

# Comprehensive Substance Abuse Prevention Program Evaluation

***THE IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION***

**2013  
Comprehensive  
Substance Abuse Prevention  
Program Evaluation – Annual Report  
7/1/2012 – 6/30/2013**

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# ***Comprehensive Substance Abuse Prevention Program Evaluation – Annual Report***

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## EXECUTIVE SUMMARY

The Comprehensive Substance Abuse Prevention Project provides primary alcohol, tobacco, and other drug (ATOD) prevention services to all counties in Iowa. Eighteen providers covering twenty-three service areas implemented a variety of evidence-based prevention programming for the project year that ran from July 1, 2012 to June 30, 2013. Agencies submitted 6,879 total matched pre-test and post-test surveys for analysis.

Participants included in this evaluation ranged in age from 8 to 19; the median age (at post-test) was 12. Over half (58.5%) of the participants were 6<sup>th</sup> and 7<sup>th</sup> grade students. Males comprised 50.7% of respondents. Eighty percent of respondents were White, and 9% of participants indicated they were of Hispanic or Latino ethnicity. Attrition analyses indicated that males, participants age 14-16 and 18, and non-white participants other than Asians were more likely to drop out or not complete a post-test. Attitude and perception of risk of harm from substances also were related to attrition: The less wrong students thought substance use was and the less risky they thought substance use was the more likely they were to attrite.

The evaluation of the Comprehensive Prevention project answers the following questions:

- *Has alcohol/tobacco/marijuana usage changed in the target population?*

The following table presents data on the percentage of middle and high school youth reporting past 30-day use of alcohol, binge drinking, cigarettes, and marijuana at the pre-test, and the percentage change and direction of change at post-test. These data are for participants in all programs combined, excluding Diversion programs. Iowa Youth Survey data also are provided. There was no evidence of change from pre-test to post-test for alcohol, binge drinking, cigarette, or marijuana use in the combined middle school and high school Comprehensive Prevention participant group (statistical tests yielded p values greater than 0.05). However, this also means that use of those substances showed no evidence of increasing as might be expected due to maturation.

Percentage of Youth Reporting Past 30-Day Use at the Pre-Test and Change at Post-Test: Comprehensive Prevention Project Participants										
Group	N	Median Age	Alcohol		Binge Drinking		Cigarettes		Marijuana	
			Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change
Iowa Youth Survey <sup>1</sup>	46,133 <sup>2</sup>	14 <sup>3</sup>	–	<b>+4.80</b>	–	<b>+3.60</b>	–	<b>+2.00</b>	–	<b>+2.20</b>
Comprehensive Prevention	5,356	13	8.57	<b>+0.40</b>	1.62	<b>+0.21</b>	2.54	<b>+0.35</b>	1.89	<b>+0.18</b>

<sup>1</sup> IYS entries reflect the estimated yearly average change in 30-day use between participating Iowa students in grades 6 and 11. Data were from the 2012 Iowa Youth Survey, State of Iowa report.  
<sup>2</sup> The total number of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 24,170, and the total number of 11<sup>th</sup> graders was 21,963.  
<sup>3</sup> The median age of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 11.5 years, and the median age of 11<sup>th</sup> graders was 16.5 years.



Program-specific data show no statistical evidence of change from pre-test to post-test in past 30-day use for the following programs: All Stars, Brain Power, Prime for Life – Non Diversion, Project Towards No Drug Abuse, Project Towards No Tobacco Use, and Too Good for Drugs. However, this also means that for those programs, use of those substances showed no evidence of increasing as might be expected due to maturation. For LifeSkills Training, there was a statistically significant increase in the use of cigarettes for participants in the first year of the program. For Project ALERT, there was a statistically significant increase in the use of alcohol for participants in the second year of the program. Those outcomes pertain only to a single year of those multi-year programs and are not necessarily indicative of outcomes of the full program. There was no evidence of change for use of other substances in those two programs. There were statistically significant decreases in the use of all three substances and binge drinking for Diversion program participants.

- *Has the percentage of the target population who indicate desirable attitudes (i.e., that it is wrong to use substances) at baseline (pre-test) maintained or increased after the intervention (post-test)?*

Attitude responses are coded on a Likert scale from 0="not wrong at all" to 3="very wrong." Maintaining a response from pre-test to post-test that use is "wrong" or "very wrong," or moving up the scale towards "very wrong" from any point on the scale is considered a positive outcome. Elementary school program showed positive outcomes of 92% or more for attitude toward substance use, with one exception: Project Towards No Tobacco Use had positive outcomes regarding attitude toward alcohol use for 84.4% of participants. Most middle and high school programs showed positive outcomes for 82% or more of participants. Project Towards No Drug Abuse tended to show lower positive outcome percentages for all substances. For Diversion programs, 62% or more of participants showed positive outcomes for attitudes regarding alcohol use, 66% showed positive outcomes regarding attitude toward cigarette use, and 71% showed positive outcomes regarding attitude toward marijuana use. It is noteworthy that thirty-three percent of Diversion participants moved up the scale (further toward "very wrong") for alcohol use and twenty-nine percent moved up the scale for cigarette use.

- *Has perception of risk of harm from alcohol/tobacco/marijuana use maintained a positive response or increased from pre-test to post-test?*

Perception of risk responses are coded on a Likert scale from 0="no risk" to 3="great risk." Maintaining a response from pre-test to post-test that use poses "moderate risk" or "great risk," or moving up the scale towards "great risk" from any point on the scale is considered a positive outcome. Outcome percentages were more variable among programs for perception of risk of harm from use. Most elementary programs had positive outcomes of 82% or more for alcohol and cigarettes, although Project Towards No Tobacco Use had 73% positive outcomes for perceived risk of harm from alcohol use. Outcome percentages for elementary programs for perceived risk of marijuana use ranges from 65% to 78%. Most middle and high school programs had positive outcomes of 81% or more for alcohol, cigarettes, and marijuana, although Project Towards No Tobacco Use had 73% positive outcomes for perceived risk of harm from alcohol use, and Project Towards No Drug Abuse had 60% of positive outcomes for perceived risk of harm from marijuana use. For Diversion programs, 70% or more of participants showed positive outcomes for perceived risk of harm from substance use. It is noteworthy that 35% of Diversion participants moved up the scale (further toward "great risk") for perceived risk of harm from alcohol use, 20% moved up the scale for perceived risk of harm from cigarette use, and 30% moved up the scale for perceived risk of harm from marijuana use.



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## BACKGROUND

The Comprehensive Substance Abuse Prevention Project provides primary alcohol, tobacco, and other drug (ATOD) prevention services to all counties in Iowa. The project is funded through a Substance Abuse Prevention and Treatment (SAPT) Block Grant from the federal Substance Abuse and Mental Health Services Administration (SAMHSA). The Iowa Department of Public Health (IDPH) administers the prevention portion of the Block Grant funds through a competitive process to provide funding for each county in the state. Eighteen providers covering twenty-three service areas were awarded contracts to implement a variety of evidence-based prevention programming for the funding cycle that runs from July 1, 2010 to June 30, 2014.

The Iowa Consortium for Substance Abuse Research and Evaluation (Consortium) was awarded a contract to evaluate the project and to provide training and technical assistance to the providers on data collection and data entry. The evaluation of the Comprehensive Substance Abuse Prevention Project (Comprehensive Project) discussed in this report covers the second year of the funding period mentioned above and includes only recurring educational programs for youth. Other services provided under the Comprehensive Prevention Project were monitored outside of this evaluation.

### Methodology

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The evaluation involves a matched pre-post design whereby a survey is administered to the target population at the beginning and at the conclusion of the prevention program. The survey is also administered at the end of each year for programs spanning multiple years. Post-test survey data from the previous program year is typically used as a baseline for reporting current-year outcomes for multi-year programs. Survey instruments may be found in Appendix A.

Agencies submitted 7,535 pre-tests, 6,901 first-year post-tests, 1,236 second-year post-tests, and 66 third-year post-tests during State Fiscal Year 2013 (July 1, 2012 – June 30, 2013). This yielded 6,879 total matched surveys; 5,666 of these were for participants in single-year programs and those in the first year of multi-year programs; 1170 were from participants in the second year of multi-year programs, and 43 were from participants in the third year of multi-year programs. Matched data include participants completing the Comprehensive and Younger Youth survey instruments.

The matched data sets are used to answer the following evaluation questions:

- Has alcohol/tobacco/marijuana use changed in the target population?
- Has the percentage of the target population who indicate at baseline (pre-test) that substance use by someone their age is wrong or very wrong remained the same (maintained) or increased after the intervention (post-test)?
- Has perceived risk of harm from alcohol/tobacco/marijuana use maintained a positive response (belief that using poses a moderate or great risk of harm) or increased from pre-test to post-test?



## OUTCOME DATA

### Participant Profile

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Demographic data provided here include participants in all programs who completed the Comprehensive or Younger Youth survey instrument. There are some instances where individual responses on demographic data varied from pre-test to post-test. Some differences are naturally occurring, such as participants' age or grade increasing by one year. In those cases, post-test responses were used, as those data most closely represent the matched group included in this report. In addition, there were numerous mismatches in individual participant responses from pre-test to post-test for gender, race, and ethnicity on both surveys. Upon investigation, agency and Consortium staff discovered that the majority of these discrepancies were due to participants giving different responses and not due to data entry error. Therefore, evaluation staff created a standard rule for addressing discrepancies in demographic data, which was to use the responses on the post-tests.

The median age (at post-test) of participants included in this report is 12. Over half (58.5%) of the participants are 6<sup>th</sup> and 7<sup>th</sup> grade students. Males comprise 50.7% of respondents, and 9.3% of all respondents are Hispanic or Latino. Participant racial groups are delineated below:

- 80.3% White
- 4.1% Black/African American
- 2.3% Asian
- 0.9% American Indian/Alaska Native
- 0.2% Native Hawaiian/Other Pacific Islander
- 2.7% Some Other Race
- 9.7% More than one race

A list of the Institute of Medicine (IOM) population categories served by this project may be found in the Appendix.

### *Attrition Analysis*

The Evaluators conducted an attrition analysis comparing students who completed a pre- and a post-test survey to those who completed only a pre-test survey. The analysis was conducted on data for students in single-year and the first year of multi-year programs. Agencies differ in the number of curriculum years they implement of any given program, and students do not complete pre-tests in subsequent years of multi-year programs. Therefore, determining attrition from year to year would be difficult. Eleven percent of students who completed a single-year or first year program pre-test did not complete a post-test survey and are considered attrition cases. There were clear differences between students who dropped out of programs or failed to complete a post-test and those who did complete a post-test. Males were more likely to attrite than females (Cochran-Mantel-Haenszel [CMH],  $p=0.0068$ ). There were no differences based on ethnicity, however members of all races other than Asian were more likely to attrite than whites (CMH,  $p<0.0001$ ). Blacks and American Indian/Alaskan Natives had about twice the probability as whites to attrite. There were significant differences in the grades (CMH,  $p<0.0001$ ) and ages of students dropping out: Tenth graders and those out of high school were most likely to attrite. Those students dropped out or did not complete a post-test at twice the rate of seventh graders. Similarly, 14-16 and 18 year olds were more likely to attrite than participants of other ages (CMH,  $p=0.0001$ ). Almost thirty percent (28.9%) of 18 year olds dropped out or did not complete a post-test. There were also differences based on students' attitudes toward and perception of risk of harm from substance use. The less wrong students thought substance use





was, the more likely they were to attrite. Students thinking cigarette use is not wrong at all were nearly twice as likely to drop out as those thinking it is even a little wrong (CMH,  $p < 0.0001$ ). Students thinking alcohol use is not wrong at all were more than twice as likely to attrite as those thinking it is very wrong (CMH,  $p = 0.0006$ ). Students thinking marijuana use was not wrong at all were nearly 3 times as likely to drop out as those thinking it is very wrong (CMH,  $p < 0.0001$ ). Perception of risk followed the same progressive pattern with the exception of cigarette risk: Those thinking cigarette use poses slight risk were most likely to drop out; about twice as likely as those thinking it poses great risk (CMH,  $p < 0.0001$ ). Students thinking alcohol use poses no risk were about twice as likely to attrite as those indicating great risk (CMH,  $p < 0.0001$ ), and students thinking marijuana use poses no risk were more than twice as likely to drop out as those thinking it poses great risk (CMH,  $p < 0.0001$ ). Therefore, the participants represented by the outcome data presented in this report differ in some ways from those who initiated the program. This selective attrition should be taken into consideration when interpreting outcomes.

The outcome evaluation assessed past 30-day substance use, attitudes toward substance use, and perceived risk of harm from substance use for alcohol, cigarettes, and marijuana.

### **Past 30-Day Use**

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Data on past 30-day use are provided for Comprehensive Prevention project participants who completed the Comprehensive Prevention Survey for programs where 50 or more participants completed both a pre-test and a post-test. The Comprehensive Prevention Younger Youth survey does not ask about past 30-day use, therefore participants who completed that survey are not included in the past 30-day use data. Attitude and perceived risk outcomes for Younger Youth respondents are provided beginning on page 10. In addition, data for Diversion program participants are provided separately because the population served by Diversion programs is different from that of the other programs. Diversion program outcome data begin on page 37. Tables 1 through 3 and Figures 1 through 3 on pages 4 through 9 present past 30-day use data for middle school and high school youth in non-Diversion programs.

The Iowa Youth Survey (IYS) data are provided as a reference for interpreting the outcome data in this report. The Iowa Youth Survey is a triennial, and recently a biennial, assessment of Iowa's school-age (grades 6, 8, and 11) students' attitudes toward substance use and actual use of substances. The IYS data reflect changes due to maturation of the youth through the different grade levels. The 2012 IYS data provided here represent an estimate of the change one might see among youth in the general population over the course of one year. Thus, this shows the estimated annual change one might expect in Iowa's general youth population versus the outcomes of youth who complete specific prevention programming under the Comprehensive Prevention project. (Note: Youth who received Comprehensive programming may also have completed the IYS). The average yearly change was calculated by dividing the difference between grades by the number of years between grades. This was done using 6<sup>th</sup> and 11<sup>th</sup> grade IYS data to provide a reference for Comprehensive Prevention Project outcomes in Table 1; using 6<sup>th</sup> and 8<sup>th</sup> grade IYS data for participants in elementary and middle school programs; and using 8<sup>th</sup> and 11<sup>th</sup> grade IYS data for participants in high school programs. A single average yearly change figure is given in the tables below to simplify interpretation. True yearly change rates, however, would increase each successive year (i.e., past 30-day use between 6<sup>th</sup> and 7<sup>th</sup> grade may increase less than 4.5%, but may increase more than 4.5% between 7<sup>th</sup> and 8<sup>th</sup> grade). While the time span between pre-test and post-test for some prevention programs presented here is less than one year, the IYS average yearly change serves as a general point of reference when examining the program outcomes rather than comparing to zero, or no change.



Table 1 presents data on the percentage of middle and high school youth reporting past 30-day use of alcohol, binge drinking (5 or more drinks in a row), cigarettes, and marijuana at the pre-test, and the percentage change and direction of change at post-test. Increases in the percentage of youth reporting use are indicated by a '+'; decreases in percentage of youth reporting use are indicated by a '-'. These data are for participants in all programs combined, excluding Diversion programs. Iowa Youth Survey data also are provided. The change values presented in the table do not necessarily indicate statistically significant differences from pre-test to post-test.

**Table 1. Change in Past 30-Day Use: Comprehensive Prevention Project Participants**

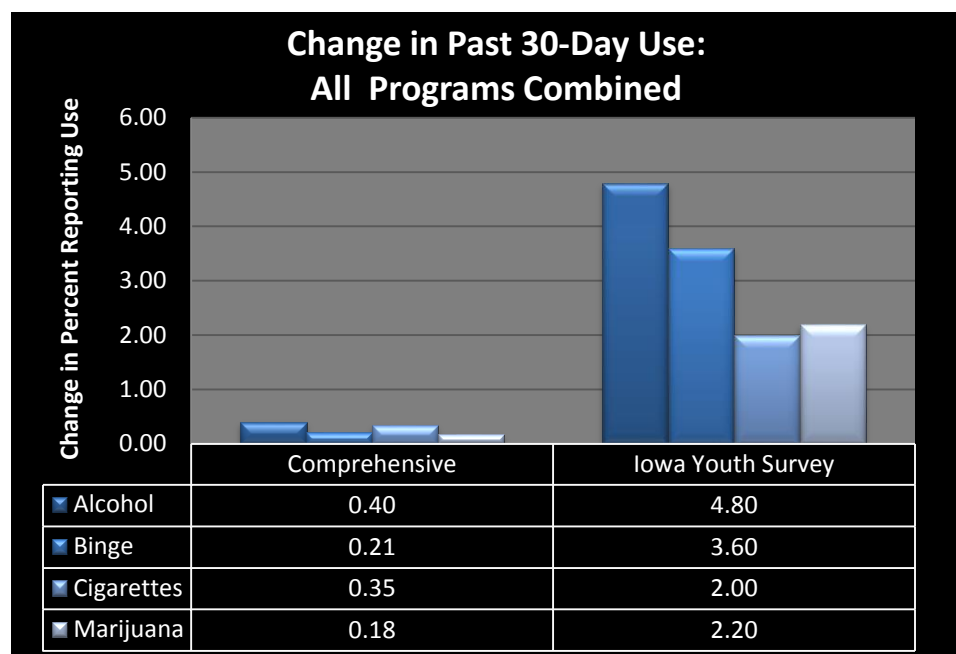
Percentage of Youth Reporting Past 30-Day Use at the Pre-Test and Change at Post-Test: Comprehensive Prevention Project Participants										
Group	N	Median Age	Alcohol		Binge Drinking		Cigarettes		Marijuana	
			Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change
Iowa Youth Survey <sup>1</sup>	46,133 <sup>2</sup>	14 <sup>3</sup>	–	<b>+4.80</b>	–	<b>+3.60</b>	–	<b>+2.00</b>	–	<b>+2.20</b>
Comprehensive Prevention	5,356	13	8.57	<b>+0.40</b>	1.62	<b>+0.21</b>	2.54	<b>+0.35</b>	1.89	<b>+0.18</b>

<sup>1</sup> IYS entries reflect the estimated yearly average change in 30-day use between participating Iowa students in grades 6 and 11. Data were from the 2012 Iowa Youth Survey, State of Iowa report.  
<sup>2</sup> The total number of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 24,170, and the total number of 11<sup>th</sup> graders was 21,963.  
<sup>3</sup> The median age of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 11.5 years, and the median age of 11<sup>th</sup> graders was 16.5 years.

There was no evidence of change from pre-test to post-test for alcohol, binge drinking, cigarette, or marijuana use in the combined middle school and high school Comprehensive Prevention participant group (statistical tests yielded p values greater than 0.05). However, this also means that use of those substances showed no evidence of increasing as would be expected due to maturation. Figure 1 on page 5 graphically displays the post 30-day use data provided in Table 1.



**Figure 1. Change in Past 30-Day Use: Comprehensive Prevention Project Participants**



The remaining tables and graphs in this report provide outcome data by specific prevention program within the Comprehensive Prevention Project. Programs are grouped according to whether the program is provided within one school year or grade (single-year programs), or spans more than one school year or grade (multi-year programs). The Consortium and IDPH re-categorized two programs during State Project Year 2012: Brain Power and Too Good for Drugs. Those programs offer curricula for several grades, but each grade's curricula can be administered as a stand-alone program, and some Comprehensive contractors implement those programs in only one grade. Therefore, Brain Power and Too Good for Drugs are now treated as single-year rather than multi-year programs.

Tables 2 and 3 and Figures 2 and 3 on pages 6 through 9 present program-specific data on the percentage of youth reporting past 30-day use of alcohol, binge drinking, tobacco, marijuana at the pre-test, and the percentage and direction of change at post-test. The change values presented in the tables do not necessarily indicate statistically significant differences from pre-test to post-test. Table 2 and Figure 2 present data for participants in single-year programs. Table 3 and Figure 3 present data for participants in multi-year programs.

**Table 2. Change in Past 30-Day Use: Participants in Single-Year Programs**

Percentage of Youth Reporting Past 30-Day Use at the Pre-Test and Change at Post-Test: Participants in Single-Year Programs										
Group	N	Median Age	Alcohol		Binge Drinking		Cigarettes		Marijuana	
			Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change
Iowa Youth Survey <sup>1</sup>	46,133 <sup>2</sup>	14 <sup>3</sup>	–	<b>+4.80</b>	–	<b>+3.60</b>	–	<b>+2.00</b>	–	<b>+2.20</b>
Brain Power	61	12 <sup>4</sup>	13.33	<b>-6.66</b>	1.67	<b>-1.67</b>	1.67	<b>+1.66</b>	0	<b>0</b>
Prime for Life	264	15 <sup>5</sup>	15.59	<b>0</b>	6.08	<b>-0.38</b>	9.89	<b>-2.29</b>	5.70	<b>-0.38</b>
Project Towards No Drug Abuse	229	15 <sup>6</sup>	19.03	<b>0</b>	8.41	<b>0</b>	14.16	<b>-1.77</b>	14.16	<b>+1.33</b>
Project Towards No Tobacco Use	121	12 <sup>7</sup>	5.88	<b>+2.52</b>	0.84	<b>-0.84</b>	0.84	<b>+3.36</b>	0	<b>0</b>
Too Good for Drugs	562	12 <sup>8</sup>	8.33	<b>-1.81</b>	0.54	<b>0</b>	1.45	<b>-0.18</b>	1.27	<b>-0.55</b>

<sup>1</sup> IYS entries reflect the estimated yearly average change in 30-day use between participating Iowa students in grades 6 and 11. Data were from the 2012 Iowa Youth Survey, State of Iowa report.  
<sup>2</sup> The total number of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 24,170, and the total number of 11<sup>th</sup> graders was 21,963.  
<sup>3</sup> The median age of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 11.5 years, and the median age of 11<sup>th</sup> graders was 16.5 years.  
<sup>4</sup> Brain Power participants were in grades 6-7.  
<sup>5</sup> Prime for Life (PFL) participants were in grade 8-post-high school.  
<sup>6</sup> Project Towards No Drug Abuse (TND) participants were in grade 8-post-high school.  
<sup>7</sup> Project Towards No Tobacco Use (TNT) participants were in grades 5-11.  
<sup>8</sup> Too Good for Drugs (TGFD) participants were in grades 5-6.

There was no evidence of change from pre-test to post-test for alcohol, binge drinking, cigarette, or marijuana use for the single-year programs (statistical tests yielded p values greater than 0.05). However, this also means that use of those substances showed no evidence of increasing as would be expected due to maturation.

**Figure 2. Change in Past 30-Day Use: Participants in Single-Year Programs**

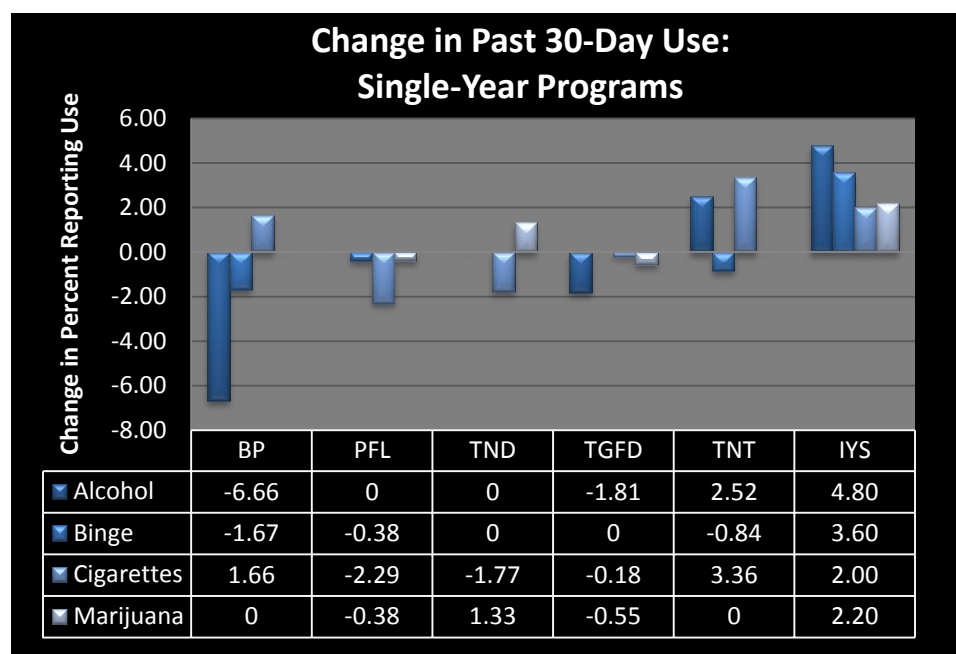


Table 3 on page 8 presents data on the percentage of youth reporting past 30-day use of alcohol, binge drinking, tobacco, and marijuana at the pre-test and the amount and direction of change at post-test for participants in multi-year programs. The change values presented in the table do not necessarily indicate statistically significant differences from pre-test to post-test. There were not sufficient numbers of matched pre- and post-test surveys for the third year of the LifeSkills Training program to report on that program year.

**Table 3. Change in Past 30-Day Use: Participants in Multi-Year Programs**

Percentage of Youth Reporting Past 30-Day Use at the Pre-Test and Change at Post-Test: Participants in Multi-Year Programs										
Group	N	Median Age	Alcohol		Binge Drinking		Cigarettes		Marijuana	
			Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change
Iowa Youth Survey <sup>1</sup>	46,133 <sup>2</sup>	14 <sup>3</sup>	–	<b>+4.80</b>	–	<b>+3.60</b>	–	<b>+2.00</b>	–	<b>+2.20</b>
All Stars (AS) – Year 1	135	13 <sup>4</sup>	8.27	<b>-2.25</b>	0.75	<b>0</b>	0.75	<b>+0.75</b>	0.75	<b>0</b>
All Stars (AS) – Year 2	52	12 <sup>4</sup>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>
LifeSkills Training (LST) - Year 1	1560	12 <sup>5</sup>	9.53	<b>+0.86</b>	1.97	<b>+0.20</b>	1.90	<b>+1.05</b>	1.58	<b>-0.07</b>
LifeSkills Training (LST) - Year 2	231	13 <sup>5</sup>	5.83	<b>+4.17</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>
Project ALERT (PA) – Year 1	1458	12 <sup>6</sup>	7.21	<b>-0.42</b>	0.63	<b>+0.49</b>	1.47	<b>+0.28</b>	0.56	<b>+0.56</b>
Project ALERT (PA) – Year 2	846	13 <sup>6</sup>	4.56	<b>+3.33</b>	0.49	<b>+0.74</b>	1.23	<b>+0.37</b>	0.86	<b>+0.62</b>

<sup>1</sup> IYS entries reflect the estimated yearly average change in 30-day use between participating Iowa students in grades 6 and 11. Data were from the 2012 Iowa Youth Survey, State of Iowa report.

<sup>2</sup> The total number of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 24,170, and the total number of 11<sup>th</sup> graders was 21,963.

<sup>3</sup> The median age of 6<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 11.5 years, and the median age of 11<sup>th</sup> graders was 16.5 years.

<sup>4</sup> All Stars Yr.1 participants ranged in age from 11-14 and were in grades 6-7; Yr.2 participants ranged in age from 12-13 and were in grade 7.

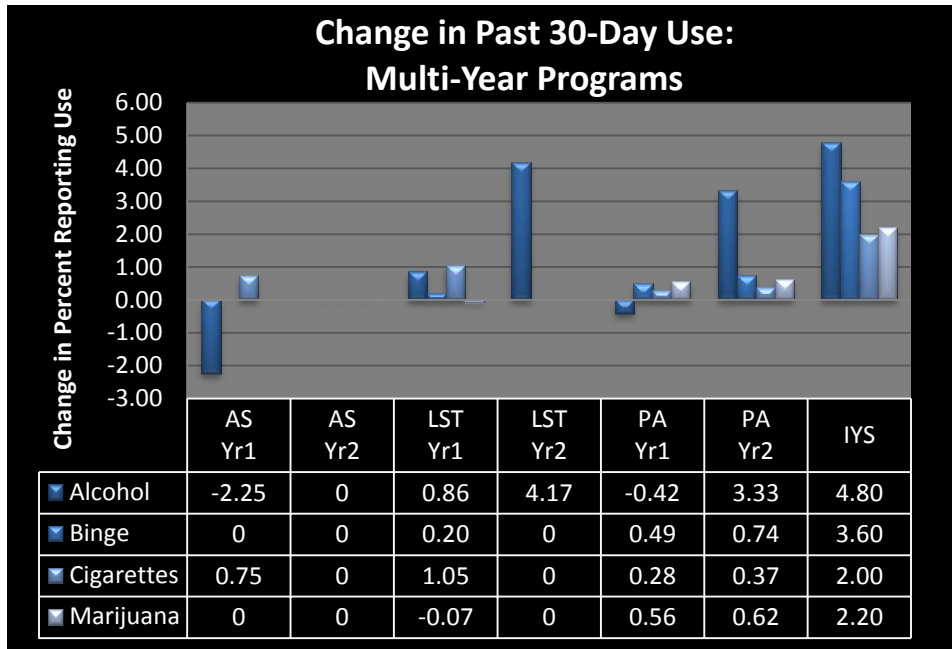
<sup>5</sup> LST Yr.1 participants ranged in age from 1 (per survey data entered into Database Builder) -17 and were in grades 6-11; Yr.2 participants ranged in age from 12-14 and were in grades 6-11.

<sup>6</sup> PA Yr.1 participants ranged in age from 1 (per survey data entered into Database Builder) -17 and were in grades 5-11; Yr.2 participants ranged in age from 1 (per survey data entered into Database Builder) -15 and were in grades 5-8.



There were statistically significant increases in use from pre-test to post-test for participants in two programs. Cigarette use increased for LifeSkills Training Year 1 participants (McNemar Chi square,  $p=0.0166$ ), and alcohol use increased for Project ALERT Year 2 participants (McNemar Chi square,  $p=0.0011$ ). There was no evidence of change for use of other substances in those two programs, and no evidence of change for any substance in the other programs. This also means that use of those substances showed no evidence of increasing as would be expected due to maturation. Figure 3 displays graphically the data provided in Table 3.

**Figure 3. Change in Past 30-Day Use: Participants in Multi-Year Programs**



## **Attitudes Toward Substance Use**

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Figures 4 through 15 on pages 11 through 22 show change in individual attitudes toward substance use from the pre-test to the post-test, by program. Data are provided for participants completing the Younger Youth survey (primarily elementary school youth) and for those completing the regular Comprehensive Prevention survey (middle- and high-school youth). The change values presented in the figures do not necessarily indicate statistically significant differences from pre-test to post-test. The number in parentheses after each program name in the figures is the number of respondents answering the question on both the pre-test and the post-test. Programs are grouped according to program duration (single-year and multi-year programs).

Attitude responses are coded on a Likert scale from 0 = "not wrong at all" to 3 = "very wrong." Individual attitudes either: 1) improved, which means that attitudes moved up the scale towards "very wrong" from any point on the scale (e.g., respondent felt alcohol use was wrong at pre-test and very wrong at post-test); 2) maintained +, which means that the pre- and post-test responses remained the same and were unfavorable toward alcohol, cigarette, or marijuana use ("wrong" or "very wrong"); 3) maintained -, which means that the pre- and post-test responses remained the same and were favorable toward alcohol, cigarette, or marijuana use ("a little wrong" or "not wrong at all"); or 4) worsened, meaning that attitudes moved down the scale away from "very wrong" from any point on the scale (e.g., respondent felt marijuana use was "wrong" at pre-test and "a little bit wrong" at post-test). Maintaining a response from pre-test to post-test that use is "wrong" or "very wrong," or moving up the scale towards "very wrong" from any point on the scale is considered a positive outcome.

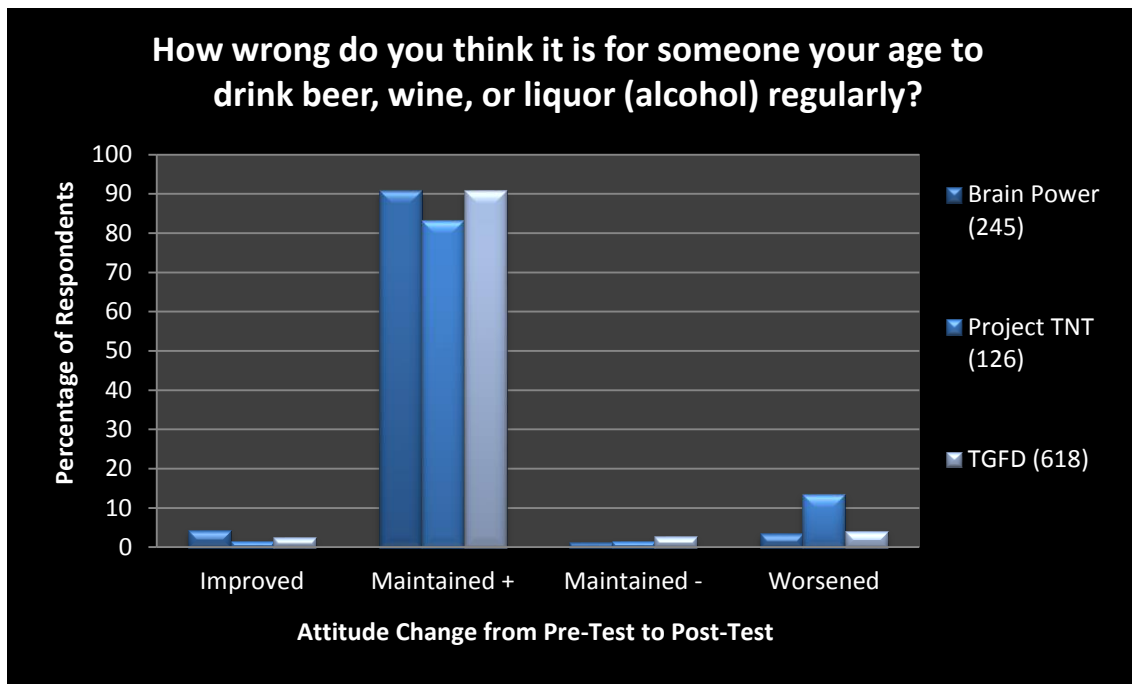
### ***Attitudes Toward Alcohol Use***

Figure 4 on page 11 shows the direction of change in individual attitudes toward alcohol use from pre- to post-test for single-year programs that served elementary school youth. The elementary school youth group contains some 6<sup>th</sup> graders (14.8% of total), although all completed the Younger Youth (YY) survey. Agencies administered the YY survey to 6<sup>th</sup> graders who were in the second or third year of multi-year programs and had taken the YY survey in the previous grade(s). Therefore, data would be consistent for those participants across program years. The change values presented in the Figure 4 do not necessarily indicate statistically significant differences from pre-test to post-test.





**Figure 4. Change in Attitudes Toward Alcohol Use by Program: Elementary School Youth in Single-Year Programs<sup>1</sup>**



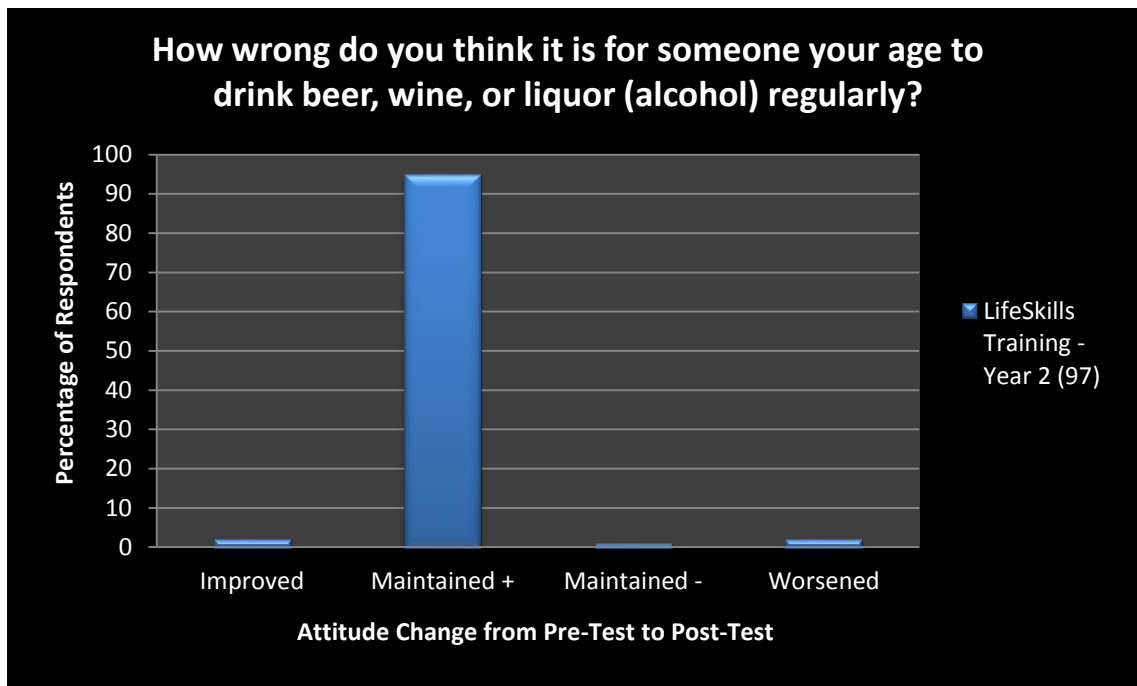
<sup>1</sup> The median age of Brain Power participants was 11; participants ranged in age from 8 to 12, and were in the 4<sup>th</sup> and 5<sup>th</sup> grades. The median age of Project Towards No Tobacco Use (TNT) participants was 11; participants ranged in age from 10 to 13, and were in the 5<sup>th</sup> grade. The median age of Too Good for Drugs (TGFD) participants was 10; participants ranged in age from 8 to 13, and were in the 4<sup>th</sup> through 6<sup>th</sup> grades.

The percentages of elementary school single-year program participants showing positive outcomes (maintaining a response that alcohol use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) for attitudes toward alcohol use are as follows:

- Brain Power – 95.24%
- Project Towards No Tobacco Use – 84.80%
- Too Good for Drugs – 93.25%

Figure 5 on page 12 shows the change in individual attitudes toward alcohol use from pre- to post-test for multi-year programs that served elementary school youth. These data present individual years of multi-year programs and therefore are not indicative of how the complete programs perform. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test. Again, the elementary school youth group contains some 6<sup>th</sup> graders (14.8% of total), although all completed the Younger Youth survey. LifeSkills Training is the only multi-year program for which there were a sufficient number of matched surveys to report data, and there were sufficient numbers only for the second curriculum year.

**Figure 5. Change in Attitudes Toward Alcohol Use by Program: Elementary School Youth in Multi-Year Programs<sup>1</sup>**



<sup>1</sup> The median age of LifeSkills Training Year 2 participants was 11; participants ranged in age from 10 to 13, and were in the 5<sup>th</sup> and 6<sup>th</sup> grades.

The percentages of elementary school multi-year program participants showing positive outcomes (maintaining a response that alcohol use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) for attitudes toward alcohol use are as follows:

- LifeSkills Training (Year 1) – 96.91%

Figure 6 on page 13 shows the change in individual attitudes toward alcohol use from pre- to post-test for single-year programs that served middle and high school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 6. Change in Attitudes Toward Alcohol Use by Program: Middle and High School Youth in Single-Year Programs**



The percentages of middle and high school single-year program participants showing positive outcomes (maintaining a response that alcohol use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- Brain Power – 88.33%
- Prime for Life – 78.79%
- Project Towards No Drug Abuse – 69.16%
- Project Towards No Tobacco Use – 89.08%
- Too Good for Drugs – 87.93%

Figure 7 on page 14 shows the change in individual attitudes toward alcohol use from pre- to post-test for multi-year programs that served middle and high school youth. These data present individual years of multi-year programs and therefore are not indicative of how the complete programs perform. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 7. Change in Attitudes Toward Alcohol Use by Program: Middle and High School Youth in Multi-Year Programs**



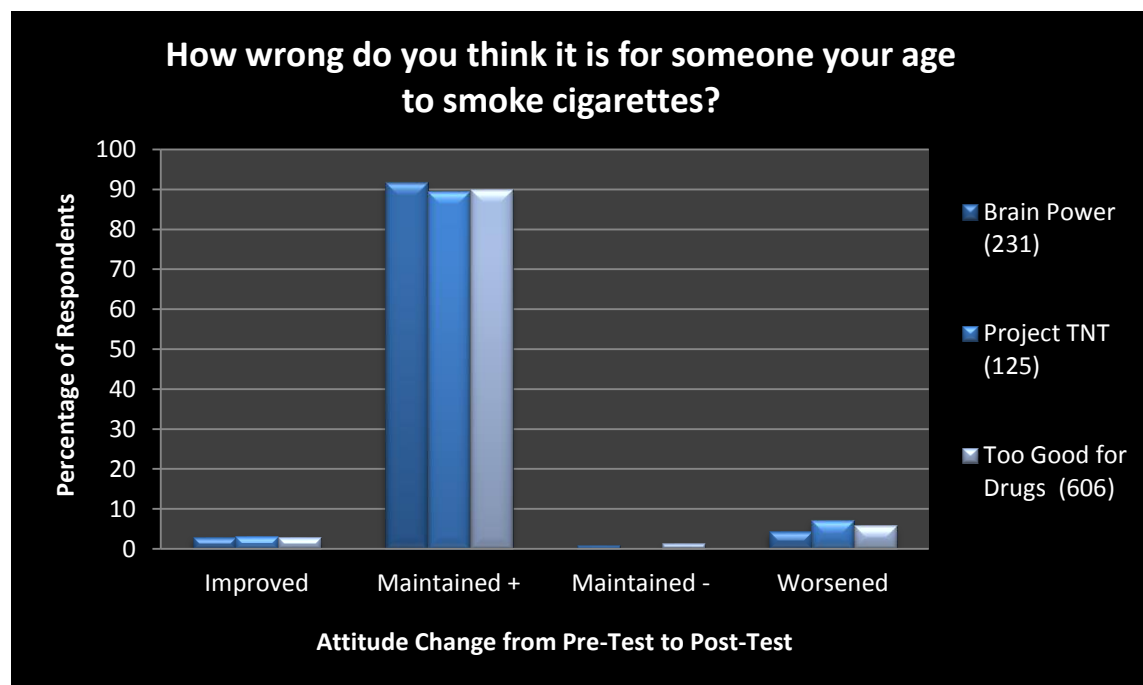
The percentages of middle and high school multi-year program participants showing positive outcomes (maintaining a response that alcohol use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- All Stars (Year 1) – 82.84%
- All Stars (Year 2) – 90.38%
- LifeSkills Training (Year 1) – 83.41%
- LifeSkills Training (Year 2) – 78.33%
- Project ALERT (Year 1) – 84.80%
- Project ALERT (Year 2) – 83.29%

## Attitudes Toward Cigarette Use

Figures 8 through 11 on pages 15 through 18 show change in individual attitudes toward daily cigarette use from the pre-test to the post-test, by program (see p. 10 for an explanation of the attitude change categories). Figure 8 shows the change in individual attitudes toward cigarette use from pre- to post-test for single-year programs that served elementary school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 8. Change in Attitudes Toward Cigarette Use by Program: Elementary School Youth in Single-Year Programs**

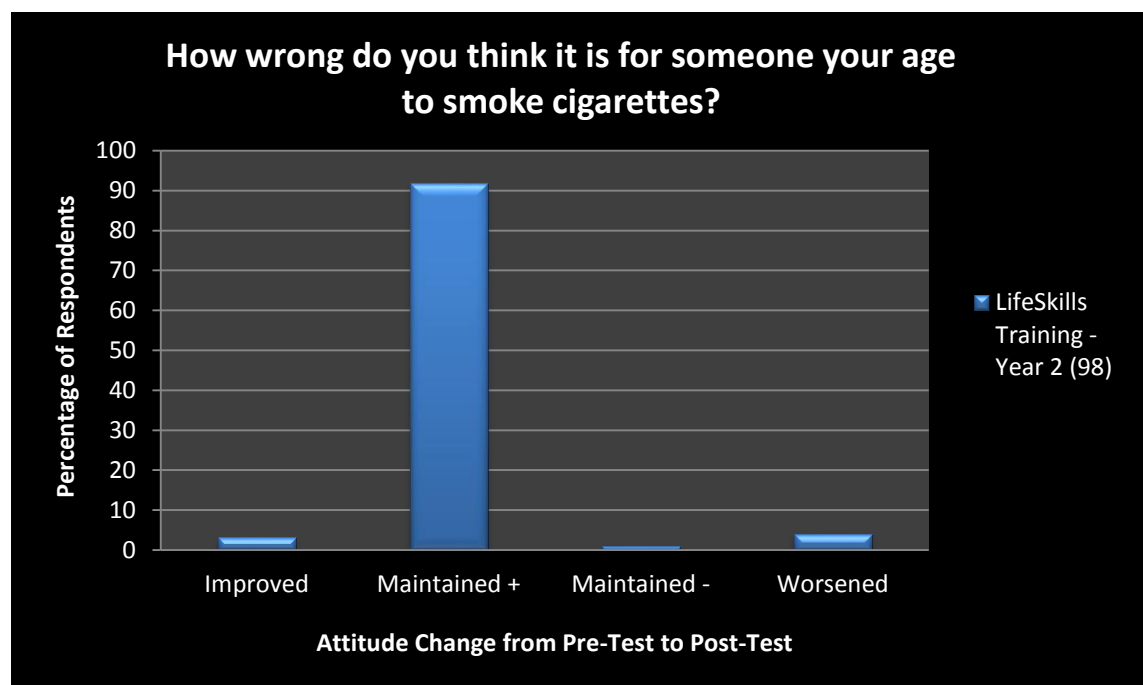


The percentages of elementary school single-year program participants showing positive outcomes (maintaining a response that cigarette use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- Brain Power – 94.81%
- Project Towards No Tobacco Use – 92.80%
- Too Good for Drugs – 92.90%

Figure 9 shows the change in individual attitudes toward cigarette use from pre- to post-test for multi-year programs that served elementary school youth. The elementary school youth group contains some 6<sup>th</sup> graders, although all completed the Younger Youth survey. LifeSkills Training is the only multi-year program for which there were a sufficient number of matched surveys to report data, and there were sufficient numbers only for the second curriculum year. These data present individual years of the program and therefore are not indicative of how the complete program performs. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 9. Change in Attitudes Toward Cigarette Use by Program: Elementary School Youth in Multi-Year Programs**

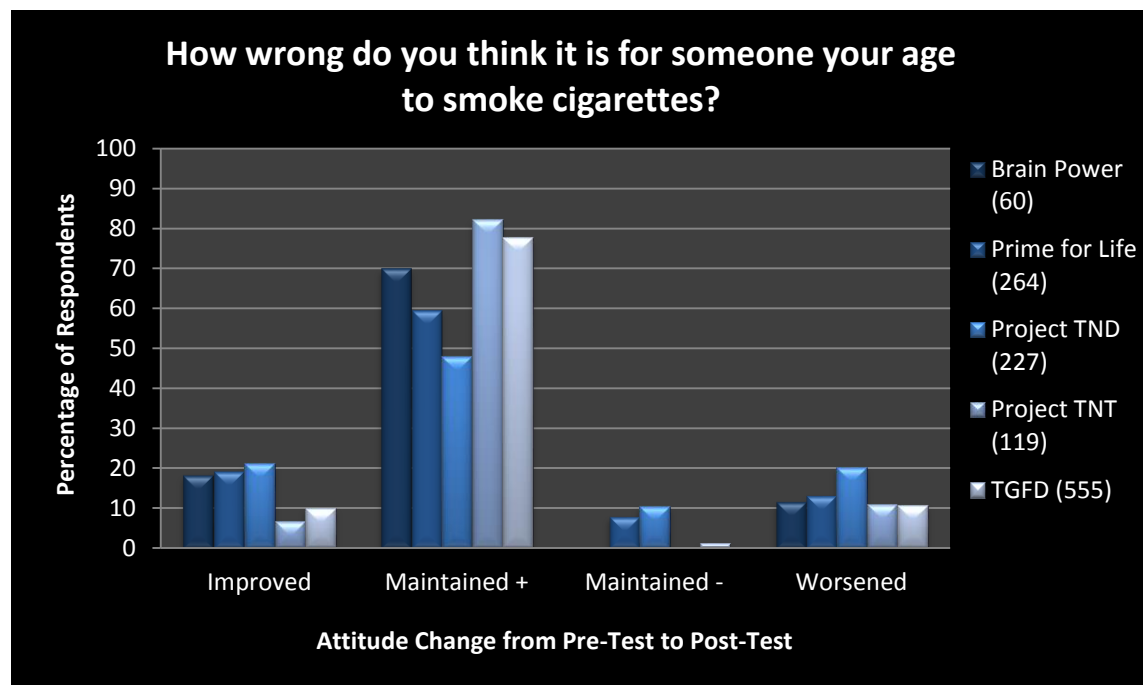


The percentages of elementary school multi-year program participants showing positive outcomes (maintaining a response that cigarette use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- LifeSkills Training (Year 1) – 94.90%

Figure 10 shows the change in individual attitudes toward cigarette use from pre- to post-test for single-year programs that served middle and high school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 10. Change in Attitudes Toward Cigarette Use by Program: Middle and High School Youth in Single-Year Programs**

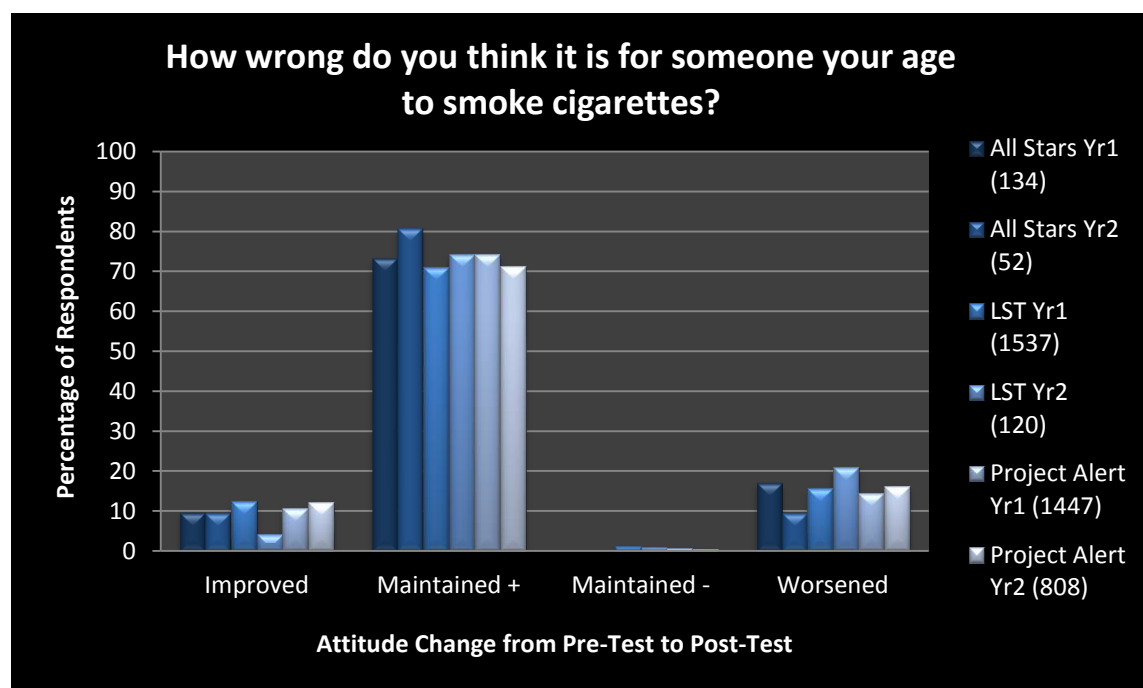


The percentages of middle school single-year program participants showing positive outcomes (maintaining a response that cigarette use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- Brain Power – 86.89%
- Prime for Life – 83.59%
- Project Towards No Drug Abuse – 78.76%
- Project Towards No Tobacco Use – 91.60%
- Too Good for Drugs – 88.85%

Figure 11 shows the change in individual attitudes toward cigarette use from pre- to post-test for multi-year programs that served middle and high school youth. These data present individual years of the program and therefore are not indicative of how the complete program performs. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 11. Change in Attitudes Toward Cigarette Use by Program: Middle and High School Youth in Multi-Year Programs**



The percentages of middle school multi-year program participants showing positive outcomes (maintaining a response that cigarette use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

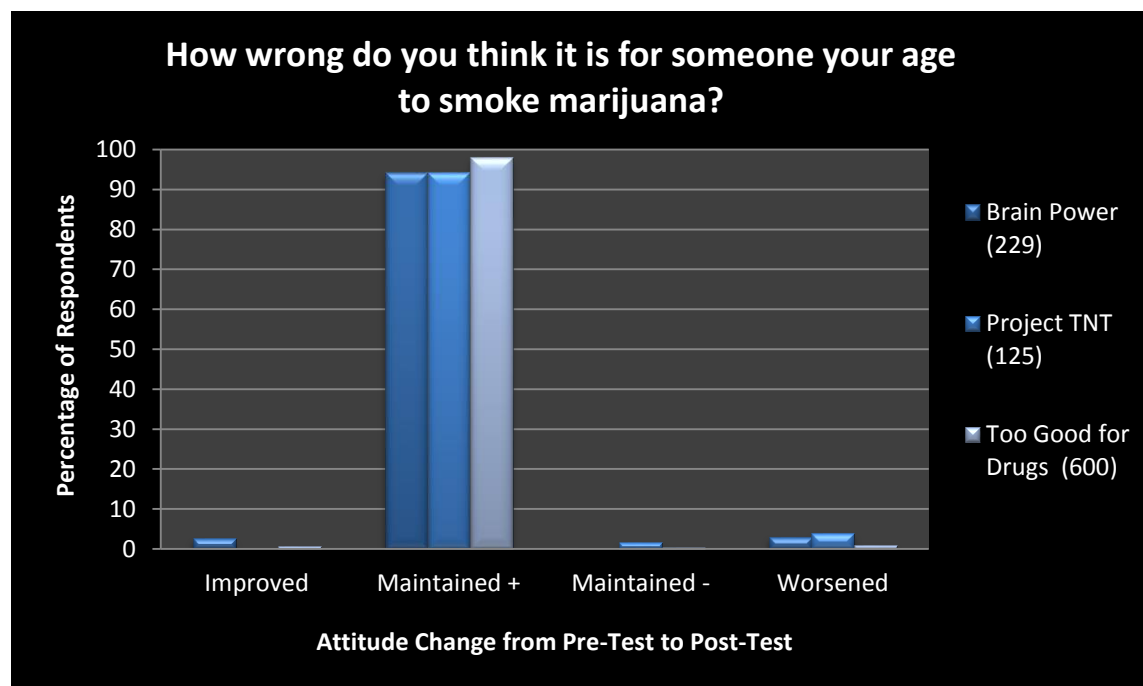
- All Stars (Year 1) – 87.31%
- All Stars (Year 2) – 90.38%
- LifeSkills Training (Year 1) – 88.89%
- LifeSkills Training (Year 2) – 85.83%
- Project ALERT (Year 1) – 84.11%
- Project ALERT (Year 2) – 86.66%



## Attitudes Toward Marijuana Use

Figures 12 through 15 on pages 19 through 22 show change in individual attitudes toward marijuana use from the pre-test to the post-test, by program (see p. 10 for an explanation of the attitude change categories). Figure 12 shows the change in individual attitudes toward marijuana use from pre- to post-test for single-year programs that served elementary school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 12. Change in Attitudes Toward Marijuana Use by Program: Elementary School Youth in Single-Year Programs**

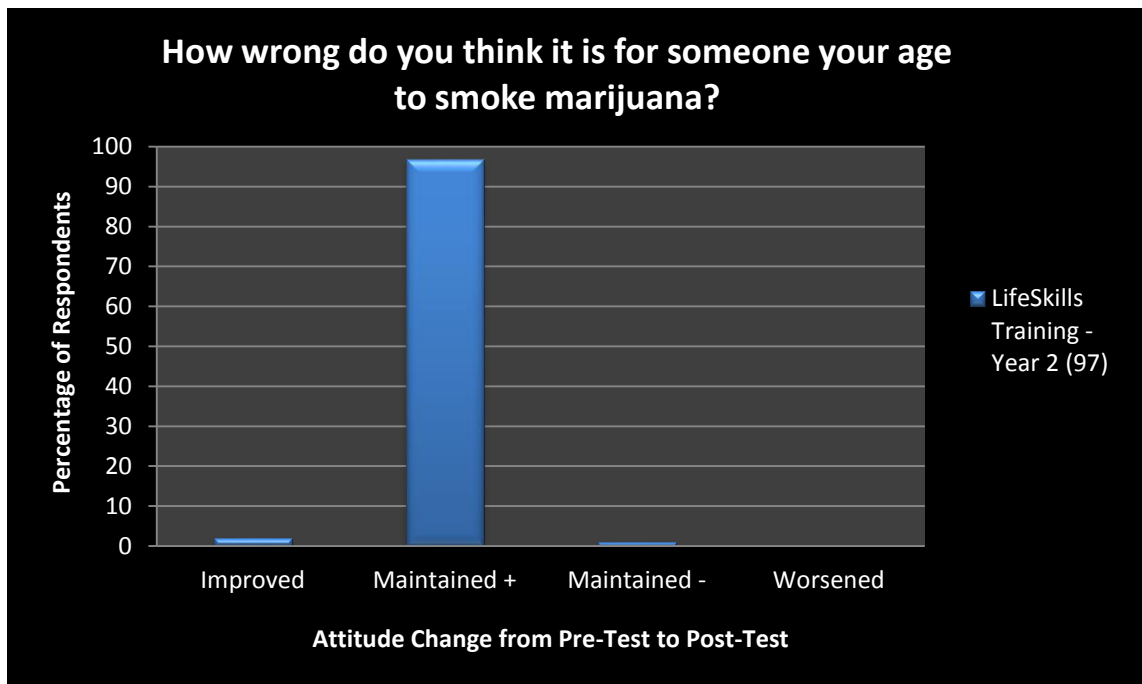


The percentages of elementary school single-year program participants showing positive outcomes (maintaining a response that marijuana use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- Brain Power – 96.94%
- Project Towards No Tobacco Use – 94.40%
- Too Good for Drugs – 98.67%

Figure 13 shows the change in individual attitudes toward marijuana use from pre- to post-test for multi-year programs that served elementary school youth. The elementary school youth group contains some 6<sup>th</sup> graders, although all completed the Younger Youth survey. LifeSkills Training is the only multi-year program for which there were a sufficient number of matched surveys to report data, and there were sufficient numbers only for the second curriculum year. These data present individual years of the program and therefore are not indicative of how the complete program performs. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 13. Change in Attitudes Toward Marijuana Use by Program: Elementary School Youth in Multi-Year Programs**

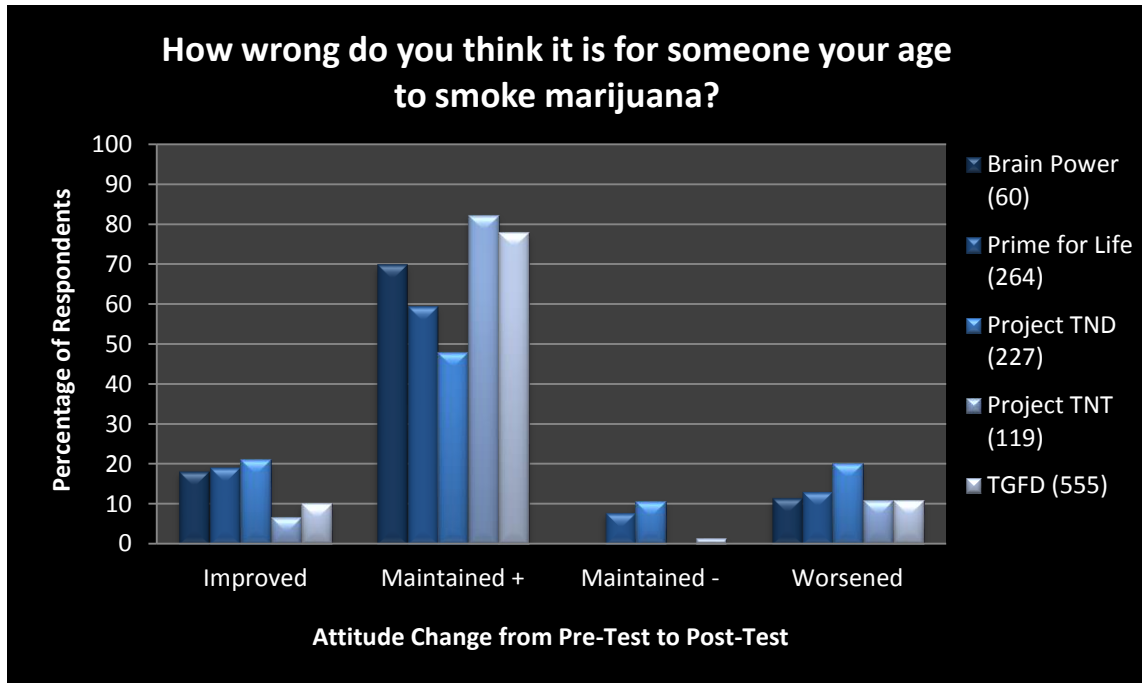


The percentages of elementary school multi-year program participants showing positive outcomes (maintaining a response that marijuana use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- LifeSkills Training (Year 1) – 98.97%

Figure 14 shows the change in individual attitudes toward marijuana use from pre- to post-test for single-year programs that served middle and high school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 14. Change in Attitudes Toward Marijuana Use by Program: Middle and High School Youth in Single-Year Programs**

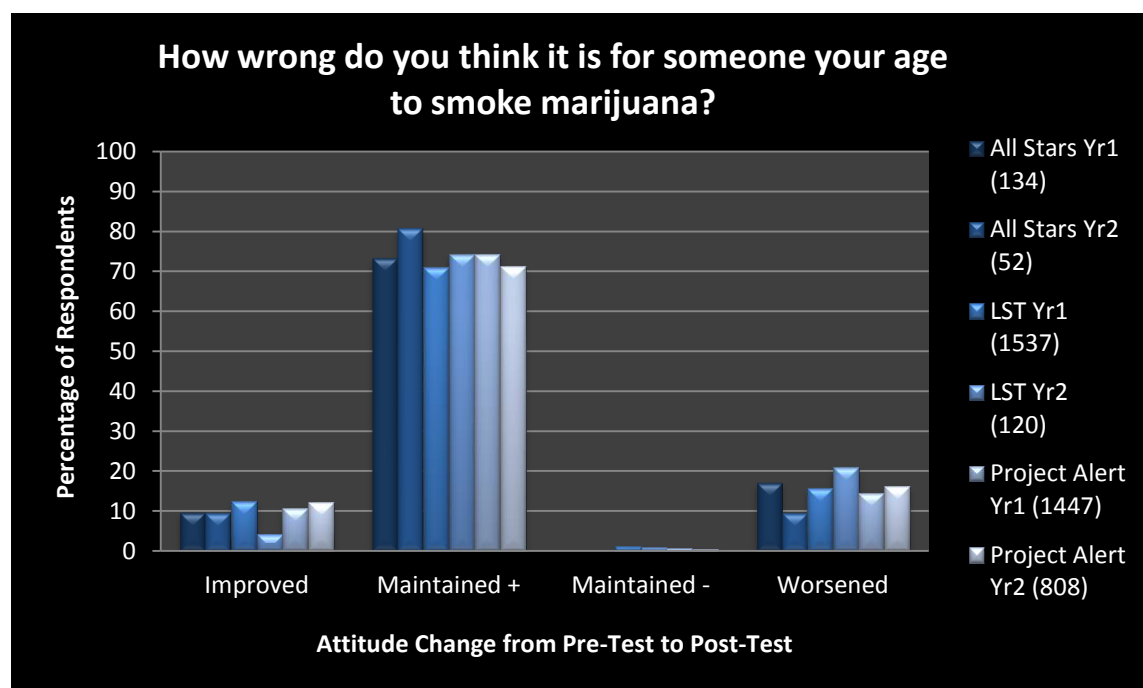


The percentages of middle school single-year program participants showing positive outcomes (maintaining a response that marijuana use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- Brain Power – 91.80%
- Prime for Life – 82.58%
- Project Towards No Drug Abuse – 67.41%
- Project Towards No Tobacco Use – 95.76%
- Too Good for Drugs – 92.61%

Figure 15 shows the change in individual attitudes toward marijuana use from pre- to post-test for multi-year programs that served middle and high school youth. These data present individual years of the program and therefore are not indicative of how the complete program performs. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 15. Change in Attitudes Toward Marijuana Use by Program: Middle and High School Youth in Multi-Year Programs**



The percentages of middle school multi-year program participants showing positive outcomes (maintaining a response that marijuana use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) are as follows:

- All Stars (Year 1) – 94.03%
- All Stars (Year 2) – 96.15%
- LifeSkills Training (Year 1) – 92.07%
- LifeSkills Training (Year 2) – 83.19%
- Project ALERT (Year 1) – 91.99%
- Project ALERT (Year 2) – 91.03%

### ***Summary of Positive Outcomes for Attitudes Toward Substance Use***

Table 4 shows the average positive outcome (improved or maintained+) percentage for Comprehensive Prevention participants for each substance by program level group.

**Table 4. Positive Outcome Percentages for Attitudes Toward Substance Use by Participant Group**

<b>Average Positive Outcome Percentages for Attitudes Toward Substance Use</b>			
<b>Participant Group</b>	<b>Alcohol</b>	<b>Cigarettes</b>	<b>Marijuana</b>
Elementary School Youth in Single Year Programs	91.1%	93.5%	96.7%
Elementary School Youth in Multi- Year Programs	96.9%	94.9%	99.0%
Middle and High School Youth in Single Year Programs	82.7%	85.9%	86.0%
Middle and High School Youth in Multi-Year Programs	83.8%	87.2%	91.4%

In three of the four groups, the percentage of students believing it is wrong for someone their age to use cigarettes was greater than the percentage believing it is wrong for someone their age to use alcohol.



## **Perceived Risk of Harm from Substance Use**

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Figures 16 through 27 on pages 25 through 36 show change from pre- to post-test in individuals' perceptions of risk of harm from substance use, by program. Data are provided for participants completing the Younger Youth survey (primarily elementary school youth) and for those completing the regular Comprehensive Prevention survey (middle- and high-school youth). The change values presented in the figures do not necessarily indicate statistically significant differences from pre-test to post-test. The number in parentheses after each program in the figures is the number of respondents answering the question on the pre-test and the post-test. Programs are grouped according to the school level of the participants and by program duration (single-year and multi-year programs).

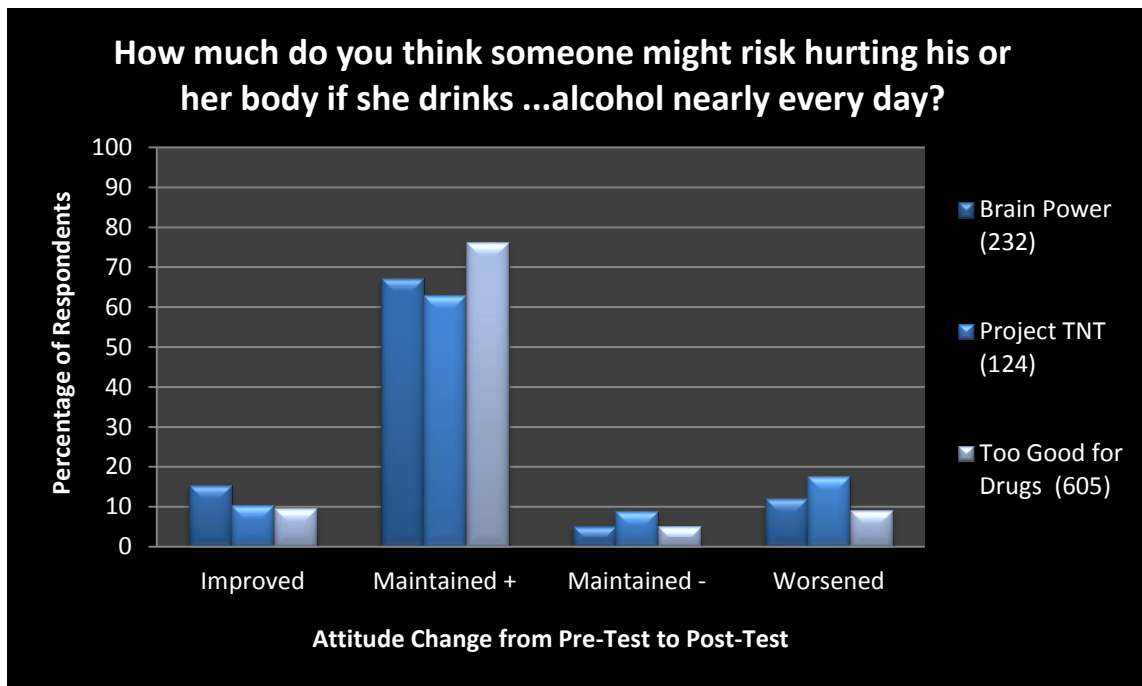
Perceived risk responses are coded on a Likert scale from 0 = "no risk" to 3 = "great risk." Individual perceptions of risk either: 1) improved, which means that their reported perception of risk of harm from using alcohol, cigarettes, or marijuana moved up the scale from pre-test to post-test towards "great risk," from any point on the scale (e.g., respondent felt alcohol use posed "no risk" at pre-test and "moderate risk" at post-test); 2) maintained +, which means that the pre- and post-test responses remained the same and were unfavorable toward alcohol, cigarette, or marijuana use (that use posed "moderate risk" or "great risk"); 3) maintained -, which means that the pre- and post-test responses remained the same and were favorable toward alcohol, cigarette, or marijuana use (that use posed "slight risk" or "no risk"); or 4) worsened, meaning that their reported perception of risk of harm moved down the scale from pre-test to post-test away from "great risk," from any point on the scale (e.g., respondent reported that marijuana use posed "moderate risk" of harm at pre-test and "no risk" at post-test). Maintaining a response from pre-test to post-test that use poses "moderate risk" or "great risk," or moving up the scale towards "great risk" from any point on the scale is considered a positive outcome.

### ***Perceived Risk of Harm from Alcohol Use***

Figure 16 on page 25 shows the change in individuals' perception of risk of harm from alcohol use from pre- to post-test for single-year programs serving elementary school youth. The elementary school youth group contains some 6<sup>th</sup> graders (14.8% of total), although all completed the Younger Youth survey. Agencies administered the YY survey to 6<sup>th</sup> graders who were in the second or third year of multi-year programs and had taken the YY survey in the previous grade(s). Therefore, data would be consistent for those participants across program years. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.



**Figure 16. Change in Perceived Risk of Harm from Alcohol Use by Program: Elementary School Youth in Single-Year Programs**

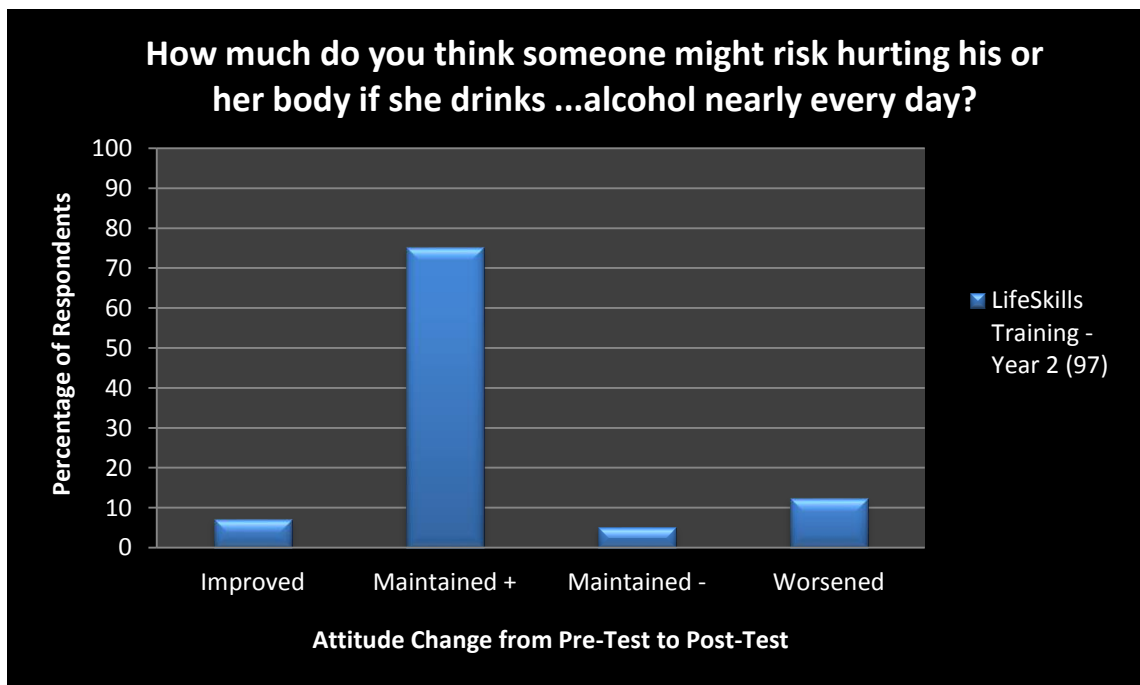


The percentages of elementary school single-year program participants showing positive outcomes (maintaining a response that alcohol use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- Brain Power – 82.76%
- Project Towards No Tobacco Use – 73.39%
- Too Good for Drugs – 85.95%

Figure 17 shows the change in individuals' perception of risk of harm from alcohol use from pre- to post-test for multi-year programs that served elementary school youth. These data present individual years of multi-year programs and therefore are not indicative of how the complete programs perform. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test. Again, the elementary school youth group contains some 6<sup>th</sup> graders (14.8% of total), although all completed the Younger Youth survey. LifeSkills Training is the only multi-year program for which there were a sufficient number of matched surveys to report data, and there were sufficient numbers only for the second curriculum year.

**Figure 17. Change in Perceived Risk of Harm from Alcohol Use by Program: Elementary School Youth in Multi-Year Programs**



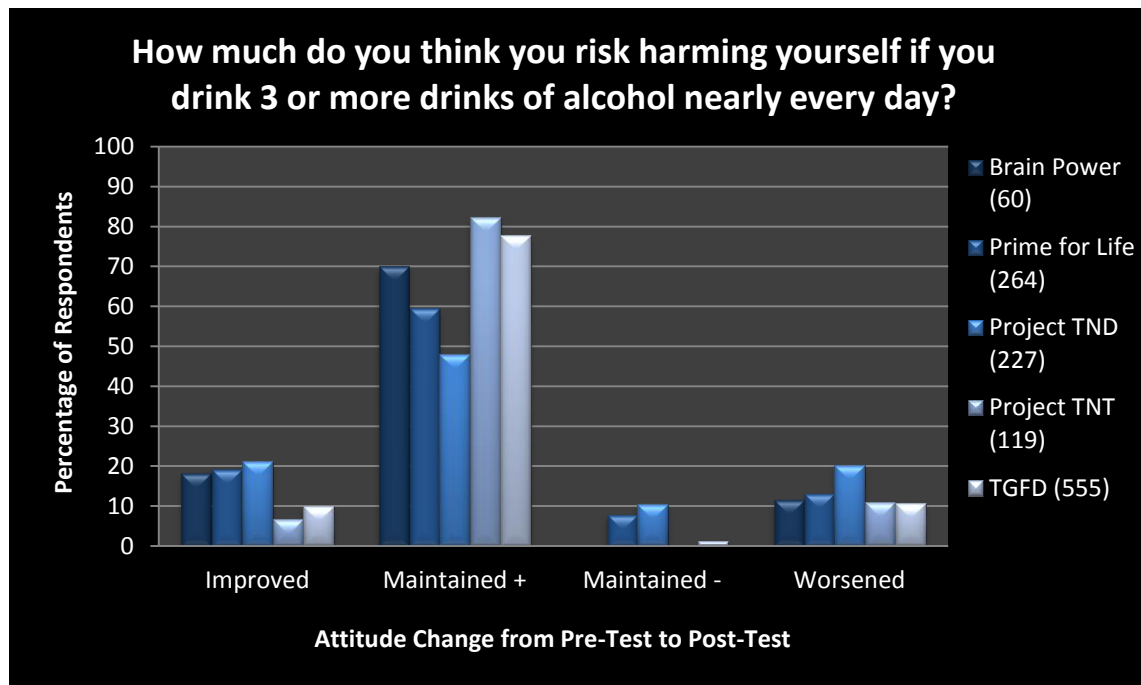
The percentages of elementary school multi-year program participants showing positive outcomes (maintaining a response that alcohol use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- LifeSkills Training (Year 1) – 82.47%



Figure 18 shows the change in individuals' perception of risk of harm from alcohol use from pre- to post-test for single-year programs serving middle and high school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 18. Change in Perceived Risk of Harm from Alcohol Use by Program: Middle and High School Youth in Single-Year Programs**

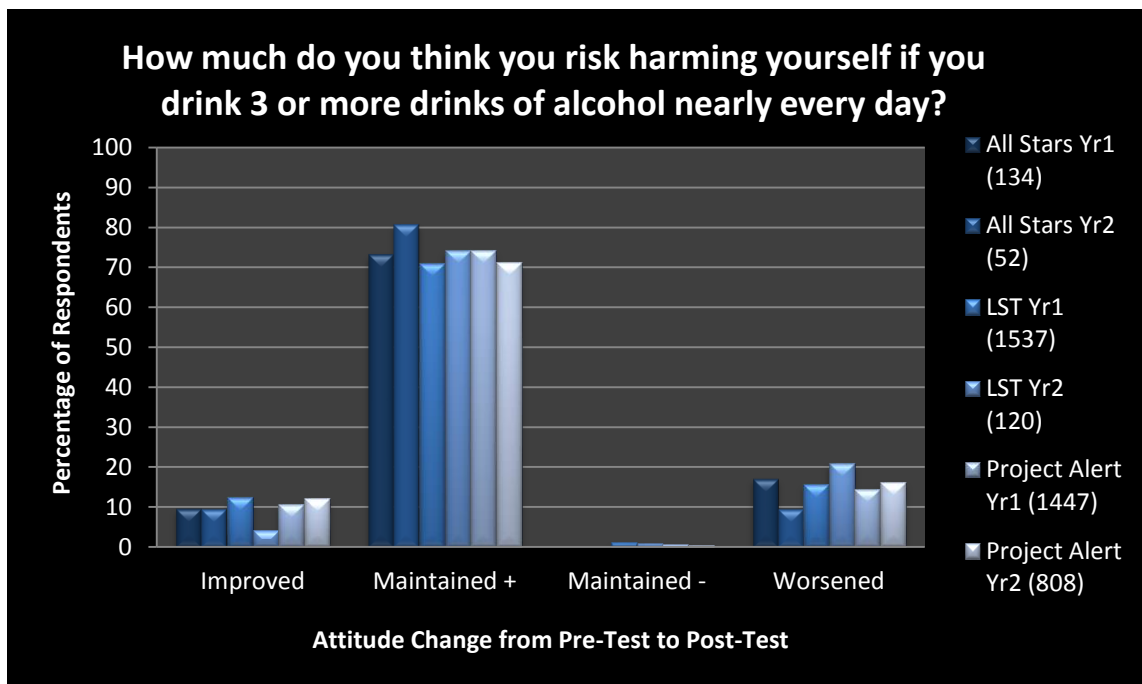


The percentages of middle school single-year program participants showing positive outcomes (maintaining a response that alcohol use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- Brain Power – 83.61%
- Prime for Life – 73.11%
- Project Towards No Drug Abuse – 70.22%
- Project Towards No Tobacco Use – 80.67%
- Too Good for Drugs – 86.92%

Figure 19 shows the change in individuals' perception of risk of harm from alcohol use from pre- to post-test for multi-year programs serving middle and high school youth. These data present individual years of the programs and therefore are not indicative of how the complete programs perform. Also, the change values presented in the table do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 19. Change in Perceived Risk of Harm from Alcohol Use by Program: Middle School Youth in Multi-Year Programs**



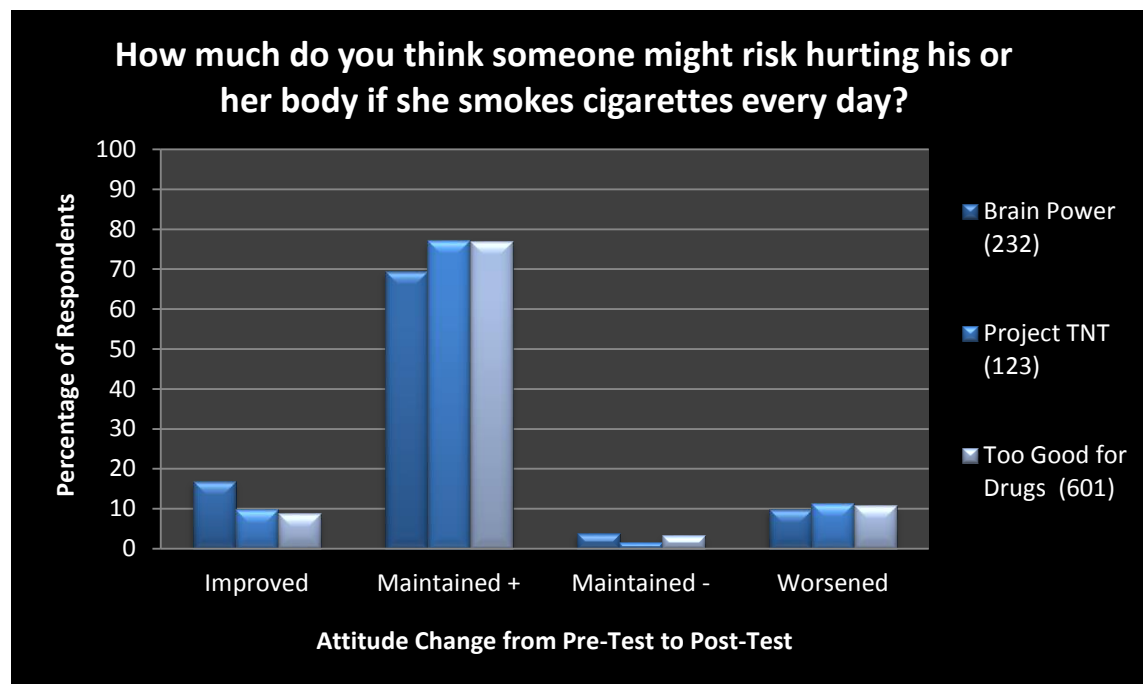
The percentages of middle school multi-year program participants showing positive outcomes (maintaining a response that alcohol use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- All Stars (Year 1) – 78.36%
- All Stars (Year 2) – 100%
- LifeSkills Training (Year 1) – 83.40%
- LifeSkills Training (Year 2) – 66.67%
- Project ALERT (Year 1) – 82.77%
- Project ALERT (Year 2) – 86.31%

### Perceived Risk of Harm from Cigarette Use

Figure 20 shows the change in individuals' perception of risk of harm from cigarette use from pre- to post-test for single-year programs serving elementary school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 20. Change in Perceived Risk of Harm from Cigarette Use by Program: Elementary School Youth in Single-Year Programs**

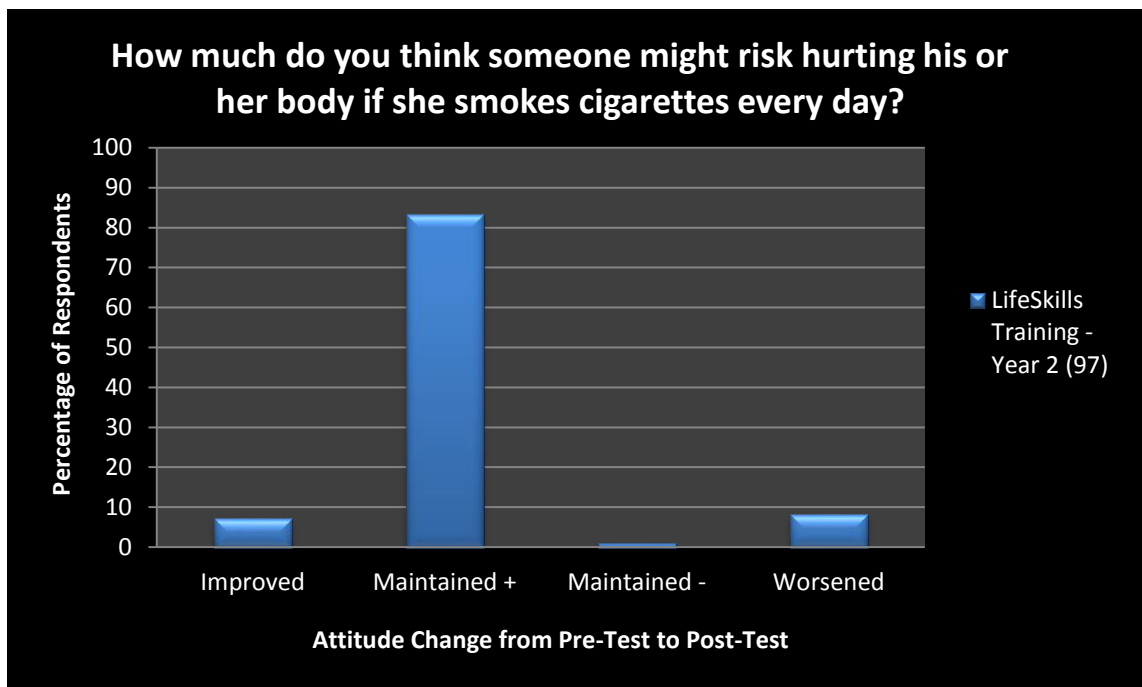


The percentages of elementary school single-year program participants showing positive outcomes (maintaining a response that cigarette use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- Brain Power – 86.21%
- Project Towards No Tobacco Use – 86.99%
- Too Good for Drugs – 85.86%

Figure 21 shows the change in individuals' perception of risk of harm from cigarette use from pre- to post-test for multi-year programs that served elementary school youth. LifeSkills Training is the only multi-year program for which there were a sufficient number of matched surveys to report data, and there were sufficient numbers only for the second curriculum year. These data present individual years of the program and therefore are not indicative of how the complete program performs. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 21. Change in Perceived Risk of Harm from Cigarette Use by Program: Elementary School Youth in Multi-Year Programs**

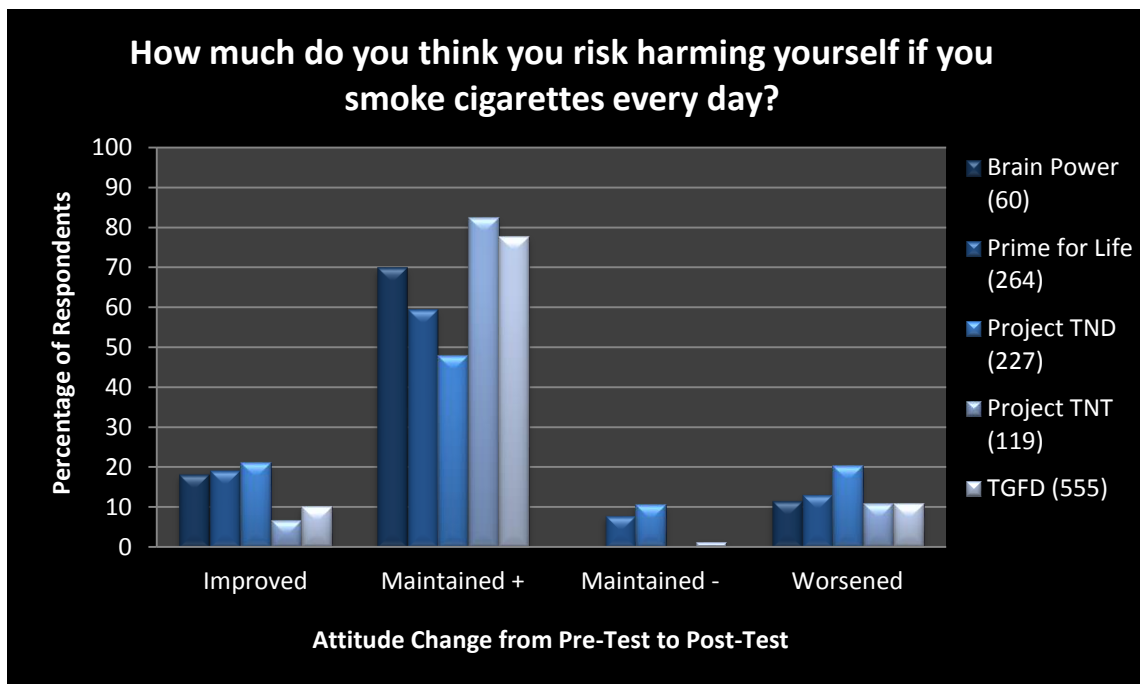


The percentages of elementary school multi-year program participants showing positive outcomes (maintaining a response that cigarette use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- LifeSkills Training (Year 1) – 90.72%

Figure 22 shows the change in individuals' perception of risk of harm from cigarette use from pre- to post-test for single-year programs serving middle and high school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 22. Change in Perceived Risk of Harm from Cigarette Use by Program: Middle and High School Youth in Single-Year Programs**

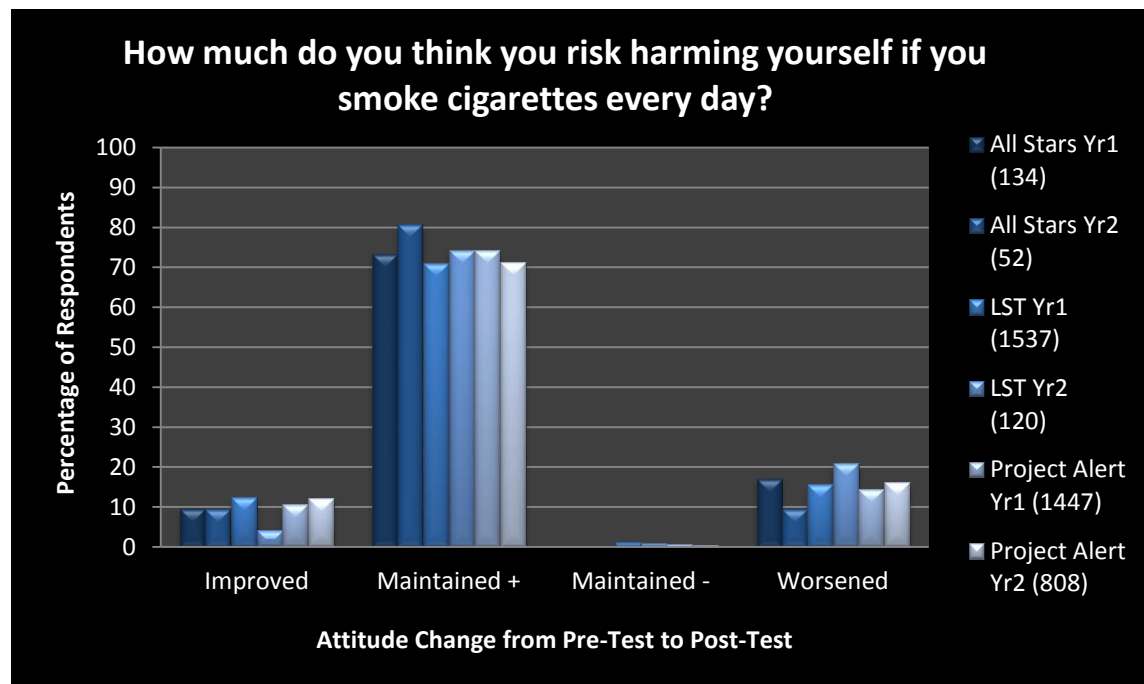


The percentages of middle school single-year program participants showing positive outcomes (maintaining a response that cigarette use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- Brain Power – 85.25%
- Prime for Life – 85.61%
- Project Towards No Drug Abuse – 78.67%
- Project Towards No Tobacco Use – 81.20%
- Too Good for Drugs – 90.28%

Figure 23 shows the change in individuals' perception of risk of harm from cigarette use from pre- to post-test for multi-year programs serving middle and high school youth. These data present individual years of the programs and therefore are not indicative of how the complete programs perform. Also, the change values presented in the table do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 23. Change in Perceived Risk of Harm from Cigarette Use by Program: Middle School Youth in Multi-Year Programs**



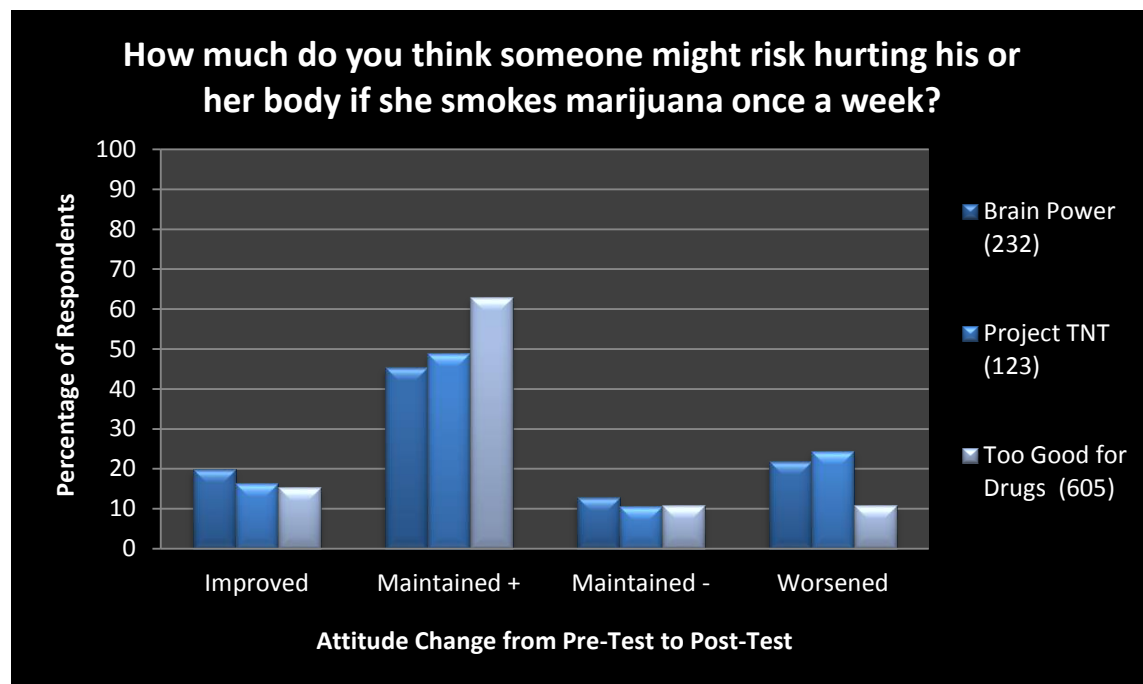
The percentages of middle school multi-year program participants showing positive outcomes (maintaining a response that cigarette use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- All Stars (Year 1) – 86.57%
- All Stars (Year 2) – 98.08%
- LifeSkills Training (Year 1) – 87.91%
- LifeSkills Training (Year 2) – 89.57%
- Project ALERT (Year 1) – 86.76%
- Project ALERT (Year 2) – 90.84%

### Perceived Risk of Harm from Marijuana Use

Figure 24 shows the change in individuals' perception of risk of harm from marijuana use from pre- to post-test for single-year programs serving elementary school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 24. Change in Perceived Risk of Harm from Marijuana Use by Program: Elementary School Youth in Single-Year Programs**

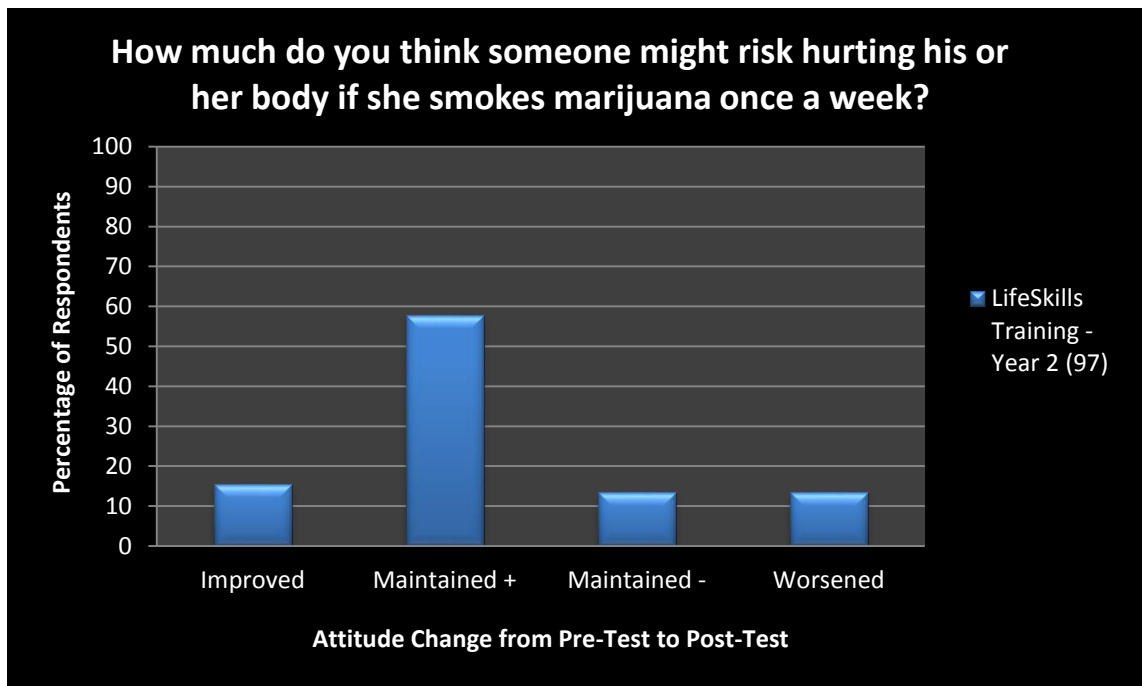


The percentages of elementary school single-year program participants showing positive outcomes (maintaining a response that marijuana use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- Brain Power – 65.09%
- Project Towards No Tobacco Use – 65.04%
- Too Good for Drugs – 78.35%

Figure 25 shows the change in individuals' perceptions of risk of harm from marijuana use from pre- to post-test for multi-year programs that served elementary school youth. LifeSkills Training is the only multi-year program for which there were a sufficient number of matched surveys to report data, and there were sufficient numbers only for the second curriculum year. These data present individual years of the program and therefore are not indicative of how the complete program performs. Also, the change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 25. Change in Perceived Risk of Harm from Marijuana Use by Program: Elementary School Youth in Multi-Year Programs**



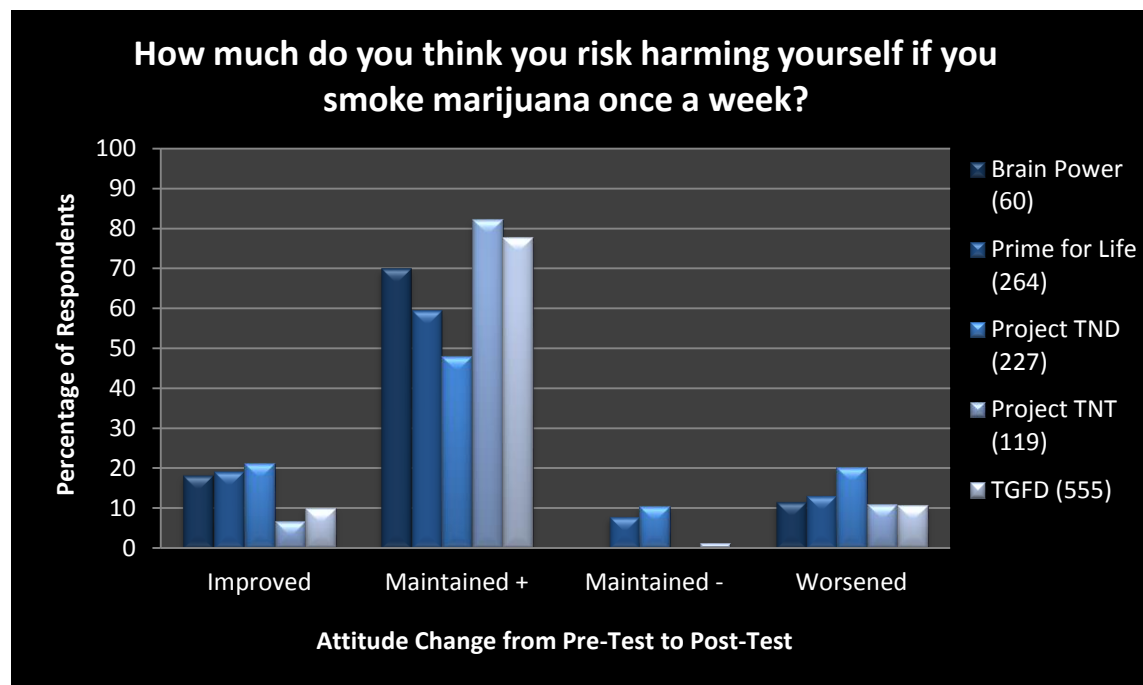
The percentages of elementary school multi-year program participants showing positive outcomes (maintaining a response that marijuana use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- LifeSkills Training (Year 1) – 73.20%



Figure 26 shows the change in individuals' perceptions of risk of harm from marijuana use from pre- to post-test for single-year programs serving middle and high school youth. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 26. Change in Perceived Risk of Harm from Marijuana Use by Program: Middle and High School Youth in Single-Year Programs**

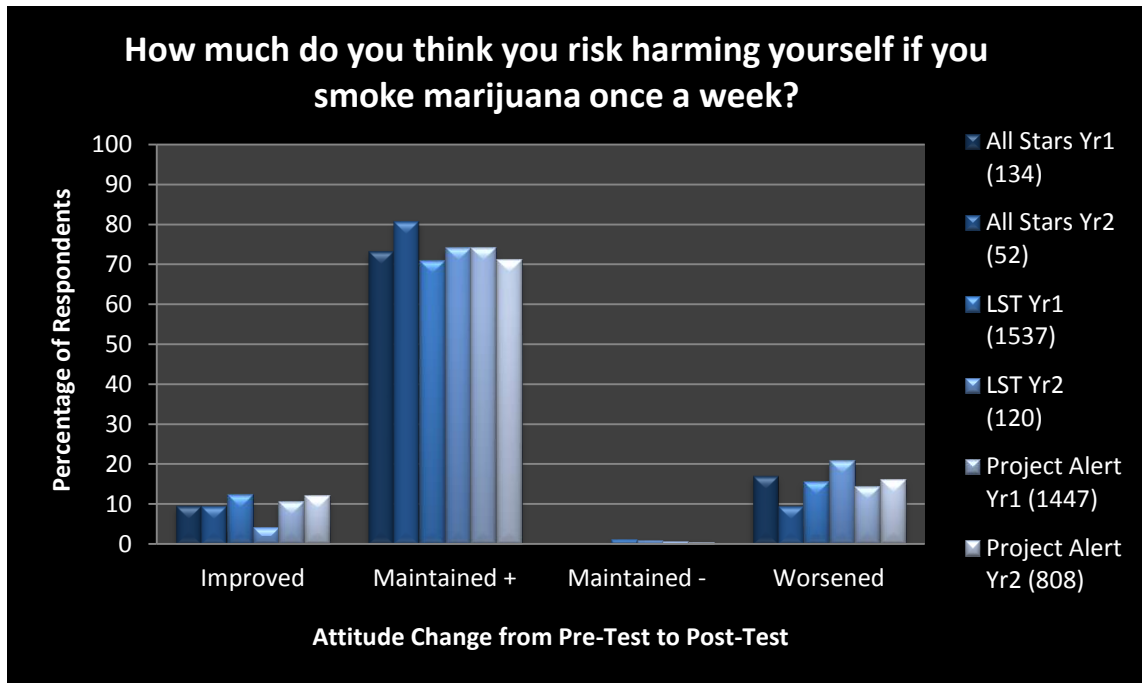


The percentages of middle and high school single-year program participants showing positive outcomes (maintaining a response that marijuana use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- Brain Power – 78.69%
- Prime for Life – 72.62%
- Project Towards No Drug Abuse – 60.19%
- Project Towards No Tobacco Use – 81.36%
- Too Good for Drugs – 79.61%

Figure 27 shows the change in individuals' perception of risk of harm from marijuana use from pre- to post-test for multi-year programs serving middle and high school youth. These data present individual years of the programs and therefore are not indicative of how the complete programs perform. Also, the change values presented in the table do not necessarily indicate statistically significant differences from pre-test to post-test.

**Figure 27. Change in Perceived Risk of Harm from Marijuana Use by Program: Middle and High School Youth in Multi-Year Programs**



The percentages of middle school multi-year program participants showing positive outcomes (maintaining a response that marijuana use poses "moderate risk" or "great risk," or moving up the scale towards "great risk") are as follows:

- All Stars (Year 1) – 82.09%
- All Stars (Year 2) – 90.38%
- LifeSkills Training (Year 1) – 80.38%
- LifeSkills Training (Year 2) – 73.33%
- Project ALERT (Year 1) – 77.97%
- Project ALERT (Year 2) – 80.35%

**Summary of Positive Outcomes for Perceived Risk of Harm from Substance Use**

Table 5 shows the average positive outcome (improved or maintained+) percentage for Comprehensive Prevention participants for each substance by program level group.

**Table 5. Positive Outcome Percentages for Perceived Risk of Harm from Substance Use by School Group**

Average Positive Outcome Percentages for Perception of Risk of Harm from Substance Use			
School Group	Alcohol	Cigarettes	Marijuana
Elementary School Youth in Single Year Programs	80.7%	86.4%	69.5%
Elementary School Youth in Multi- Year Programs	82.5%	90.7%	73.2%
Middle and High School Youth in Single Year Programs	78.9%	84.2%	74.5%
Middle and High School Youth in Multi-Year Programs	82.9%	90.0%	80.8%

For all groups, the percentage of students believing regular marijuana use poses risk of harm is less than the percentages believing cigarette and alcohol use pose risk of harm. The percentage believing cigarette use poses risk is higher for all groups than the percentages believing alcohol and marijuana pose risk of harm.

**Diversion Program Outcomes**

Diversion programs are prevention programs for indicated populations of youth who have already experienced legal or other consequences from their substance use. Hence, Diversion program data are presented separately from the primary prevention programs. Diversion programs also tend to be shorter in duration than other prevention programs, and usually span fewer than 30 days. The Comprehensive Prevention survey instrument now accounts for such short programs by asking at the post-test if participants have used in the past 30 days or since the beginning of the prevention program, whichever is the shorter timeframe. Therefore, pre-test data presented below on substance use reflect use reported in the 30 days prior to starting the program and completing the pre-test, and post-test data reflect the timeframe from the start of the program or completion of the pre-test to the end of the program or completion of the post-test. Two-hundred sixty-one Diversion program participants completed both a pre-test and a post-test survey. The median age for these participants was 17, and the median grade was 11th.

**Past 30-Day Use**

Table 6 on page 38 presents data on the percentage of Diversion program participants reporting use of alcohol, binge drinking (5 or more drinks in a row), cigarettes, and marijuana at the pre-test and the amount and direction of change at post-test. Iowa Youth Survey data also are provided.

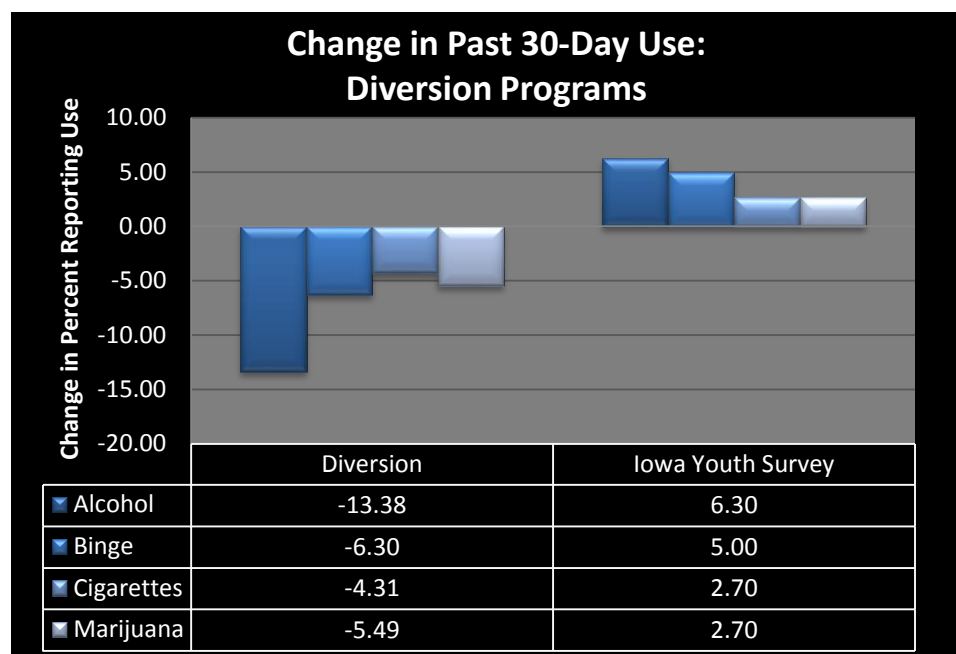
**Table 6. Change in Substance Use: Diversion Program Participants**

Percentage of Youth Reporting Use at the Pre-Test and Change at Post-Test: Diversion Program Participants										
Group	N	Median Age	Alcohol		Binge Drinking		Cigarettes		Marijuana	
			Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change	Pre-Test %	Change
Iowa Youth Survey <sup>1</sup>	46,257 <sup>2</sup>	15 <sup>3</sup>	–	<b>+6.30</b>	–	<b>+5.00</b>	–	<b>+2.70</b>	–	<b>+2.70</b>
Diversion	261	17	49.21	<b>-13.38</b>	27.56	<b>-6.30</b>	29.41	<b>-4.31</b>	17.25	<b>-5.49</b>

<sup>1</sup> IYS entries reflect the estimated yearly average change in 30-day use between participating Iowa students in grades 8 and 11. Data were from the 2012 Iowa Youth Survey, State of Iowa report.  
<sup>2</sup> The total number of 8<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 24,294, and the total number of 11<sup>th</sup> graders was 21,963.  
<sup>3</sup> The median age of 8<sup>th</sup> graders completing the 2012 Iowa Youth Survey was 13.5 years, and the median age of 11<sup>th</sup> graders was 16.5 years.

The decreases in use of all substances are statistically significant. (McNemar test results are as follows: Alcohol,  $p < 0.0001$ ; binge drinking,  $p = 0.0259$ ; cigarette use,  $p = 0.0347$ , and marijuana use,  $p = 0.0094$ .) Figure 28 on page 39 displays, graphically, the change in past 30-day use from pre- to post-test for Diversion programs participants.

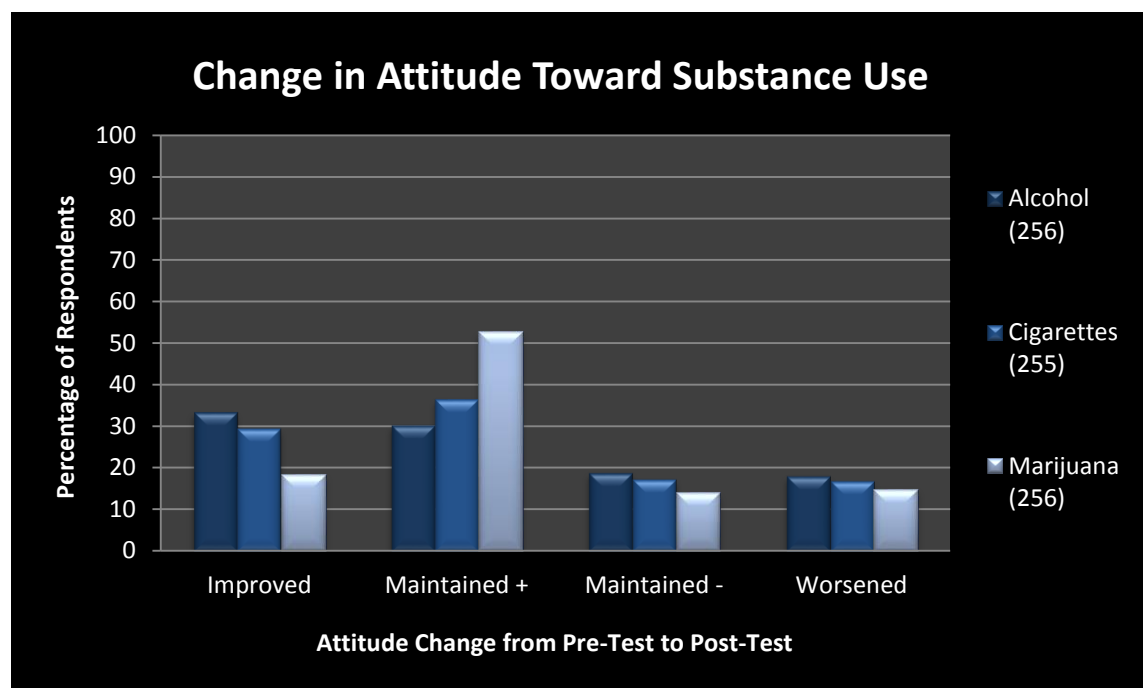
**Figure 28. Change in Past 30-Day Use: Diversion Program Participants**



### ***Attitudes Toward Substance Use***

Attitude responses are coded on a Likert scale from 0="not wrong at all" to 3="very wrong." Individual attitudes either: 1) improved, which means that attitudes moved up the scale towards "very wrong" from any point on the scale (e.g., respondent felt alcohol use was wrong at pre-test and very wrong at post-test); 2) maintained +, which means that the pre- and post-test responses remained the same and were unfavorable toward alcohol, cigarette, or marijuana use ("wrong" or "very wrong"); 3) maintained -, which means that the pre- and post-test responses remained the same and were favorable toward alcohol, cigarette, or marijuana use ("a little wrong" or "not wrong at all"); or 4) worsened, meaning that attitudes moved down the scale away from "very wrong" from any point on the scale (e.g., respondent felt marijuana use was "wrong" at pre-test and "a little bit wrong" at post-test). Maintaining a response from pre-test to post-test that use is "wrong" or "very wrong," or moving up the scale towards "very wrong" from any point on the scale is considered a positive outcome. Figure 29 on page 40 presents data on the change in attitude toward alcohol, cigarette, and marijuana use from pre-test to post-test for Diversion program participants. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test. The number in parentheses after each substance name in the figure is the number of respondents answering the question on both the pre-test and the post-test.

**Figure 29. Change in Attitudes Toward Substance Use: Diversion Program**



The percentages of Diversion program participants showing positive attitude outcomes (maintaining a response that use is “wrong” or “very wrong,” or moving up the scale towards “very wrong”) for each substance are as follows:

- Alcohol – 63.28%
- Cigarettes – 65.88%
- Marijuana – 71.09%

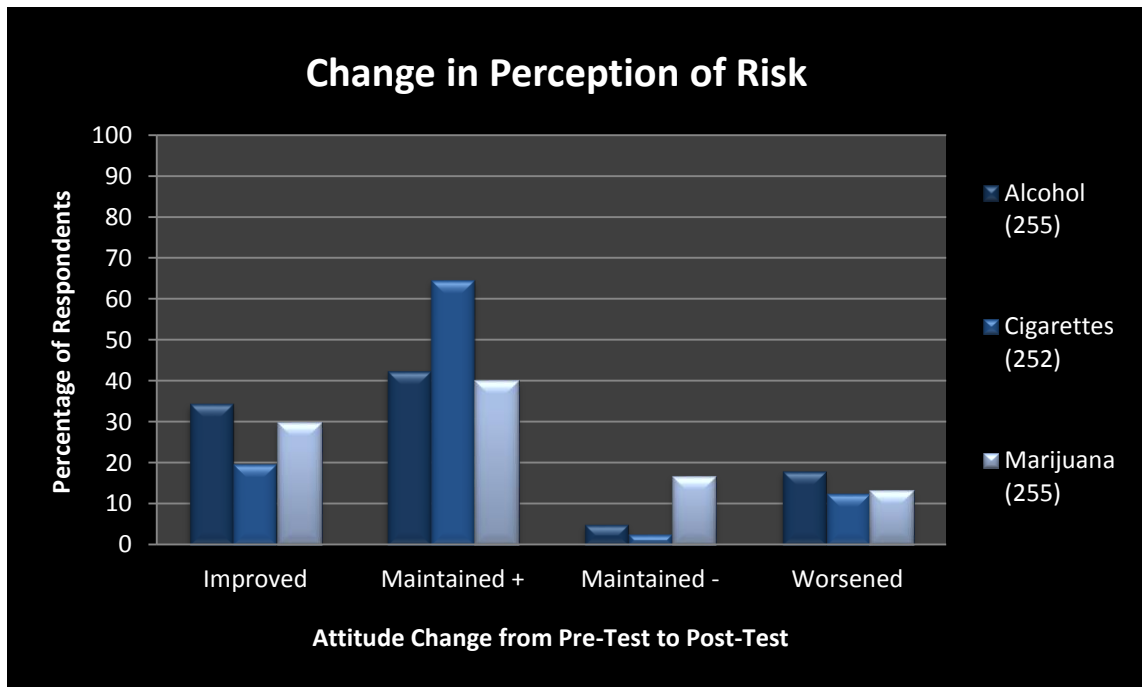
Thirty-three percent of participants moved up the scale towards “very wrong” regarding alcohol use, twenty-nine percent moved up the scale towards “very wrong” regarding cigarette use, and eighteen percent moved up the scale towards “very wrong” regarding marijuana use.

### ***Perceived Risk of Harm from Substance Use***

Perceived risk responses are coded on a Likert scale from 0=“no risk” to 3=“great risk.” Individual perceptions of risk either: 1) improved, which means that their reported perception of risk of harm from using alcohol, cigarettes, or marijuana moved up the scale from pre-test to post-test towards “great risk,” from any point on the scale (e.g., respondent felt alcohol use posed “no risk” at pre-test and “moderate risk” at post-test); 2) maintained +, which means that the pre- and post-test responses remained the same and were unfavorable toward alcohol, cigarette, or marijuana use (that use posed “moderate risk” or “great risk”); 3) maintained –, which means that the pre- and post-test responses remained the same and were favorable toward alcohol, cigarette, or marijuana use (that use posed “slight risk” or “no risk”); or 4) worsened, meaning that their reported perception of risk of harm moved down the scale from pre-test to post-test away from “great risk,” from any point on the scale (e.g., respondent reported that marijuana use posed “moderate risk” of harm at pre-test and “no risk” at post-

test). Maintaining a response from pre-test to post-test that use poses “moderate risk” or “great risk,” or moving up the scale towards “great risk” from any point on the scale is considered a positive outcome. Figure 30 presents data on the change in perception of risk of harm from alcohol, cigarette, and marijuana use from pre-test to post-test for Diversion program participants. The change values presented in the figure do not necessarily indicate statistically significant differences from pre-test to post-test. The number in parentheses after each substance name in the figures is the number of respondents answering the question on both the pre-test and the post-test.

**Figure 30. Change in Perceived Risk of Harm from Substance Use: Diversion Program**



The percentages of Diversion program participants showing positive perceived risk outcomes (maintaining a response that use poses moderate or great risk, or moving up the scale towards “great risk”) for each substance are as follows:

- Alcohol – 76.86%
- Cigarettes – 84.52%
- Marijuana – 69.80%

Thirty-five percent of participants moved up the scale towards “great risk” regarding alcohol use, twenty percent moved up the scale towards “great risk” regarding cigarette use, and thirty percent moved up the scale towards “great risk” regarding marijuana use.

## CONCLUSION

The results of the evaluation of the Comprehensive Prevention project answer the following questions:

- *Has alcohol/tobacco/marijuana usage changed in the target population?*

There was no statistical evidence of change from pre-test to post-test for alcohol, binge drinking, cigarette, or marijuana use for the following programs: All Stars, Brain Power, Prime for Life – Non Diversion, Project Towards No Drug Abuse, Project Towards No Tobacco Use, and Too Good for Drugs. However, this also means that for those programs, use of those substances showed no evidence of increasing as would be expected due to maturation. For LifeSkills Training, there was a statistically significant increase in the use of cigarettes in participants in the first year of the program. For Project ALERT, there was a statistically significant increase in the use of alcohol in participants in the second year of the program. Those outcomes pertain only to a single year of those multi-year programs and are not necessarily indicative of outcomes of the full program. There was no evidence of change for use of other substances in those two programs.

There were statistically significant decreases in the use of all three substances and binge drinking for Diversion program participants.

- *Has the percentage of the target population who indicate desirable attitudes (i.e., that it is wrong to use substances) at baseline (pre-test) maintained or increased after the intervention (post-test)?*

Ninety-three percent or more of participants in three of the four elementary school programs showed positive outcomes for attitudes toward alcohol use (maintained a response from pre-test to post-test that use is “wrong” or “very wrong,” or moved up the scale towards “very wrong” from any point on the scale). Project Towards No Tobacco Use had the lowest percentage, with positive outcomes for 84.4% of participants. Eight of the eleven middle and high school program groups (counting each year of multi-year programs as a separate group) showed positive outcomes above 82% for attitude toward alcohol use. Project Towards No Drug Abuse had the lowest percentage, with 69.2% of participants showing positive outcomes.

Ninety-two percent or more of participants in elementary school programs showed positive outcomes for attitudes toward cigarette use, and ten of the eleven middle and high school program groups showed positive outcomes of 83% or more. Project Towards No Drug Abuse had the lowest percentage, with 78.8% of participants showing positive outcomes for attitudes toward cigarette use.

The elementary school programs showed positive outcomes of 94% or more for attitude toward marijuana use. Eight of the eleven middle and high school program groups showed positive outcomes above 91% for attitude toward marijuana use. Project Towards No Drug Abuse had the lowest percentage, with 67.4% of participants showing positive outcomes.

For Diversion programs, 62% or more of participants showed positive outcomes for attitudes regarding alcohol use, 66% showed positive outcomes regarding attitude toward cigarette use, and 71% showed positive outcomes regarding attitude toward marijuana use. It is noteworthy





that thirty-three percent of Diversion participants moved up the scale (further toward “very wrong”) for alcohol use and twenty-nine percent moved up the scale for cigarette use.

- *Has perception of risk of harm from alcohol/tobacco/marijuana use maintained a positive response or increased from pre-test to post-test?*

Three of the four elementary school programs had 82% or more of participants show positive outcomes for perception of risk of harm from alcohol use (maintained a response from pre-test to post-test that use poses “moderate risk” or “great risk,” or moved up the scale towards “great risk” from any point on the scale). Project Towards No Tobacco Use had the lowest percentage, with 73% of participants show positive outcomes. Eight of the eleven middle school program groups (counting each year of multi-year programs as a separate group) had 80% or more of participants with positive outcomes. LifeSkills Training Year 2 had the lowest percentage, with 66.7% of participants showing positive outcomes for perceived risk of harm from alcohol use.

Regarding perception of risk of harm from cigarette use, 85% or more of participants in the elementary school programs showed positive outcomes. All but one of the middle and high school program groups had positive outcomes of 81% or more. Project Towards No Drug Abuse had the lowest percentage, with 78.7% of participants showing positive outcomes.

Regarding perception of risk of harm from marijuana use, percentages for the elementary school program groups ranged from 65% to 78%. In ten of the eleven middle school program groups, 72% percent or more participants showed positive outcomes; 60.2% of Project Towards No Drug Abuse participants showed positive outcomes.

For Diversion programs, 70% or more of participants showed positive outcomes for perceived risk of harm from substance use. It is noteworthy that 35% of Diversion participants moved up the scale (further toward “great risk”) for perceived risk of harm from alcohol use, 20% moved up the scale for perceived risk of harm from cigarette use, and 30% moved up the scale for perceived risk of harm from marijuana use.

It is important to consider the populations served by these programs when assessing their performance. Project Towards No Drug Abuse was the lowest performer for attitudes toward use of all substances and lowest on perceived risk of harm for 2 of the 3 substances (and second only to LifeSkills Training in perception of risk for alcohol use). However, it may be that the populations served by the program were selective or indicated rather than universal, and these outcomes may meet or exceed goals or expectations for those groups. Alternatively, outcomes for the Diversion programs were quite positive given the indicated populations served, and agencies implementing Project Towards No Drug Abuse may want to consider replacing that program with curricula used in the Diversion programs.

Attrition places a caveat on these results. Over 10% of the population served attrited. Based on the attrition analysis, the Evaluators recommend prevention agencies assess the cross-cultural acceptability of the prevention programs they implement and increase efforts to engage and retain minority participants.

# Appendix

## Institute of Medicine Categories of Populations Served by Agency and Program

## Institute of Medicine Population Categories by Agency and Program

AGENCY	PROGRAM	POPULATION SERVED (IOM CATEGORY)
ADDS	LifeSkills Training	Universal-Direct
	Project ALERT	Universal-Direct
ASAC Area 6	LifeSkills Training	Universal
	Prime for Life	Indicated and Universal
	Project Towards No Drug Abuse	Selective
	Families and Schools Together	Selective
CADS	Too Good For Drugs	Universal-Direct
CFR	Diversion	Indicated
	JADE	Universal
	Too Good for Drugs	Universal-Direct
Compass Pointe	Diversion (Juvenile Alcohol & Drug Education)	Indicated
	Prime for Life	Universal
EFR Area 13	LifeSkills Training	Universal-Direct
	Too Good for Drugs	
EFR Area 16	LifeSkills Training	Universal-Direct
	Project Towards No Tobacco Use	
	Too Good for Drugs	
EFR Area 20	LifeSkills Training	Universal-Direct
Helping Services	Project Towards No Tobacco Use	Universal-Direct
MECCA Services	LifeSkills Training	Universal-Direct
New Opportunities	LifeSkills Training	Universal-Direct
Pathways	Diversion (Prime for Life)	Indicated
Prairie Ridge Addiction Treatment Services	Diversion (Prime for Life)	Indicated
SASCC	All Stars	Universal-Direct
SATUCI	Juvenile Education Groups	Indicated
SIEDA	Brain Power	Universal-Direct
Trinity Muscatine	LifeSkills Training	Universal-Direct
	Project ALERT	
	Project Towards No Drug Abuse	Indicated and Universal
YSS Area 1	Project ALERT	Universal-Direct
	Too Good For Drugs	
YSS Area 2	Project ALERT	Universal-Direct