What Works Clearinghouse

ies INSTITUTE OF EDUCATION SCIENCES

Too Good for Drugs™

Program description

Too Good for Drugs™ is designed to promote life skills, character values, resistance skills to negative peer influence, and resistance to the use of illegal drugs, alcohol, and tobacco. The program, which targets elementary and middle school students, is based on classroom discussions and structured activities that center on interactive learning and skill-building exercises.

Students engage in role-play and cooperative learning games and are encouraged to apply the skills to different contexts. *Too Good for Drugs*™ also includes the optional elements of parental and community involvement. Two related programs are addressed in the intervention reports on *Too Good for Drugs and Violence* (high school) and *Too Good for Violence* (K–8).

Research

Two studies of *Too Good for Drugs*™ met the What Works Clearinghouse (WWC) evidence standards. These studies, which included nearly 2,500 students in grades 3, 4, and 6, attending

12 elementary and middle schools in Florida, examined results on students' behavior and knowledge, attitudes, and values.[1]

Effectiveness

Too Good for Drugs™ was found to have potentially positive effects on students' behavior and no discernible effects on students' knowledge, attitudes, and values.

	Behavior	Knowledge, attitudes, and values	Academic achievement
Rating of effectiveness	Potentially positive effects	No discernible effects	Not reported
Improvement index[2]	Average: +10 percentile points	Average: +7 percentile points	Not reported
	Range: 0 to +17 percentile points	Range: +3 to +11 percentile points	

1. The evidence presented in this report is based on the available research. Findings and conclusions may change as new research becomes available.

2. These numbers show the average and range of improvement indices for all findings across the two studies.

Developer and contact

Mendez Foundation. 601 S. Magnolia Avenue, Tampa, FL 33606. Web: www.mendezfoundation.org. Telephone: 800-750-0986.

Scope of use

Too Good for Drugs™ (K–8) was first developed in Hillsborough County (Tampa), Florida in 1978. The middle school program was revised in 1995.[3] *Too Good for Drugs*™ and its companion programs (*Too Good for Violence* and *Too Good for Drugs and Violence*) have been implemented in more than 2,500 districts in more than 48 states in rural, urban, and suburban communities with African-American, Asian, Hispanic, and Caucasian student populations and across diverse socioeconomic groups. *Too Good for Drugs*™ may have changed since the studies were conducted. The WWC recommends asking the developer for information about the most current version of this curriculum and taking into account that student demographics and school context may affect outcomes.

Teaching

Too Good for Drugs™ was included in the character education review because the program addresses several character traits that are infused into most of the lessons. *Too Good for Drugs*™ consists of 10 lessons at each grade level lasting 30–45 minutes per lesson. All lessons are scripted and intended to be taught by trained teachers or program instructors (off-site educators). Lessons include information about the frequency of drug use among American youth and the harmful effects of drug use. Instructional strategies cover goal setting and decisionmaking skills, prosocial skills, resistance to negative peer influence skills, and interpersonal skills. Core values such as respect for self and others, empathic responding, and responsibility are integrated into the lessons. Cooperative learning activities, role-play, and skill-building methods reinforce positive behaviors and skills and encourage students to apply these behaviors and skills in other contexts.

The developer provides such teacher resources as grade-level kits that include scripted curricula, 50 student workbooks, measurable objectives, evaluation tools, lesson extenders, and tips for teaching the program. According to the developer, the program is school-based but also includes such optional community and parental involvement components as parent newsletters and interactive family materials as well as information on holding parent information sessions.

Cost

The cost of materials for a classroom, including the curriculum, 50 student workbooks, teaching materials such as puppets and posters, teaching tips, and evaluation tools, ranges from $100 to $130 depending on the grade level.

Teachers are encouraged to attend an on-site or regional curriculum training workshop held by the developer. The cost per day of a regional training workshop is $300 a person for curriculum training and $400 a person for train the trainer sessions. The cost of the regional training is reduced to $850 if the participant attends all three days of training. The cost per day of an on-site training workshop, which can train groups of 15 to 50 participants, is $1,500 plus travel for curriculum training and $225 a person for train the trainer sessions. The developer states that smaller school districts may collaborate with nearby districts to share the cost of on-site training.

Two studies reviewed by the WWC investigated the effects of *Too Good for Drugs*™. Both studies (Bacon, 2000; Bacon, 2003) were randomized controlled trials that met WWC evidence standards. Both studies focused on *Too Good for Drugs*™ implemented in classrooms rather than as a schoolwide intervention.

The Bacon (2000) study investigated the program effects on middle school students and included more than 1,300 sixth-grade students attending six middle schools in one large school district in Florida. This study compared outcomes for students participating in a *Too Good for Drugs*™ curriculum with

3. The revised middle school curriculum is also known as *Too Good for Drugs II.*

outcomes for students in classes that did not use a character education curriculum.

The Bacon (2003) study investigated the program effects on elementary school students and included more than 1,100 third- and fourth-grade students attending six elementary schools in one school district in Florida. This study compared outcomes for students participating in a *Too Good for Drugs*™ curriculum with outcomes for students in classes that did not use a character education curriculum.

Effectiveness

Findings

The WWC review of character education addresses student outcomes in three domains: behavior; knowledge, attitudes, and values; and academic achievement.

Behavior. Bacon (2003) found statistically significant differences favoring the intervention group on all three subscales (personal and social skills, prosocial behavior, and inappropriate behavior) four months after the end of the program.[4] Although, as calculated by the WWC, none of these outcomes—individually or averaged—were found to be statistically significant the average effect size was large enough to be considered substantively important (at least 0.25).

Knowledge, attitudes, and values. Bacon (2000) reported statistically significant differences favoring the intervention group on three outcomes (resistance skills, prosocial peer group, and locus of control) four months after the end of the program. But none of these outcomes were found to be statistically significant as calculated by the WWC. The average effect size was neither statistically significant nor substantively important.

Bacon (2003) reported statistically significant differences in student perceptions favoring the intervention group on one of the five outcomes (goal setting and decisionmaking) four months after the end of the program. This effect was not found to be statistically significant as calculated by the WWC. The average effect size was neither statistically significant nor substantively important.

Rating of effectiveness

The WWC rates interventions as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance of the findings (as calculated by the WWC), the size of the differences between participants in the intervention condition and the comparison condition, and the consistency of the findings across studies (see the WWC Intervention Rating Scheme).

The WWC found *Too Good for Drugs™* to have potentially positive effects on behavior and no discernible effects on knowledge, attitudes, and values

Improvement index

For each outcome domain, the WWC computed an improvement index based on the average effect size (see the Technical Details of WWC-Conducted Computations). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is entirely based on the size of the effect, regardless of the statistical significance of the effect, the study design, or analysis. The improvement index can take on values between −50 and +50, with positive numbers denoting favorable results. The average improvement index for behavior is +10 percentile points, with a range of 0 to +17 percentile points across findings. The average improvement index for knowledge, attitudes, and values is +7 percentile points, with a range of +3 to +11 percentile points across findings.

4. The level of statistical significance was calculated by the WWC and, where necessary, corrects for clustering within classrooms or schools, and for multiple comparisons. For an explanation, see the WWC Tutorial on Mismatch. See the Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate the statistical significance. In the case of the *Too Good for Drugs*™ report, corrections for clustering and multiple comparisons were needed.

The WWC found *Too Good for Drugs™* to have potentially positive effects on behavior and no discernible effects on knowledge, attitudes, and values *(continued)*

Summary

The WWC reviewed two studies on *Too Good for Drugs™.* Both studies (Bacon, 2000; Bacon, 2003) were randomized controlled trials that met WWC evidence standards. Only one study (Bacon, 2003) examined student outcomes in the behavior domain. The average effect size across all behavior outcomes examined in this study was substantively important but not statistically significant. So the WWC rated the program as having potentially positive effects in the behavior domain. Both studies reviewed for *Too Good for Drugs™* examined student outcomes in the knowledge, attitudes, and values domain. When the WWC aggregated the results across all outcomes in this domain in each of the studies, the domain average effect size in each of the studies was neither statistically significant nor substantively important. In addition, none of the individual findings was statistically significant, as calculated by the WWC. So the WWC rated the program as having no discernible effects on knowledge, attitudes, and values. Character education, an evolving field, is beginning to establish a research base. The evidence presented in this report is limited and may change as new research emerges.

References

Met WWC evidence standards

Bacon, T. P. (2000). The effects of the Too Good for Drugs prevention program on students' substance use intentions and risk and protective factors. *Florida Educational Research Council, Inc., Research Bulletin,* 31(3 & 4), 1–25.

Bacon, T. P. (2003). Technical report: Evaluation of the Too Good for Drugs Elementary School Prevention Program. A report produced for Florida Department of Education Department of Safe and Drug-Free Schools. Tallahassee, FL. Available from: The Mendez Foundation, 601 S. Magnolia Avenue, Tampa, FL 33606.

For more information about specific studies and WWC calculations, please see the WWC *Too Good for Drugs™* Technical Appendices.

Appendix

Appendix A1.1   Study characteristics: Bacon, 2000 (randomized controlled trial)

Characteristic	Description
Study citation	Bacon, T. P. (2000). The effects of the Too Good for Drugs prevention program on students' substance use intentions and risk and protective factors. *Florida Educational Research Council, Inc., Research Bulletin,* 31(3 & 4), 1–25.
Participants	The comparison group included 1,318 sixth-grade students from six middle schools. About 51% of the student population in these schools in eligible for participation in the free or reduced lunch program. Of the sample, 52% were females, 48% were Caucasian, 33% African-American, 13% Hispanic, and 6% Asian.
Setting	One large school district in Florida that serves students from urban, suburban, and rural regions.
Intervention	The *Too Good for Drugs™* sixth-grade curriculum consisted of nine lesson units averaging 45 minutes in length. The program was implemented during the first quarter of the school year.
Comparison	The comparison group was drawn from matched schools in the same school district. Comparison group students did not participate in the *Too Good for Drugs™* program at the time of the study but received this program at the fourth quarter of the school year.
Primary outcomes and measurement	Students responded to survey items assessing students' intentions to use marijuana and their perceptions of peer resistance skills, positive attitudes toward nondrug use, perceptions of peer normative substance use, perceptions of peer disapproval of substance use, prosocial peer relationships, and locus of control. (See Appendix A2.2 for a more detailed description of outcome measures.)
Teacher training	All lessons were delivered by program instructors (trained off-site educators), so no training of teachers was done.

Appendix A1.2   Study characteristics: Bacon, 2003 (randomized controlled trial)

Characteristic	Description
Study citation	Bacon, T. P. (2003). Technical report: Evaluation of the Too Good for Drugs Elementary School Prevention Program. A report produced for Florida Department of Education Department of Safe and Drug-Free Schools. Tallahassee, FL. Available from: The Mendez Foundation, 601 S. Magnolia Avenue, Tampa, FL 33606.
Participants	The study comparison included 1,142 third- and fourth-grade students from six elementary schools. About 45% of the sample was eligible to participate in the free or reduced lunch program. Of the sample, 49% were females, 71% Caucasian, 17% African-American, 10% Hispanic, and 2% other race (Asian; American Indian; multicultural).
Setting	The school district was in Lake County, Florida.
Intervention	The program was implemented during the first half of the school year. Classroom teachers delivered 10 lesson units averaging 45 minutes in length to students in grades 3 and 4. Students were also encouraged to participate in "Home Workouts" with their family members to reinforce the lessons.

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Characteristic	Description
Comparison	The comparison group was drawn from matched schools in the same school district. Comparison group students did not participate in the *Too Good for Drugs™* program at the time of the study but received it in the fourth quarter of the school year.
Primary outcomes and measurement	Students responded to two sets of survey items. Three items were used to gauge students' intentions to drink alcohol and use marijuana within the next 12 months. Nineteen additional items were used to assess protective factors associated with youth susceptibility to illicit drugs. The 19 items were grouped into such protective factor subscales as perceptions of peer resistance skills, prosocial peer relationships, and locus of control. (See Appendices A2.1 and A2.2 for a more detailed description of outcome measures.)
Teacher training	No training information was given other than that in small groups or individually teachers received a brief training refresher.

Appendix A2.1   Outcome measures in the behavior domain

Outcome measure	Description
The Teacher Checklist of Student Behavior (TCSB): personal and social skills	This scale, developed by the study author, consists of 11 items assessing students' emotional behavior and interpersonal interactions with peers. The checklist was completed for each student individually (as cited in Bacon, 2003).
The Teacher Checklist of Student Behavior (TCSB): prosocial behaviors	This scale, developed by the study author, consists of six items assessing students' helping, respectful, and emphatic behavior with peers. The checklist was completed for each student individually (as cited in Bacon, 2003).
The Teacher Checklist of Student Behavior (TCSB): inappropriate behaviors	This scale, developed by the study author, consists of six items assessing students' aggressive and disruptive behavior. The checklist was completed for each student individually (as cited in Bacon, 2003).

Appendix A2.2   Outcome measures in the knowledge, attitudes, and values domain

Outcome measure	Description
Intentions for drinking	One survey item on which students indicate if they intend to drink alcohol anytime during the next year (as cited in Bacon, 2000).
Intention for marijuana	One survey item on which students indicate if they intend to use marijuana anytime during the next year (as cited in Bacon, 2000).
Perceptions of social and resistance skills	A measure on which students indicate if they can tell the difference between healthy and unhealthy relationships and if they are able to avoid unhealthy behaviors (as cited in Bacon, 2000; Bacon, 2003).
Prosocial peers	A scale composed by the study author for the purpose of this study to assess perceptions of prosocial peer behaviors (as cited in Bacon, 2000).
Locus of control	A scale composed by the study author for the purpose of this study to assess perceptions of locus of control related to being able to avoid drinking, fighting, and drug use (as cited in Bacon, 2000).
Perceptions of emotional competency skills	A six-item scale developed by the study author on which students indicated if they felt confident in their ability to manage their behavior and emotions and to successfully plan for personal goals (as cited in Bacon, 2003).
Perceptions of goal setting and decisionmaking skills	A seven-item scale developed by the study author on which students indicated if they managed their actions by setting goals and creating plans to reach these goals (as cited by Bacon, 2003).

Appendix A3.1   Summary of study findings included in the rating for the behavior domain[1]

| Outcome measure | Study sample | Sample size[3] (students/ schools) | Author's findings from the study | | WWC calculations | | | |
| | | | Mean outcome (standard deviation[2]) | | | | | |
			Too Good for Drugs™ group (column 1)	Comparison group (column 2)	Mean difference[4] (column 1– column 2)	Effect size[5]	Statistical significance[6] (at α = 0.05)	Improvement index[7]
Bacon, 2003 (randomized controlled trial)								
Personal and social skills (follow-up)	Grades 3–4	6/1,051	3.75 (0.83)	3.51 (0.72)	0.24	0.31	ns	+12
Prosocial behaviors (follow-up)	Grades 3–4	6/1,051	3.82 (0.86)	3.46 (0.78)	0.36	0.44	ns	+17
Inappropriate behaviors (follow-up)	Grades 3–4	6/1,051	4.04 (1.04)	4.04 (1.18)	0.00	0.00	ns	+0
Domain average[8] for behavior						0.25	ns	+10

ns = not statistically significant

1. This appendix reports end-of-program and follow-up findings considered for the effectiveness rating and the improvement index. Interim and immediate posttest findings from the same studies are not included in these ratings but are reported in Appendix A4.1.
2. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes.
3. The WWC received confirmation from the study author that the analysis of pretest equivalence was based on the analysis sample rather than the intent-to-treat sample. This analysis addresses concerns about sample attrition that otherwise might affect this review.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. For an explanation of the effect size calculation, please see the Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is the result of chance rather than a real difference between the groups. The level of statistical significance was calculated by the WWC and, where necessary, corrects for clustering within classrooms or schools, and for multiple comparisons. For an explanation, see the WWC Tutorial on Mismatch. See the Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate the statistical significance. In the case of the Too Good for Drugs™ report, corrections for clustering and multiple comparisons were needed.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between –50 and +50, with positive numbers denoting favorable results.
8. This row provides the study average, which is also the domain average in this case. The WWC-computed domain average effect size is a simple average rounded to two decimal places. The domain improvement index is calculated from the average effect size.

Appendix A3.2 Summary of study findings included in the rating for the knowledge, attitudes, and values domain[1]

| Outcome measure[3] | Study sample | Sample size[4,5] (students/ schools) | Mean outcome (standard deviation[2]) | | WWC calculations | | | |
			Too Good for Drugs™ group (column 1)	Comparison group (column 2)	Mean difference[6] (column 1– column 2)	Effect size[7]	Statistical significance[8] (at $\alpha = 0.05$)	Improvement index[9]
Bacon, 2000 (randomized controlled trial)								
Intentions for drinking (follow-up)	Grade 6	6/1,060	90 out of 495 students	62 out of 298 students	1.18	0.18[10]	ns	+4
Intention for marijuana (follow-up)	Grade 6	6/1,060	62 out of 510 students	54 out of 319 students	1.47	0.23[10]	ns	+9
Resistance skills (follow-up)	Grade 6	6/1,060	4.36 (0.75)	4.15 (0.82)	0.21	0.27	ns	+11
Peers disapprove use (follow-up)	Grade 6	6/1,060	3.73 (0.98)	3.47 (1.07)	0.26	0.26	ns	+10
Prosocial peers (follow-up)	Grade 6	6/1,060	4.58 (0.74)	4.50 (0.86)	0.08	0.10	ns	+4
Locus of control (follow-up)	Grade 6	6/1,060	4.37 (0.63)	4.25 (0.72)	0.12	0.18	ns	+7
Average[11] for knowledge, attitudes, and values (Bacon, 2000)						0.20	ns	+8
Bacon, 2003 (randomized controlled trial)								
Emotional competency skills (follow-up)	Grades 3–4	6/935	4.00 (0.61)	3.95 (0.61)	0.05	0.08	ns	+3
Social and resistance skills (follow-up)	Grades 3–4	6/935	3.59 (0.63)	3.54 (0.64)	0.05	0.08	ns	+3
Goal setting and decision making skills (follow-up)	Grades 3–4	6/935	4.33 (0.73)	4.21 (0.71)	0.12	0.17	ns	+7
Average[11] for knowledge, attitudes, and values (Bacon, 2003)						0.11	ns	+4
Domain average for knowledge, attitudes and values across studies						0.16	na[12]	+7

ns = not statistically significant
na = not applicable

1. This appendix reports end-of-program and follow-up findings considered for the effectiveness rating and the improvement index. Interim and immediate posttest findings from the same studies are not included in these ratings, but are reported in Appendix A4.2.
2. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes.
3. Bacon (2003) also examined effects on students' perceptions of the harmful effects of drugs and alcohol and students' intentions to smoke tobacco. These outcomes were not included, because they were not relevant to the scope of

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this review. For further information about the scope of this review, please see the Character Education Protocol.

4. The WWC requested and received from the study author sample sizes for the analysis sample of students for all variables in Bacon (2000) because they were not reported in the study paper.

5. The WWC received confirmation from the study author that the analysis for pretest equivalence is based on the analysis sample rather than the intent-to-treat sample. This analysis addresses concerns about sample attrition that otherwise might affect findings.

6. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group. The numbers in the mean difference column for the intentions for drinking and marijuana use represent the odds ratio (ratio between the proportions of the intervention group and comparison group) used to calculate effect size.

7. For an explanation of the effect size calculation, please see the Technical Details of WWC-Conducted Computations.

8. Statistical significance is the probability that the difference between groups is the result of chance rather than a real difference between the groups. The level of statistical significance was calculated by the WWC and, where necessary, corrects for clustering within classrooms or schools, and for multiple comparisons. For an explanation, see the WWC Tutorial on Mismatch. See the Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate the statistical significance. In the case of the *Too Good for Drugs™* report, corrections for clustering and multiple comparisons were needed.

9. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between −50 and +50, with positive numbers denoting favorable results.

10. Effect size for this outcome measure was calculated using the odds ratio formula, please see the Technical Details of WWC-Conducted Computations.

11. The WWC-computed average effect sizes for each study and for the domain across studies are simple averages rounded to two decimal places. The average improvement indices are calculated from the average effect sizes.

12. In both studies reviewed for *Too Good for Drugs™* Bacon reported statistically significant positive findings for several student outcomes, but after correcting for clustering and multiple comparisons the WWC found that the differences between the groups were not statistically significant.

Appendix A4.1   Summary of end-of-program study findings for the behavior domain[1]

Outcome measure	Study sample	Sample size (students/schools)[3]	Author's findings from the study		WWC calculations			
			Mean outcome (standard deviation[2])					
			Too Good for Drugs™ group (column 1)	Comparison group (column 2)	Mean difference[4] (column 1– column 2)	Effect size[5]	Statistical significance[6] (at $\alpha = 0.05$)	Improvement index[7]
Bacon, 2000 (randomized controlled trial)								
Personal and social skills	Grades 3–4	6/1,051	3.71 (0.78)	3.50 (0.66)	0.21	0.29	ns	+11
Prosocial behaviors	Grades 3–4	6/1,051	3.79 (0.87)	3.37 (0.72)	0.42	0.52	ns	+20
Inappropriate behaviors	Grades 3–4	6/1,051	4.20 (0.91)	4.05 (1.01)	0.15	0.16	ns	+6

ns = not statistically significant

1. This appendix presents interim and immediate posttest findings for the behavior domain. End-of-program and follow-up scores were used for rating purposes and are presented in Appendix A3.1.
2. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes.
3. The WWC received confirmation from the study author that the analysis for pretest equivalence is based on the analysis sample rather than the intent-to-treat sample. This analysis addresses concerns about sample attrition that otherwise might affect findings.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. For an explanation of the effect size calculation, please see the Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is the result of chance rather than a real difference between the groups. The level of statistical significance was calculated by the WWC and, where necessary, corrects for clustering within classrooms or schools. For an explanation, see the WWC Tutorial on Mismatch. See the Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate the statistical significance. In the case of the Too Good for Drugs™ report, a correction for clustering was needed.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between –50 and +50, with positive numbers denoting favorable results.

Appendix A4.2 Summary of end-of-program study findings for the knowledge, attitudes, and values domain[1]

| Outcome measure[3] | Study sample | Sample size (students/ schools)[4,5] | Author's findings from the study | | WWC calculations | | | |
| | | | Mean outcome (standard deviation[2]) | | | | | |
			Too Good for Drugs™ group (column 1)	Comparison group (column 2)	Mean difference[6] (column 1– column 2)	Effect size[7]	Statistical significance[8] (at $\alpha = 0.05$)	Improvement index[9]
Bacon, 2000 (randomized controlled trial)								
Intentions for drinking	Grade 6	6/1,060	59 out of 575 students	58 out of 366 students	1.65	0.30	ns	+12
Intention for marijuana	Grade 6	6/1,060	50 out of 589 students	45 out of 384 students	1.43	0.22	ns	+9
Resistance skills	Grade 6	6/1,060	4.50 (0.45)	4.25 (0.78)	0.25	0.42	ns	+16
Prosocial peers	Grade 6	6/1,060	4.71 (0.56)	4.58 (0.72)	0.13	0.21	ns	+8
Locus of control	Grade 6	6/1,060	4.47 (0.71)	4.26 (0.57)	0.21	0.32	ns	+12
Bacon, 2003 (randomized controlled trial)								
Emotional competency skills	Grades 3–4	6/935	4.08 (0.57)	3.94 (0.59)	0.14	0.24	ns	+10
Social and resistance skills	Grades 3–4	6/935	3.63 (0.68)	3.49 (0.68)	0.14	0.21	ns	+8
Goal setting and decisionmaking skills	Grades 3–4	6/935	4.50 (0.58)	4.24 (0.66)	0.26	0.42	ns	+16

ns = not statistically significant

1. This appendix presents interim and immediate posttest findings for measures that fall in the knowledge, attitudes, and values domain. End-of-program and follow-up scores were used for rating purposes and are presented in Appendix A3.2.
2. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes.
3. Bacon (2003) also examined effects on students' perceptions of the harmful effects of drugs and alcohol and students' intentions to smoke tobacco. These outcomes were not included, because they were not relevant to the scope of this review. For further information about the scope of this review, please see the Character Education Protocol.
4. WWC requested and received from the study author sample sizes for the analysis sample of students for all variables in Bacon (2000) because they were not reported in the study paper.
5. The WWC received confirmation from the study author that the analysis for pretest equivalence is based on the analysis sample rather than the intent-to-treat sample. This analysis addresses concerns about sample attrition that otherwise might affect findings.
6. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group. The numbers in the mean difference column for the intentions for drinking and marijuana use represent the odds ratio (ratio between the proportions of the intervention group and comparison group) used to calculate effect size.
7. For an explanation of the effect size calculation, please see the Technicals Details of WWC-Conduct Computations.

8. Statistical significance is the probability that the difference between groups is the result of chance rather than a real difference between the groups. The level of statistical significance was calculated by the WWC and where necessary, corrects for clustering within classrooms or schools. For an explanation, see the WWC Tutorial on Mismatch. See the Technicals Details of WWC-Conduct Computations for the formulas the WWC used to calculate the statistical significance. In the case of the *Too Good for Drugs™* report, a correction for clustering was needed.

9. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between −50 and +50, with positive numbers denoting favorable results.

Appendix A5.1   Rating for the behavior domain

The WWC rates interventions as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.[1]

For the outcome domain of behavior, the WWC rated *Too Good for Drugs*™ as having potentially positive effects. It did not meet the criteria for positive effects, because it only had one study. The remaining ratings (mixed effects, no discernible effects, potentially negative effects, and negative effects) were not considered, because *Too Good for Drugs*™ was assigned the highest applicable rating.

Rating received

Potentially positive effects: Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect, thus qualifying as a *positive* effect.

  Met. The one study on *Too Good for Drugs*™ that examined behavior found a substantively important positive effect.

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect. Fewer or the same number of studies showing *indeterminate* effects than showing statistically significant or substantively important *positive* effects.

  Met. The WWC analysis found no statistically significant or substantively important negative effects or indeterminate effects in this domain.

Other ratings considered

Positive effects: Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a strong design.

  Not met. *Too Good for Drugs*™ had only one evaluation study meeting WWC evidence standards that examined student outcomes in the behavior domain.

- Criterion 2: No studies showing statistically significant or substantively important *negative* effects.

  Met. No studies sharing statistically significant or substantively important negative effects in this domain.

[1]. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain level effect. The WWC also considers the size of the domain level effect for ratings of potentially positive effects. See the WWC Intervention Rating Scheme for a complete description.

Appendix A5.2   Rating for the knowledge, attitudes, and values domain

The WWC rates interventions as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.[1]

For the outcome domain of knowledge, attitudes, and values, the WWC rated *Too Good for Drugs*™ as having no discernible effects. It did not meet the criteria for other ratings (positive effects, potentially positive effects, mixed effects, potentially negative effects, and negative effects) because none of the studies showed statistically significant or substantively important effects.

Rating received

No discernible effects: No affirmative evidence of effects.

- Criterion 1: None of the studies shows a statistically significant or substantively important effect, either positive or negative.

    Met. *Too Good for Drugs*™ had two studies meeting WWC evidence standards. Neither study showed a statistically significant or substantively important effect.

Other ratings considered

Positive effects: Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a strong design.

    Not met. *Too Good for Drugs*™ had two studies meeting WWC evidence standards, both of which met standards for strong design. But neither study showed a statistically significant positive effect.

- Criterion 2: No studies showing statistically significant or substantively important *negative* effects.

    Met. The WWC analysis found no statistically significant or substantively important negative effects in this domain.

Potentially positive effects: Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect, thus qualifying as a *positive* effect.

    Not met. The WWC analysis found no statistically significant or substantively important positive effects in this domain.

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect. Fewer or the same number of studies showing *indeterminate* effects than the number showing statistically significant or substantively important *positive* effects.

    Not met. The WWC analysis found no statistically significant or substantively important negative effects in this domain. But, while both studies showed indeterminate effects, neither showed statistically significant or substantively important positive effects in this domain.

Mixed effects: Evidence of inconsistant effects as demonstrated through EITHER of the following.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect. At least one study showing a statistically significant or substantively important *negative* effect, but no more such studies than the number showing a statistically significant or substantively important *positive* effect.

    Not met. No studies showing statistically significant or substantively important effects in this domain.

 OR

- Criterion 2: At least one study showing a statistically significant or substantively important effect AND more studies showing an *indeterminate* effect than showing a statistically significant or substantively important effect.

Not met. No studies sharing a statistically significant or substantively important effect in this domain.

Potentially negative effects: Evidence of a negative effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *negative* effect.

  Not met. No studies showing a statistically significant or substantively important negative effect in this domain.

- Criterion 2: No studies showing a statistically significant or substantively important *positive* effect, OR more studies showing statistically significant or substantively important *negative* effects than showing statistically significant or substantively important *positive* effects.

  Met. No studies showing a statistically significant or substantively important positive effect in this domain.

Negative effects: Strong evidence of a negative effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *negative* effects, at least one of which is based on a strong design.

  Not met. The WWC analysis found no statistically significant negative effects in this domain.

- Criterion 2: No studies showing statistically significant or substantively important *positive* effects.

  Met. The WWC analysis found no statistically significant or substantively important positive effects in this domain.

1. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain level effect. The WWC also considers the size of the domain level effect for ratings of potentially positive effects. See the WWC Intervention Rating Scheme for a complete description.