

# **Botvin LifeSkills Outcome Evaluation**

**Fiscal Year 20/21**

(July 1<sup>st</sup>, 2020 – June 30<sup>th</sup>, 2021)

Anderson and Turtle Bay Middle School



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## Introduction

The Botvin LifeSkills program is an evidence-based substance use and violence prevention program for adolescents and young teens. LifeSkills Training is funded by the Mental Health Service Act (MHSA) as outlined in Shasta County's strategic plan as a prevention and early intervention program to address at-risk middle school students. The program can be taught in a variety of environments (often in schools) and has been proven effective in reducing tobacco, alcohol, opioid, and illicit drug use. Other benefits include reductions in delinquency, fighting, and verbal aggression as students learn valuable social and coping skills.

The program was administered to 6<sup>th</sup>-8<sup>th</sup> grade students attending Turtle Bay and Anderson Middle School during Fiscal Year 20/21. The program promotes healthy alternatives to risky behavior through activities that help students resist peer pressure to smoke or use drugs and alcohol, develop greater self-esteem and social skills, learn about relaxation techniques to cope with anxiety, and learn about the effects of substance abuse and healthier lifestyle choices.

This is the third year of delivering Botvin Lifeskills in 6<sup>th</sup>-8<sup>th</sup> grades at Anderson and the first year at Turtle Bay Middle School.

## Method

National Health Promotion Associates, Inc. (NHPA) designed a survey<sup>1</sup> to gauge how much students know about illicit drug use, their attitudes towards drugs, and determine what kind of social and coping skills they have. The survey was given to students before and after participating in the program and consisted of 7 questions about the students' background and 53 questions that related to one of three categories of substance abuse prevention: *knowledge*, *attitudes*, or *life skills*. All three categories were broken down into related subgroups and each subgroup was scored according to the instructions on the Botvin Lifeskills website.<sup>2</sup> The name of each category and subgroup is listed below:

### *Knowledge category*

- Anti-drug knowledge (13 questions)
- Life skills knowledge (19 questions)
- Overall knowledge (anti-drug/life skills knowledge combined - 32 questions)

### *Attitudes category*

- Anti-smoking attitudes (4 questions)
- Anti-drinking attitudes (4 questions)
- Anti-drug attitudes (anti-smoking/anti-drinking attitudes combined - 8 questions)

### *Life Skills category*

- Drug refusal skills (6 questions)
- Assertiveness skills (3 questions)
- Relaxation skills (2 questions)
- Self-control skills (2 questions)

Each subgroup is a measure that is scored once the survey is completed. Measures in the *Knowledge* category were scored as a percentage (with 100% being the maximum score) while measures in the *Attitudes* and *Life Skills* categories were each scored out of five possible points (with 5/5 being the maximum score). Under the "Data Analysis" section of this report, details of how the scores were generated for these measures are provided.

# Limitations

## Implementation barriers

With schools distributing the survey in a virtual format due to the pandemic, the survey completion rate was lower than expected. Two schools that initially began the program, Pacheco and Happy Valley, did not have any post-survey responses submitted and were excluded from the evaluation. Additionally, 8<sup>th</sup> graders from Turtle Bay did not return any post-surveys.

## Survey Design

The “Drug refusal” score might have been adversely affected by the transition from survey Section C.) to Section D.). Section C.) had a series of statements representing attitudes towards drug use (i.e. “Smoking cigarettes makes you look cool”) where students indicated where they agreed or disagreed with the statement in question. “Disagree” represented an anti-drug response across the entire section. The next section on the survey, Section D.), had a series of statements such as “Smoke a cigarette”, “Use cocaine or other drugs” where, again, students indicated their agreement or disagreement, but, unlike the preceding section, “Agree” was the anti-drug response for this section due to a lead-in statement that read: “I would say NO if someone tried to get me to [Smoke a cigarette], [Use cocaine or other drugs], [etc.,].” In the preceding section C.), there was no lead-in statement. Students could have misinterpreted section D.) if they did not see the lead-in statement.

Results for Fiscal Year 20/21 are shown on the next two pages.

# Results

The results of each scored measure for 6<sup>th</sup> – 8<sup>th</sup> grade students from Turtle Bay school are shown in the matrix below (8<sup>th</sup> grade post-surveys were not completed and were excluded from the evaluation). Higher post-survey scores are represented by green arrows while lower scores are shown as red arrows. Higher survey scores in every measure are preferred.

		Turtle Bay School								
		6 <sup>th</sup> grade			7 <sup>th</sup> grade			8 <sup>th</sup> grade		
	Measure	Pre-Survey (N = 20)	Post-Survey (N = 20)	Change	Pre-Survey (N = 23)	Post-Survey (N = 23)	Change	Pre-Survey	Post-Survey (N = 0)	Change
<b>Knowledge</b>	Anti-drug	61.15%	70.38%	+9.23% ↑	60.20%	59.20%	-1.00% ↓			
	Life skills	66.84%	80.53%	+13.69% ↑	77.35%	76.66%	-0.69% ↓			
	Overall (combined)	64.53%	76.41%	+11.88% ↑	70.38%	69.57%	-0.81% ↓			
<b>Attitudes</b>	Anti-smoking	4.48	4.50	+0.02 ↑	4.45	4.37	-0.08 ↓			
	Anti-drinking	4.41	4.48	+0.07 ↑	4.21	4.26	+0.05 ↑			
	Anti-drug (combined)	4.44	4.49	+0.05 ↑	4.33	4.32	-0.01 ↓			
<b>Life Skills</b>	Drug refusal	3.06	2.94	-0.12 ↓	4.01	3.77	-0.24 ↓			
	Assertiveness	3.58	3.52	-0.06 ↓	3.35	3.45	+0.10 ↑			
	Relaxation	4.03	4.15	+0.12 ↑	3.91	3.85	-0.06 ↓			
	Self-control	3.48	3.18	-0.30 ↓	3.15	3.26	+0.11 ↑			

Note: Numbers may not add due to rounding.

The results of each scored measure for 6<sup>th</sup> – 8<sup>th</sup> grade students from Turtle Bay School are shown in the matrix below. Higher post-survey scores are represented by green arrows while lower scores are shown as red arrows. Higher survey scores in every measure are preferred.

		Anderson Middle School								
		6 <sup>th</sup> grade			7 <sup>th</sup> grade			8 <sup>th</sup> grade		
	Measure	Pre-Survey (N = 41)	Post-Survey (N = 41)	Change	Pre-Survey (N = 11)	Post-Survey (N = 11)	Change	Pre-Survey (N = 13)	Post-Survey (N = 13)	Change
<b>Knowledge</b>	Anti-drug	61.15%	67.81%	+6.66% ↑	60.68%	66.43%	+5.75% ↑	63.91%	70.41%	+6.50% ↑
	Life skills	71.71%	73.13%	+1.42% ↑	59.06%	63.16%	+4.10% ↑	76.11%	83.81%	+7.70% ↑
	Overall (combined)	67.42%	70.97%	+3.55% ↑	59.72%	64.49%	+4.77% ↑	71.15%	78.37%	+7.22% ↑
<b>Attitudes</b>	Anti-smoking	4.59	4.41	-0.18 ↓	4.54	4.47	-0.07 ↓	4.28	4.28	No Change
	Anti-drinking	4.52	4.35	-0.17 ↓	4.53	4.44	-0.09 ↓	4.15	4.25	+0.10 ↑
	Anti-drug (combined)	4.56	4.38	-0.18 ↓	4.54	4.46	-0.08 ↓	4.21	4.27	+0.06 ↑
<b>Life Skills</b>	Drug refusal	2.45	2.49	+0.04 ↑	3.54	3.01	-0.53 ↓	3.79	3.63	-0.16 ↓
	Assertiveness	3.47	3.68	+0.21 ↑	3.48	3.36	-0.12 ↓	3.28	3.31	+0.03 ↑
	Relaxation	3.88	3.88	No Change	4.08	3.80	-0.28 ↓	3.73	3.82	+0.09 ↑
	Self-control	3.76	3.54	-0.22 ↓	3.42	3.55	+0.13 ↑	3.51	3.69	+0.18 ↑

Note: Numbers may not add due to rounding.

## Conclusion

The results show that the program was successful at improving anti-drug and life skills knowledge for 6 - 8<sup>th</sup> graders at Anderson and for 6<sup>th</sup> graders at Turtle Bay. Turtle Bay seventh graders had a slight decrease in these scores and eighth graders did not complete the post-surveys.

Overall Life Skills (consisting of Drug Refusal, Assertiveness, Relaxation, and Self-control) and anti-drug attitudes (consisting of Anti-smoking and Anti-drinking) showed mixed results with some grades showing improvements while others worsened.

Efforts should be made to improve implementation of the program. Some grades were not available for post-survey follow-up. Some students received the program in a virtual format due to the pandemic which may have contributed to lower post-survey participation. Other improvements would consist of addressing barriers to learning, changing attitudes, and implementing life skills. Program staff should consider adjusting the curriculum to better influence anti-drug attitudes and improve implementation of life skills learned by students. Tweaking the survey design between sections C.) and D.) would also be ways to improve.

## Data Analysis

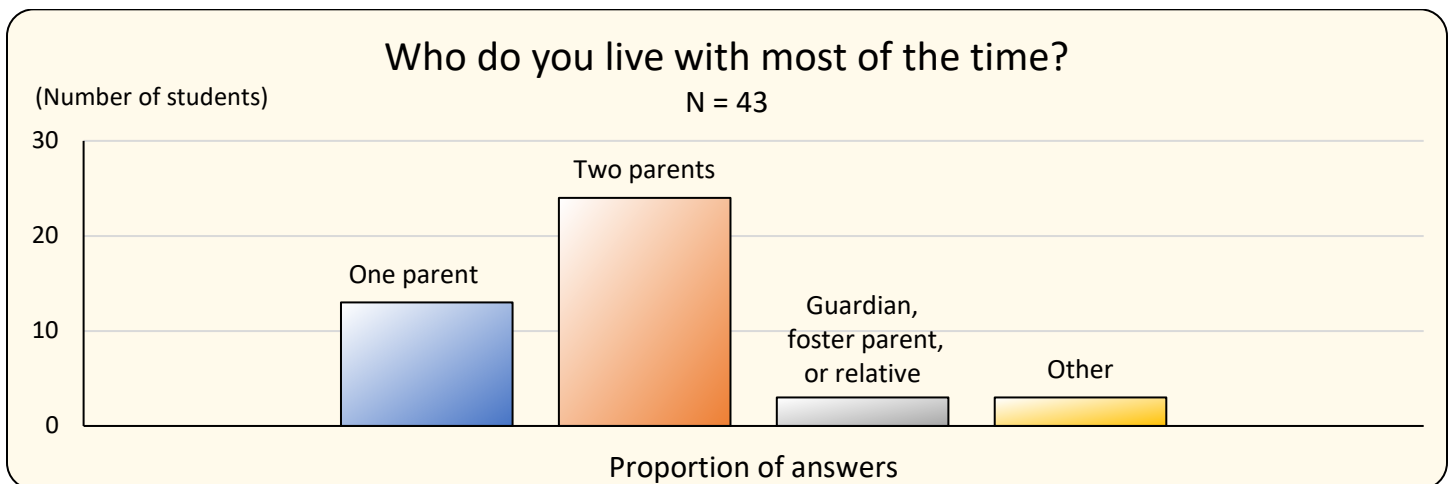
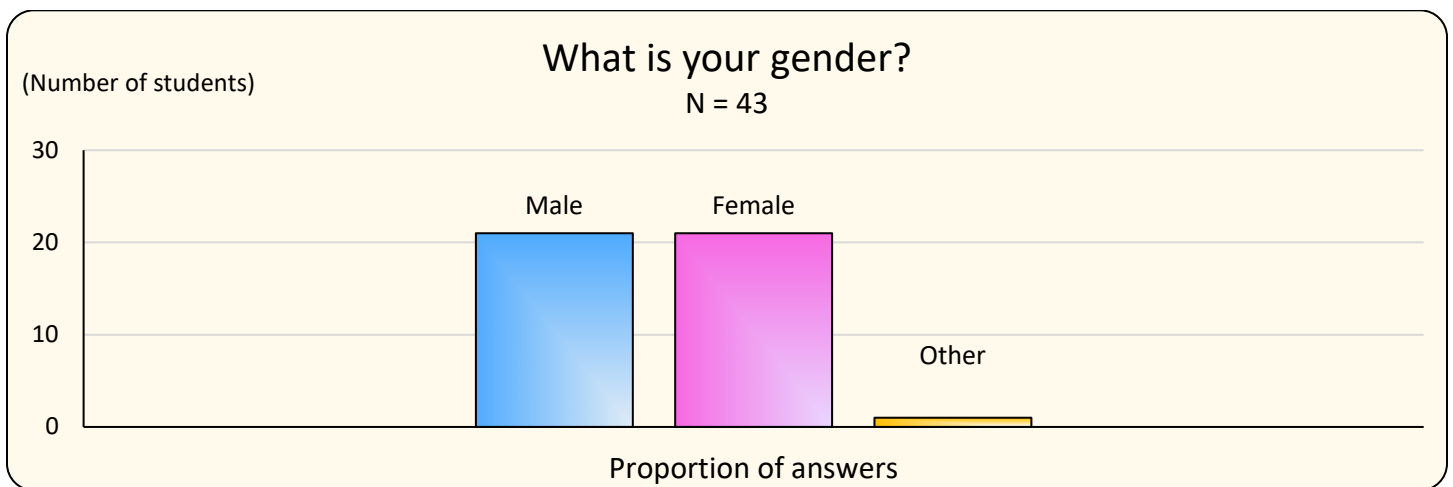
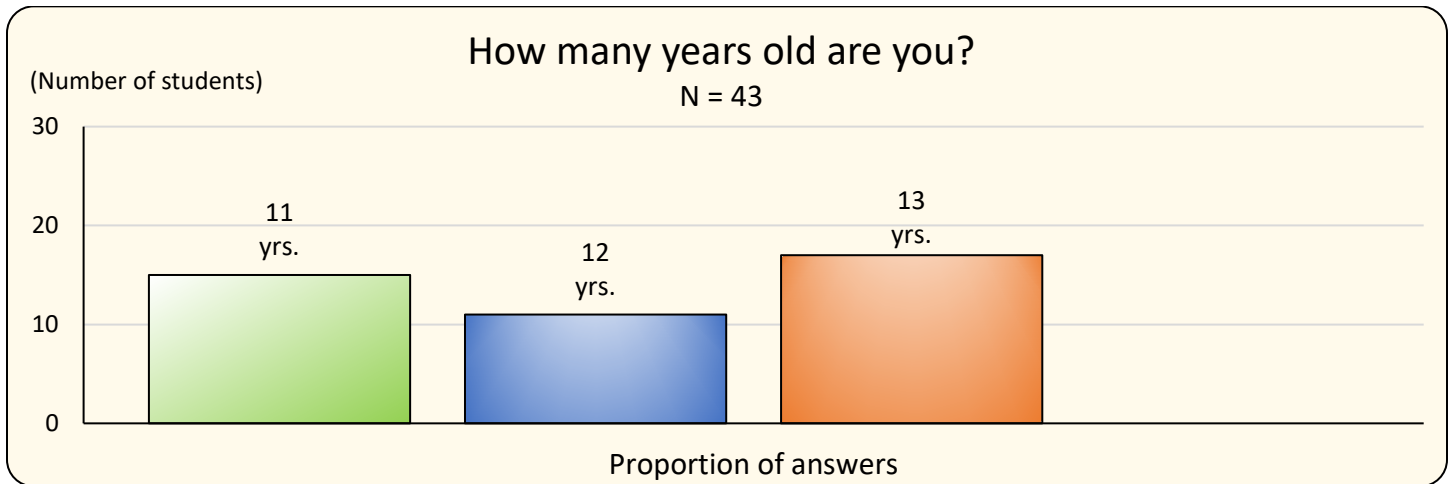
In this section, information on the students' background (including demographic information) and how the scored measures were calculated will be explored in greater detail. Missing responses were ignored when calculating the scored measures, and missing responses were also not individually tracked in the student background section. Only students who took both pre- and post-surveys were counted (linked by their student ID number). If multiple surveys were taken by the same student, only the survey they completed first was used. Survey questions, shown further on in this report, are formatted differently for illustrative purposes. The structure of this section is as follows:

### Turtle Bay

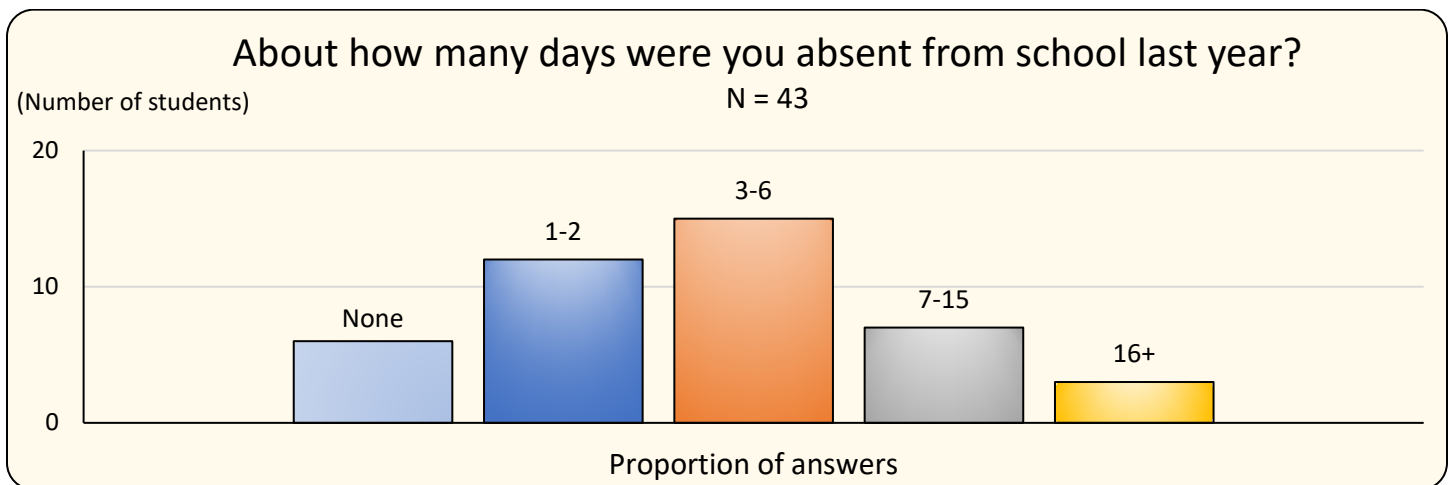
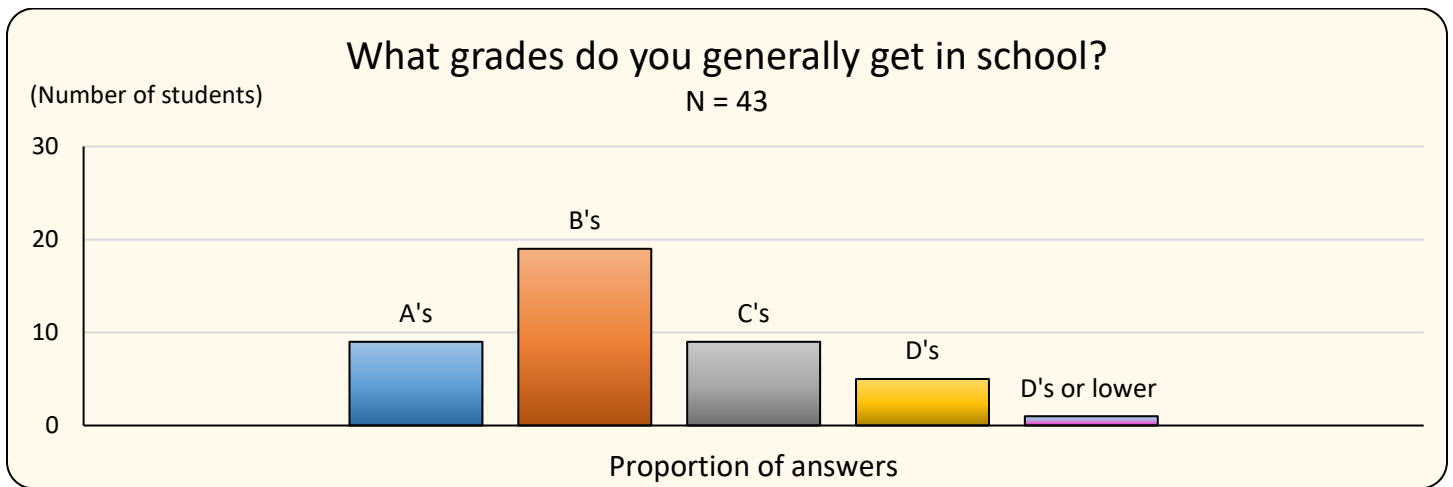
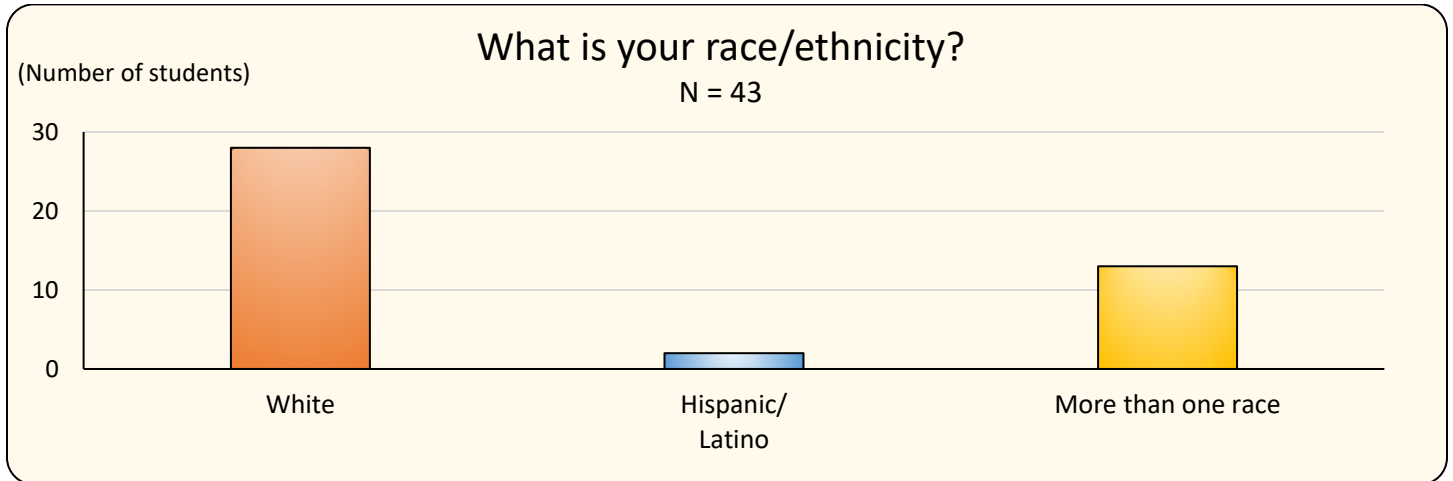
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### Anderson

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## Section B: Knowledge measures (Anti-drug)

“To create an **anti-drug knowledge summary score**, add up the number of items (out of items 1 – 7, 12 – 17) that are answered correctly and divide by 13 (the total number of drug knowledge items). This number gives you the proportion of drug knowledge items answered correctly.”<sup>2</sup>

Anti-Drug knowledge items (Turtle Bay)		6th grade (% correct)			7th grade (% correct)			8th grade (% correct)		
		PRE (N = 21)	POST (N = 21)	Change	PRE (N = 23)	POST (N = 23)	Change	PRE	POST (N = 0)	Change
1.	Most adults smoke cigarettes. (F)	30.00%	45.00%	15.00%	34.78%	52.17%	17.39%	N/A	N/A	N/A
2.	Smoking a cigarette causes your heart to beat slower. (F)	30.00%	30.00%	0.00%	43.48%	34.78%	-8.70%	N/A	N/A	N/A
3.	Few adults drink wine, beer, or liquor every day. (T)	65.00%	35.00%	-30.00%	39.13%	30.43%	-8.70%	N/A	N/A	N/A
4.	Most people my age smoke marijuana. (F)	70.00%	90.00%	20.00%	73.91%	60.87%	-13.04%	N/A	N/A	N/A
5.	Smoking marijuana causes your heart to beat faster. (T)	60.00%	85.00%	25.00%	73.91%	69.57%	-4.35%	N/A	N/A	N/A
6.	Most adults use cocaine or other hard drugs. (F)	70.00%	80.00%	10.00%	52.17%	82.61%	30.43%	N/A	N/A	N/A
7.	Cocaine and other hard drugs always make you feel good. (F)	90.00%	70.00%	-20.00%	56.52%	56.52%	0%	N/A	N/A	N/A
12.	Smoking can affect the steadiness of your hands. (T)	80.00%	85.00%	5.00%	82.61%	73.91%	-8.70%	N/A	N/A	N/A
13.	A stimulant is a chemical that calms down the body. (F)	60.00%	80.00%	20.00%	30.43%	52.17%	21.74%	N/A	N/A	N/A
14.	Smoking reduces a person’s endurance for physical activity. (T)	75.00%	100.00%	25.00%	82.61%	82.61%	0%	N/A	N/A	N/A
15.	A serving of beer or wine contains less alcohol than a serving of “hard liquor” such as whiskey. (F)	20.00%	45.00%	25.00%	39.13%	26.09%	-13.04%	N/A	N/A	N/A
16.	Alcohol is a depressant. (T)	50.00%	70.00%	20.00%	82.61%	60.87%	-21.74%	N/A	N/A	N/A
17.	Marijuana smoking can improve your eyesight. (F)	95.00%	100.00%	5.00%	91.30%	86.96%	-4.35%	N/A	N/A	N/A

<b>Anti-drug knowledge summary score</b> (higher % is preferred):	<b>61.15%</b>	<b>70.38%</b>	<b>+9.23%</b>	<b>60.20%</b>	<b>59.20%</b>	<b>-1.00%</b>	N/A	N/A	N/A
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Legend
Post-improvement increased by more than 5% (Section B)
Post-improvement decreased by more than 5% (Section B)

## Section B: Knowledge measures (Life skills)

“To create a **life skills knowledge summary score**, add up the number of items (out of items 8 – 11, 18 – 32) that are answered correctly and divide by 19 (the total number of life skills knowledge items). This number gives you the proportion of life skills knowledge items answered correctly.”<sup>2</sup>

Life skills knowledge items (Turtle Bay)		6th grade (% correct)			7th grade (% correct)			8th grade (% correct)		
		PRE (N = 21)	POST (N = 21)	Change	PRE (N = 23)	POST (N = 23)	Change	PRE	POST (N = 0)	Change
8.	What we believe about ourselves affects the way we act or behave. (T)	100.00%	90.00%	-10.00%	86.96%	82.61%	-4.35%	N/A	N/A	N/A
9.	It is almost impossible to develop a more positive self-image. (F)	65.00%	65.00%	0.00%	91.30%	86.96%	-4.35%	N/A	N/A	N/A
10.	It is important to measure how far you have come toward reaching your goal. (T)	85.00%	85.00%	0.00%	82.61%	78.26%	-4.35%	N/A	N/A	N/A
11.	It’s a good idea to make a decision and then think about the consequences later. (F)	55.00%	75.00%	20.00%	65.22%	73.91%	8.70%	N/A	N/A	N/A
18.	Some advertisers are deliberately deceptive. (T)	55.00%	95.00%	40.00%	86.96%	78.26%	-8.70%	N/A	N/A	N/A
19.	Companies advertise only because they want you to have all the facts about their products. (F)	40.00%	85.00%	45.00%	69.57%	69.57%	0.00%	N/A	N/A	N/A
20.	It’s a good idea to get all information about a product from its ads. (F)	60.00%	50.00%	-10.00%	69.57%	73.91%	4.35%	N/A	N/A	N/A
21.	Most people do not experience anxiety. (F)	75.00%	80.00%	5.00%	78.26%	60.87%	-17.39%	N/A	N/A	N/A
22.	There is very little you can do when you feel anxious. (F)	45.00%	70.00%	25.00%	43.48%	78.26%	34.78%	N/A	N/A	N/A
23.	Deep breathing is one way to lessen anxiety. (T)	85.00%	90.00%	5.00%	82.61%	91.30%	8.70%	N/A	N/A	N/A
24.	Mental rehearsal is a poor relaxation technique. (F)	60.00%	85.00%	25.00%	82.61%	69.57%	-13.04%	N/A	N/A	N/A
25.	You can avoid misunderstandings by assuming the other person knows what you mean. (F)	55.00%	80.00%	25.00%	78.26%	78.26%	0.00%	N/A	N/A	N/A
26.	Effective communication is when both sender and receiver interpret a message in the same way. (T)	80.00%	90.00%	10.00%	86.96%	86.96%	0.00%	N/A	N/A	N/A
27.	Relaxation techniques are of no use when meeting people. (F)	70.00%	90.00%	20.00%	86.96%	69.57%	-17.39%	N/A	N/A	N/A
28.	A compliment is more effective when it is said sincerely. (T)	85.00%	85.00%	0.00%	91.30%	78.26%	-13.04%	N/A	N/A	N/A
29.	A nice way of ending a conversation is to tell the person you enjoyed talking with him or her. (T)	95.00%	95.00%	0.00%	95.65%	95.65%	0.00%	N/A	N/A	N/A
30.	Sense of humor is an example of a non-physical attribute. (T)	35.00%	60.00%	25.00%	73.91%	78.26%	4.35%	N/A	N/A	N/A
31.	It’s better to be polite and lead someone on, even if you don’t want to go out with them. (F)	60.00%	80.00%	20.00%	52.17%	60.87%	8.70%	N/A	N/A	N/A
32.	Almost all people who are assertive are either rude or hostile. (F)	65.00%	80.00%	15.00%	65.22%	65.22%	0.00%	N/A	N/A	N/A
<b>Life skills knowledge summary score (higher % is preferred):</b>		<b>66.84%</b>	<b>80.53%</b>	<b>+13.69%</b>	<b>77.35%</b>	<b>76.66%</b>	<b>-0.69%</b>	N/A	N/A	N/A

## Section C: Attitude measures (Anti-drug)

“To create an **anti-drug attitudes summary score**, calculate the mean of all 8 items (C1 to C8). To create an anti-smoking attitudes summary score, calculate the mean of items C2, C4, C6, and C7. To create an anti-drinking attitudes summary score, calculate the mean of items C1, C3, C5, and C8. Higher scores indicate stronger attitudes against smoking and drinking.”<sup>2</sup>

Anti-drug attitudes (Turtle Bay)		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1.	Kids who drink alcohol are more grown-up.	①	②	③	④	⑤
2.	Smoking cigarettes makes you look cool.	①	②	③	④	⑤
3.	Kids who drink alcohol have more friends.	①	②	③	④	⑤
4.	Kids who smoke have more friends.	①	②	③	④	⑤
5.	Drinking alcohol makes you look cool.	①	②	③	④	⑤
6.	Smoking cigarettes lets you have more fun.	①	②	③	④	⑤
7.	Kids who smoke cigarettes are more grown-up.	①	②	③	④	⑤
8.	Drinking alcohol lets you have more fun.	①	②	③	④	⑤

**Anti-drinking attitudes score** (scores range from 1 to 5, scores closest to 5 are preferred):

**Anti-smoking attitudes score** (scores range from 1 to 5, scores closest to 5 are preferred):

**Anti-drug attitudes summary score** (scores range from 1 to 5, scores closest to 5 are preferred):

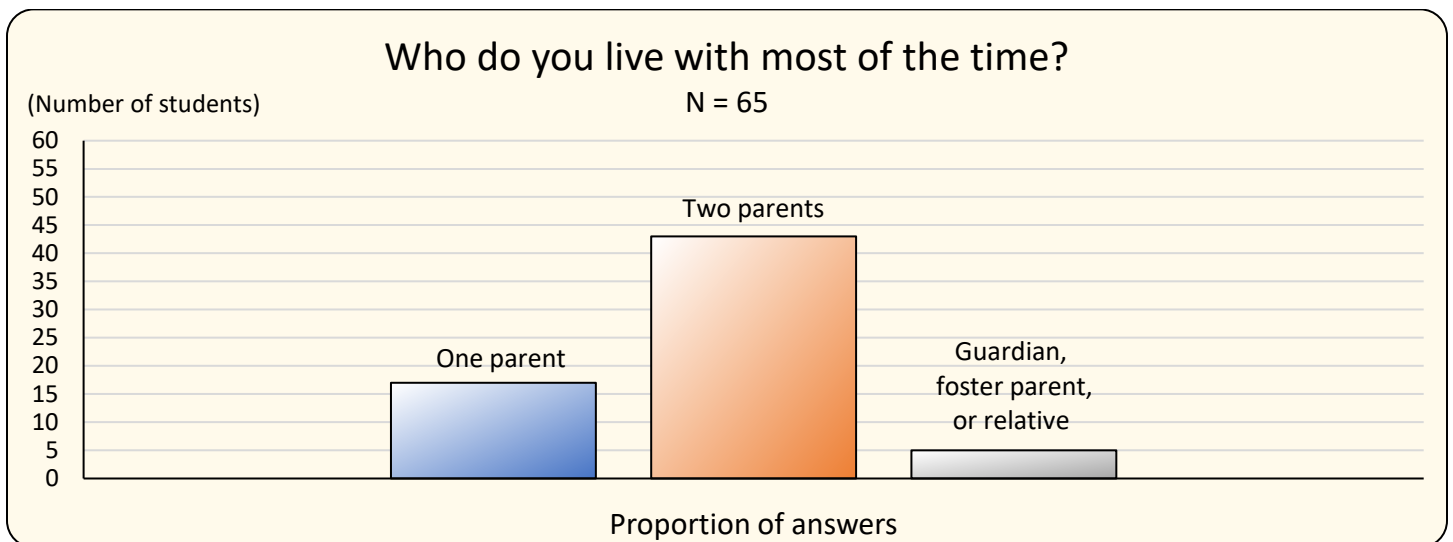
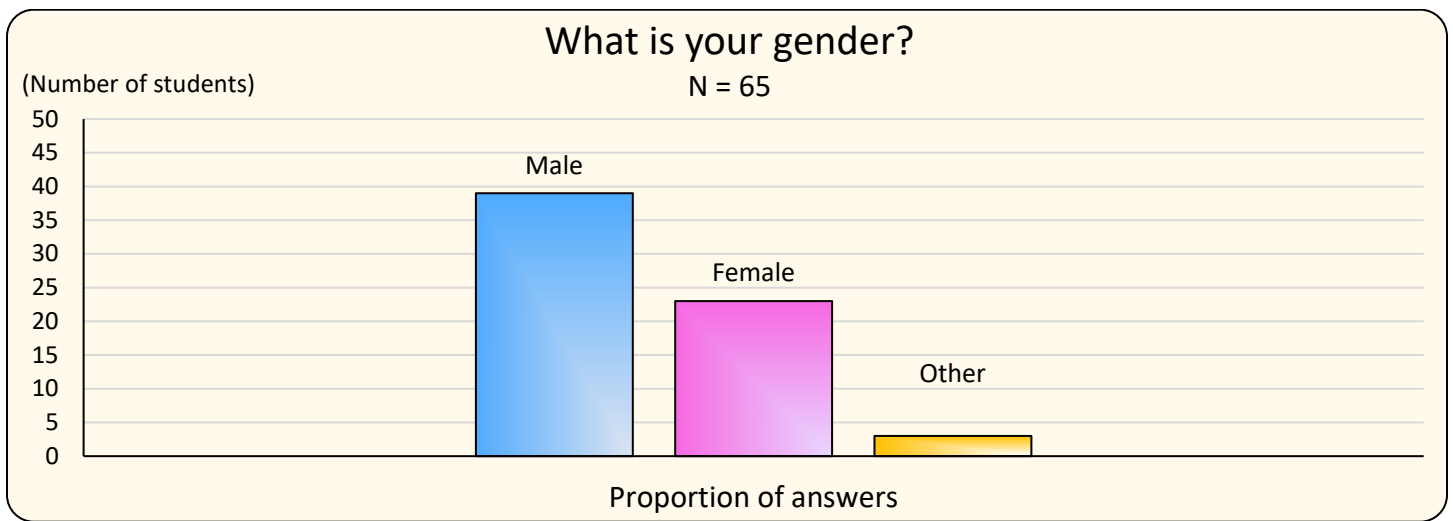
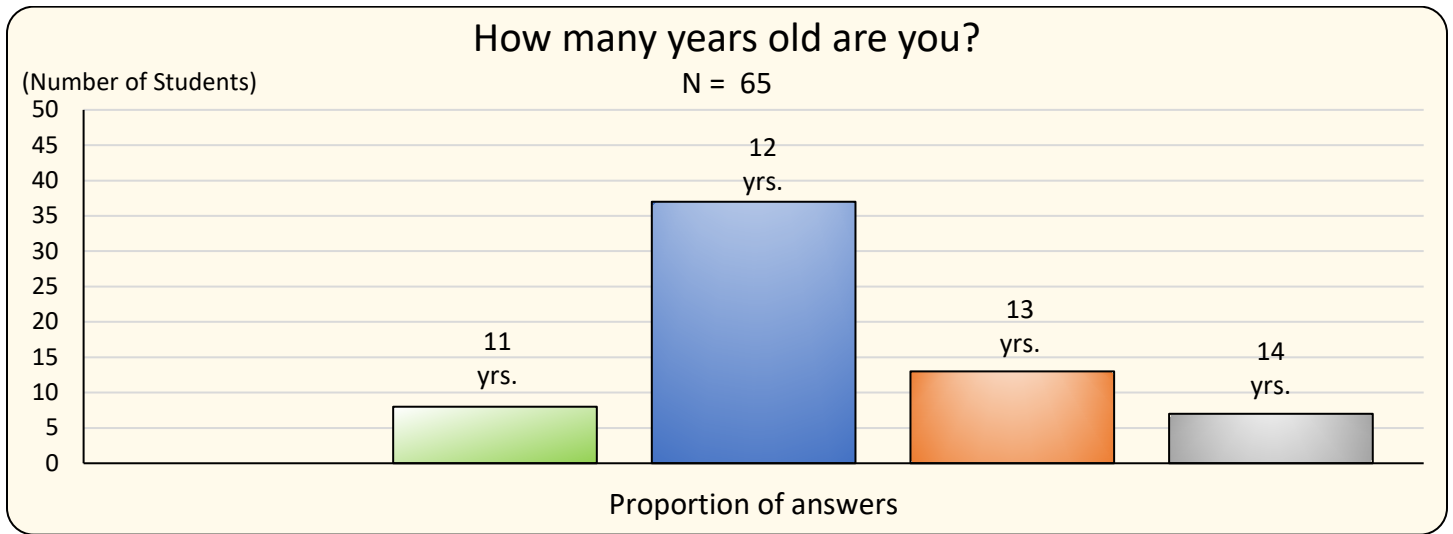
6 <sup>th</sup> grade		7 <sup>th</sup> grade		8 <sup>th</sup> grade	
PRE (N = 21)	POST (N = 21)	PRE (N = 23)	POST (N = 23)	PRE	POST (N = 0)
4.5	4.5	4.22	4.26	N/A	N/A
4.65	4.75	4.87	4.83	N/A	N/A
4.3	4.35	3.91	3.96	N/A	N/A
4.15	4.2	3.87	3.74	N/A	N/A
4.65	4.75	4.61	4.65	N/A	N/A
4.6	4.35	4.61	4.48	N/A	N/A
4.5	4.7	4.43	4.43	N/A	N/A
4.2	4.3	4.09	4.17	N/A	N/A
<b>4.41</b>	<b>4.48</b>	<b>4.21</b>	<b>4.26</b>	N/A	N/A
<b>4.48</b>	<b>4.5</b>	<b>4.45</b>	<b>4.37</b>	N/A	N/A
<b>4.44</b>	<b>4.49</b>	<b>4.33</b>	<b>4.32</b>	N/A	N/A

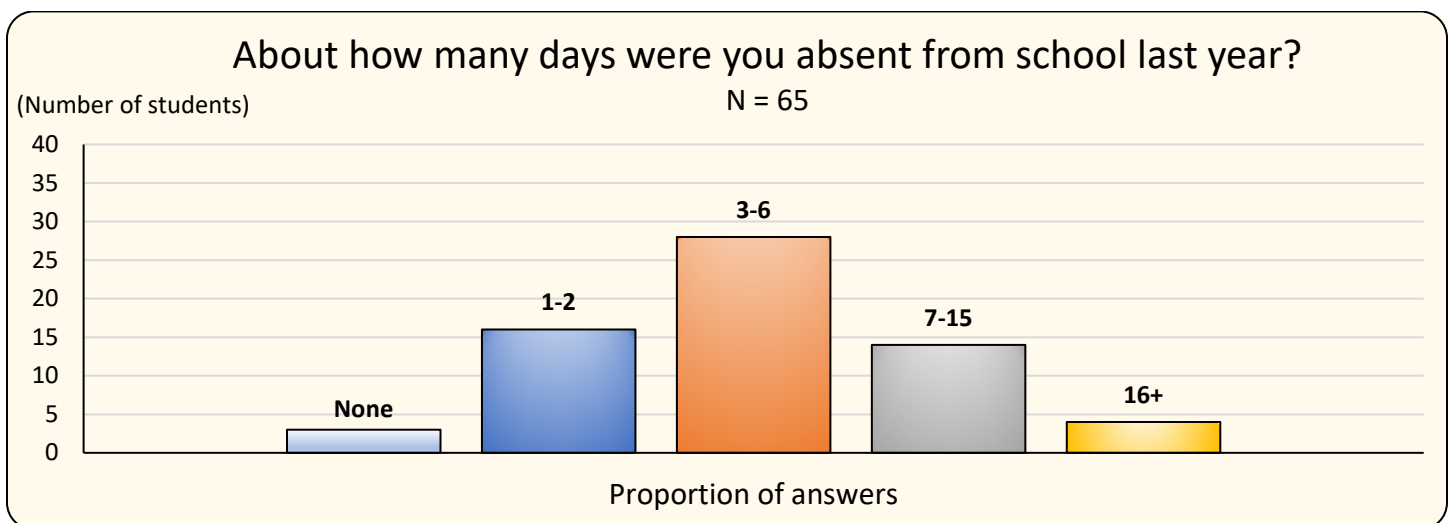
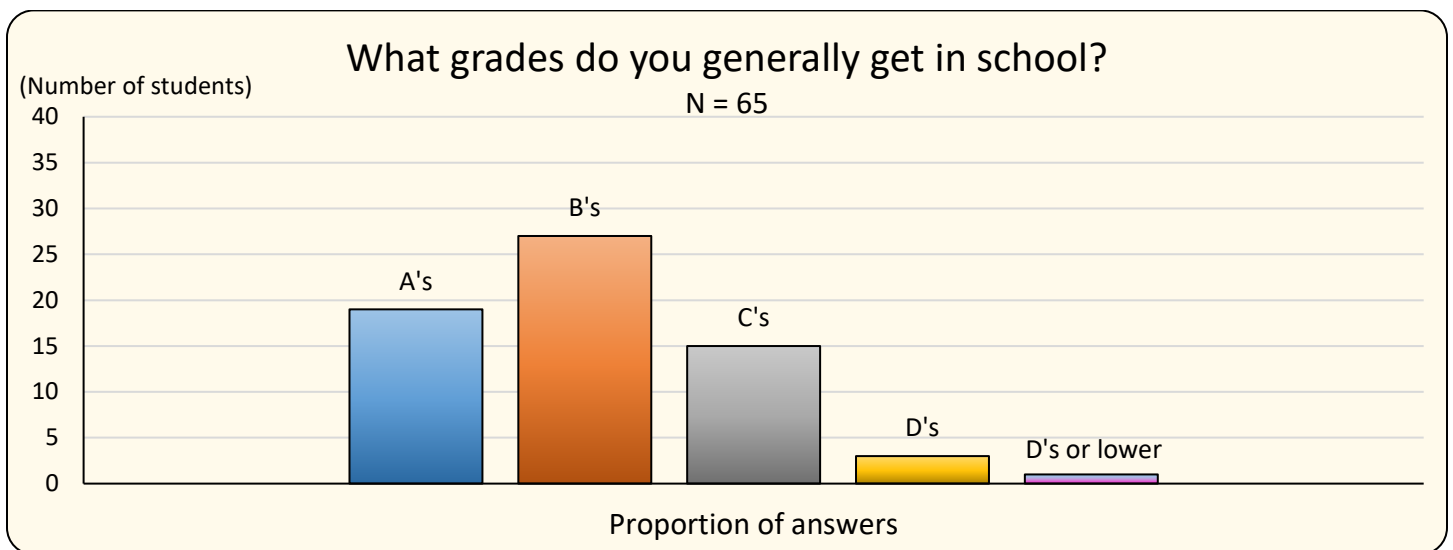
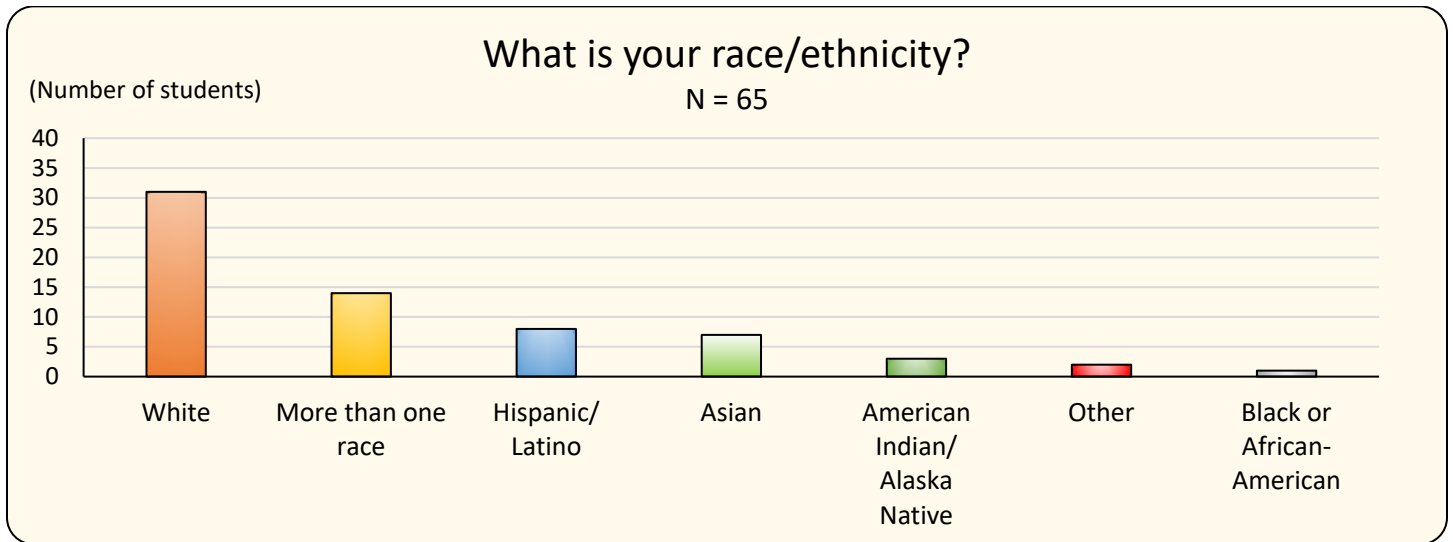
### Legend

This question factors into the Anti-drinking attitudes score (Section C)
This question factors into the Anti-smoking attitudes score (Section C)
Post-improvement increased by more than 5% (Sections C & D)
Post-improvement decreased by more than 5% (Section C & D)

Section D: Life skills measures (Drug refusal, assertiveness, relaxation, and self-control)

Life skills (Turtle Bay)		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	6 <sup>th</sup> grade		7 <sup>th</sup> grade		8 <sup>th</sup> grade	
							PRE (N = 21)	POST (N = 21)	PRE (N = 23)	POST (N = 23)	PRE	POST (N = 0)
I would say NO if someone tried to get me to:												
1.	Smoke a cigarette. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.15	3.05	4.26	3.74	N/A	N/A
2.	Drink beer, wine, or liquor. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.95	3.05	3.87	3.70	N/A	N/A
3.	Smoke marijuana or hashish. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.1	2.8	3.78	3.70	N/A	N/A
4.	Use cocaine or other drugs. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.95	2.9	4.17	3.70	N/A	N/A
5.	Use a prescription drug that was prescribed for someone else. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.15	3	4.13	3.87	N/A	N/A
6.	Vape or smoke an e-cigarette <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.05	2.85	3.83	3.91	N/A	N/A
<b>Drug refusal skill</b> <sup>2</sup> (Scores for Q's. 1-6 are averaged then subtracted from 6 to invert them - <b>higher scores are preferred</b> ):							<b>2.94</b>	<b>3.06</b>	<b>1.99</b>	<b>2.23</b>	N/A	N/A
I would:												
7.	Tell someone if they gave me less change(money) than I was supposed to get back after paying for something. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.75	3.5	3.70	3.65	N/A	N/A
8.	Say "no" to someone who asks to borrow money from me. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.15	3.55	3.26	3.17	N/A	N/A
9.	Tell someone to go to the end of the line if they try to cut ahead of me. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.85	3.5	3.09	3.52	N/A	N/A
<b>Assertiveness skills</b> <sup>2</sup> (Scores for Q's. 7-9 are averaged then subtracted from 6 to invert them - <b>higher scores are preferred</b> ):							<b>2.42</b>	<b>2.48</b>	<b>2.65</b>	<b>2.55</b>	N/A	N/A
In order to cope with stress or anxiety, I would:												
10.	Relax all the muscles in my body, starting with my feet and legs. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4	4.15	3.91	4.00	N/A	N/A
11.	Breathe in slowly for a count of four, then hold my breath in for a count of four, and slowly exhale for a count of four. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4.05	4.15	3.91	3.70	N/A	N/A
<b>Relaxation skills</b> <sup>2</sup> (Scores Q.10 & Q.11 are averaged then subtracted from 6 to invert them - <b>higher scores are preferred</b> ):							<b>1.98</b>	<b>1.85</b>	<b>2.09</b>	<b>2.15</b>	N/A	N/A
In general:												
12.	If I find that something is really difficult, I get frustrated and quit. <i>[Higher scores preferred]</i>	①	②	③	④	⑤	3.4	2.9	2.91	3.17	N/A	N/A
13.	I stick to what I'm doing until I'm finished with it. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.55	3.45	3.39	3.35	N/A	N/A
<b>Self-Control Skills</b> <sup>2</sup> (Score for Q. 13 is subtracted from 6 to invert it then averaged with Q. 12 – <b>higher scores are preferred</b> ):							<b>2.93</b>	<b>2.73</b>	<b>2.76</b>	<b>2.91</b>	N/A	N/A





## Section B: Knowledge measures (Anti-drug)

Anderson

“To create an **anti-drug knowledge summary score**, add up the number of items (out of items 1 – 7, 12 – 17) that are answered correctly and divide by 13 (the total number of drug knowledge items). This number gives you the proportion of drug knowledge items answered correctly.”<sup>2</sup>

Anti-Drug knowledge items (Anderson)		6th grade (% correct)			7th grade (% correct)			8th grade (% correct)		
		PRE (N = 41)	POST (N = 41)	Change	PRE (N = 11)	POST (N = 11)	Change	PRE (N = 13)	POST (N = 13)	Change
1.	Most adults smoke cigarettes. (F)	45.00%	52.63%	+7.63%	55.56%	45.45%	-10.10%	61.54%	46.15%	-15.38%
2.	Smoking a cigarette causes your heart to beat slower. (F)	22.50%	42.11%	+19.61%	11.11%	54.55%	+43.43%	46.15%	23.08%	-23.08%
3.	Few adults drink wine, beer, or liquor every day. (T)	50.00%	63.16%	+13.16%	44.44%	54.55%	+10.10%	15.38%	38.46%	+23.08%
4.	Most people my age smoke marijuana. (F)	85.00%	84.21%	-0.79%	77.78%	81.82%	+4.04%	53.85%	53.85%	0.00%
5.	Smoking marijuana causes your heart to beat faster. (T)	50.00%	81.58%	+31.58%	33.33%	63.64%	+30.30%	61.54%	76.92%	+15.38%
6.	Most adults use cocaine or other hard drugs. (F)	60.00%	71.05%	+11.05%	88.89%	81.82%	-7.07%	92.31%	92.31%	0.00%
7.	Cocaine and other hard drugs always make you feel good. (F)	72.50%	63.16%	-9.34%	77.78%	81.82%	+4.04%	92.31%	100.00%	+7.69%
12.	Smoking can affect the steadiness of your hands. (T)	82.50%	89.47%	+6.97%	77.78%	81.82%	+4.04%	84.62%	100.00%	+15.38%
13.	A stimulant is a chemical that calms down the body. (F)	70.00%	60.53%	-9.47%	44.44%	45.45%	+1.01%	61.54%	61.54%	0.00%
14.	Smoking reduces a person’s endurance for physical activity. (T)	72.50%	84.21%	+11.71%	77.78%	63.64%	-14.14%	92.31%	100.00%	+7.69%
15.	A serving of beer or wine contains less alcohol than a serving of “hard liquor” such as whiskey. (F)	30.00%	34.21%	+4.21%	11.11%	36.36%	+25.25%	23.08%	46.15%	+23.08%
16.	Alcohol is a depressant. (T)	60.00%	63.16%	+3.16%	88.89%	81.82%	-7.07%	61.54%	76.92%	+15.38%
17.	Marijuana smoking can improve your eyesight. (F)	95.00%	92.11%	-2.89%	100.00%	90.91%	-9.09%	84.62%	100.00%	+15.38%
<b>Anti-drug knowledge summary score (higher % is preferred):</b>		<b>61.15%</b>	<b>67.81%</b>	<b>+6.66%</b>	<b>60.68%</b>	<b>66.43%</b>	<b>+5.75%</b>	<b>63.91%</b>	<b>70.41%</b>	<b>+6.51%</b>



## Section B: Knowledge measures (Life skills)

Anderson

“To create a **life skills knowledge summary score**, add up the number of items (out of items 8 – 11, 18 – 32) that are answered correctly and divide by 19 (the total number of life skills knowledge items). This number gives you the proportion of life skills knowledge items answered correctly.”<sup>2</sup>

Life skills knowledge items (Anderson)		6th grade (% correct)			7th grade (% correct)			8th grade (% correct)		
		PRE (N = 23)	POST (N = 23)	Change	PRE (N = 13)	POST (N = 13)	Change	PRE (N = 20)	POST (N = 20)	Change
8.	What we believe about ourselves affects the way we act or behave. (T)	92.50%	92.11%	-0.39%	11.11%	18.18%	7.07%	92.31%	100.00%	7.69%
9.	It is almost impossible to develop a more positive self-image. (F)	75.00%	73.68%	-1.32%	100.00%	72.73%	-27.27%	84.62%	100.00%	15.38%
10.	It is important to measure how far you have come toward reaching your goal. (T)	92.50%	92.11%	-0.39%	77.78%	90.91%	13.13%	69.23%	100.00%	30.77%
11.	It's a good idea to make a decision and then think about the consequences later. (F)	75.00%	73.68%	-1.32%	77.78%	100.00%	22.22%	69.23%	84.62%	15.38%
18.	Some advertisers are deliberately deceptive. (T)	85.00%	81.58%	-3.42%	33.33%	36.36%	3.03%	69.23%	76.92%	7.69%
19.	Companies advertise only because they want you to have all the facts about their products. (F)	52.50%	60.53%	8.03%	66.67%	81.82%	15.15%	76.92%	92.31%	15.38%
20.	It's a good idea to get all information about a product from its ads. (F)	55.00%	60.53%	5.53%	44.44%	72.73%	28.28%	61.54%	61.54%	0.00%
21.	Most people do not experience anxiety. (F)	65.00%	71.05%	6.05%	66.67%	54.55%	-12.12%	69.23%	84.62%	15.38%
22.	There is very little you can do when you feel anxious. (F)	55.00%	63.16%	8.16%	55.56%	63.64%	8.08%	61.54%	69.23%	7.69%
23.	Deep breathing is one way to lessen anxiety. (T)	85.00%	92.11%	7.11%	33.33%	45.45%	12.12%	92.31%	100.00%	7.69%
24.	Mental rehearsal is a poor relaxation technique. (F)	80.00%	78.95%	-1.05%	77.78%	81.82%	4.04%	84.62%	84.62%	0.00%
25.	You can avoid misunderstandings by assuming the other person knows what you mean. (F)	65.00%	71.05%	6.05%	55.56%	63.64%	8.08%	76.92%	61.54%	-15.38%
26.	Effective communication is when both sender and receiver interpret a message in the same way. (T)	67.50%	73.68%	6.18%	22.22%	18.18%	-4.04%	92.31%	84.62%	-7.69%
27.	Relaxation techniques are of no use when meeting people. (F)	85.00%	76.32%	-8.68%	66.67%	90.91%	24.24%	84.62%	92.31%	7.69%
28.	A compliment is more effective when it is said sincerely. (T)	72.50%	68.42%	-4.08%	88.89%	90.91%	2.02%	84.62%	92.31%	7.69%
29.	A nice way of ending a conversation is to tell the person you enjoyed talking with him or her. (T)	92.50%	89.47%	-3.03%	33.33%	9.09%	-24.24%	84.62%	84.62%	0.00%
30.	Sense of humor is an example of a non-physical attribute. (T)	55.00%	50.00%	-5.00%	77.78%	81.82%	4.04%	61.54%	84.62%	23.08%
31.	It's better to be polite and lead someone on, even if you don't want to go out with them. (F)	50.00%	50.00%	0.00%	55.56%	72.73%	17.17%	61.54%	76.92%	15.38%
32.	Almost all people who are assertive are either rude or hostile. (F)	62.50%	71.05%	8.55%	77.78%	54.55%	-23.23%	69.23%	61.54%	-7.69%
<b>Life skills knowledge summary score (higher % is preferred):</b>		<b>71.71%</b>	<b>73.13%</b>	<b>+1.42%</b>	<b>59.07%</b>	<b>63.16%</b>	<b>+4.09%</b>	<b>76.11%</b>	<b>83.81%</b>	<b>+7.69%</b>

## Section C: Attitude measures (Anti-drug)

“To create an **anti-drug attitudes summary score**, calculate the mean of all 8 items (C1 to C8). To create an anti-smoking attitudes summary score, calculate the mean of items C2, C4, C6, and C7. To create an anti-drinking attitudes summary score, calculate the mean of items C1, C3, C5, and C8. Higher scores indicate stronger attitudes against smoking and drinking.”<sup>2</sup>

Anti-drug attitudes (Anderson)		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1.	Kids who drink alcohol are more grown-up.	①	②	③	④	⑤
2.	Smoking cigarettes makes you look cool.	①	②	③	④	⑤
3.	Kids who drink alcohol have more friends.	①	②	③	④	⑤
4.	Kids who smoke have more friends.	①	②	③	④	⑤
5.	Drinking alcohol makes you look cool.	①	②	③	④	⑤
6.	Smoking cigarettes lets you have more fun.	①	②	③	④	⑤
7.	Kids who smoke cigarettes are more grown-up.	①	②	③	④	⑤
8.	Drinking alcohol lets you have more fun.	①	②	③	④	⑤

**Anti-drinking attitudes score** (scores range from 1 to 5, scores closest to 5 are preferred):

**Anti-smoking attitudes score** (scores range from 1 to 5, scores closest to 5 are preferred):

**Anti-drug attitudes summary score** (scores range from 1 to 5, scores closest to 5 are preferred):

6 <sup>th</sup> grade		7 <sup>th</sup> grade		8 <sup>th</sup> grade	
PRE (N = 23)	POST (N = 23)	PRE (N = 13)	POST (N = 13)	PRE (N = 20)	POST (N = 20)
4.5	4.16	4.59	4.48	4.12	4.33
4.75	4.59	4.57	4.39	4.51	4.39
4.45	4.41	4.45	4.43	3.85	3.97
4.425	4.38	4.45	4.38	3.74	3.91
4.725	4.51	4.64	4.53	4.50	4.51
4.55	4.35	4.50	4.57	4.46	4.32
4.65	4.30	4.64	4.53	4.43	4.51
4.4	4.32	4.44	4.34	4.12	4.20
4.52	4.35	4.53	4.44	4.15	4.25
4.59	4.41	4.54	4.47	4.28	4.28
4.56	4.38	4.54	4.46	4.22	4.27

Life skills (Anderson)		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	6 <sup>th</sup> grade		7 <sup>th</sup> grade		8 <sup>th</sup> grade	
							PRE (N = 23)	POST (N = 23)	PRE (N = 13)	POST (N = 13)	PRE (N = 20)	POST (N = 20)
I would say NO if someone tried to get me to:												
1.	Smoke a cigarette. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.55	3.46	2.48	3.07	2.08	2.15
2.	Drink beer, wine, or liquor. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.53	3.49	2.61	3.02	2.26	4.45
3.	Smoke marijuana or hashish. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.58	3.57	2.33	2.94	2.31	2.55
4.	Use cocaine or other drugs. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.6	3.54	2.53	3.03	2.16	2.27
5.	Use a prescription drug that was prescribed for someone else. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.6	3.54	2.43	2.98	2.20	2.3
6.	Vape or smoke an e-cigarette <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.5	3.46	2.38	2.93	2.24	2.49
<b>Drug refusal skill</b> <sup>2</sup> (Scores for Q's. 1-6 are averaged then subtracted from 6 to invert them - <b>higher scores are preferred</b> ):							<b>2.45</b>	<b>2.49</b>	<b>3.54</b>	<b>3.01</b>	<b>3.79</b>	<b>3.63</b>
I would:												
7.	Tell someone if they gave me less change (money) than I was supposed to get back after paying for something. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.31	2.30	2.20	2.06	2.32	2.60
8.	Say "no" to someone who asks to borrow money from me. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.67	2.51	2.72	2.87	2.92	2.68
9.	Tell someone to go to the end of the line if they try to cut ahead of me. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.62	2.16	2.65	2.98	2.92	2.8
<b>Assertiveness skills</b> <sup>2</sup> (Scores for Q's. 7-9 are averaged then subtracted from 6 to invert them - <b>higher scores are preferred</b> ):							<b>3.47</b>	<b>3.68</b>	<b>3.48</b>	<b>3.36</b>	<b>3.28</b>	<b>3.31</b>
In order to cope with stress or anxiety, I would:												
10.	Relax all the muscles in my body, starting with my feet and legs. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.03	2.11	1.96	2.14	2.23	2.17
11.	Breathe in slowly for a count of four, then hold my breath in for a count of four, and slowly exhale for a count of four. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.21	2.14	1.88	2.26	2.32	2.18
<b>Relaxation skills</b> <sup>2</sup> (Scores for Q's 10 & 11 are averaged then subtracted from 6 to invert them - <b>higher scores are preferred</b> ):							<b>3.89</b>	<b>3.88</b>	<b>4.08</b>	<b>3.80</b>	<b>3.73</b>	<b>3.82</b>
In general:												
12.	If I find that something is really difficult, I get frustrated and quit. <b>[Higher scores preferred]</b>	①	②	③	④	⑤	3.59	3.41	3.27	3.46	3.47	3.60
13.	I stick to what I'm doing until I'm finished with it. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.92	3.68	3.57	3.64	3.56	3.77
<b>Self-Control Skills</b> <sup>2</sup> (Score for Q. 13 is subtracted from 6 to invert it then averaged with Q. 12 - <b>higher scores are preferred</b> ):							<b>2.84</b>	<b>2.86</b>	<b>2.85</b>	<b>2.91</b>	<b>2.95</b>	<b>2.91</b>

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