

Botvin LifeSkills Outcome Evaluation

Fiscal Year 19/20

(July 1st, 2019 – June 30th, 2020)

Shasta Lake and Anderson 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 6th-8th grade students attending Shasta Lake and Anderson Middle School during Fiscal Year 19/20. 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 6th-8th grades at Shasta Lake and the second year at Anderson Middle School. Shasta Lake had teachers trained to deliver the Botvin Lifeskills program. Anderson Middle School has a collaboration between trained teachers and a contracted counseling provider (Dunamis Wellness) delivering the Botvin Lifeskills program.

Method

National Health Promotion Associates, Inc. (NHPA) designed a survey to gauge how much students know about illicit drug use, how they feel about it, and determine what kind of social and coping skills they have (an individual's knowledge and attitudes towards drug use, as well as knowing what kind of social/coping skills they have, is indicative of their propensity to stay away from drugs).¹ 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.² 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.

Results

The results of each scored measure for 6th – 8th grade students from Shasta Lake school is shown in the matrix below. Higher post-survey scores in every measure are preferred. Higher post-survey scores are represented by green arrows while lower scores are shown as red arrows.

		Shasta Lake School								
		6 th grade			7 th grade			8 th grade		
	Measure	Pre-Survey (N = 7)	Post-Survey (N = 7)	Change	Pre-Survey (N = 21)	Post-Survey (N = 21)	Change	Pre-Survey (N = 84)	Post-Survey (N = 84)	Change
Knowledge	Anti-drug	56.04%	64.10%	+8.06% ↑	63.74%	68.86%	+5.12% ↑	67.58%	65.52%	-2.06% ↓
	Life skills	60.15%	72.81%	+12.66% ↑	65.66%	71.93%	+6.27% ↑	79.39%	82.56%	+3.17% ↑
	Overall (combined)	58.10%	68.46%	+10.36% ↑	64.70%	70.40%	+5.70% ↑	73.49%	74.04%	+0.55% ↑
Attitudes	Anti-smoking	4.18	4.79	+0.61 ↑	4.63	4.55	-0.08 ↓	4.48	4.33	-0.15 ↓
	Anti-drinking	4.14	4.71	+0.57 ↑	4.43	4.42	-0.01 ↓	4.37	4.18	-0.19 ↓
	Anti-drug (combined)	4.16	4.75	+0.59 ↑	4.53	4.48	-0.05 ↓	4.43	4.26	-0.17 ↓
Life Skills	Drug refusal	1.76	3.17	+1.41 ↑	3.68	3.05	-0.63 ↓	3.60	3.72	+0.12 ↑
	Assertiveness	3.62	3.11	-0.51 ↓	3.33	3.54	+0.21 ↑	3.46	3.44	-0.02 ↓
	Relaxation	3.64	3.67	+0.03 ↑	3.68	3.93	+0.25 ↑	4.01	4.07	+0.06 ↑
	Self-control	3.29	3.67	+0.38 ↑	3.70	3.81	+0.11 ↑	3.69	3.80	+0.11 ↑

Note: Numbers may not add due to rounding.

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

		Anderson Middle School								
		6 th grade			7 th grade			8 th grade		
	Measure	Pre-Survey	Post-Survey	Change	Pre-Survey	Post-Survey	Change	Pre-Survey	Post-Survey	Change
		(N = 23)	(N = 23)		(N = 13)	(N = 13)		(N = 20)	(N = 20)	
Knowledge	Anti-drug	54.52%	66.08%	+11.57% ↑	71.79%	67.83%	-3.96% ↓	57.31%	69.68%	+12.38% ↑
	Life skills	63.39%	74.16%	+10.78% ↑	69.30%	76.56%	+7.26% ↑	70.53%	82.04%	+11.52% ↑
	Overall (combined)	58.96%	70.12%	+11.18% ↑	70.55%	72.20%	+1.65% ↑	63.92%	75.86%	+11.95% ↑
Attitudes	Anti-smoking	4.86	4.84	-0.02 ↓	3.90	4.41	+0.51 ↑	4.40	4.56	+0.16 ↑
	Anti-drinking	4.80	4.82	+0.02 ↑	4.10	4.39	+0.29 ↑	4.40	4.49	+0.09 ↑
	Anti-drug (combined)	4.83	4.83	No Change	4.00	4.40	+0.40 ↑	4.40	4.52	+0.12 ↑
Life Skills	Drug refusal	1.76	3.17	+1.41 ↑	2.7	4.02	+1.32 ↑	3.38	3.80	+0.42 ↑
	Assertiveness	3.20	3.73	+0.53 ↑	3.27	3.33	+0.06 ↑	3.60	3.78	+0.18 ↑
	Relaxation	3.61	3.76	+0.15 ↑	3.85	3.95	+0.10 ↑	4.21	3.85	-0.36 ↓
	Self-control	3.35	3.12	-0.23 ↓	3.38	2.95	-0.43 ↓	3.61	3.82	+0.21 ↑

Note: Numbers may not add due to rounding.

Before analyzing these results, consideration should be given to some data collection limitations.

Limitations

School Closures from COVID-19

When schools switched to distance learning due to the California Governor's stay-at-home order in March (from the Covid-19 pandemic), both schools had challenges with delivering the program and collecting surveys. School closures that began in March significantly lowered the number of Botvin Lifeskills lessons delivered, the Botvin Lifeskills post-survey participation rate, and program fidelity.

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.

Conclusion

For both schools, the results indicate that the program was successful at improving students' overall (combined) anti-drug knowledge and life skills knowledge in each grade. For Anderson, overall anti-drug attitudes among the sixth graders did not change but overall anti-drug attitudes for seventh and eighth graders improved. For Shasta Lake, overall anti-drug attitudes among the sixth graders improved, but slightly worsened among the seventh and eighth graders. According to NHPA, caution should be exercised when interpreting findings without a control group because drug use and risk factors tend to worsen during early adolescence, even during a prevention program. The best way to evaluate program effects is to compare the changes over time with those who received the program and a control group that did not. Measures in the Life Skills category had mixed success for both schools, but most measures in this category showed improved post-survey scores.

Recommendations

Efforts should be made to continue improving the program. This would consist of addressing barriers to learning, changing attitudes, and implementing life skills. If it is feasible, program staff should consider adjusting the curriculum to better influence anti-drug attitudes and improve implementation of life skills learned by students. Ideally, program fidelity would not be impacted by external factors (like school closures). Also, perhaps tweaking the survey design between sections C.) and D.) would be ways to improve.

Data Analysis

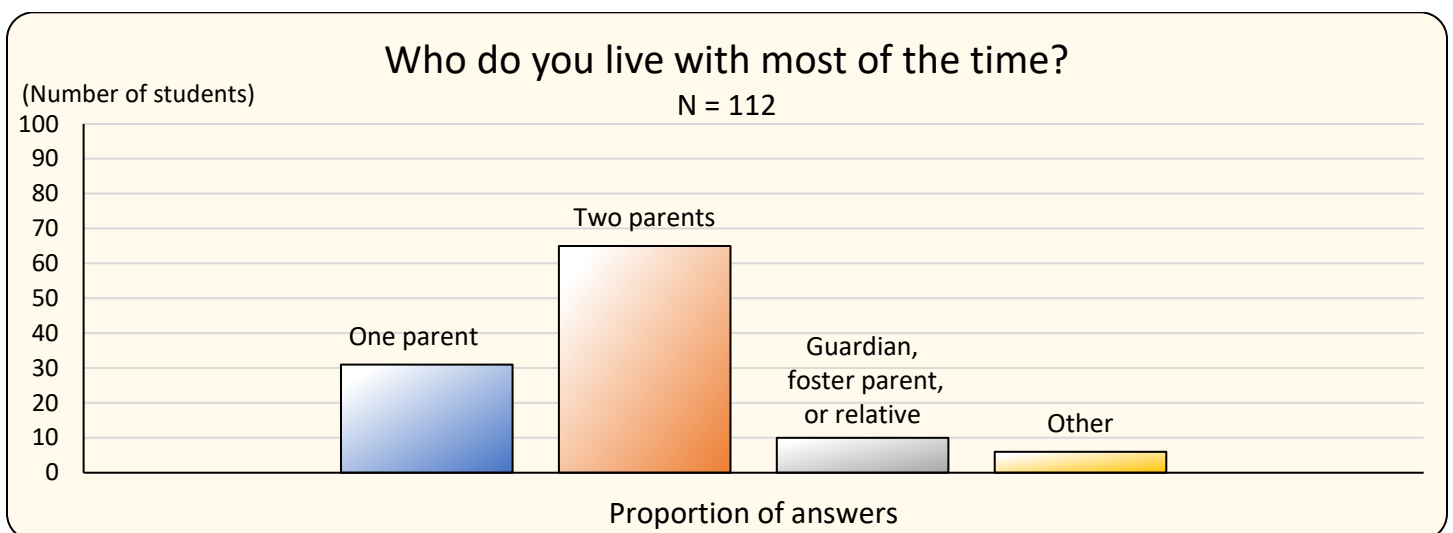
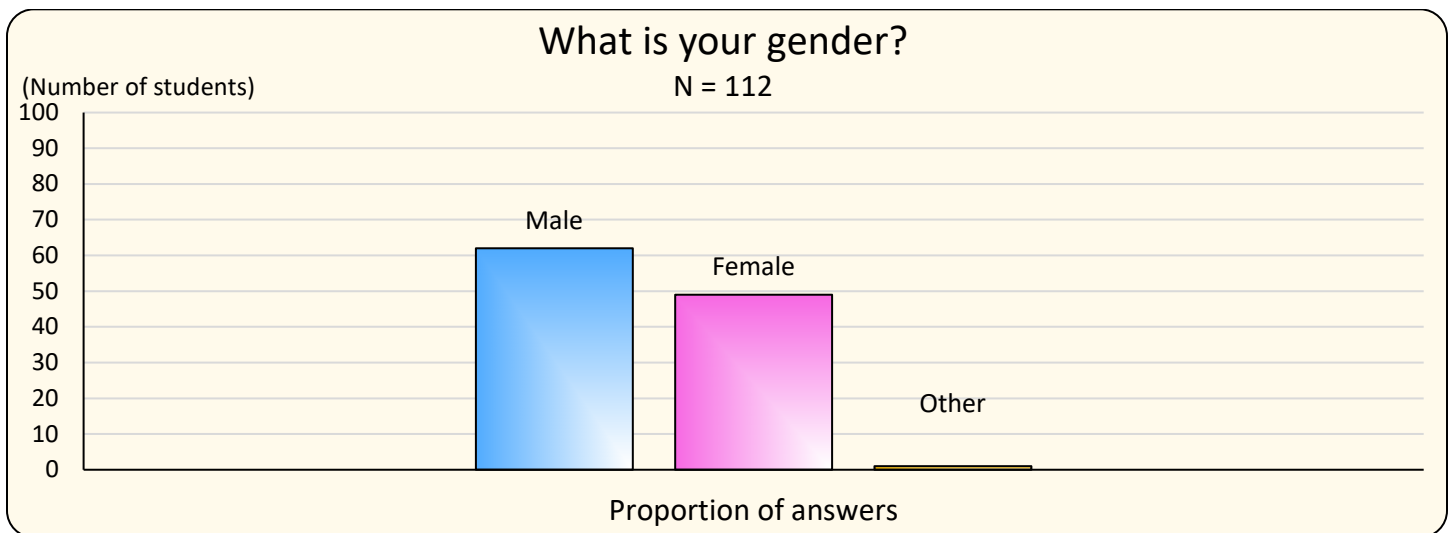
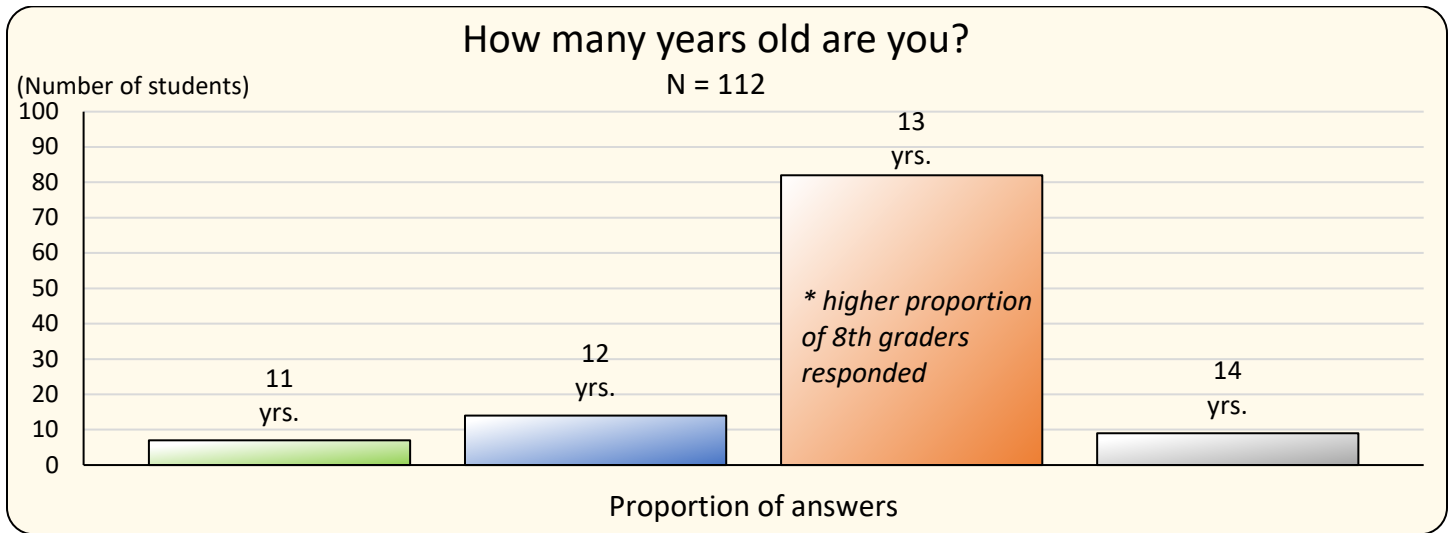
In this section, information on the students' background (including demographic information) and how the scored measures were calculated will be explored in greater detail. Missing responses were ignored when calculating the scored measures, and missing responses were also not individually tracked in 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:

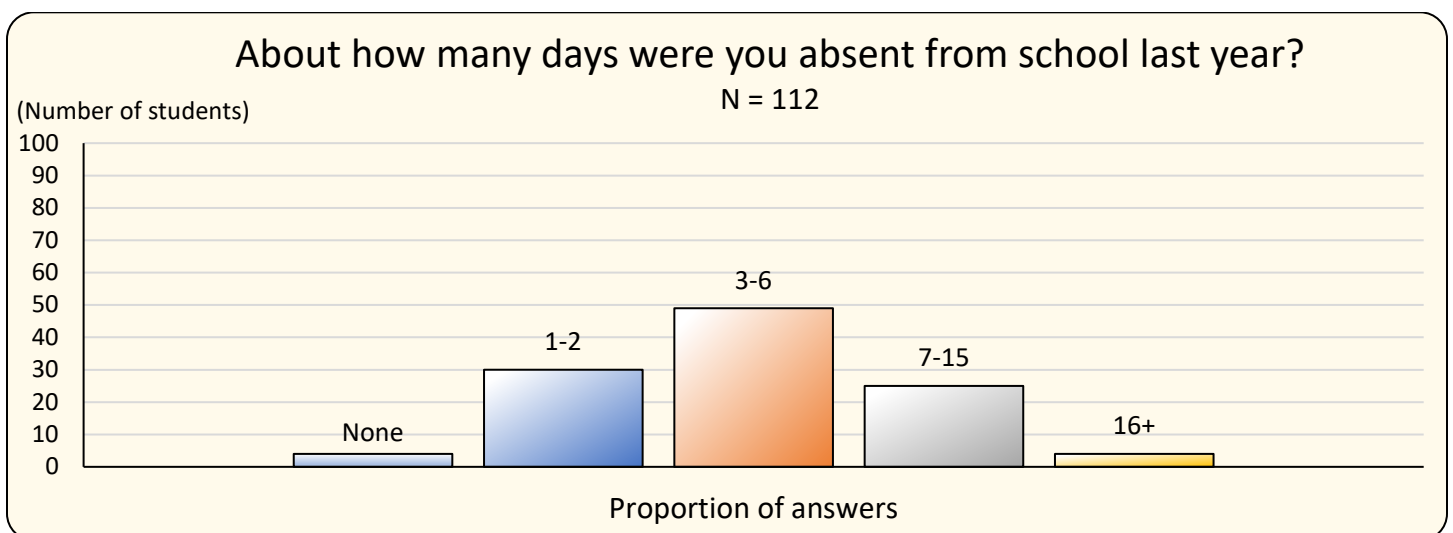
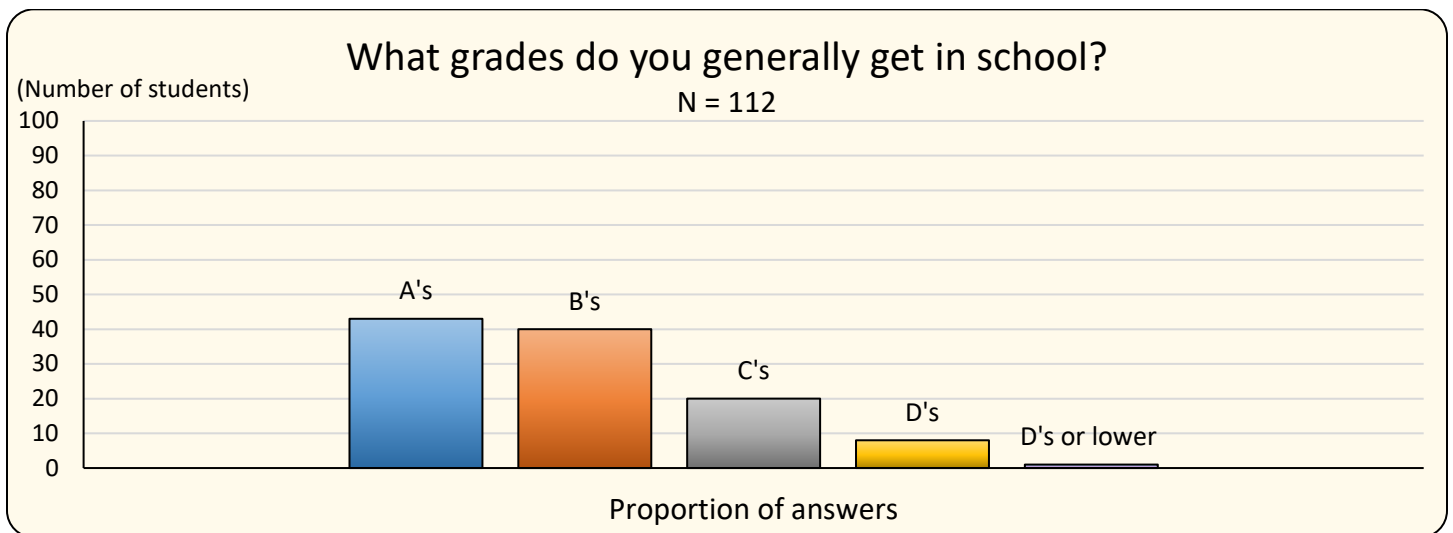
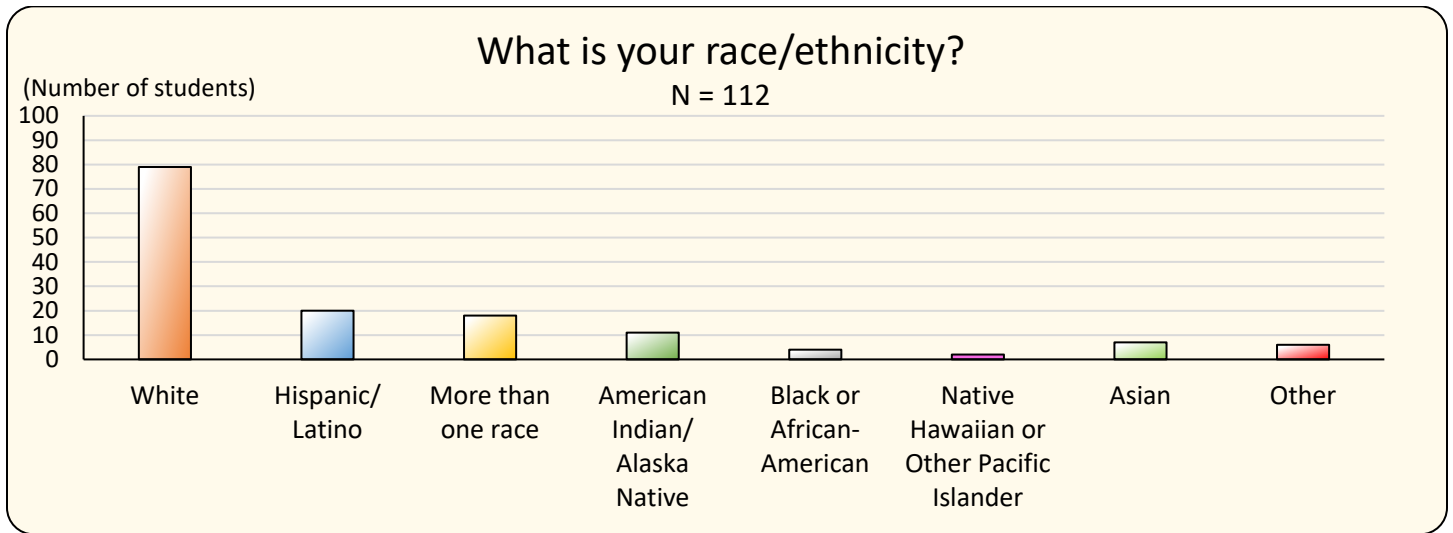
Shasta Lake

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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.”²

Anti-Drug knowledge items (Shasta Lake)		6th grade (% correct)			7th grade (% correct)			8th grade (% correct)		
		PRE (N = 7)	POST (N = 7)	Change	PRE (N = 21)	POST (N = 21)	Change	PRE (N = 84)	POST (N = 84)	Change
1.	Most adults smoke cigarettes. (F)	14.29%	50.00%	35.71%	42.86%	28.57%	-14.29%	57.14%	53.01%	-4.13%
2.	Smoking a cigarette causes your heart to beat slower. (F)	14.29%	50.00%	35.71%	42.86%	76.19%	33.33%	59.52%	63.86%	4.33%
3.	Few adults drink wine, beer, or liquor every day. (T)	57.14%	50.00%	-7.14%	42.86%	66.67%	23.81%	48.81%	45.78%	-3.03%
4.	Most people my age smoke marijuana. (F)	71.43%	50.00%	-21.43%	76.19%	57.14%	-19.05%	55.95%	55.42%	-0.53%
5.	Smoking marijuana causes your heart to beat faster. (T)	28.57%	83.33%	54.76%	76.19%	80.95%	4.76%	69.05%	66.27%	-2.78%
6.	Most adults use cocaine or other hard drugs. (F)	57.14%	66.67%	9.53%	61.90%	61.90%	0.00%	78.57%	78.31%	-0.26%
7.	Cocaine and other hard drugs always make you feel good. (F)	71.43%	83.33%	11.90%	80.95%	80.95%	0.00%	89.29%	90.36%	1.08%
12.	Smoking can affect the steadiness of your hands. (T)	85.71%	100%	14.29%	85.71%	100.00%	14.29%	94.05%	91.57%	-2.48%
13.	A stimulant is a chemical that calms down the body. (F)	71.43%	66.67%	-4.76%	66.67%	61.90%	-4.76%	54.76%	51.81%	-2.95%
14.	Smoking reduces a person’s endurance for physical activity. (T)	85.71%	83.33%	-2.38%	80.95%	85.71%	4.76%	89.29%	87.95%	-1.33%
15.	A serving of beer or wine contains less alcohol than a serving of “hard liquor” such as whiskey. (F)	28.57%	16.67%	-11.90%	19.05%	33.33%	14.29%	29.76%	24.10%	-5.67%
16.	Alcohol is a depressant. (T)	71.43%	33.33%	-38.10%	57.14%	71.43%	14.29%	57.14%	50.60%	-6.54%
17.	Marijuana smoking can improve your eyesight. (F)	71.43%	100%	28.57%	95.24%	90.48%	-4.76%	95.24%	92.77%	-2.47%

Anti-drug knowledge summary score (higher % is preferred):

56.04%	64.10%	+8.06%	63.74%	68.86%	+5.12%	67.58%	65.52%	-2.06%
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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.” ²

Life skills knowledge items (Shasta Lake)		6th grade (% correct)			7th grade (% correct)			8th grade (% correct)		
		PRE (N = 7)	POST (N = 7)	Change	PRE (N = 21)	POST (N = 21)	Change	PRE (N = 84)	POST (N = 84)	Change
8.	What we believe about ourselves affects the way we act or behave. (T)	71.43%	83.33%	11.90%	95.24%	80.95%	-14.29%	91.67%	90.36%	-1.31%
9.	It is almost impossible to develop a more positive self-image. (F)	85.71%	100.00%	14.29%	76.19%	80.95%	4.76%	78.57%	80.72%	2.15%
10.	It is important to measure how far you have come toward reaching your goal. (T)	85.71%	100.00%	14.29%	85.71%	95.24%	9.52%	95.24%	92.77%	-2.47%
11.	It's a good idea to make a decision and then think about the consequences later. (F)	28.57%	50.00%	21.43%	71.43%	80.95%	9.52%	90.48%	93.98%	3.50%
18.	Some advertisers are deliberately deceptive. (T)	42.86%	66.67%	23.81%	80.95%	71.43%	-9.52%	71.43%	81.93%	10.50%
19.	Companies advertise only because they want you to have all the facts about their products. (F)	42.86%	66.67%	23.81%	52.38%	38.10%	-14.29%	64.29%	78.31%	14.03%
20.	It's a good idea to get all information about a product from its ads. (F)	42.86%	33.33%	-9.52%	61.90%	76.19%	14.29%	65.48%	71.08%	5.61%
21.	Most people do not experience anxiety. (F)	42.86%	83.33%	40.48%	61.90%	71.43%	9.52%	73.81%	81.93%	8.12%
22.	There is very little you can do when you feel anxious. (F)	57.14%	83.33%	26.19%	38.10%	57.14%	19.05%	70.24%	71.08%	0.85%
23.	Deep breathing is one way to lessen anxiety. (T)	85.71%	100.00%	14.29%	76.19%	95.24%	19.05%	92.86%	96.39%	3.53%
24.	Mental rehearsal is a poor relaxation technique. (F)	71.43%	66.67%	-4.76%	47.62%	71.43%	23.81%	72.62%	74.70%	2.08%
25.	You can avoid misunderstandings by assuming the other person knows what you mean. (F)	71.43%	66.67%	-4.76%	57.14%	71.43%	14.29%	75.00%	77.11%	2.11%
26.	Effective communication is when both sender and receiver interpret a message in the same way. (T)	57.14%	83.33%	26.19%	61.90%	66.67%	4.76%	85.71%	89.16%	3.44%
27.	Relaxation techniques are of no use when meeting people. (F)	85.71%	100.00%	14.29%	66.67%	80.95%	14.29%	80.95%	79.52%	-1.43%
28.	A compliment is more effective when it is said sincerely. (T)	85.71%	83.33%	-2.38%	85.71%	85.71%	0.00%	96.43%	93.98%	-2.45%
29.	A nice way of ending a conversation is to tell the person you enjoyed talking with him or her. (T)	71.43%	83.33%	11.90%	90.48%	80.95%	-9.52%	97.62%	96.39%	-1.23%
30.	Sense of humor is an example of a non-physical attribute. (T)	42.86%	50.00%	7.14%	52.38%	33.33%	-19.05%	66.67%	67.47%	0.80%
31.	It's better to be polite and lead someone on, even if you don't want to go out with them. (F)	28.57%	16.67%	--11.90%	28.57%	52.38%	23.81%	58.33%	71.08%	12.75%
32.	Almost all people who are assertive are either rude or hostile. (F)	42.86%	66.67%	23.81%	57.14%	76.19%	19.05%	80.95%	80.72%	-0.23%
Life skills knowledge summary score (higher % is preferred):		60.15%	72.81%	+12.66%	65.66%	71.93%	+6.27%	79.39%	82.56%	+3.18%

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.”²

Anti-drug attitudes (Shasta Lake)		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):

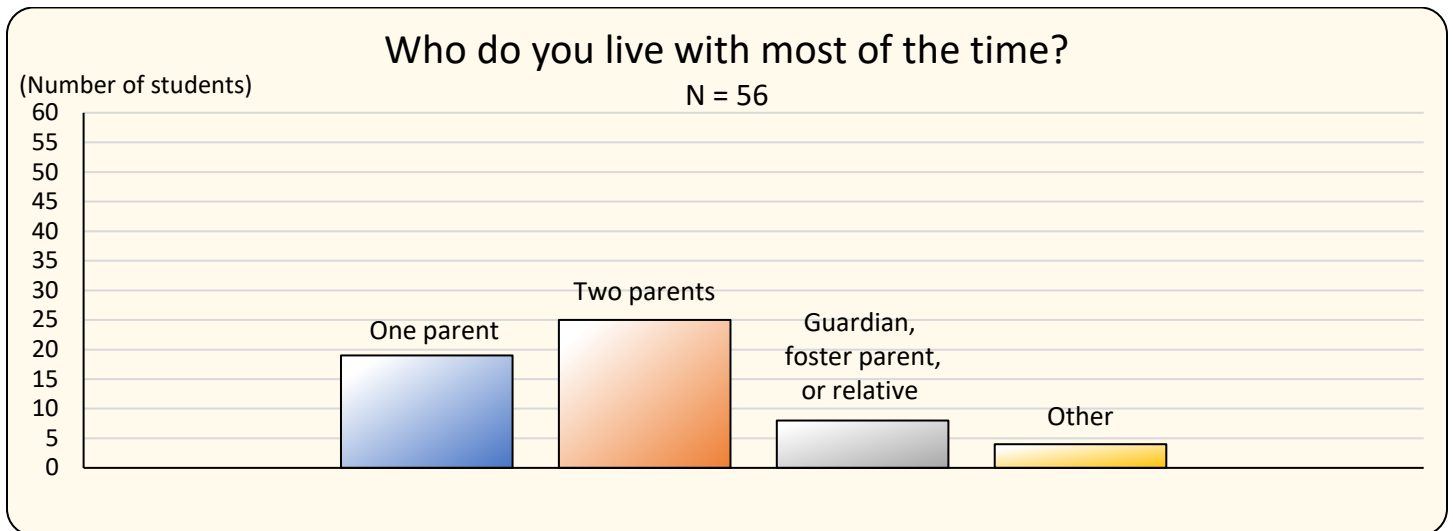
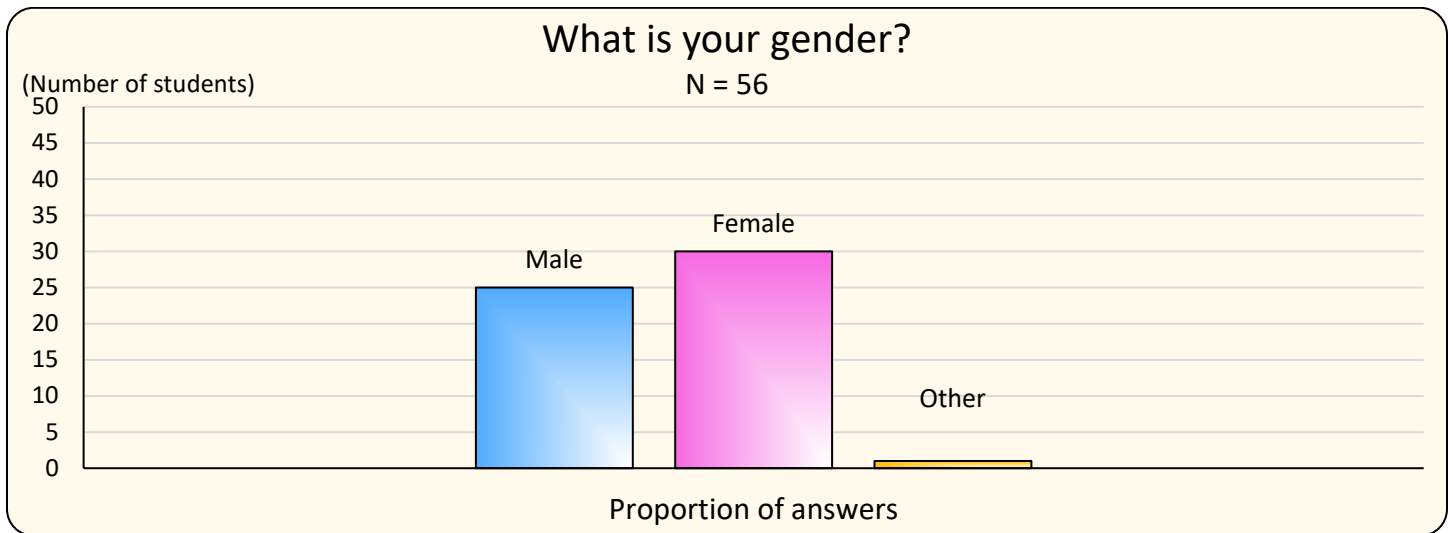
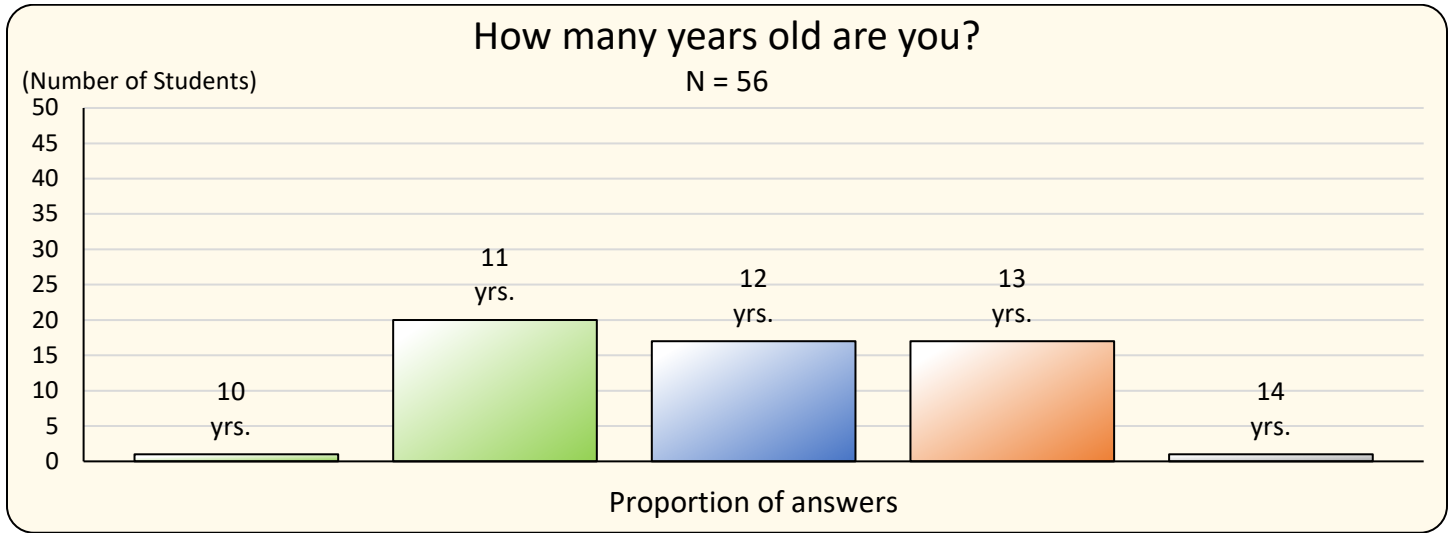
Anti-drug attitudes summary score (scores range from 1 to 5, scores closest to 5 are preferred):

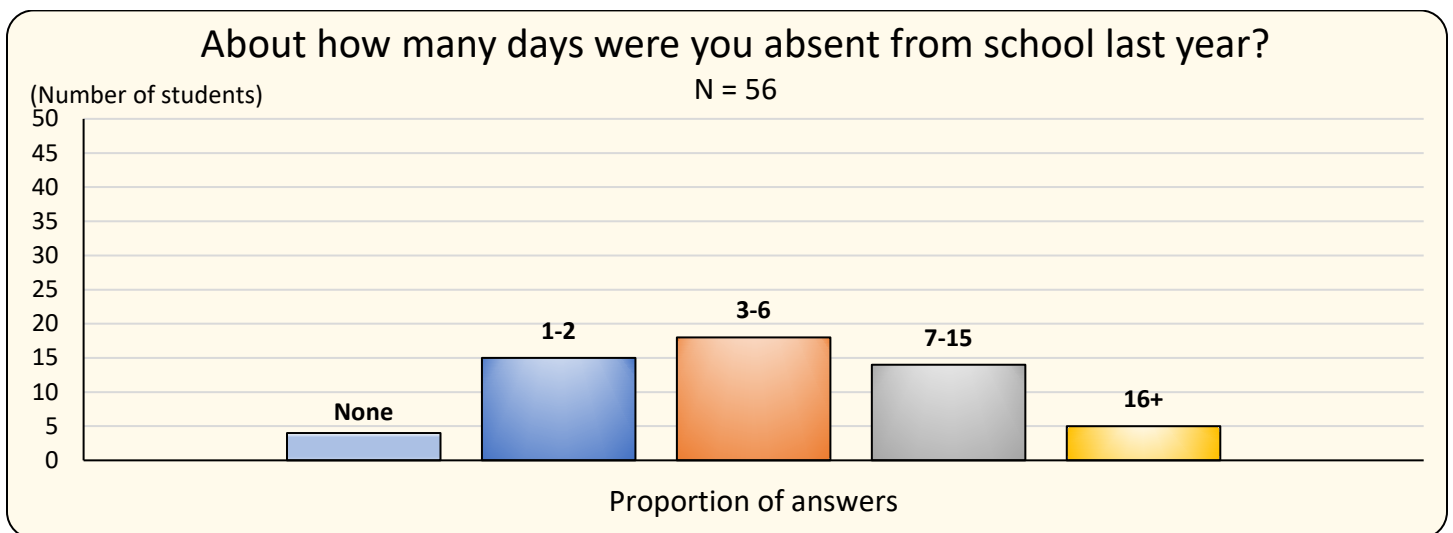
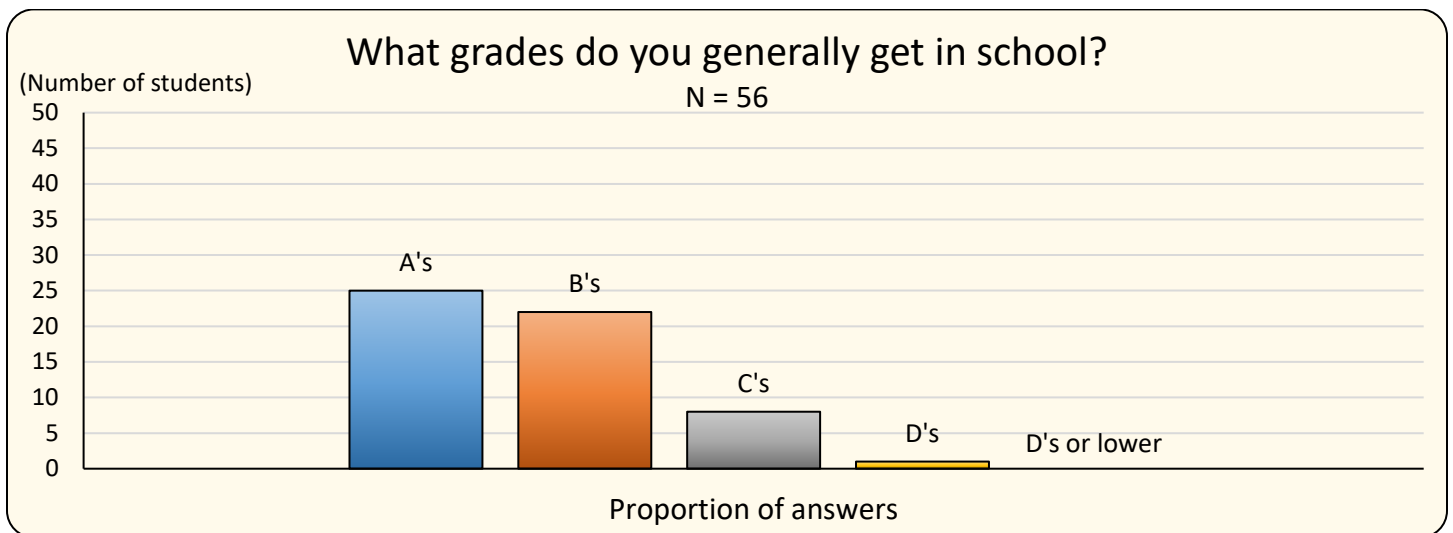
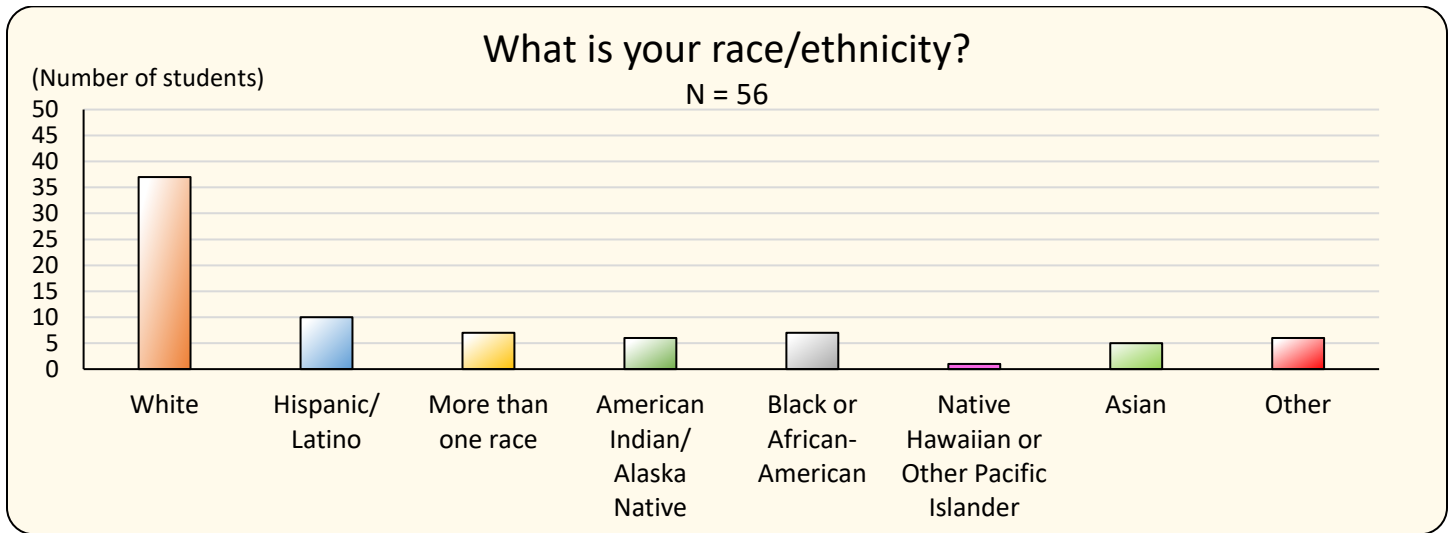
6 th grade		7 th grade		8 th grade	
PRE (N = 7)	POST (N = 7)	PRE (N = 21)	POST (N = 21)	PRE (N = 84)	POST (N = 84)
4.43	5.00	4.45	4.33	4.50	4.29
4.43	5.00	4.80	4.76	4.75	4.48
3.43	4.50	4.15	4.14	4.08	3.93
3.43	4.50	4.30	4.29	4.00	3.83
4.43	4.50	4.60	4.62	4.55	4.37
4.14	4.67	4.85	4.67	4.58	4.51
4.71	5.00	4.55	4.48	4.60	4.49
4.29	4.83	4.50	4.57	4.35	4.14
4.14	4.71	4.43	4.42	4.37	4.18
4.18	4.79	4.63	4.55	4.48	4.33
4.16	4.75	4.53	4.48	4.43	4.26

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 (Shasta Lake)		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	6 th grade		7 th grade		8 th grade	
							PRE (N = 7)	POST (N = 7)	PRE (N = 21)	POST (N = 21)	PRE (N = 84)	POST (N = 84)
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	4.29	2.83	2.40	2.86	2.25	2.18
2.	Drink beer, wine, or liquor. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4.00	2.83	2.35	3.00	2.45	2.37
3.	Smoke marijuana or hashish. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4.29	2.83	2.15	3.14	2.45	2.40
4.	Use cocaine or other drugs. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4.29	2.83	2.30	2.81	2.29	2.18
5.	Use a prescription drug that was prescribed for someone else. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4.29	2.83	2.25	2.76	2.40	2.25
6.	Vape or smoke an e-cigarette <i>[Lower scores preferred]</i>	①	②	③	④	⑤	4.29	2.83	2.50	3.14	2.54	2.28
Drug refusal skill ² <i>(Scores for Q's. 1-6 are averaged then subtracted from 6 to invert them - higher scores are preferred):</i>							1.76	3.17	3.68	3.05	3.60	3.72
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	2.71	2.67	2.20	2.29	2.11	2.17
8.	Say "no" to someone who asks to borrow money from me. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.29	2.83	2.95	2.57	2.71	2.60
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	2.14	3.17	2.85	2.52	2.81	2.92
Assertiveness skills ² <i>(Scores for Q's. 7-9 are averaged then subtracted from 6 to invert them - higher scores are preferred):</i>							3.62	3.11	3.33	3.54	3.46	3.44
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	2.71	2.33	2.35	2.05	2.14	2.00
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	2.00	2.33	2.30	2.10	1.83	1.87
Relaxation skills ² <i>(Scores Q.10 & Q.11 are averaged then subtracted from 6 to invert them - higher scores are preferred):</i>							3.64	3.67	3.68	3.93	4.01	4.07
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	3.14	3.67	3.5	3.62	3.48	3.63
13.	I stick to what I'm doing until I'm finished with it. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.57	2.33	2.1	2.00	2.10	2.04
Self-Control Skills ² <i>(Score for Q. 13 is subtracted from 6 to invert it then averaged with Q. 12 - higher scores are preferred):</i>							3.29	3.67	3.70	3.81	3.69	3.80





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.”²

Anti-Drug 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
1.	Most adults smoke cigarettes. (F)	30.43%	45.45%	15.02%	83.33%	54.55%	-28.79%	40.00%	70.59%	30.59%
2.	Smoking a cigarette causes your heart to beat slower. (F)	13.04%	27.27%	14.23%	66.67%	45.45%	-21.21%	45.00%	52.94%	7.94%
3.	Few adults drink wine, beer, or liquor every day. (T)	43.48%	45.45%	1.98%	33.33%	63.64%	30.30%	50.00%	47.06%	-2.94%
4.	Most people my age smoke marijuana. (F)	78.26%	77.27%	-0.99%	50.00%	45.45%	-4.55%	40.00%	35.29%	-4.71%
5.	Smoking marijuana causes your heart to beat faster. (T)	39.13%	50.00%	10.87%	83.33%	81.82%	-1.52%	45.00%	70.59%	25.59%
6.	Most adults use cocaine or other hard drugs. (F)	69.57%	81.82%	12.25%	83.33%	81.82%	-1.52%	65.00%	94.12%	29.12%
7.	Cocaine and other hard drugs always make you feel good. (F)	60.87%	100.00%	39.13%	66.67%	63.64%	-3.03%	60.00%	82.35%	22.35%
12.	Smoking can affect the steadiness of your hands. (T)	60.87%	86.36%	25.49%	83.33%	81.82%	-1.52%	90.00%	88.24%	-1.76%
13.	A stimulant is a chemical that calms down the body. (F)	56.52%	72.73%	16.21%	66.67%	63.64%	-3.03%	65.00%	58.82%	-6.18%
14.	Smoking reduces a person’s endurance for physical activity. (T)	69.57%	77.27%	7.71%	100.00%	100.00%	0.00%	90.00%	94.12%	4.12%
15.	A serving of beer or wine contains less alcohol than a serving of “hard liquor” such as whiskey. (F)	39.13%	27.27%	-11.86%	83.33%	36.36%	-46.97%	20.00%	29.41%	9.41%
16.	Alcohol is a depressant. (T)	60.87%	68.18%	7.31%	66.67%	81.82%	15.15%	50.00%	88.24%	38.24%
17.	Marijuana smoking can improve your eyesight. (F)	86.96%	100.00%	13.04%	66.67%	81.82%	15.15%	85.00%	94.12%	9.12%

Anti-drug knowledge summary score (higher % is preferred):	54.52%	66.08%	+11.57%	71.79%	67.83%	-3.96%	57.31%	69.68%	+12.38%
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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.”²

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)	82.61%	77.27%	-5.34%	100%	100%	0.00%	85.00%	88.24%	3.24%
9.	It is almost impossible to develop a more positive self-image. (F)	52.17%	68.18%	16.01%	50.00%	54.55%	4.55%	70.00%	70.59%	0.59%
10.	It is important to measure how far you have come toward reaching your goal. (T)	86.96%	95.45%	8.50%	83.33%	100%	16.67%	90.00%	94.12%	4.12%
11.	It's a good idea to make a decision and then think about the consequences later. (F)	69.57%	72.73%	3.16%	66.67%	72.73%	6.06%	70.00%	82.35%	12.35%
18.	Some advertisers are deliberately deceptive. (T)	56.52%	77.27%	20.75%	66.67%	81.82%	15.15%	70.00%	70.59%	0.59%
19.	Companies advertise only because they want you to have all the facts about their products. (F)	56.52%	77.27%	20.75%	50.00%	45.45%	-4.55%	65.00%	70.59%	5.59%
20.	It's a good idea to get all information about a product from its ads. (F)	60.87%	59.09%	-1.78%	66.67%	72.73%	6.06%	35.00%	47.06%	12.06%
21.	Most people do not experience anxiety. (F)	56.52%	77.27%	20.75%	83.33%	81.82%	-1.52%	80.00%	88.24%	8.24%
22.	There is very little you can do when you feel anxious. (F)	30.43%	50.00%	19.57%	66.67%	54.55%	-12.12%	55.00%	76.47%	21.47%
23.	Deep breathing is one way to lessen anxiety. (T)	73.91%	81.82%	7.91%	66.67%	100%	33.33%	95.00%	100%	5.00%
24.	Mental rehearsal is a poor relaxation technique. (F)	73.91%	77.27%	3.36%	66.67%	72.73%	6.06%	85.00%	88.24%	3.24%
25.	You can avoid misunderstandings by assuming the other person knows what you mean. (F)	65.22%	72.73%	7.51%	66.67%	81.82%	15.15%	75.00%	76.47%	1.47%
26.	Effective communication is when both sender and receiver interpret a message in the same way. (T)	73.91%	68.18%	-5.73%	100%	63.64%	-36.36%	65.00%	94.12%	29.12%
27.	Relaxation techniques are of no use when meeting people. (F)	52.17%	77.27%	25.10%	66.67%	72.73%	6.06%	65.00%	94.12%	29.12%
28.	A compliment is more effective when it is said sincerely. (T)	78.26%	81.82%	3.56%	83.33%	100%	16.67%	85.00%	94.12%	9.12%
29.	A nice way of ending a conversation is to tell the person you enjoyed talking with him or her. (T)	78.26%	90.91%	12.65%	66.67%	100%	33.33%	95.00%	94.12%	-0.88%
30.	Sense of humor is an example of a non-physical attribute. (T)	52.17%	72.73%	20.55%	66.67%	63.64%	-3.03%	40.00%	58.82%	18.82%
31.	It's better to be polite and lead someone on, even if you don't want to go out with them. (F)	39.13%	59.09%	19.96%	50.00%	63.64%	13.64%	45.00%	88.24%	43.24%
32.	Almost all people who are assertive are either rude or hostile. (F)	65.22%	72.73%	7.51%	50.00%	72.73%	22.73%	70.00%	82.35%	12.35%
Life skills knowledge summary score (higher % is preferred):		63.39%	74.16%	+10.78%	69.30%	76.56%	+7.26%	70.53%	82.04%	+11.52%

Section C: Attitude measures (Anti-drug)

Anderson

“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.”²

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 th grade		7 th grade		8 th grade	
PRE (N = 23)	POST (N = 23)	PRE (N = 13)	POST (N = 13)	PRE (N = 20)	POST (N = 20)
4.87	4.91	4.00	4.73	4.55	4.71
4.91	4.95	4.20	4.64	4.85	4.82
4.83	4.68	4.00	4.09	3.85	4.00
4.74	4.68	3.60	3.73	3.80	4.00
4.83	4.95	4.80	4.64	4.80	4.76
4.91	4.77	3.80	4.64	4.45	4.71
4.87	4.95	4.00	4.64	4.50	4.71
4.70	4.73	3.60	4.09	4.40	4.47
4.80	4.82	4.10	4.39	4.40	4.49
4.86	4.84	3.90	4.41	4.40	4.56
4.83	4.83	4.00	4.40	4.40	4.52

Life skills (Anderson)		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	6 th grade		7 th grade		8 th 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	3.22	2.38	3.20	2.00	2.58	2.24
2.	Drink beer, wine, or liquor. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.22	2.38	2.80	1.91	2.68	2.06
3.	Smoke marijuana or hashish. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.17	2.38	3.40	1.91	2.68	2.18
4.	Use cocaine or other drugs. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.09	2.33	3.60	2.00	2.63	2.24
5.	Use a prescription drug that was prescribed for someone else. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.17	2.38	3.80	2.09	2.68	2.18
6.	Vape or smoke an e-cigarette <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.17	2.38	3.00	2.00	2.47	2.29
Drug refusal skill ² <i>(Scores for Q's. 1-6 are averaged then subtracted from 6 to invert them - higher scores are preferred):</i>							2.83	3.63	2.7	4.02	3.38	3.80
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	2.70	2.24	2.40	2.55	2.42	1.76
8.	Say "no" to someone who asks to borrow money from me. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	3.13	2.29	3.00	2.82	2.53	2.71
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	2.57	2.29	2.80	2.64	2.26	2.18
Assertiveness skills ² <i>(Scores for Q's. 7-9 are averaged then subtracted from 6 to invert them - higher scores are preferred):</i>							3.20	3.73	3.27	3.33	3.60	3.78
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	2.48	2.38	3.00	2.18	1.89	2.18
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	2.30	2.10	2.00	1.91	1.68	2.12
Relaxation skills ² <i>(Scores for Q's 10 & 11 are averaged then subtracted from 6 to invert them - higher scores are preferred):</i>							3.61	3.76	3.85	3.95	4.21	3.85
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	2.91	2.76	3	2.73	3.37	3.65
13.	I stick to what I'm doing until I'm finished with it. <i>[Lower scores preferred]</i>	①	②	③	④	⑤	2.22	2.52	2.25	2.82	2.16	2.00
Self-Control Skills ² <i>(Score for Q. 13 is subtracted from 6 to invert it then averaged with Q. 12 - higher scores are preferred):</i>							3.35	3.12	3.38	2.95	3.61	3.82

References

(1.) "MHSA Docs | Shasta MHSA". *Shastamhsa.com*, 2020,

http://shastamhsa.com/site/assets/files/1151/brief-1st-ms-survey-september_2018.pdf.

(2.) "MHSA Docs | Shasta MHSA". *Shastamhsa.com*, 2020,

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