NORTHWEST PORTLAND AREA INDIAN HEALTH BOARD

GARRETT LEE SMITH SUICIDE PREVENTION

HEALING OF THE CANOE SURVEY RESULTS

DETAILED AGGREGATE REPORT

2018–2019

THRIVE

TABLE OF CONTENTS

LIST OF TABLES

Please note that the cover photo is used with the generous permission of the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians.

BACKGROUND

THRIVE

The Northwest Portland Area Indian Health Board's THRIVE (Tribal Health: Reaching out InVolves Everyone) project has worked with the NW tribal communities to prevent suicide since 2009. In 2008, and again in 2013, the project administered a regional Community Readiness Assessment survey to better understand the capacity of the NW tribes to prevent suicide. Using community-based participatory research methods (CBPR), a strategic plan was developed. The 2013 assessment identified several gaps in available services in the NW tribal communities, including lack of sustainable funding, lack of suicide prevention staff, poor access to confidential mental health (MH) services, insufficient access to culturally appropriate interventions, lack of crisis response protocols, and lack of communication between tribal departments about prevention services and programs. Despite the compelling need, American Indian/Alaska Native (AI/AN) youth in the Pacific Northwest do not receive sufficient suicide prevention, screening, treatment, or care. However, NW tribes are committed to working together to fill these gaps and prevent suicide.

In fall 2014, THRIVE was awarded a Garrett Lee Smith Youth Suicide Prevention grant. This 5-year grant, awarded by the Substance Abuse and Mental Health Services Administration (SAMHSA), provides THRIVE with funds for suicide prevention training and technical assistance to the 43 federally recognized tribes in Oregon, Washington, and Idaho (NW). In collaboration with the NW tribes, as well as other regional partners, the project is building regional suicide prevention capacity and preventing suicide among AI/AN youth 10-24 years old. THRIVE activities are working to increase the availability and use of culturally appropriate services, resources, and messages that meet the unique needs of AI/AN youth, their families, and communities.

The THRIVE multilevel approach includes activities focused on:

- Physical Environment & Public Policy – e.g., establishing crisis response plans, reducing access to firearms and lethal means
- Structural & Organizational Systems – e.g., improving clinical practice related to suicide and alcohol and drug (A&D) screening, treatment, and referral; increasing availability of wrap-around services
- Community Norms & Interactions – e.g., changing social norms surrounding use of mental health services (reduce stigma, improve social acceptability)
- Family Norms & Interactions – e.g., helping parents/families identify signs of suicide ideation or intent; facilitating parent/family referral to mental health services
- Individual Knowledge, Attitudes, & Behaviors – e.g., improving perceptions of self-worth, self-efficacy, and connections to family/school/tribe; decreasing bullying, alcohol and drug use, and other risky behaviors

For complex topics such as suicide, multilevel public health approaches offer the best opportunity to achieve sustained behavior change over time.

Healing of the Canoe

The *Healing of the Canoe* (HOC) curriculum is an evidence-based, strength-based life skills curriculum for youth that uses culture to prevent substance abuse and connect youth to community and culture (see healingofthecanoe.org). The curriculum was developed in partnership between the Suquamish Tribe, faculty and staff at the University of Washington's Alcohol and Drug Abuse Institute (ADAI), and the National Institutes of Health's National Institute on Minority Health and Health Disparities. The Northwest Portland Area Indian Health Board (NPAIHB) utilized funds from its Garrett Lee Smith Youth Suicide Prevention grant to partner with the ADAI to develop two additional lessons on suicidal thoughts and behaviors. After these new lessons were developed, NPAIHB sponsored an HOC training for northwest tribes and tribal organization staff. The NPAIHB provided funding to tribes to implement HOC. This report provides a data summary for three HOC sites.

The Healing of the Canoe Evaluation

The *Healing of the Canoe* (HOC) Pre- and Post-Surveys are paper-and-pencil surveys designed to measure the impact of the *Healing of the Canoe* curriculum. The surveys were developed collaboratively by the NPAIHB, ADAI, NPC Research, Suquamish Tribe, and Port Gamble S'Klallam Tribe. The surveys draw from questions used by ADAI in its evaluation of the HOC curriculum, the Youth Risk Behavior Survey, the Oregon Native Youth Survey (Mackin, Perkins, Tarte, & Dent, 2010), and the Healthy & Empowered Youth (*H.E.Y.*) Project survey created by Oregon Health and Science University to evaluate the Native STAND curriculum (which addresses sexually transmitted infections, HIV, and teen pregnancy, as well as drug and alcohol use and dating violence). The surveys were designed to correspond with the social-ecological model, and ask about peers, family, school, and community.

In 2017-2018, a resilience scale (Panter-Brick, Hadfield, Dajani, Eggerman, Ager, & Ungar, 2017) and Adverse Childhood Experience questions were added. Additional questions were developed by NPAIHB and NPC Research. We thank our friends at American Indian Health & Family Services (Detroit, Michigan) for sharing some open-ended question ideas inspired by youth at their site to create a positive feeling after some of the more sensitive topics.

This report provides the Pre- and Post-Survey results for youth who received the HOC curriculum in spring and summer 2018 and 2019.

We want to extend a hearty thank you to the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, who graciously agreed to let us use the cover photo.

METHODS

A survey was administered to youth receiving the Healing of the Canoe (HOC) curriculum to assess the risk and protective factors associated with suicide ideation and the impact of the program. Youth in three tribal communities filled out the survey at two time points: immediately before the implementation of the HOC program and again immediately after the last HOC session. The goal was to assess any changes in risk and protective factors that may be attributable to the program. The Pre-Survey administration sample consisted of 57 youth, while 54 Post-Surveys were collected. A total of 63 unique youths responded to at least one administration of the survey.[1] However, this report focuses exclusively on the 48 youth who provided both a Pre- and a Post-Survey.

Of the three HOC implementation sites, two provided a short-term intensive program that spanned less than 1 month, while the third provided a longer-term implementation over one semester and was taught in a tribal school setting. An Intensive Post-Survey was developed for the shorter-term intensive programs that excluded some items, such as the 30-day substance use questions and other similar questions that cannot be expected to change much in a shorter HOC implementation. Summary data tables are shown in Appendix A, while the survey instruments are found in Appendix B.

Respondents ranged in age from 11 to 18 years; the average was 13.4 years of age. Table 1 displays the demographic profile of respondents who completed both a Pre-Survey and a Post-Survey (n = 48). All respondents who answered the question about race/ethnicity identified as American Indian or Alaskan Native. There were slightly more female than male respondents (50% female, 44% male). Demographic questions were asked on both the Pre-and Post-Surveys in 2018-2019.[2]

> *"[In HOC] I learned how to deal with someone if they are feeling depressed."*
>
> *~ HOC Participant*

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[1] Some youth completed the Post-Survey survey who did not complete the Pre-Survey and some completed a Pre-Survey but not a Post-Survey.

[2] In some cases, youth did not answer a demographic question on the Pre-Survey but did answer it on the Post-Survey; in this situation, any answer given on the Pre- or the Post-Survey was used to generate the final demographic items used in the analysis.

Table 1. Respondent Demographic Profiles

	Number of Youth	Percentage of Youth
Race[3]		
American Indian/Alaska Native	47	98%
Not American Indian/Alaska Native	0	0%
Missing	1	2%
Sex		
Male	21	44%
Female	24	50%
Other	2	4%
Missing	1	2%
Age		
11-13 years old	26	54%
14-18 years old	21	44%
Missing	1	2%

The survey consisted primarily of Likert-type items intended to gauge respondents' suicide ideation and to measure risk and protective factors (Appendix B contains the surveys). Scales were created from the average scores across individual items that were intended to measure the same domain. The same scales are found on the Pre-Surveys for all youth and the Post-Surveys for the longer-term HOC implementation. The shorter-term implementation Post-Survey includes the scales with a "*" next to the name. A description of the scales produced for the analyses (with their names in blue bolded headings) is found in the next section.

PROTECTIVE FACTOR SCALE CREATION

Children's Hope Scale*[4]

Six items were included in the survey to assess the respondent's situational awareness and positivity. Example items include *I can think of many ways to get the things in life that are most important to me* and *I am doing just as well as other kids my age*. Response options ranged from "none of the time" to "all of the time," and scores for this domain ranged from 1 – 6 with higher scores indicating greater optimism.

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[3] For this report, all youth who identified as American Indian or Alaska Native (AI/AN) or AI/AN in combination with other race/ethnicities on the Post-Survey demographic section were coded as AI/AN. The non-AI/AN youth are all those who did not check "AI/AN" as part of their "all that apply" response.

[4] The Children's Hope Scale (Snyder et al., 1997) was also used in the original evaluation of the Healing of the Canoe evaluation (Donovan et al., 2015).

Connection to Cultural Identity*

Youth were asked four questions to assess the strength of their cultural identity. Items in this scale include *Spiritual beliefs are a source of strength for me*. Response options ranged from "strongly disagree" to "strongly agree," and scores ranged from 1 – 4 with higher scores indicating greater connection to their cultural heritage.

Family

Five items assessed the respondent's familial bond. Example items include *My parents or guardians notice when I am doing a good job and let me know about it* and *I enjoy spending time with my family*. Response options ranged from "strongly disagree" to "strongly agree," and scores ranged from 1 – 4 with higher scores indicating a youth's greater sense of connection to their family.

Community*

Two items assessed youth perceptions of their community environment. Items include *There is an Elder in my community that I hang out with and go to for advice* and *I feel safe in my community*. Response options ranged from "strongly disagree" to "strongly agree," and scores in this domain ranged from 1 – 4 with higher scores indicating greater connectedness with the community.

School

Three questions were asked to assess school culture. Example items include *My teacher notices when I am doing a good job and lets me know about it* and *I enjoy being at school*. Response options ranged from "strongly disagree" to "strongly agree," and scores ranged from 1 – 4 with higher scores indicating greater school bonding.

Resilience*

This scale, known as the Cross-Cultural Youth Resilience Measure 12 Item scale (CYRM-12), consists of 12 items that assess youth's resilience (Panter-Brick, Hadfield, Dajani, Eggerman, Ager, & Ungar, 2017). The CYRM-12 was developed for use across different cultures and now has been used with youth around the world. Items include *I try to finish what I start* and *I know where to go in my community to get help*. Response options ranged from "not at all" to "a lot," and scores ranged from 1 – 12, with higher scores indicating greater resilience.

ADDITIONAL SURVEY CONTENT

Additional items on the survey include self-reported drug use, incidences of harassment, frequencies of bullying, feeling depressed, and general questions regarding the respondent's health, including sleep and exercise.

RESULTS

PRE-SURVEY TO POST-SURVEY

Mental Health and Suicide Ideation

For many analyses, the outcome of interest was whether the respondent had contemplated or attempted suicide within the past month. Overall, there were few youth who had contemplated suicide (10%, n = 6) and even fewer who had attempted suicide (2%, n = 1). Given the low percentage of respondents who had contemplated or attempted suicide, mental health was also examined. Specifically, one question asked youth how good their mental health was in general, with response options ranging from "poor" to "excellent." Nearly 30% (n = 18) of youth responded that their mental health was either "poor" or "fair." Scores on risk and protective factors were compared across two groups—youth who had contemplated suicide within the past month or rated their mental health as "poor" or "fair" and youth who had not contemplated suicide and rated their mental health as "good" or "excellent."

Protective Factors (Scales)

Table 2 displays the average (mean) scale scores for respondents on the Pre-Survey and Post-Surveys. Generally, youth at Pre-Survey reported positive scores on scales measuring potential protective factors, with scores averaging on the higher end of the scale range. Most scales had an average score of 3.0 or greater, indicating that youth generally agreed that they felt safe in their families and communities, as well as typically exhibiting positivity and resiliency. The scale measuring how safe youth felt in their schools had an average of 2.9 during the Pre-Survey administration. **Shaded measures** indicate that these items were not included on the Intensive Post-Survey (see Appendix B).

Scores at Post-Survey generally remained stable. The Children's Hope, Community, and Resilience scales had a slight increase in the average score between Pre-Survey and Post-Survey while the Family scale had a slight decrease in the average score between Pre-Survey and Post-Survey. None of the differences between average Pre-Survey and Post-Survey scores were significant.[5]

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[5] The distributions of the scales were examined, and they all were normal - or did not deviate from normality enough to be concerned. Nonparametric equivalents (i.e., Wilcoxon test) would not have different interpretations since the nonparametric approaches generally have less power. We ran the Wilcoxon test and it agreed with the t-test results; therefore, we have used the t-test results throughout this paper.

Table 2. Average Scale Scores at Pre-Survey and Post-Survey*

	Range	Pre-Survey		Post-Survey	
		N	Mean	N	Mean
Children's Hope Scale	1 – 6	48	4.1	48	4.2
Cultural Connection	1 – 4	47	3.3	48	3.3
Family	1 – 4	48	3.3	30	3.2
Community	1 – 4	48	2.9	48	3.1
School	1 – 4	48	2.9	29	2.9
Resilience	1 – 5	47	3.9	47	4.0

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

Scale scores at Pre-Survey were compared across demographic characteristics to determine if there were differences in protective factors by gender and age. Overall, there were few differences between males and females in terms of their Pre-Survey scores (Table 3), though males had a slightly higher average on the Children's Hope Scale than females. None of the differences between genders were statistically significant.

Age of youth was compared across the scale scores. Youth aged 11-13 years old were compared to youth aged 14-18 years old. Youth who were 11-13 years of age and youth who were 14-18 years of age scored similarly across all the scales, though older youth aged 14-18 years old had a slightly higher average on the Children's Hope Scale. None of the differences between age groups were significant for any of the scales.

Table 3. Average Scale Scores at Pre-Survey by Gender and Age

Gender	Female		Male	
	N	Mean	N	Mean
Children's Hope Scale	24	4.0	21	4.4
Cultural Connection	24	3.3	20	3.4
Family	24	3.3	21	3.3
Community	24	3.0	21	2.8
School	24	3.0	21	2.9
Resilience	24	3.9	20	4.0
Age	11-13 years old		14-18 years old	
	N	Mean	N	Mean
Children's Hope Scale	26	3.9	21	4.4
Cultural Connection	26	3.3	20	3.4
Family	26	3.3	21	3.3
Community	26	2.8	21	3.0
School	26	2.8	21	3.0
Resilience	26	3.9	20	4.0

Table 4 displays the change scores on the computed scales between Pre-Survey and Post-Survey for youth who completed both surveys. Positive scores indicate that the scores on these protective factors increased between Pre-Survey and Post-Survey while negative scores indicate that there was a decrease on these scales between Pre-Survey and Post-Survey. Overall, there was little growth found on the protective scale scores. Males had a slight decrease in *Family* between Pre-Survey and Post-Survey, females showed a slight increase during the same period. However, none of the change scores were significantly different between genders.

When looking at differences between age groups, there were a few differences. Older youth aged 14-18 years of age had slight increases in the *Resilience* scale and slight decreases in the *Family* scale, whereas youth aged 11-13 years of age remained stable. None of the differences in scale scores were significantly different between the two age groups.

Table 4. Differences between Pre-Survey and Post-Survey Measures by Gender and Age*

Gender	Female		Male	
	N	Mean	N	Mean
Children's Hope Scale	24	0.1	21	0.3
Cultural Connection	24	0.0	20	0.0
Family	15	0.1	13	-0.2
Community	24	0.0	21	0.3
School	15	-0.1	12	0.2
Resilience	24	0.0	19	0.5
Age	**11-13 years old**		**14-18 years old**	
	N	Mean	N	Mean
Children's Hope Scale	26	0.1	21	0.1
Cultural Connection	26	-0.1	20	0.0
Family	16	0.0	13	-0.1
Community	26	0.1	21	0.1
School	16	0.0	12	0.0
Resilience	25	0.0	20	0.1

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

Health

Youth were asked a series of questions regarding their physical health. These questions included the average amount of sleep they received on a nightly basis as well as how many days they had breakfast or exercised during the past week. Exercise was defined as having at least an hour of physical activity each day. On average, youth reported having an average of around 7 hours of sleep every night.[6] Additionally, youth reported exercising an average of just over 4 days every week and eating breakfast just under 5 days per week. These scores are displayed in Table 5. There was very little change on the average of these measures between Pre-Survey and Post-Survey. Again, two out of the three HOC implementation sites asked these questions on the Post-Survey.

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[6] Teens should get over 9 hours sleep http://www.nationwidechildrens.org/sleep-in-adolescents. On the Pre-Survey, 14% of youth reported getting 9 or more hours of sleep. Of the 32 Post-Survey (school-based) respondents, 16% reported getting 9 or more hours of sleep.

Table 5. Health at Pre-Survey and Post-Survey*

	N	Pre-Survey	N	Post-Survey
Sleep (average hours per night)	30	7.3	30	7.5
Breakfast (number of days in past week)	48	4.5	48	4.8
Exercise (number of days in past week)	30	4.3	30	4.2

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

Youth were also asked to rate their general physical and mental health on a 4-point scale, with higher scores indicating greater physical and mental health. Table 6 displays the average health ratings provided by youth at Pre-Survey and Post-Survey. With regard to physical health, the average rating was 3.0 at Pre-Survey and 2.8 at Post-Survey. This finding suggests that youth generally reported *good* health at both time points. When looking at mental health, youth had an average rating of 2.8 on the Pre-Survey and an average rating of 2.9 on the Post-Survey, which corresponds to having good mental health. None of the differences between physical health and mental health were significantly different between Pre-Survey and Post-Survey.

Table 6. Physical and Mental Health at Pre-Survey and Post-Survey

	Pre-Survey (n = 48)	Post-Survey (n = 48)
Physical Health	3.0	2.8
Mental Health	2.8	2.9

Table 7 shows the change in health ratings between Pre-Survey and Post-Survey separated by the gender and age of the respondent. Positive values indicate an increase in health ratings on the Post-Survey from scores on the Pre-Survey. Females increased in the average number of days exercising while males decreased, and females increased in the number of days they ate breakfast, while males remained stable. However, the difference between females and males was not statistically significant, likely due to small sample sizes. Younger children aged 11-13 years old had greater increases in the average number of days eating breakfast and in the average number of days exercising than older children aged 14-18 years old. Conversely, older youth increased slightly in average overall mental health while younger youth remained stable between Pre-Survey and Post-Survey administration. Younger children also had a decrease in the number of days exercising. However, none of the differences between age groups were significant.

Table 7. Change in Health Items between Pre-Survey and Post-Survey by Gender and Age*

Gender	Female		Male	
	N	Mean	N	Mean
Sleep (average hours per night)	15	0.2	13	0.2
Breakfast (number of days in past week)	24	0.6	21	0.0
Exercise (number of days in past week)	15	0.7	13	-0.4
Physical Health	23	-0.2	21	-0.2
Mental Health	24	0.1	20	0.1
Age	11-13 years old		14-18 years old	
	N	Mean	N	Mean
Sleep (average hours per night)	16	0.3	13	0.3
Breakfast (number of days in past week)	26	0.4	21	0.0
Exercise (number of days in past week)	16	0.4	13	0.1
Physical Health	25	-0.3	21	0.0
Mental Health	25	0.0	21	0.1

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

Seeking Help

Youth were asked questions about whether they would seek help if they or a friend were feeling depressed or suicidal. Three questions on the survey asked how likely they would be to seek help if they were depressed or how confident they were that they would seek help for a friend who was feeling depressed. These questions were asked on a four-point scale with "1" indicating that youth were not likely to or did not feel confident seeking help and "4" indicating that youth were likely to or felt confident seeking help.

Table 8 displays the average (mean) scores for these three questions on the Pre-Survey and Post-Survey. On both the Pre-Survey and the Post-Survey, average scores for all three questions were 3.0 or greater, indicating that youth felt confident or were likely to seek help for themselves if they were depressed or suicidal or for friends and family members who were depressed or suicidal. Scores for all three questions remained relatively stable between Pre-Survey and Post-Survey administrations.

Table 8. Help Seeking Behavior at Pre-Survey and Post-Survey

	Pre-Survey (n = 48)	Post-Survey (n = 48)
Do you feel confident that that you could help a friend or family member who is thinking about suicide?	3.4	3.2
How likely would you be to seek help if **you** were feeling depressed or suicidal?	3.0	3.0
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal?	3.3	3.3

Table 9 displays changes in help seeking attitudes between the Pre-Survey and Post-Survey administrations between gender and age categories. Females, on average, showed a decrease from Pre-Survey to Post-Survey when asked how confident they were that they could help a friend or family member who was thinking about suicide and how likely they were to seek help if they were depressed or suicidal. Male youth showed a modest increase on these two questions between Pre-Survey and Post-Survey. When youth were asked how likely they would be to seek help for a friend who was depressed or suicidal, females showed a slight increase from Pre-Survey to Post-Survey while male youth remained steady. The largest difference by gender was that females were less likely, and males were more likely from Pre-Survey to Post-Survey to seek help if <u>they</u> were depressed or suicidal. However, none of the differences between gender groups were statistically significant.

Changes on these questions between Pre-Survey and Post-Survey were also compared between age groups. Older youth increased in how confident they were that they could help a friend or family member who was thinking about suicide, while younger youth showed a decrease during the same time interval. This difference was statistically significant.[7] Younger youth made modest increases from Pre-Survey to Post-Survey when asked how likely they were to seek help for themselves or for a friend or family member experiencing depression. Older youth decreased or showed no change on these questions in the same time period. The differences between younger and older youth on these two questions were not significant.

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[7] $t(42) = 2.046$, $p < .05$

Table 9. Change in Help Seeking Between Pre- and Post-Survey by Gender and Age

Gender	Female		Male	
	N	Mean	N	Mean
Do you feel confident that that you could help a friend or family member who is thinking about suicide?	23	-0.4	19	0.1
How likely would you be to seek help if **you** were feeling depressed or suicidal?	24	-0.2	19	0.4
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal?	24	0.2	20	0.0
Age	**11-13 years old**		**14-18 years old**	
	N	Mean	N	Mean
Do you feel confident that that you could help a friend or family member who is thinking about suicide?	24	**-0.4**	20	**0.2**
How likely would you be to seek help if **you** were feeling depressed or suicidal?	26	0.1	19	-0.1
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal?	26	0.1	20	0.0

Risk Factors - Substance Use

The survey asked youth questions about alcohol, tobacco, and other illicit substance use within the past 30 days. Table 10 displays the percentage of youth who responded that they took any of the substances in the previous 30 days. Overall, reported illicit substance use was low among survey respondents. This result is in striking contrast to Donovan et al. (2015), who found that over half of the HOC participants in that study had previously smoked cigarettes and two thirds had consumed alcohol and/or used marijuana.[8] It is possible that youth in the current sample are under-reporting their use due to the method of survey administration, or that the rates of use are lower because the youth in the current sample are younger (over half are younger than high school aged, while the samples in the Donovan et al., 2015, study were all in high school).

The most common substances used in the previous 30 days in the current study were alcohol, cigarettes, and prescription drugs. There was little change in the percentage of youth who took illicit substances between Pre-Survey and Post-Survey, although 4% of respondents reported

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[8] The original HOC evaluation involved trained tribal staff conducting the surveys one-on-one with youth. In the NPAIHB implementation, the surveys were implemented in a group setting by NPC staff or trained tribal staff.

using non-prescription drugs at Pre-Survey and no respondent reported using non-prescription drugs at Post-Survey. The percentage of youth who reported using prescription drugs or other illegal drugs increased from Pre-Survey to Post-Survey. Although Pre- and Post-Survey results are included in Table 10, it is important to note that one of the community-based sites did not have the questions about substance use on the Intensive Post-Survey, so the results are for the two other sites.

Table 10. Substance Use at Pre-Survey and Post-Survey

	Pre-Survey (*n* = 48)	Post-Survey (*n* = 30)
Cigarettes	4%	3%[9]
Alcohol	6%	7%
Marijuana	4%	3%[10]
Non-prescription Drugs	4%	0%
Other Illegal Drugs (e.g., cocaine, meth, inhalants, psychedelics)	0%	3%
Prescription Drugs (e.g., Vicodin, OxyContin, Xanax, Valium, Ritalin, Ambien)	8%	10%

Risk Factors - Harassment

The survey asked youth if they have been harassed at school or anywhere else within the past year. Table 11 displays the percentage of youth who responded that they had been harassed during the previous year. Half (48%) of the youth reported they had not been harassed in the previous year at Pre-Survey, but that decreased to one-third of youth at Post-Survey who reported not having been harassed in the previous year. Although Pre- and Post-Survey results are included in Table 11, it is important to note that one of the community-based implementation sites did not have the question about harassment on the Intensive Post-Survey,

> *"[HOC] helped me learn **patience**. It also brought me closer to people and gave me new friends."*
>
> *~ HOC Participant*

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[9] One of the two youth at Pre- who used cigarettes did not use at Post- and the other was in the group which was not asked this question. This youth at Post- who used did not reporting using at Pre-.

[10] One of the two youth at Pre- who used marijuana continued to use at Post- and the other was not asked this question.

so the results are only for the two sites that implemented the full Post-Survey. Therefore, the Pre- and Post-Survey results for harassment should not be compared. However, when youth did report that they had been harassed during the previous year, the most common reason for harassment was based on their group of friends or for their physical characteristics, including their weight, clothes, or acne.

Table 11. Reported Harassment at Pre-Survey and Post-Survey

	Pre-Survey (*n* = 48)	Post-Survey (*n* = 30)
Race	19%	7%
Sexual Comment	15%	13%
Sexual Orientation	19%	17%
Physical Characteristics	29%	20%
Group of friends	17%	23%
Other	2%	3%
Not been harassed	48%	57%

Note: Youth may report more than one type of harassment. Percentages do not add up to 100%.

CHARACTERISTICS OF YOUTH WITH MENTAL HEALTH AND SUICIDE IDEATION

The next several tables explore whether responses between youth participants who had thought of suicide or attempted suicide in the past year or reported poor mental health differed from those who had not considered or attempted suicide and reported good mental health.

Demographic characteristics of the youth who had mental health issues on the Pre-Survey can be found in Table 12. There was no difference by age. Those youth reporting mental health issues were roughly the same age as those not reporting any mental health issues. By gender, a higher proportion of youth reporting mental health issues was female compared to youth not reporting mental health issues; however, this was not a statistically significant difference.

Table 12. Demographic Characteristics of Youth with Mental Health Issues (Pre-Survey)[11]

	No mental health issues (*n* = 30)	Mental health issues (*n* = 17)
11-13 years of age	53%	59%
14-18 years of age	47%	41%
Age (average in years)	13.4	13.3
Male	57%	24%
Female	40%	71%
Other Gender	3%	6%

The scales were also examined by youth reporting mental health issues at Pre-Survey. Youth with mental health issues at Pre-Survey scored lower than their peers who did not report mental health issues in each of the protective factor scales. Three of these scales were statistically significant: youth who had mental health issues scored lower on the *Children's Hope,*[12] *School,*[13] and *Resilience*[14] scales.

Table 13. Average Scale Scores at Pre-Survey by Mental Health Issues

	No mental health issues			Mental health issues		
	Range	N	Mean	Range	N	Mean
Children's Hope Scale	1 − 6	30	**4.4**	1 − 6	18	**3.7**
Cultural Connection	1 − 4	30	3.3	1 − 4	17	3.6
Family	1 − 4	30	3.4	1 − 4	18	3.3
Community	1 − 4	30	2.9	1 − 4	18	2.9
School	1 − 4	30	**3.1**	1 − 4	18	**2.6**
Resilience	1 − 5	30	**4.2**	1 − 5	17	**3.5**

Changes in each of the average (mean) scale scores from Pre-Survey to Post-Survey were compared between youth with mental health issues and those who did not report mental health issues. Those youth with mental health issues had greater average increases in the *Children's Hope*, *Cultural Connection*, *Community*, *School*, and *Resilience* scales than youth who reported no mental health issues. However, none of the differences were statistically

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[11] One youth reporting mental health issues did not report their age or gender.
[12] $t(46) = 2.793$, $p < .01$
[13] $t(46) = 2.909$, $p < .01$
[14] $t(45) = 2.696$, $p < .01$

significant. Table 14 shows the average increases in these scales between Pre-Survey and Post-Survey for youth reporting mental health issues and youth reporting no mental health issues.

Table 14. Average Scale Score Differences from Pre- to Post-Survey by Mental Health Issues*

	Range	No mental health issues		Mental health issues	
		N	Mean	N	Mean
Children's Hope Scale	1 − 6	30	0.04	18	0.27
Cultural Connection	1 − 4	30	-0.07	17	0.10
Family	1 − 4	19	-0.05	11	-0.06
Community	1 − 4	30	0.08	18	0.22
School	1 − 4	18	0.03	11	0.14
Resilience	1 − 5	29	0.02	17	0.07

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

The health items were compared between youth who reporting having a mental health issue and those who reported no mental health issues to determine if these health measures were related to suicide ideation. Table 15 displays the previous health measures between these two groups of youth. Across all health outcomes, youth who did not report any mental health issues had better health ratings than youth who did report mental health issues; three of these measures were statistically significant. Youth who did not report mental health issues had more days eating breakfast during the previous week,[15] higher physical health ratings,[16] and higher mental health ratings[17] than their peers who had reported mental health issues.

Table 15. Health Measures at Pre-Survey by Mental Health Issues

	No mental health issues (*n* = 30)	Mental health issues (*n* = 18)
Sleep (average hours per night)	7.4	6.9
Breakfast (number of days in past week)	**5.4**	**3.0**
Exercise (number of days in past week)	4.6	3.6
Physical Health	**3.2**	**2.5**
Mental Health	**3.4**	**1.7**

[15] $t(46) = 4.012, p < .001$
[16] $t(45) = 3.804, p < .001$
[17] $t(46) = 10.805, p < .001$

Changes in these health measures from Pre-Survey to Post-Survey were compared between youth reporting mental health issues and youth not reporting any mental health issues. Table 16 displays the average increase between Pre-Survey and Post-Survey for these youth. Youth with mental health issues reported larger increases in the amount of sleep and frequency of eating breakfast, on average, compared to youth not reporting any mental health issues. Youth with mental health issues also had greater decreases in the average number of days with exercise in a week and overall physical health. Youth who reported having mental health issues reported an increase in their overall mental health from Pre-Survey to Post-Survey while youth without mental health issues had an average decrease; this difference was statistically significant.[18]

Table 16. Average Health Differences from Pre- to Post-Survey by Mental Health Issues*

	No mental health issues		Mental health issues	
	N	Mean	N	Mean
Sleep (average hours per night)	19	0.05	11	0.09
Breakfast (number of days in past week)	30	0.10	18	0.60
Exercise (number of days in past week)	19	0.52	11	-0.45
Physical Health	29	-0.14	18	-0.22
Mental Health	29	**-0.24**	18	**0.61**

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

I just enjoyed having a nice safe cultural outlet. As well as learning and listening to some teachings from a skipper.

~ HOC Participant

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[18] $t(45) = 3.228$, $p < .01$

Although a higher proportion of youth who reported mental health issues reported smoking cigarettes and using alcohol, non-prescription drugs, and other prescription drugs, the differences were not statistically significant (Table 17), likely due to the small sample sizes.

Table 17. Substance Use at Pre-Survey by Mental Health Issues

	No mental health issues (*n* = 30)	Mental health issues (*n* = 18)
Cigarettes	3%	6%
Alcohol	3%	11%
Marijuana	3%	6%
Non-prescription Drugs	3%	6%
Prescription Drugs (e.g., Vicodin, OxyContin, Xanax, Valium, Ritalin, Ambien)	7%	11%

Table 18 provides information about harassment in the past year for youth who reported mental health issues and those who reported no mental health issues. About two thirds (57%) of the youth who did not report any mental health issues reported they had not experienced any type of harassment compared to one-third (33%) of youth who reported mental health issues. In particular, youth with mental issues reported slightly greater levels of harassment for their race, sexual orientation, physical characteristics, and group of friends, than their peers who did not report mental health issues. Youth with mental health issues also had a slightly greater average number of harassment types than youth who did not report mental health issues. None of the differences between youth with and without mental health issues were statistically significant.

Table 18. Reported Harassment at Pre-Survey by Mental Health Issues

	No mental health issues (*n* = 30)	Mental health issues (*n* = 18)
Race	17%	22%
Sexual Comment	20%	6%
Sexual Orientation	17%	22%
Physical Characteristics	27%	33%
Group of friends	10%	28%
Other	3%	0%
Number of types of harassment (average)	0.9	1.1
Not been harassed	57%	33%

The survey also asked youth about other risk factors, such as whether they had been electronically bullied in the past 12 months and whether they had been in a physical fight in the past 30 days, as well as lifetime physical abuse or forced sexual intercourse. Again, higher proportions of the youth who reported mental health issues also reported having experienced being electronically bulled or being in at least one physical fight within the past 12 months. Youth who reported mental health issues also reported having been forced to have sex in their life more often. None of the differences between youth with and without mental health issues were significantly different.

Table 19. Other Risk Factors at Pre-Survey by Mental Health Issues

	No mental health issues (n = 30)	Mental health issues (n = 18)
Have been electronically bullied past 12 months	17%	28%
Have been in at least one physical fight in past 12 months	30%	44%
Lifetime physical abuse*	40%	38%
Lifetime forced to have sex*	4%	17%
*The table reports the percentage of "yes" answers out of all "yes" and "no" responses. The third option "don't know/don't want to answer" is not included in this table (there were very few).		

Changes in how confident or likely youth were to seek help for themselves or for friends or family members who were feeling depressed or suicidal were compared between youth with reported mental health issues and youth without reported mental health issues. These results are displayed in Table 20 below. For youth not reporting mental health issues, scores remained stable or showed slight increases from Pre-Survey to Post-Survey for all three survey questions. For youth who did report mental health issues, average scores decreased from Pre-Survey to Post-Survey. However, none of these differences were significant.

Table 20. Changes in Help Seeking from Pre- to Post-Survey by Mental Health Issues

	No mental health issues		Mental health issues	
	N	Mean	N	Mean
Do you feel confident that that you could help a friend or family member who is thinking about suicide?	28	0.0	17	-0.4
How likely would you be to seek help if **you** were feeling depressed or suicidal?	29	0.1	17	-0.1
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal?	30	0.1	17	-0.1

COMMUNITY-BASED VERSUS SCHOOL-BASED HOC CURRICULUM IMPLEMENTATION

Of the three sites, two elected to implement the HOC curriculum in a community-based setting. One of the sites implemented HOC over three weekends in the summer (spanning nearly 30 days). The other community-based curriculum site implemented HOC in two week-long sessions during the summer, one for middle school-aged youth and one for high school-aged youth. The long-term implementation site implemented HOC for middle school students in the tribal school over the spring semester.

Theoretically, differences in HOC outcomes by model type is a question of programmatic importance: Is it possible to get the same outcomes in different settings over a shorter period of time in the community versus in the school setting? Practically, however, there is good reason to believe the comparison of HOC program models will be misleading. This is because the differences among the two program models are likely due to a host of other factors unrelated to the duration of the HOC program. These factors include setting (single week and 3 weekends vs. once per week for several weeks), season (summer vs. school year), the number of HOC facilitators, types of youth (one of the community-based programs specifically recruited high-risk youth), youth age, fidelity to the HOC lessons (and/or length of time spent on each lesson), etc.

The three tables in this section show differences between program models at Pre-Survey highlighting the differences in the two groups of youth (community-based and school based). Table 21 reports demographic characteristics of the youth in the community-based (short-term) and school-based (long-term) HOC models. Neither gender nor age between program models was statistically significant.

Table 21. Demographic Characteristics of Youth by Program Model[19]

	Community-Based (*n* = 30)	School-Based (*n* = 21)
Age		
Age (average in years)	13.6	13.1
Sex		
Male	45%	44%
Female	52%	50%
Other	3%	6%

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[19] The sample size for **age** was *n* = 29 for community-based implementation and *n* = 17 for school-based implementation.

The protective factor scales were also examined by community- and school-based models on the Pre-Survey, as seen in Table 22. There were some differences among the scales by program model, and the School scale showed statistical significance between the two models: youth in the community-based (summer) programs scored higher on these scales than those in the school-based model.[20] Because these differences were present at Pre-Survey, the difference is not likely to have anything to do with the community- or school-based programming. Instead, the difference is likely due to the school setting itself, the season, or the characteristics of the youths in each program.

Table 22. Average Scale Scores at Pre-Survey by Program Model

		Community		School	
	Range	N	Mean	N	Mean
Children's Hope Scale	1 − 6	29	4.3	19	3.8
Cultural Connection	1 − 4	29	3.4	18	3.2
Family	1 − 4	29	3.4	19	3.1
Community	1 − 4	29	3.1	19	2.7
School	1 − 4	29	**3.0**	19	**2.7**
Resilience	1 − 5	29	4.1	18	3.8

Table 23 below presents Pre- and Post-Survey outcome data by program model. The protective scale scores saw minimal gains for both models from Pre- to Post-Survey. However, the *Family* and *School* scales showed significantly different gains between the two program models; those in the school-based model had positive gains in these two scales while youth in the community-based model showed decreases in these scales.[21]

Table 23. Average Scale Score Differences from Pre- to Post-Survey by Program Model*

		Community		School	
	Range	N	Mean	N	Mean
Children's Hope Scale	1 − 6	29	-0.05	19	0.38
Cultural Connection	1 − 4	29	0.01	18	-0.04
Family	1 − 4	11	**-0.28**	19	**0.08**
Community	1 − 4	29	0.12	19	0.16
School	1 − 4	10	**-0.20**	19	**0.21**
Resilience	1 − 5	29	0.02	17	0.07

*Shaded measures indicate that these items were not included on the Intensive Post-Survey.

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[20] $t(46) = 2.104$, $p < .05$
[21] *Family*: $t(28) = 2.330$, $p < .05$
     School: $t(27) = 2.433$, $p < .05$

Average (mean) scores on the Pre-Survey for questions asking youth how confident or likely they were to seek help for themselves or for friends or family feeling depressed or suicidal (displayed in Table 24) were compared between the community- and school-based program models. Youth in the school-based model had a slightly higher average score when asked how confident they were in helping a friend or family member thinking about suicide than youth in the community-based program model. However, youth in the community-based model had slightly higher average scores than youth in the school-based model when asked how likely they would be to seek help for themselves or for friends and family feeling depressed or suicidal. None of these differences were statistically significant.

Table 24. Average Help Seeking Scores at Pre-Survey by Program Model

	Community (n = 29)	School (n = 18)
Do you feel confident that that you could help a friend or family member who is thinking about suicide?	3.2	3.7
How likely would you be to seek help if **you** were feeling depressed or suicidal?	3.1	2.7
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal?	3.4	3.1

Changes for these help seeking questions between Pre-Survey and Post-Survey were compared between youth participating in the community-based or school-based program models. The average changes in scores are displayed in Table 25. Youth in the community-based program model remained consistent between Pre-Survey and Post-Survey on all three questions. For youth participating in the school-based program model, average scores decreased when asked how confident they were that they could help a friend or family member thinking about suicide, but showed a small increase for the other two questions asking how likely they would be to seek help for themselves or a friend or family member who was feeling depressed or suicidal. The difference in the changes between Pre-Survey and Post-Survey was significant between the two program models for the question asking how confident youth were in helping a friend or family member thinking about suicide.[22] Changes on the other two questions asking how likely youth were to seek help for themselves or a friend or family member were not significantly different between the community- and school-based program models.

Table 25. Changes in Help Seeking from Pre- to Post-Survey by Program Model

	Community		School	
	N	Mean	N	Mean
Do you feel confident that that you could help a friend or family member who is thinking about suicide?	27	**0.1**	18	**-0.5**
How likely would you be to seek help if **you** were feeling depressed or suicidal?	28	-0.1	18	0.2
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal?	29	0.0	18	0.1

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[22] $t(43) = 2.246$, $p < .05$

SUMMARY OF RESULTS

Youth participating in the HOC curriculum in three Northwest Tribal communities were asked to fill out Pre- and Post-Surveys to help understand their thoughts about themselves, their families, school, communities, behaviors, and past experiences. Survey respondents ranged in age from 11 to 18 years; the average was 13. All of the youth who reported their race identified as American Indian or Alaskan Native (AI/AN) and 50% identified as female.

In this summary, we are reporting only on the statistically significant results from this evaluation.

Differences between the Pre- and Post-Survey found the following:

- Younger youth decreased in how confident they were to be able to help a friend or family member thinking about suicide, while older youth had a modest increase.
- Youth with mental health issues saw larger increases at the Post-Survey in five of the six protective factor scales (*Children's Hope, Cultural Connection, School, Community, and Resilience*).
- Youth in the community-based program model slightly increased between the Pre- and Post-Surveys on how confident they were to seek help for a friend or family member feeling suicidal while youth in the school-based program model decreased.
- Youth in the school-based program had more gains in the *Family* and *School* scales than youth in community-based programs.

At Pre-Survey, several characteristics were statistically linked to mental health issues in youth:

- The *Children's Hope, School,* and *Resilience* scales were statistically linked to suicidal thoughts and behaviors at the Pre-Survey, with youth reporting mental health issues having lower scores on these scales.
- Youth with mental health issues, on average, ate breakfast on two fewer days per week and reported lower ratings of physical health and mental health than youth without mental health issues.
- Youth with mental health issues increased in overall mental health from Pre-Survey to Post-Survey while youth without mental health issues decreased in overall mental health during the same time period.
- Youth with mental health issues were more likely to say they had been forced to have sex in their lifetime (22%) than their peers without any reported mental health issues (3%) and to have been bullied.

Although we do not have a comparison group of youth **not** receiving the HOC curriculum, we are particularly interested in any evidence, however tentative, about the impact of the HOC implementation on participating youth. Youth with mental health issues had statistically significant increases in their self-reported mental heath from Pre- to Post-Survey, which may indicate this curriculum is appropriate for youth facing mental health challenges. The decreases in self-reported mental health ratings for youth *without* mental health indicators at the Pre-Survey also could indicate that they were reporting their mental health concerns more honestly or completely at the Post-Survey. The results of this evaluation also indicate that the suicide prevention-related components of this curriculum might be more appropriate for older youth, since they had significant increases in confidence that they could help suicidal friends or family members, compared to younger youth.

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APPENDIX A: HEALING OF THE CANOE DATA TABLES

Healing of the Canoe Data Tables

The tables below summarize the percent of youth reporting positive responses for each survey item (such as "Strongly Agree/Agree," or other response, which is indicated in the table title). The columns compare the percentage of responses from the Pre-Survey and Post-Survey completed by the 48 youth who provided both a Pre- and a Post-Survey.[1] Items where the percentage of youth was different on the Post-Survey than the Pre-Survey indicate potential program impact.

Table A1. Percentages of Youth Answering "A lot/Most/All of the Time" to Survey Items Asking How They Respond in Most Situations (Children's Hope Scale)

Survey Items	Pre	Post
I think I am doing pretty well. *(post n = 47)*	67%	72%
I can think of many ways to get the things in life that are most important to me.	73%	75%
I am doing just as well as other kids my age. *(post n = 47)*	65%	68%
When I have a problem, I can come up with lots of ways to solve it.	60%	58%
I think the things I have done in the past will help me in the future.	60%	71%
Even when others want to quit, I know that I can find ways to solve the problem.	56%	67%
Average scale score *(possible range 1 = "none of the time" to 6 = "all of the time")*	4.1	4.2

Table A2. Percentages of Youth Answering "Strongly Agree/Agree" to Survey Items about Family

Survey Items	Pre	Post
My parents or guardians notice when I am doing a good job and let me know about it. *(post n = 30)*	85%	80%
I feel safe at home. *(pre n = 47; post n = 30)*	94%	87%
When I am not home, one of my parents/guardians knows where I am and who I am with. *(pre n = 46; post n = 29)*	94%	93%
I enjoy spending time with my family. *(post n = 29)*	92%	93%
There is someone in my family I can talk to about anything. *(pre n = 47; post n = 30)*	81%	73%

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[1] Not all questions asked on the Pre-Survey were asked on the Post-Survey due to the short duration of implementation for one of the sites (1 week).

**Table A3. Percentages of Youth Answering "Strongly Agree/Agree"
to Survey Items about Community**

Survey Items	Pre	Post
There is an Elder in my community that I hang out with and go to for advice. *(pre n = 45)*	60%	71%
I feel safe in my community. *(pre n = 46; post n = 46)*	91%	89%

**Table A4. Percentages of Youth Answering "Strongly Agree/Agree"
to Survey Items about School**

Survey Items	Pre	Post
My teacher(s) notices when I am doing a good job and lets me know about it. *(post n = 28)*	77%	86%
I feel safe at my school. *(post n = 28)*	75%	75%
I enjoy being at school. *(pre n = 47; post n = 28)*	57%	71%
I try hard at school. *(post n = 29)*	79%	76%

**Table A5. Percentages of Youth Answering "Two or More Friends"
to Survey Items about Peers**

Survey Items	Pre	Post
How many of your friends could you share a personal problem with? *(post n = 30)*	83%	80%
How many of your friends try to do their best? *(pre n = 47; post n = 30)*	81%	80%

**Table A6. Percentages of Youth Answering "Good/Very
Good/Excellent" to Survey Items about Health**

Survey Items	Pre	Post
In general, how good is your physical health? *(pre n = 47)*	77%	65%
In general, how good is your mental health? *(post n = 47)*	65%	68%

Table A7. Average Number of Hours/Days for Questions about Sleep, Breakfast, and Physical Activity in the Past Week and Percentage of Youth Reaching Thresholds for Sleep, Breakfast, and Physical Activity in the Past Week

Survey Items	Pre	Post
On an average week night, how many hours of sleep do you get? *(the # of hours ranges from 4 hours or less to 10 hours or more on both the pre- and post-surveys; post n = 30)*	7.3 hours	7.5 hours
• Percentage of youth who got 8 hours of sleep or more	48%	53%
During the past 7 days, on how many days did you eat breakfast? *(the number of days ranges from 0 to 7 days on both the pre- and post-surveys; post n= 48)*	4.5 days	4.8 days
• Percentage of youth who ate breakfast 7 days per week	33%	35%
During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? *(The number of days ranges from 0 to 7 days on both the pre- and post-surveys; post n = 30)*	4.3 days	4.2 days
• Percentage of youth who were physically active 5 days per week or more	48%	43%

Table A8. Average Number of Negative Events (Past 3 Months)

Survey Items	Pre	Post (*n* = 30)[2]
Please check whether any of the following events happened to you in the past 3 months:		
Changed or left school	6%	3%
Moved to a different home or became homeless	10%	3%
Broke up with a boyfriend or girlfriend	21%	3%
One or more adults important to you had a serious alcohol or drug problem	21%	17%
Death among family/friends	40%	10%
Experienced violence (physical, emotional, sexual, other)	17%	13%
Other[3]	15%	7%
Average number of all events per youth *(possible range = 0-7; actual range for youth at pre = 0-5; actual range for post = 0-3)*	1.2	0.6

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[2] These items are not asked on the Intensive Post-Survey.
[3] On the Pre-Survey, other responses included "5 months ago, but still difficult," "drug user mom," "sudden stress/anxiety," "occasional not on purpose verbal bullying," and "mom broke ankle." On the Post-Survey, "my friends got into a car accident."

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Table A9. Percentages of Youth Answering "Yes" to Questions about Harassment, Bullying, and Physical Fights in the Past 12 Months

Survey Items	Pre	Post
Have you been harassed at school or anywhere else? *(pre n = 46; post n = 28)*	50%	39%
Harassment about your race or ethnic origin *(pre n = 46; post n = 28)*	20%	7%
Unwanted sexual comments or attention *(pre n = 46; post n = 28)*	15%	14%
Harassment because someone thought you were gay, lesbian, or bisexual *(pre n = 46; post n = 28)*	20%	18%
Harassment about your weight, clothes, acne, or other physical characteristics *(pre n = 46; post n = 28)*	30%	21%
Harassment about your group of friends *(pre n = 46; post n = 28)*	17%	25%
Other types of harassment[4] *(pre n = 46; post n = 28)*	2%	4%
Have you been electronically bullied? *(pre n = 47; post n = 29)*	21%	24%
How many times were you in a physical fight?[5] *(post n = 29)*	35%	28%

Table A10. Percentages of Youth Answering "Yes" to Questions about Depression and Suicidality

Survey Items	Pre	Post
During the past 30 days, did you ever seriously consider suicide? *(pre n = 47; post n = 46)*	11%	11%
During the past 30 days, did you attempt suicide? *(pre n = 47; post n = 47)*	2%	2%
During the past 12 months, did you attempt suicide? *(pre n = 47; post n = 47)*	13%	13%

Table A11. Percentages of Youth Answering "Very Likely/Likely" to Survey Items Asking about What They Would Do if a Friend was Thinking of Suicide

Survey Items	Pre	Post
How likely would you be to seek help **for a friend** who you thought might be depressed or suicidal? *(pre n = 47)*	83%	79%
How likely would you be to seek help if **you** were feeling depressed or suicidal? *(pre n = 47)*	70%	68%

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[4] On the Pre-Survey, other responses included, "the way I act;" on the Post-Survey, "my clothes."
[5] Response options ranged from "0" to "more than 12 times." Any number of fights was included as a "yes" (i.e., one or more fights) for Table A9.

Table A12. Percentages of Youth Answering "Confident/Very Confident" to a Question about Helping a Friend or Family Member

Survey Items	Pre	Post
Do you feel confident that that you could help a friend or family member who is thinking about suicide? *(pre n = 47; post n = 46)*	89%	85%

Table A13. Percentages of Youth Answering "Yes" to Adverse Childhood Experiences Questions[6]

Survey Items	Pre
Has a parent or adult in your household often… Swore at you, insulted you, put you down, humiliated you, or acted in a way that made you afraid? *(pre n = 46)*	28%
Have you often felt that…No one in your family loved you, or thought you were important, or special, or your family didn't look out for each other or support each other? *(pre n = 46)*	22%
Have you often felt that…You didn't have enough money in your household to cover food, bills, or housing? *(pre n = 46)*	26%
Were your parents ever separated or divorced? *(pre n = 47)*	60%
Has your parent or guardian often been…Pushed, grabbed, slapped, or threatened by their spouse/partner? *(pre n = 45)*	18%
Did you ever live with anyone who was a problem drinker, alcoholic, or used drugs? *(pre n = 46)*	61%
Did you ever live with anyone who was depressed, mentally ill, or attempted suicide? *(pre n = 47)*	34%
Did you ever live with a parent or guardian who served time in jail or prison? *(pre n = 46)*	54%
Have you ever been physically abused (pushed, slapped, or kicked)?[7]	31%
Have you ever been forced to do something sexual that you did not want to?[8] *(pre n = 47)*	9%
Percentage of youth with four or more ACE items	46%
Average number of ACE items *(possible range 0-10)*	3.3 items

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[6] The first 8 questions in this table have been adapted slightly for use with adolescents (https://acestoohigh.com/got-your-ace-score/) from the 10 original ACE study questions developed by Kaiser Permanente and published in their 1998 landmark study (read more about the original study and find other resources here: https://www.cdc.gov/violenceprevention/acestudy/index.html). The last two questions about physical and sexual abuse are from the original HOC survey rather than the ACE questionnaire; however, the ACE questionnaire does ask about both physical and sexual abuse, so we have incorporated them into this table.

[7] Ten youth (21%) reported, "don't know" or "do not want to answer." These answer options were not included in the original ACE questionnaire, but we think they provide important information.

[8] Five youth (11%) reported, "don't know" or "do not want to answer." These answer options were not included in the original ACE questionnaire, but we think they provide important information.

**Table A14. Percentages of Youth Answering "No Days" to Questions
Asking about Substance Use in the Past 30 Days**

Survey Items	Pre	Post
[percent who did not:] Smoke cigarettes *(post n = 29)*	96%	100%
[percent who did not:] Drink alcohol *(post n = 29)*	94%	97%
[percent who did not:] Use marijuana *(post n = 28)*	96%	96%
[percent who did not:] Use non-prescription, over the counter drugs for feelings they cause *(post n = 28)*	96%	100%
[percent who did not:] Use prescription drugs (like Vicodin, OxyContin, Tylox, Xanax, Valium, Ritalin, Ambien, etc.) without a doctor's orders *(post n = 29)*	92%	93%
[percent who did not:] Use other illegal drugs (like cocaine, meth, inhalants, psychedelics, heroin, etc. *(post n = 29)*	100%	100%
[percent who did not:] Have 5 or more drinks of alcohol in a row… within a couple of hours *(post n = 28)*	94%	100%

**Table A15. Percentages of Youth Answering "Strongly
Agree/Agree" to Survey Items Asking about Connection to Culture**

Survey Items	Pre	Post
I am proud of my ethnic background. *(pre n = 45; post n = 47)*	89%	89%
I enjoy my community's traditions. *(pre n = 47)*	94%	98%
I feel connected to my own culture, race or ethnic group. *(pre n = 45; post n = 47)*	96%	89%
It is important to me to have Indian values and practices, such as respect for elders and generosity. *(pre n = 47)*	94%	96%
Spiritual beliefs are a source of strength for me. *(pre n = 46)*	85%	83%
Overall average of culture connection items *(possible range 1 = "strongly disagree" to 4 = "strongly agree;" actual range 1.8 to 4; pre n = 47)*	3.3	3.3

Table A16 displays the average responses to the 12 items in the Cross-Cultural Youth Resilience Measure (CYRM-12) scale. The 12 questions are listed separately, and the five possible responses ranged from "not at all = 1" to "somewhat = 3" to "a lot = 5" for each item. The last row in Table 16 shows the average sum of all 12 measures on both Pre- and Post-Surveys.

Table A16. Average Responses to Each Cross-Cultural Resilience Scale Item

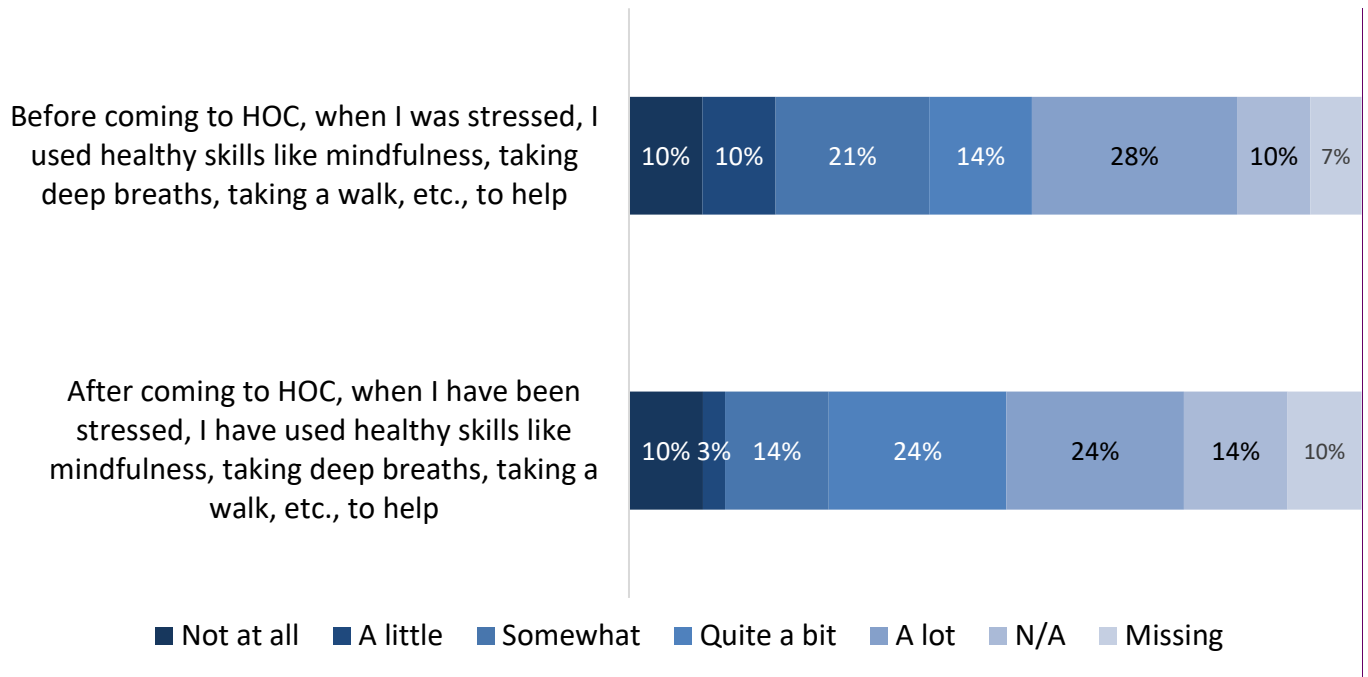| Survey Items	Pre	Post
I have people I look up to. *(pre n = 47; post n = 47)*	4.0	3.9
Getting an education is important to me. *(pre n = 47; post n = 47)*	4.4	4.4
My parent(s)/caregiver(s) know a lot about me (for example, who my friends are, what I like to do). *(pre n = 47; post n = 47)*	3.9	4.2
I try to finish what I start. *(pre n = 47; post n = 47)*	4.0	3.9
I solve problems without harming myself or others (for example, hitting others, saying nasty things, using drugs and/or being violent). *(pre n = 45; post n = 47)*	3.7	4.2
I know where to go in my community to get help. *(pre n = 47; post n = 47)*	3.5	3.9
I feel I belong at my school. *(pre n = 47; post n = 47)*	3.4	3.5
My family stands by me during difficult times. *(pre n = 46; post n = 47)*	4.1	4.1
My friends stand by me during difficult times. *(pre n = 45; post n = 46)*	4.1	4.0
I am treated fairly in my community. *(pre n = 47; post n = 45)*	4.0	4.0
I have opportunities to develop skills that will be useful later in life (like job skills and skills to care for others). *(pre n = 47; post n = 46)*	4.1	4.3
I like the way my community celebrates things (like holidays, festivals). *(pre n = 47; post n = 46)*	4.2	4.2
Overall average resilience score *(possible range 1-5; actual range 2.1 to 5; pre and post n = 47)*	3.9	4.0

PRE - How honest were you in filling out this survey?

- ☐ I was not honest at all 0 (0%)
- ☐ I was honest once in a while 0 (0%)
- ☐ I was honest some of the time 2 (4%)
- ☐ I was honest much of the time 6 (13%)
- ☐ I was very honest 37 (77%)
- ☐ Missing 3 (6%)

POST - How honest were you in filling out this survey?

- ☐ I was not honest at all 0 (0%)
- ☐ I was honest once in a while 1 (2%)
- ☐ I was honest some of the time 1 (2%)
- ☐ I was honest much of the time 7 (15%)
- ☐ I was very honest 37 (77%)
- ☐ Missing 2 (4%)

P O S T - O N L Y   S U R V E Y   Q U E S T I O N

Figure A1. Retrospective Before and after HOC Healthy Skills Use - Post-Survey Only

Before coming to HOC, when I was stressed, I used healthy skills like mindfulness, taking deep breaths, taking a walk, etc., to help: 10% | 10% | 21% | 14% | 28% | 10% | 7%

After coming to HOC, when I have been stressed, I have used healthy skills like mindfulness, taking deep breaths, taking a walk, etc., to help: 10% 3% | 14% | 24% | 24% | 14% | 10%

■ Not at all ■ A little ■ Somewhat ■ Quite a bit ■ A lot ■ N/A ■ Missing

DEMOGRAPHICS – PRE-SURVEY

How old are you? (Please fill in the blank)
- ☐ 11 3 (6%)
- ☐ 12 10 (21%)
- ☐ 13 13 (27%)
- ☐ 14 12 (25%)
- ☐ 15 4 (8%)
- ☐ 16 3 (6%)
- ☐ 17 0 (0%)
- ☐ 18 1 (2%)
- ☐ Missing 2 (4%)

What is your sex?
- ☐ Male 21 (44%)
- ☐ Female 24 (50%)
- ☐ Other 2 (4%)
- ☐ Missing 1 (2%)

What is your race/ethnicity? (Please choose all that apply)[9]
- ☐ American Indian/Alaska Native 47 (100%)
- ☐ White 20 (43%)
- ☐ Black or African American 1 (2%)
- ☐ Asian or Pacific Islander 2 (4%)
- ☐ Hispanic or Latino 9 (19%)
- ☐ Other 2 (4%)
- ☐ Missing 1 (2%)

How do you describe your sexual orientation? (Please choose all that apply)[10]
- ☐ Straight or heterosexual (attracted to the opposite sex) 33 (69%)
- ☐ Lesbian or Gay (attracted to the same sex) 1 (2%)
- ☐ Bi-sexual (attracted to both men and women) 5 (10%)
- ☐ Two-Spirit 0 (0%)
- ☐ Other 1 (2%)
- ☐ Don't know 3 (6%)
- ☐ Choose not to say 3 (6%)
- ☐ Missing 2 (4%)

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[9] Percentages sum to greater than 100% as participants had the option to check multiple categories for race/ethnicity.

[10] Participants had the option of selecting multiple options for the sexual orientation question.

DEMOGRAPHICS – POST-SURVEY

How old are you? (Please fill in the blank)
- ☐ 11 3 (6%)
- ☐ 12 6 (13%)
- ☐ 13 14 (29%)
- ☐ 14 15 (31%)
- ☐ 15 3 (6%)
- ☐ 16 4 (8%)
- ☐ 17 0 (0%)
- ☐ 18 1 (2%)
- ☐ Missing 2 (4%)

What is your sex?
- ☐ Male 20 (42%)
- ☐ Female 24 (50%)
- ☐ Other 2 (4%)
- ☐ Missing 2 (4%)

What is your race/ethnicity? (Please choose all that apply)[11]
- ☐ American Indian/Alaska Native 43 (90%)
- ☐ White 17 (35%)
- ☐ Black or African American 1 (2%)
- ☐ Asian or Pacific Islander 2 (4%)
- ☐ Hispanic or Latino 8 (17%)
- ☐ Other 1 (2%)
- ☐ Missing 2 (4%)

How do you describe your sexual orientation? (Please choose all that apply) [12]
- ☐ Straight or heterosexual (attracted to the opposite sex) 27 (56%)
- ☐ Lesbian or Gay (attracted to the same sex) 0 (0%)
- ☐ Bi-sexual (attracted to both men and women) 4 (8%)
- ☐ Two-Spirit 0 (0%)
- ☐ Other 2 (4%)
- ☐ Don't know 3 (6%)
- ☐ Choose not to say 2 (4%)
- ☐ Missing 2 (4%)

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[11] Percentages sum to greater than 100% as participants had the option to check multiple categories for race/ethnicity.

[12] Participants had the option of selecting multiple options for the sexual orientation section.

OPEN-ENDED QUESTIONS – PRE-SURVEY [13]

PRE - What is your favorite time of year and why?	
{Illegible} bc its my birthday	none
{Day} cause its my Birthday	October/September for football
4th of July	I think it is fall because of the changing leaves and the cool weather.
Autumn because of the colors & weather	Summer bc I get to go swimming
Christmas	Summer because I love how warm it is.
Christmas it's my dad's birthday and I get to see my whole family.	Summer because it is very warm
December of 2014, because Christmas of that time was great	Summer, basketball tournaments/pow wow/stickgame.
Don't have one	{Month} Because it's my birthday, and winter
4th of July	Summer because of camping
Easter because I get a lot of candy	Summer, because I smile
Fall	Winter/cold and can do things.
Fall. Even when everything is dieing it's still beautiful.	Summer, Sun, beach, no school
I like winter because it is so pretty	The year I was born. Because I came into the world
Halloween it's as dark as my soul JK	Valentines day because I get to hang out with firends
My birthday because I got {amount} $	When it summer because you can go swimming
I think its canoe journey because its with family and people you can trust/and it's a long time to be	Winter & Sumer because Nee daush and working {redacted}
I love them all equaly, they each have something to bring.	My sister's birthday, because we always go on vacation to somewhere.
IDK	Winter because we get to spend time together.
{Month} because it's the month of my birthday	Winter it's cold and I like snow.
middle of the year cuz I get to see kids alot	Winter, Christmas
My birthday	My favorite time of year is Summer b/c no school

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[13] Data entry staff did their best to record the responses exactly as they appeared on the surveys. We have masked months, family relationships, and monetary amounts to protect confidentiality since there are such a small number of youth.

PRE - What makes you smile?	
All my girlfriends	My friend
Almost everything	My Friends & family
canoeing	My friends + family
Family/friends.	My friends and family plus my cat
Famlie	My friends/family
food and family	My friends/family, dogos and pow wow dancing & canoeing
Fortnite	My friends/family.
friends, family & music	my friends/my nephew
frinds/jokes	My kitten {name}
Funny things & my family.	my muscles in my mouth
IDK	My pets or youtube
Jokes everything	My sisters and my nephew.
lots of stuff	seeing my dad
music, humor, nature, friends, animles, cute clothes, anime, my teachers, ect	seeing my dads picture
Music. Friends. Family. Nature. Reading. Doing art.	{name}. Also, Books.
My baby brother	things I don't wanna name.
My best friend	Things that are funny.
My boyfriend	True friends
My brother	When my friends are around me.
My family.	when my friends say something funny or laugh
my family/friends	{name}

OPEN-ENDED QUESTIONS – POST-SURVEY [14]

POST - What is your favorite thing to do during the day?	
Basketball	Mess around
Boxing	My favorite thing to do is go fishing or play football or basketball
Chat with other friends and drawing	My favorite thing to do is playing basketball.
cheerleading	nothing
Chill/hang out	read
draw & play video games	Read and sleep if it's hot I like to swim
draw, play with my dogs, play basketball	Read Books, go on Bike rides and watch TV
Fortnite, Baseball, Basket	read or talk to friends
Games	Read, write, and draw
go outside	Read. Listen to music.
Go to open gym so play basketball	ride my bike around the neihborehood with my friends.
Hang out with friends, and laugh about jokes.	sleep
Hang out with friends, play basketball and do homework	soccer
Hangout with my family.	walk around or hand out with my friends
hear or watch my favorite shows or hang out with {family}	Watch TV, or youtoob with my kittins, singing, danceing, lisening to music, messing around. Being ou
I like to read and write	work
	work on cars

POST - What is one thing that you are grateful for?	
being able to see my tribal cousins and being away from annoying midle schoolers	My family
Being native	my family & pets
everything	My family and friends
Everything	My family and friends.
Existing	my family, {animals}, friends
fam	My famlie and Mom, dad, siblings
family	my friends
food, a house	My Friends
for the games	My friends/family
friends witch is practically familly	my great friend and family.
having a house to live in	My mom
I am grateful for my family	my mothe and the rest of the family
I am grateful for my family ig.	My Native coultre.
I am grateful for my friends	my parents and brothers.
I am gratefull for being born into a wonderful famaly that loves and soports me.	My sister {name} and My nephew {name}
I am greatful for a family that loves and supports me.	My Uncle
Mom	Myself
My brother	The people who love and care about me.
my family	

POST - What was the most useful thing you learned in HOC?	
A lot.	I lerned to think about the other person's love language before acting to make them feel better.
All the information about drugs so I can inform others about them.	I think it was teamwork building and making new friends.
Bro I don't know.	IdK
communication & leading	It helped me learn patience. It also brought me closer to people and gave me new friends.
Coping ways of depression	learning about my traib ['tribe'?]
everything	learning about stuff...
fr friendship	Make friends
friendship.	Making good connections
Had this quiz already	More about my Native culture.
how to help other people	my background/community
How to make a drumb so I can someday teach my kids.	No!! leaving!! messes!!
How to wood carv	nothing
I don't know what HOC is	Nothing.
I don't know. I just enjoyed having a nice safe cultural outlet. As well as learning and listening to some teachings from a skipper.	patiance, friendship, life tools, and that I can trust these people here to come to.
I feel more open about things	Some parents don't care as much for their kids.
I have a lot of people who love me	Taking care of others
I leard to make a dream catcher and why you don't call a canoe a boat. learned new things about my cultur	that you can call for help
I learned How to deal with someone if they are feeling depressed.	the long-term effects of drugs.
I learned patience, and I also have learned to grow into a better person	To realize you have people that are here for you.
I learned that some people could be trusted, but some can't.	What weed could do to me if I used it.

APPENDIX B: HEALING OF THE CANOE PRE AND POST SURVEYS