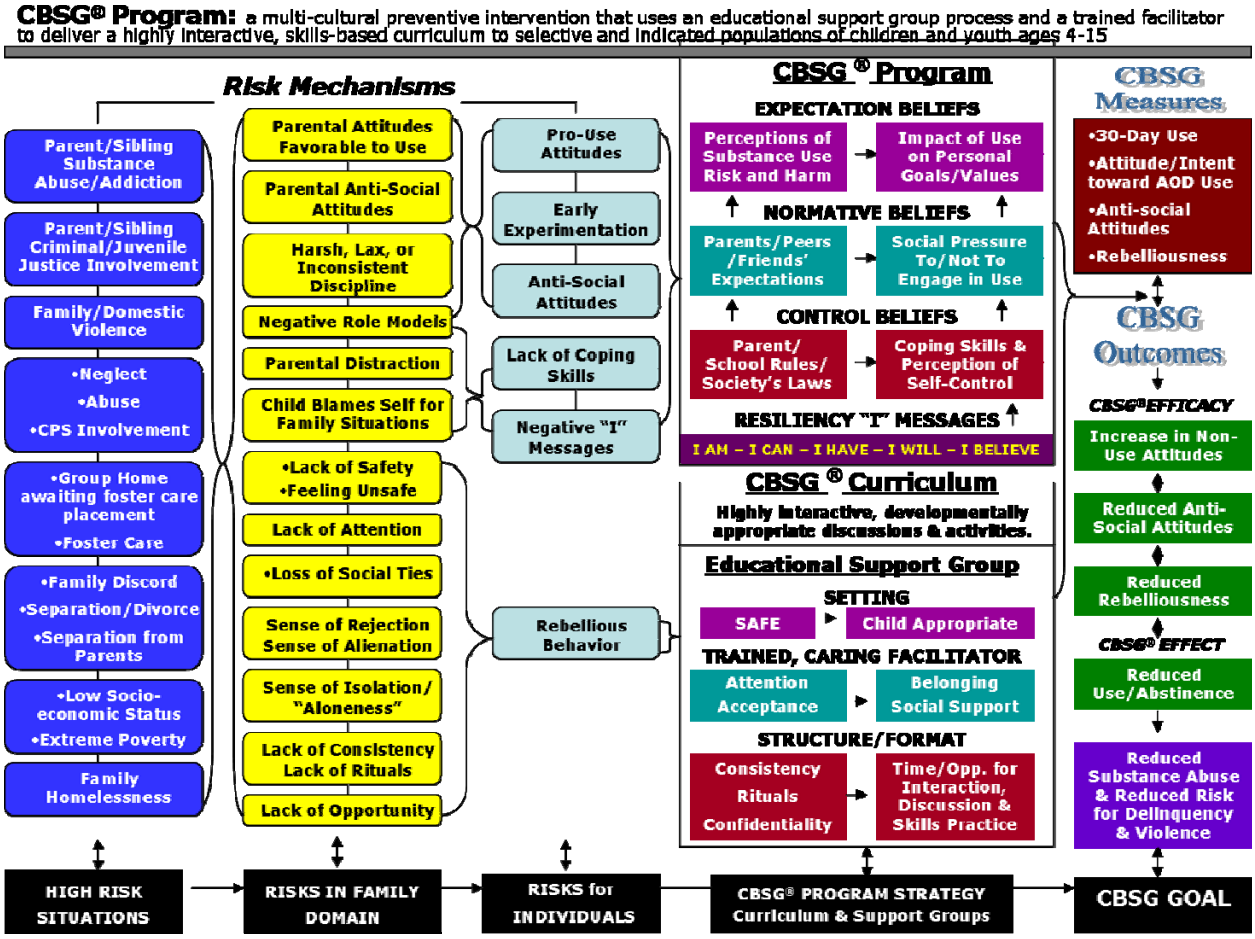
Operationally, the educational support group modality is designed to promote a sense of belonging among program participants, which is based on research indicating that the feeling or sense of being included by others contributes to identity formation, psychological adjustment and interpersonal skills (Hagerty et al., 1996; Nestmann and Hurrelmann, 1994;; Turner, 1999). An inclusive environment intentionally promotes a

sense of belonging, encourages and supports its members, and provides positive and specific feedback, which work in tandem to motivate youth to show respect and concern (Peterson, et al., 2001). Feeling a sense of belonging is also associated with empowerment (Scales & Leffert, 1999), and is associated with a range of psychosocial benefits (Eccles and Gootman, 2001; Kress, 2005;; Pittman, 2003; Scales and Leffert, 1999).

CBSG Program® Model: On the next page is a depiction of the CBSG Program® Model. In interpreting the model, it may be helpful to start at the bottom, reading the bottom row of information from left to right. Then, starting at top left, read down each column, left to right. Relationships between columns are depicted by brackets, and relationships within columns are depicted by arrows. Under "risk mechanisms": the far left column lists the "high-risk situations" which place children and youth at elevated risk for substance use/abuse, delinquency and violence; the middle column lists conditions that increase risk factors in the family domain; and the last column lists risk factors in the individual domain. Key components of the CBSG Program® are identified in the next to last column, and the last column depicts the relationship of targeted risk factors to expected outcomes.

The Rainbow Days CBSG Program® Model:

Risk Mechanisms, Program Components, Measures & Outcomes



Support Group Session Content: The following matrix lists the CBSG® Program session titles, major messages, goals, key points, and key knowledge and skills content.

Session	Goal	Key Knowledge & Skills
1 – Getting to Know You **Major Message:** I AM Not Alone	To get acquainted and learn about the group process	• Practicing group decision making; • Practicing teamwork and cooperative learning; • Practicing positive messages of reinforcement; • Practicing respectful behaviors; • Learning Group Rules; • Learning about trust and confidentiality "What's said here stays here.")
2- A Celebration of Me **Major Message:** I AM special, capable, unique and valued.	To recognize and celebrate the unique and special qualities of each participant	• Identifying personal attributes/assets; • Sharing personal attributes/assets; • Practicing respect; • Practicing tolerance.
3 – Feelings **Major Message:** All my feelings are okay and I CAN choose how to express them.	To identify feelings and learn appropriate, healthy ways to express them	• Identifying/explaining feelings; • Sharing thoughts and feelings; • Practicing skills for dealing with uncomfortable feelings.
4 – Handling Anger **Major Message:** I CAN stay calm when I feel angry and not get into fights.	To identify ways to stay calm and stay out of fights	• Practicing skills for emotional and personal control and self-mastery; • Practicing handling anger in challenging situations.
5 – Dreams and Goal Setting **Major Message:** I BELIEVE there is a purpose for my life.	To gain or strengthen our sense of purpose and feel more confident in setting goals and taking steps that will help us in achieving our dreams	• Practicing skills in goal setting and steps toward attainment; • Linking dreams and goals with behavior and consequences.
6 – Making Healthy Choices **Major Message:**	To recognize that we have the freedom to make choices and that most people our age	• Exploring social influences to use ATOD, including the media; • Correcting misperceptions

I WILL be alcohol tobacco and drug free.	want to make healthy choices	about prevalence of ATOD use; • Practicing identifying who and how to ask for help.
7 – Friends **Major Message:** I CAN treat others like I want to be treated.	To identify ways to make and maintain healthy friendships	• Naming the attributes of a "true friend" ; • Naming own assets as a "true friend"; • Describing the value of true friendship; • Practicing giving and receiving compliments.
8- Resisting Negative Peer Pressure **Major Message:** I WILL resist negative peer pressure and stay out of trouble.	To develop the confidence and skills needed to resist negative peer pressure that could lead to unhealthy choices.	• Practicing skills for resisting peer influence and refusing substance use and other anti-social, rebellious, negative, dangerous or self-defeating behaviors.
9- Chemical Dependency: A Family Disease **Major Message:** I CAN ask for help.	To learn how to take care of ourselves if living in a family impacted by chemical dependency.	• Exploring ways to take care on ourselves; • Practicing identifying who and how to ask for help.
10-Changes and Challenges In My Life **Major Message:** I CAN handle the changes in my life in healthy ways.	To identify ways to handle change and challenging situations, especially change over which we have no control.	• Analyzing and reframing the changes we face • Practicing handling changes in healthy ways.
11 – Putting It All Together **Major Message:** I HAVE learned many things about myself that will help me now and in the future.	To review all the major messages and key points from the previous eight sessions	• Exploring attitudes, opinions and behaviors; • Analyzing and reframing all that has been learned.
12 – Celebration and Commitment	To celebrate one another and our group experience and to make a commitment not to	• Practicing making a public commitment to be alcohol, tobacco and drug free.

Major Messages: I AM likeable, capable, unique and valued; I CAN treat others like I want to be treated; I HAVE strengths, capabilities and people who care about me; I WILL be alcohol, tobacco and drug free; I BELIEVE I have a purpose.	use alcohol, tobacco and other drugs	

Spanish translations of all participant materials are available.

APPENDIX C

High-Risk Pool Selection Protocol

High-Risk Pool Protocol: School counselors on each campus were trained to provide an orientation to all teachers in Grades 2-5 on that campus, including an orientation to the use of a confidential referral form to be completed by all teachers in Grades 2-5. Referral of students to the school counselor by teachers is standard operating practice on school campuses. The training of counselors was conducted by the program developer's staff to ensure a standardized orientation was conducted on each campus, including how to use a confidential referral form, "Referring Individual's Assessment of Student's Risks/Needs" (See Appendix H.)

- Teachers completed the confidential referral form using students' school identification codes or students' line number in each teacher's grade book.
- The confidential form provided criteria for referring students, including a list of high-risk environments and situations. Teachers were instructed to indicate only the count of any high-risk situations to which a child had been or was currently exposed (0=Not Applicable; 1, 2, 3, and 4), and were further instructed not to circle or otherwise identify the type of risk factor (a recommendation by the district's legal department). This count method was modeled after the risk identification process used by the Adverse Childhood Experiences Study (Anda et al., 2002). Expected response was high; research shows that school teachers and counselors routinely know of students' exposure to high-risk situations by virtue of their living arrangements (shelters, foster care, neighborhood conditions) and the presence of special circumstances, for instance when restraining orders prohibit parental or family pick-up privileges (Brown, 1999; Dwyer, 2005).

- High-risk situations included on the referral form were:
    - a substance abusing parent or sibling;
    - a parent or sibling in jail, prison or criminal or juvenile justice system;
    - living in a domestic violence shelter;
    - a family separation or divorce;
    - living in foster care or a group home;
    - living in a homeless shelter;
    - participating in the free or reduced lunch program;
    - living in a crime and drug affected neighborhood; and/or
    - living in public housing.
- The referral form also included a list of coping and social skill deficits, as well as observable attitudes and behaviors indicating elevated risks for anti-social attitudes and rebellious behaviors ("behaviors of concern"). The form included a Likert scale for teacher's ranking the level of skill deficits and/or observable attitudes and behaviors :

  (0 – Not Applicable; 1= Minor; 2 or 3 = Moderate; 4= Significant).
- Teachers were also asked to indicate the "most significant need I see at this time."
- No attempt was made to identify early substance use. However, it was anticipated from the district's own substance use surveys, and the findings of the 2002 Texas School Survey of Substance Use among Students in Grades 4–6 (Liu LY, 2003), that approximately 10% of students in the study would report prior substance use. This percent of estimated prior substance use (10%) was lower than the average percent reflected in the district and in the statewide elementary survey results for 2002, which included Grades 4-6 only, and in which prior use was reflected as being: 19% in Grade 6; 15% in Grade 5; 12% in Grade 4. However, because the study included students in Grades 2-5, and

substance use in Grade 2 was expected to be extremely low, the anticipated percent of students in the study expected to have engaged in prior substance use was adjusted downward accordingly.

- Completed forms were collected by counselors at each school, who were instructed to make no further assessment or ranking of need, but to list all students by school identification code or a derivative of same, or a code derived from the teacher's first and last initials, the class period, and line number assigned to the student in the teachers' grade book. NOTE: In an effort to minimize potential for counselor bias, no limits were placed on the number of students that could be placed in the high-risk pools.
- The coded list from each counselor comprised the "high risk pool" of students for that campus, from which students would be randomly selected for participation in the implementation.
- Completed forms became the property of the school and were not made available to the study.

See Appendix H for Form:

"Referring Individual's Assessment of Student's Risk/Needs"

Appendix D

Pre/Post Survey Administration Protocol

Survey Administration: The same process was followed in both the Spring and Fall semesters. The Student Pre/Post Survey questionnaire is attached.

- Identical questionnaires and procedures were used at each data collection point.
- Survey administrators were developer's staff members, who were not otherwise involved with students during the study, were trained as survey administrators for all data collection sessions.
- Classroom teachers were present during each survey, but situated in the room so as to ensure students' confidentiality was not threatened or compromised.
- Students were informed that their participation in the survey was voluntary and were told prior to the start of the survey about its purpose.
- Students created a four-letter "code" made up of the first two letters of their first name and first two letters of their last names. This code became a unique identifier to allow for matching of pre and post surveys.
- To address duplicate codes among students, the school name, counselor name, date of survey administration, and name of survey administrator were also collected. This information, along with basic demographic information about each student allowed for matching the pretests and posttests.
- Instructions were given verbally and in writing.
- Each student received a copy of the survey questions and a form on which to mark their answers.
- To reduce anxiety about completing the survey, and encourage students to be completely honest in their responses, students were assured that the instrument was not a test, it would not be graded, there were no "right or wrong" answers. They were told not to put their names anywhere on the survey and that the survey was completely anonymous.

- To address a variety of reading levels and facilitate comprehension without embarrassing any students, survey questions were read aloud by the survey administrators and each question was read twice.

- To ensure unbiased responses, administrators were given scripts to respond to questions from students about the meaning of survey items by indicating that: "they (the students) would have to decide what the question meant to them. Different questions may mean something different to different people, and different people may have different opinions. That's why there are no right or wrong answers. This is not a test; it is a survey about your personal opinions."

- To ensure students' privacy, administrators were trained to assist poor readers by reading from their own copy of the survey while facing the student, making sure not to look at the student's survey answer sheet.

- To reduce the incidence of missing data, administrators encouraged students to look over their instruments and be sure that they had completed all the answers they intended to complete.

- Students were informed that they were not required to complete any question they did not feel comfortable answering or wish to answer.

- Completing the survey required an average of one regular school class period.

- Collection of the surveys was conducted by holding open a large envelope and allowing each student to place his or her survey in the envelope.

- Collection envelopes were marked by the survey administrators "pre" or "post" and with the name of the classroom teacher, the grade level, room number, date, class period and their name. Each envelope contained only one classroom's surveys and was closed and sealed by the survey administrators.

- Surveys were forwarded to the study data manager who reviewed them for completeness of the identifier sections and accuracy of markings and erasures in the body of the scan form.

- Data was electronically transferred to an Excel® file for analysis, which was conducted by independent evaluators.

APPENDIX E: SURVEY QUESTIONNAIRE

2003 Non-Equivalent Control Group Study

Survey Questionnaire

2003 Rainbow Days' Curriculum-Based Support Group (CBSG) Pre/Post Survey (CPPS)

A 28-item anonymous, self-report questionnaire includes the following items:

Item Nos.	Content
1-4	Demographic Information
5-8	Anti-social Attitudes
9-11	Rebelliousness
12-16	Alcohol, Tobacco and Other Drug (ATOD) Use
17-26	Anti-ATOD-Use Attitudes and Intentions
27-28	Previous Participation in the CBSG® Program

The actual questionnaire given to students appears on Pages 2-5.

Your Opinions Please!

Directions: ***DO NOT MARK ON THIS FORM. USE THE SCAN FORM ONLY. PLEASE RETURN THIS FORM AFTER THE SURVEY. Thank you.***

Before you share your opinions, please tell us about yourself:

1. I am a
- **A. Boy**
- **B. Girl**

2. I am
- **A. Black or African American (Not Hispanic/Latino)**
- **B. Hispanic/Latino**
- **C. White (Not Hispanic/Latino)**
- **D. Asian-American (Not Hispanic/Latino)**
- **E. Other (Not Hispanic/Latino)**

3. What is the language you use most often at home?
- **A. English**
- **B. Spanish**
- **C. English & Spanish**
- **D. Other**

4. How old are you?
- **A. 8-9**
- **B. 10-11**
- **C. 12-13**
- **D. 14-15**

Now, let's get started!

Your Opinions and Actions

Please choose the answer that fits best.	Never (A)	Sometimes (B)	Always (C)
5. I think it's ok to cheat at school.	A	B	C
6. I think it is all right to beat up people if they start the fight.	A	B	C
7. I think it is ok to take something without asking if you can get away with it.	A	B	C
8. You should tell the truth even if you are going to get in trouble.	A	B	C
9. I do the opposite of what people tell me, just to get them mad.	A	B	C
10. I like to see how much I can do before I get in trouble.	A	B	C
11. I don't follow rules that I don't like.	A	B	C

Tobacco, Alcohol, and Other Drugs

Please choose the answer that best describes your behavior.

12. During the past 30 days (month) how many days have you used alcohol?

A. 0 days

B. 1-2 days

C. 3-4 days

D. 5 or more days

13. During the past 30 days (month) how many days have you used marijuana or pot?

A. 0 days

B. 1-2 days

C. 3-4 days

D. 5 or more days

14. During the past 30 days (month) how many days have you sniffed or Inhaled fumes or smells from white-out, glue, markers, gasoline or used poppers, rush, whippets? (Note: Your asthma inhaler does not count.)

    A. 0 days

    B. 1-2 days

    C. 3-4 days

    D. 5 or more days

15. During the past 30 days (month) how many days have you used other illegal drugs?

    A. 0 days

    B. 1-2 days

    C. 3-4 days

    D. 5 or more days

16. During the past 30 days (month) how many days have you used any type of tobacco (cigarettes, chewing tobacco, snuff, cigars, or pipe tobacco)?

    A. 0 days

    B. 1-2 days

    C. 3-4 days

    D. 5 or more days

Congratulations!

You have already completed more than half of your survey!

On to the next question…

Your Opinions Please!

Please choose the answer that fits best.	No, never (A)	I don't think so (B)	Maybe (C)	Yes, definitely (D)
17. I might smoke cigarettes when I get older.	A	B	C	D
18. Grown-ups have more fun when they drink.	A	B	C	D
19. I will probably drink alcohol when I am old enough.	A	B	C	D
20. It is OK to use drugs if you don't get caught.	A	B	C	D
21. Drugs like marijuana and cocaine should be okay for kids to use.	A	B	C	D
22. If I have a choice I might try drugs.	A	B	C	D
23. Marijuana makes you happy.	A	B	C	D
24. People usually drink alcohol at parties.	A	B	C	D
25. I can't wait to be old enough to drink.	A	B	C	D
26. I am curious about alcohol and drugs.	A	B	C	D

27. Have you ever been in a Rainbow Days group?

A. Yes

B. No

28. If you answered "yes" to being in a Rainbow Days group, did you enjoy the group?

A. Yes

B. No

That is it.

You are finished!

Thanks!

APPENDIX F: IMPLEMENTATION FIDELITY - ATTENDANCE

Instructions:
Please print the first two letters of students' first name and first two letters of student's last name on the form.

DO NOT USE STUDENTS' FULL NAMES.

Curriculum-Based Support Group Program

Group Facilitator's Report:

ATTENDANCE DOCUMENTATION

Legend for Race/Ethnicity:

African-American or Black	AA
Hispanic/Latino	H/L
White (Not Hispanic/Latino)	W
Asian/Pacific Islander	A/P
Other	O

Facilitator: ______________________

Site: ____________________________

Please CIRCLE (O) Gender, Grade, Race/Ethnicity. **Please CHECK (✓) all sessions attended.**

1st 2 letters of FIRST NAME		1st 2 letters of LAST NAME		Gender	Grade	Race/Ethnicity	SESSION ATTENDANCE Start Date: ____________											End Date: ____________
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12
				M F	2 3 4 5	AA A/P H/L O W	1	2	3	4	5	6	7	8	9	10	11	12

APPENDIX G: IMPLEMENTATION FIDELITY – OBSERVATION TOOL PARTS A, B AND C

Curriculum-Based Support Group (CBSG®) Implementation Fidelity Observation Tool - Part A: Logistics

WHEN

Date: _____/_____/_____ **Time:** _____ ❑ AM ❑ PM

WHERE

School or Community Site: _____ **School District (if applicable):** _____

WHAT

Curriculum: ❑ School/Community ❑ Faith ❑ Shelters/Transitional

Session: ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10 ❑ 11 ❑ 12

Session Title: _____

WHO

Observer: _____	❑ M ❑ F	❑Black ❑Hisp/Latino(a) ❑White ❑Asian Am. ❑Other
Facilitator: _____	❑ M ❑ F	❑Black ❑Hisp/Latino(a) ❑White ❑Asian Am. ❑Other
Co Facilitator:	❑ M ❑ F	❑Black ❑Hisp/Latino(a) ❑White ❑Asian Am. ❑Other

HOW

Session Interval: *If more than one week has passed since the last session was conducted, please indicate the reason:*

❑ Holiday ❑ School Break ❑ Weather Closure ❑ Site Conflict ❑ Facilitator Absence ❑ Other:

Group Setting: Room was: ❑ UNOCCUPIED ❑ PRIVATE ❑ CHILD/YOUTH APPROPRIATE (safe, clean, orderly, etc.)

If above not checked, please explain: _____

❑ Y ❑ N Sufficient chairs and tables present - or adequate floor space - for all participants to be seated comfortably?

Chairs, tables, etc. were: ❑ Matched to age/size of participants/ ❑ "Okay" ❑ Inappropriate

❑ Y ❑ N Room was ready for group? If "No": Was significant time was lost in setting the room up? ❑ Y ❑ N

❑ Y ❑ N Only one group at a time was conducted in the room? If "No," please explain: _____

_____

❑ Y ❑ N All sessions of this group conducted in the same room? If "No," please explain: _____

_____

Level of Distraction in the Room: ❑ High ❑ Moderate ❑ Low ❑ None ❑ Constant ❑ Intermittent

If high or moderate, please explain: _____

❑ **Facilitator's cell phone did not ring or vibrate during session.**

❑ **Observer's cell phone did not ring or vibrate during session.**

❑ **Observer avoided interactions that would interfere with the group process or be a distraction:** If "no", explain:

Timeliness:

❑ Y ❑ N Facilitator was on time? If "no", explain: _____

❑ Y ❑ N Participants were on time? If "no", explain: _____

❑ Y ❑ N Session started on time? If "no", explain: _____

❑ Y ❑ N Session ended on time? If "no", explain: _____

❑ Y ❑ N Observer was on time? If "no", explain: _____

❑ Y ❑ N Observer stayed to end? If "no", explain: _____

(See Also Part B –Process, and Complete Appropriate Section of Part C –Content)

Curriculum-Based Support Group (CBSG®)
Implementation Fidelity Observation Tool: Part B - Process

FACILITATOR:

If the co-facilitator had a significant role in the session, complete this section of Part B on another form and attach.

1.	Called participants by name.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
		If first session, used name tags: ❑ **Y**		❑ **N**	❑ **N/A**	
2.	Appeared to enjoy being with group members.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
3.	Maintained positive discipline.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
4.	Maintained participants' interest.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
5.	Gave open posture/attention to all members.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
6.	Practices "active listening".					
7.	Was sincere in all interactions with all members.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
8.	Responded with acceptance/understanding.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
9.	Was equally effective with both genders.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
10.	Was equally effective with all races/ethnicities.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
11.	Encouraged bonding between participants.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
12.	Answered questions effectively.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
13.	Corrected incorrect answers in positive manner.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
14.	Modeled respect and "good manners."	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
15.	Encouraged participants to respect each other.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
16.	Handled unexpected situations effectively.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always

GROUP MEMBERS:

1.	Appeared to understand the group process.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
		If first session, appeared to understand process as explained. ❑ **Y** ❑ **N**				
2.	Appeared to understand Group Rules/Promises.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
3.	Appeared to understand "3 Times Consequence."	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
4.	Followed Group Rules/Promises.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
5.	Recalled last session's content.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
6.	Appeared to understand this session's content.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
7.	Appeared involved and interested.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
8.	Appeared to enjoy activities.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always
9.	Recalled the major messages during closing ritual.	❑ Never	❑ Rarely	❑ Sometimes	❑ Often	❑ Always

GROUP FORMAT:

1. ❑ **Y** ❑ **N** Greeted children individually as they entered the room; appeared to make them feel welcome.
2. ❑ **Y** ❑ **N** Gained attention of group members quickly for start of group.
3. ❑ **Y** ❑ **N** Explained/Reviewed Group Rules/Promises and explained/reviewed the consequences.
4. ❑ **Y** ❑ **N** Modeled/Conducted Sunshine & Cloud. Responded appropriately when members chose to "pass."
5. ❑ **Y** ❑ **N** Reviewed last session's content. Encouraged member involvement, feedback and input.
6. ❑ **Y** ❑ **N** Conducted Guided Discussion. Encouraged member involvement, feedback and input.
7. ❑ **Y** ❑ **N** Included all key points. [Refer to list of key points for this session. If any omitted, explain in "Comments" section below.]
8. ❑ **Y** ❑ **N** Emphasized the session's Major Message. Encouraged members to repeat the session's major message.
9. ❑ **Y** ❑ **N** Introduced activity. Effectively linked the activity(ies) to the key points in the guided discussion.
10. ❑ **Y** ❑ **N** Processed the activity and repeated session's message. Encouraged member involvement, feedback and input.
11. ❑ **Y** ❑ **N** Summarized the session by reviewing the key points and major message.
12. ❑ **Y** ❑ **N** Conducted Major Message Ritual with enthusiasm. Repeated ❑ **Y** ❑ **N**

❑ **Y** ❑ **N** DID FACILITATOR ADD ANYTHING THAT WAS NOT IN THE CURRICULUM? If yes, please explain:

_____

COMMENTS (List the number of the item and write your comments. If needed, use back of form:

OVERALL:

Participants:	❑ Highly Cooperative	❑ Somewhat Cooperative	❑ Somewhat Challenging	❑ Highly Challenging
Facilitator:	❑ Highly Effective	❑ Somewhat Effective	❑ Somewhat Ineffective	❑ Highly Ineffective
Co-Facilitator:	❑ Highly Effective	❑ Somewhat Effective	❑ Somewhat Ineffective	❑ Highly Ineffective

Observer's Signature: _____
Date:_____

Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 1: Getting to Know You

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	*Yes*	No
☼ Our group is: • different from school and class - there are no right or wrong answers and there are no grades or tests; • a time to meet with others we may already know, make new friends, and have fun; • a time to learn about ourselves and about each other, and about important choices that can help us make a better life for ourselves; • a time for building trust with each other and it is a safe place where we can talk about our thoughts and feelings; • a chance to take a break from your usual routine and spend time thinking and talking about subjects different from the ones in your classroom.		
☼ In our group there are Group Promises that will help us feel safe and comfortable.		
☼ *Discussed that participants were selected and invited to be in group because they can benefit from and enjoy the group, not because they are "in trouble."*		

NOTES

Feedback from Facilitator:

_____

_____

_____

_____

_____

Feedback from Observer:

_____

_____

_____

_____

_____

Improvements for Future Groups:

_____

_____

_____

_____

_____

Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 2: A Celebration of Me!

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	*Yes*	No
☼ *Each of us is "one-of-a-kind" (unique). There is no one else exactly like me.*		
☼ *We are special because of who we are, not because of what we do or what we have.*		
☼ *Using alcohol and other drugs will not make me feel better about myself.*		
☼ *Part of how we feel about ourselves is how we feel about our family. There are many different kinds of families. Every family is special in some way, but no family is perfect.*		

NOTES

Feedback from Facilitator:

_____

_____

_____

_____

_____

Feedback from Observer:

_____

_____

_____

_____

_____

Improvements for Future Groups:

_____

_____

_____

_____

_____

Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 3: Feelings

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	***Yes***	**No**
☼ All of us have feelings. All our feelings are okay.		
☼ We can learn how to handle and show our feelings in healthy, positive ways – even feelings we don't like to have.		
☼ Drinking alcohol or using tobacco or other drugs to change our feelings is never okay for us to do.		

NOTES

Feedback from Facilitator:

_____

_____

_____

_____

_____

Feedback from Observer:

_____

_____

_____

_____

_____

Improvements for Future Groups:

_____

_____

_____

_____

_____

Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 4: Handling Anger

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game
   - ❑ Yes
   - ❑ No
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	*Yes*	No
☼ When we lose control and react to situations with an angry behavior like fighting, there can be negative consequences.		
☼ Steps to handling anger: 1. S = Stop – cool down and gain control. 2. I = Identify – what are you feeling and why? 3. T = Take Action – respond to your feelings in an appropriate way that shows respect for yourself and others.		
☼ Alcohol and other drugs can cause us to lose control over the way we feel and act.		

NOTES

Feedback from Facilitator:

_____

_____

_____

_____

_____

Feedback from Observer:

_____

_____

_____

_____

_____

Improvements for Future Groups:

_____

_____

_____

_____

_____

Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 5: Dreams & Goal Setting

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	*Yes*	No
☼ Dreams can give us hope and give us a sense of purpose for our future.		
☼ There are steps we can take to help us set goals and achieve our dreams: 1. Identify our dreams. 2. Develop a plan. 3. Ask for help. 4. Be flexible.		
☼ Getting into fights and using alcohol and other drugs can keep us from reaching our dreams or achieving our goals.		

NOTES

Feedback from Facilitator:

_____

_____

_____

_____

_____

Feedback from Observer:

_____

_____

_____

_____

_____

Improvements for Future Groups:

_____

_____

_____

_____

_____

Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 6: Making Healthy Choices

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	***Yes***	**No**
☼ Everyone makes choices every day and all our choices have consequences.		
☼ Consequences can either be positive (healthy) or negative (unhealthy).		
☼ Most people your age want to make healthy choices and have chosen not to use alcohol, tobacco, or other drugs.		
☼ Using alcohol, tobacco, and other drugs is never a healthy choice.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 7: Friends

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	***Yes***	**No**
☼ To have good friends, we must first BE a good friend.		
☼ There are some positive, healthy things we can do to have the friendships we want: • Be yourself and like yourself. • Be a good listener. • Be reliable and trustworthy. • Understand that having conflict is normal. Friends can disagree and still be friends. • Forgive one another.		
☼ A true friend will respect our choice not to use alcohol, tobacco, and other drugs.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 8: Resisting Negative Peer Pressure

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game
   - ❑ Yes
   - ❑ No
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	***Yes***	**No**
☼ Pressure from our peers can influence us to make healthy choices or unhealthy choices.		
☼ The "5-B's of Saying No" ***** – we can learn skills that can help us say "no" when we are pressured: 1. Beware 2. Bad idea 3. Better one 4. Bye for now 5. Buzz me later		
☼ Resisting peer pressure to use alcohol, tobacco, and other drugs is a healthy choice and keeps us from getting in trouble.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 9: Putting It All Together

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game
   - ❑ Yes
   - ❑ No
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please continue on the next page for checklist of Key Points.

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	*Yes*	No
☼ We are special because of who we are, not because of what we do or what we have.		
☼ Part of how we feel about ourselves is how we feel about our family. There are many different kinds of families. Every family is special in some way, no family is perfect.		
☼ Using alcohol and other drugs will not make me feel better about myself.		
☼ We can learn how to handle and show our feelings in healthy, positive ways – even feelings don't like to have.		
☼ Drinking alcohol or using tobacco or other drugs to change our feelings is never okay for us to do.		
☼ Steps to handling anger are: Stop-cool down and gain control; Identify what we are feeling and why; and Take Action by responding in appropriate ways.		
☼ Alcohol and other drugs can cause us to lose control over the way we feel and act.		
☼ Dreams can give us hope and give us a sense of purpose for our future.		
☼ Getting into fights and using alcohol and other drugs can keep us from reaching our dreams or achieving our goals.		
☼ Using alcohol, tobacco, and other drugs is never a healthy choice.		
☼ Most people your age want to make healthy choices and have chosen not to use alcohol, tobacco, or other drugs.		
☼ To have good friends, we must first BE a good friend.		
☼ A true friend will respect our choice not to use alcohol, tobacco, and other drugs.		
☼ Pressure from our peers can influence us to make healthy choices or unhealthy choices.		
☼ Resisting peer pressure to use alcohol, tobacco, and other drugs is a healthy choice and keeps us from getting in trouble.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 10:
Chemical Dependency: A Family Disease

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session. **Key Point**	***Yes***	**No**
☼ Chemical Dependency (or Alcoholism) is a disease.		
☼ Chemical Dependency is a disease that affects the person physically, emotionally, and spiritually.		
☼ The whole family is impacted when someone in the family is chemically dependent.		
☼ There are four "C's" to remember about Chemical Dependency: • We cannot **Cause** someone to become chemically dependent. • We cannot **Control** the person or the disease. • We cannot **Cure** the disease. • We can **Cope**.		
☼ There are people to help us and ways we can take care of ourselves if Chemical Dependency is in our family.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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Rainbow Days' CBSG Program
Implementation Fidelity Observation Tool: Part C- Content
Session 11: Changes & Challenges in My Life

Site: _____ **Facilitator:** _____

Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	*Yes*	No
☼ Change happens to everyone. Some changes can be good and we like them, while others can be hard and we don't like them.		
☼ Some changes in our life we have control over, some changes in our life we don't have control over.		
☼ Even though we may not be able to control what happens, we can control how we act when change happens.		
☼ It is important to choose healthy ways to handle change.		
☼ We can find "safe people" who can support us and help us cope with hard changes.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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Rainbow Days' CBSG® Program
Implementation Fidelity Observation Tool: Part C- Content
Session 12: Celebration & Commitment

Site: _____ **Facilitator:** _____
Observer: _____ **Date:** ___/___/___

CBSG® Session Format

1. Sunshine & Cloud
   - ❑ Yes
   - ❑ No
2. Guided Discussion
   - ❑ Yes
   - ❑ No
3. Activity/Game — Indicate Activity/Game(s) selected
   - ❑ Yes _____
   - ❑ No _____
4. Processing/Sharing
   - ❑ Yes
   - ❑ No
5. Major Message Ritual
   - ❑ Yes
   - ❑ No

Please check "yes" or "no" to indicate if each key point was covered when you observed the session.

Key Point	***Yes***	**No**
☼ It is important to take time to celebrate our accomplishments.		
☼ I promise to be alcohol, tobacco, and drug free.		
☼ Each one of us can decide how this program will affect our choices and the way we act both now and in the future.		

NOTES

Feedback from Facilitator:

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Feedback from Observer:

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Improvements for Future Groups:

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APPENDIX H

CONFIDENTIAL: For Teacher/Counselor Use Only

Referring Individual's Assessment of Student's Risks/Needs

School: _____ Teacher: _____ (Initials ___ ___)

Counselor: _____ Class Period: ____ Date: _____

Student ID: Please use School Code Number or
Grade Book Line Number: _____ M__ F___ Grade: ____

Please assess the student's involvement (Minor, Moderate, Significant) in the Behaviors of Concern, and indicate the number of High-Risk Situations (bottom box) to which the student may be exposed. Please circle "N/A" if the behavior or exposure is not applicable.

BEHAVIORS OF CONCERN	*PLEASE CIRCLE YOUR CHOICE*				
The student APPEARS to:	**N/A**	**Minor**	**Moderate**		**Significant**
a) Lack a sense of belonging in the class.	0	1	2	3	4
b) Not be aware of his/her unique and special qualities (very low self-esteem)	0	1	2	3	4
c) Be unable to state how he/she feels.	0	1	2	3	4
d) Lack a desire to cooperate.	0	1	2	3	4
e) Lack a willingness to participate.	0	1	2	3	4
f) Be unwilling to listen or pay attention.	0	1	2	3	4
g) Make poor decisions in the classroom.	0	1	2	3	4
h) Lack enthusiasm for school work.	0	1	2	3	4
i) Not realize he or she needs help.	0	1	2	3	4
j) Lack appropriate ways to ask for help.	0	1	2	3	4
k) Lack willingness to accept help.	0	1	2	3	4
l) Deal inappropriately with failure.	0	1	2	3	4
m) Lack self-control in challenging situations.	0	1	2	3	4
n) Interact inappropriately with classmates.	0	1	2	3	4
o) Be extremely shy and/or withdrawn.	0	1	2	3	4
p) **Live in one or more high-risk situations. *See explanation below**	**N/A**	**1 situation**	**2 or 3 situations**		**4+ situations**

*Students who live in one or more HIGH-RISK SITUATIONS are the least likely to have coping and social skills and are at elevated risk for future substance abuse, delinquency and violence. High-risk situations include: a substance abusing parent, sibling, other family member or guardian; a parent/sibling in jail or prison or in the criminal or juvenile justice system; living in a domestic violence shelter; a family separation/divorce; living in foster care or a group home; living in a homeless shelter; participating in free or reduced lunch; living in a crime and/or drug affected neighborhood; living in public housing.

The most significant need I see at this time is: _____

APPENDIX I

Rainbow Days – Curriculum-Based Support Group Program

Referring Individual's Assessment of Student's Improvement

School: _____ Teacher: _____

Counselor: _____ Date: _____

1st 2 letters of FIRST NAME: ____ ____ 1st 2 letters of LAST NAME ____ ____ M__ F___ Grade: ____

Please circle your assessment of the improvement you have observed in the student you referred. *While you may not see dramatic changes in behavior in a matter of a few weeks, small steps toward improvement in these areas is progress.*

IMPROVEMENT ASSESSMENT: Please circle NAI (Not An Issue) if the student possessed the attribute before being referred, making improvement impossible to measure.

BEHAVIORS of CONCERN	***CIRCLE IMPROVEMENT***				
The student appears to be better able to:	**NAI**	**None**	**Moderate**		**Significant**
a) **Feel a sense of belonging in the class.**	0	1	2	3	4
b) **State his/her unique and special qualities.**	0	1	2	3	4
c) **State how he/she feels.**	0	1	2	3	4
d) **Show a desire to pay attention and cooperate.**	0	1	2	3	4
e) **Demonstrate a willingness to participate.**	0	1	2	3	4
f) **Show improvement in ability to listen.**	0	1	2	3	4
g) **Make some better decisions in the classroom.**	0	1	2	3	4
h) **Show more enthusiasm for school work.**	0	1	2	3	4
i) **State that he/she needs help.**	0	1	2	3	4
j) **Ask for help in appropriate ways.**	0	1	2	3	4
k) **Accept help.**	0	1	2	3	4
l) **Deal more appropriately with failure.**	0	1	2	3	4
m) **Show more self-control in challenging situations.**	0	1	2	3	4
n) **Interact with classmates appropriately.**	0	1	2	3	4

The most significant change I can see at this time is:

_____

_____

I am glad I referred the student: __Yes __No ***(Please comment on back of page.)***

APPENDIX J

Rainbow Days – Curriculum-Based Support Group Program

Facilitator's Pre-Assessment of Student's Behaviors, Knowledge, Skills

This report is completed by the group facilitator after the 3rd session.

1st two letters of 1st name: __ __ 1st two letters of last name: __ __	Date: _____
Grade: _____ Facilitator: _____	Completed After 3rd Session: ___

Circle:	Boy Girl	African-American Hispanic/Latino White Asian Native American Other

BEHAVIOR ASSESSMENT: Please think about this child's behavior in group, and then circle the most appropriate response. Circle the NUMBER of high-risk situations and check each situation.

The child displays:	**Never**	**Rarely**	**Sometimes**		**Often**	**Always**
1. Sense of ease and comfort in the group setting.	0	1	2	3	4	5
2. Confidence and willingness to contribute ideas.	0	1	2	3	4	5
3. Confidence and willingness to share feelings.	0	1	2	3	4	5
4. Desire to pay attention and cooperate.	0	1	2	3	4	5
5. Effort to remember and use group rules.	0	1	2	3	4	5
6. Effort to use self-control.	0	1	2	3	4	5
7. Ability to name (identify) different feelings.	0	1	2	3	4	5
8. Ability to verbalize (talk about) ideas and feelings.	0	1	2	3	4	5
9. Ability to accept other's differences.	0	1	2	3	4	5
10. Ability to manage/control frustration and anger.	0	1	2	3	4	5
11. Sense of humor that's respectful to others.	0	1	2	3	4	5
12. Understanding of what it takes to be a true friend.	0	1	2	3	4	5
13. Knowledge of dangers associated with drug use.	0	1	2	3	4	5
14. Knowledge of steps to resist external pressure or influence.	0	1	2	3	4	5
15. Knowledge of "I am, I can, I have, I will, I believe."	0	1	2	3	4	5
16. Ability to relate to at one other group member.	0	1	2	3	4	5

a) **Live in one or more high-risk situations. *See explanation below**	**N/A**	**1 situation**	**2 or 3 situations**	**4+ situations**

__Substance abusing parent, sibling, other family member or guardian
__Parent/sibling in jail or prison or in the criminal or juvenile justice system
__Participating in free or reduced lunch
__Living in a crime and/or drug affected neighborhood
__Family separation/divorce
__Living in a domestic violence shelter
__Living in foster care or a group home
__Living in a homeless shelter
__Living in public housing.
Other: _____

The most significant need I see in this child right now is: _____

_____

APPENDIX K

Rainbow Days – Curriculum-Based Support Group Program

Facilitator's Post-Assessment of Student's Behaviors, Knowledge, Skills

This Report is Completed by the Group Facilitator after the 12th Session.

1st two letters of 1st name: __ __ 1st two letters of last name: __ __	Date: _____
Grade: _____ Facilitator: _____	Completed After 12th Session: __
Circle: Boy Girl	African-American Hispanic/Latino White Asian Native American Other

BEHAVIOR ASSESSMENT: Please think about this child' behavior in group, and then about the extent to which he/she demonstrated the following. Please circle your answers. *Thank you!*

The child displays:	Never	Rarely	Sometimes		Often	Always
1. Sense of ease and comfort in the group setting.	0	1	2	3	4	5
2. Confidence and willingness to contribute ideas.	0	1	2	3	4	5
3. Confidence and willingness to share feelings.	0	1	2	3	4	5
4. Desire to pay attention and cooperate.	0	1	2	3	4	5
5. Effort to remember and use group rules.	0	1	2	3	4	5
6. Effort to use self-control.	0	1	2	3	4	5
7. Ability to name (identify) different feelings.	0	1	2	3	4	5
8. Ability to verbalize (talk about) ideas and feelings.	0	1	2	3	4	5
9. Ability to accept other's differences.	0	1	2	3	4	5
10. Ability to manage/control frustration and anger.	0	1	2	3	4	5
11. Sense of humor that's respectful to others.	0	1	2	3	4	5
12. Understanding of what it takes to be a true friend.	0	1	2	3	4	5
13. Knowledge of dangers associated with drug use.	0	1	2	3	4	5
14. Knowledge of steps to resist external pressure or influence.	0	1	2	3	4	5
15. Knowledge of "I am, I can, I have, I will, I believe."	0	1	2	3	4	5

The most significant improvement I see in this child is: _____

_____

The child appeared to bond with at least one other child in the group: __ Yes __ No

The most significant need this child has: _____

I referred this child to the school counselor for: _____

APPENDIX L

Date: ____/____/____ Grade: 2 3 4 5	*Curriculum-Based Support Group Program* **Group Participant Evaluation**	Name (4-Letter Code) __ __ __ __

School: _____ Counselor: _____

Please complete the following statements about your participation in a Rainbow Days group:

1. Some things I enjoyed about group were: _____

   _____

2. Some things I disliked about group were: _____

   _____

3. The Most important thing I learned in group was: _____

   _____

4. **Group helped me:** *(Please CIRCLE your answer.)*

	Didn't Help	Helped a Little	Helped a Lot	REALLY Helped!
a) Understand the importance of making healthy choices	1	2	3	4
b) Appreciate my family	1	2	3	4
c) Improve my communication skills	1	2	3	4
d) To think before I just do something	1	2	3	4
e) Understand how to choose and keep good friends	1	2	3	4
f) Understand the importance of not using alcohol, tobacco and other drugs	1	2	3	4
g) Understand the importance of staying in school so I can achieve my dreams	1	2	3	4

5. I know other kids who would like to be in this group. ? Yes ? No

6. If you could tell other kids something about this group, what would you say? _____

   _____

   _____

Please turn the page.

. **Group also helped me learn skills to:**	**Didn't Help**	**Helped a Little**	**Helped a Lot**	REALLY Helped!
) Ask for help with problems.	**1**	**2**	**3**	**4**
) Talk things over with classmates when we have a problem or argument.	**1**	**2**	**3**	**4**
) Disagree with adults without fighting or arguing.	**1**	**2**	**3**	**4**
) Feel good about my unique and special qualities.	**1**	**2**	**3**	**4**
) Deal better with changes.	**1**	**2**	**3**	**4**
Show respect to others by following the rules, like our roup promises.	**1**	**2**	**3**	**4**
) Tell the truth even if you are going to get in trouble.	**1**	**2**	**3**	**4**
) Tell others how I feel.	**1**	**2**	**3**	**4**
Listen better.	**1**	**2**	**3**	**4**
Think about the consequences of my choices and decisions.	**1**	**2**	**3**	**4**
) Control my temper when people are angry with me.	**1**	**2**	**3**	**4**
Talk to someone I trust when I am upset.	**1**	**2**	**3**	**4**
ı) Control my temper when I am angry with others.	**1**	**2**	**3**	**4**
) Feel that I can do some things well.	**1**	**2**	**3**	**4**
) Say "thank you" when someone compliments or praises me.	**1**	**2**	**3**	**4**
) Not pick on or make fun of others.	**1**	**2**	**3**	**4**
) Not repeat gossip.	**1**	**2**	**3**	**4**
Think about what I want to do in the future.	**1**	**2**	**3**	**4**
) Refuse to do something I believe is wrong even if my very best friend tries to make me do it.	**1**	**2**	**3**	**4**
Never pressure a friend to do something he or she thinks is wrong.	**1**	**2**	**3**	**4**

Thank you!

APPENDIX M

Date: ____/____/____

Rainbow Days' 2003 CBSG® Evaluation Study
Counselor's Feedback

School: _____ Counselor: _____

Please complete the following statements about your participation in the CBSG® Program evaluation study:

1. The most beneficial outcome of our school's participation: _____
   _____

2. The least beneficial outcome of our school's participation_____
   _____

3. The most important thing I learned _____
   _____

4. **Please Rate the Developer's:**	Low	So-So (Okay)	HIGH	VERY HIGH
a) Training	1	2	3	4
b) Technical assistance and follow-up	1	2	3	4
c) Availability of study staff to answer questions	1	2	3	4
d) The quality of assistance	1	2	3	4
e) The timeliness of assistance	1	2	3	4
f) Usefulness of the written procedures	1	2	3	4
g) Ease of use of the forms	1	2	3	4
h) Extent of burden on you or other staff	1	2	4	4

YOUR COMMENTS & SUGGESTIONS PLEASE: *Please expand on the ratings above and indicate the item number or letter for each comment. We welcome your feedback on how we can improve.*

_____
_____
_____
_____
_____
_____

Counselor's Feedback Continued

. TALK TO PARTICIPANTS AND GET A ENSE OF THEIR FEELINGS ABOUT:	None	Some	A Little	A Lot
) If the program helped them.	1	2	3	4
) If they had fun.	1	2	3	4
) If they felt respected by the facilitator.	1	2	3	4
) If they liked the facilitator.	1	2	3	4
) If the facilitator was kind.	1	2	3	4
If they would recommend group to others.	No	Maybe	Yes	It ROCKS

Please share your FAVORITE Children's Comments:

Please share Teacher's Comments (especially the ones we need to know, but they might tell us!)

Are there any ways in which we can be of service?

Thank you!