LOCAL EVALUATION REPORT

IPP Name: **Native American Health Center**
CDEP: **Gathering of Native Americans (GONA)**
Submitted: **October 31, 2025**

Paul Masotti, Ph.D.
Director of Research & Evaluation
Native American Health Center

Priority population: Native American Youth 12 - 17
Evaluation Time Period: May 2022 – March 2025

This report was made possible by the support of the California Department of Public Health - Office of Health Equity, through a California Reducing Disparities Project Phase 2 Extension grant funded by State of California General Fund.)

TABLE OF CONTENTS

2. EXECUTIVE SUMMARY

INTRODUCTION

This report summarizes three separate but related research projects connected to the California Department of Public Health funded California Reducing Disparities Project (CRDP), Phase 2 Extension with periodic reference to our prior GONA research in Phase 2 (2016 – 2022). **(*Note - The Executive Summary is longer than the suggested 4-page maximum because it summarizes 3 projects*.)**

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17) : This is an evaluation of health-related outcomes of our CRDP Community-defined Evidenced Practice (CDEP), the Gathering of Native Americans (GONA) where we conducted our local evaluation and also submitted data for the Statewide Evaluation. This study in many ways replicates and has the same results of the previous CRDP Phase 2 study.

STUDY 2 – Youth GONA 2023 Cost Analysis: A prospective cost analysis of the 2023 GONA was conducted, from the payer's perspective, according to established methods (Drummond et al., 2005; Gold et al., 1996). A cost analysis identified NAHC's facilities/infrastructure and personnel resources, combined with location costs, used in the planning and delivery of GONA. We determined unit costs of these resources and the calculation of the: a) total cost of the delivering GONA; b) cost per participant; and c) cost per participant per day. Sensitivity analyses were also performed to evaluate costs under different variables.

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation: This study: i) evaluated the long-term ('down-stream') impact of the GONA on the cultural connectedness and well-being/quality of life of Indigenous adults; and ii) assessed the cost-effectiveness of the GONA including any healthcare service utilization savings. [***Note –data analyses is ongoing. Preliminary results are presented in this report.***]

Gathering of Native Americans (GONA) Purpose/Description

The Gathering of Native Americans (GONA) was developed by Native/Indigenous persons for Native/Indigenous people in the early 1990s. Although originally developed as an intervention for drug and alcohol abuse, GONA has demonstrated the ability to positively address other social issues such as stigma, family health, violence, suicide and mental health (HIR, 2012; CRDP, 2012).

GONA is a manualized CDEP with a four-day curriculum that provides a structured, culturally specific framework and process for Native/Indigenous persons to address historical trauma, substance abuse, and other risk factors for self-destructive behavior and emotional/social/mental health. In GONA, the "community" is the perceived "patient" or entity that needs healing versus the individual. This community-wide healing also promotes individual (and family) healing and reduction of mental health risk factors as a direct result of a collective healing process. **GONA Curriculum -** Each day of the GONA has a central theme addressing the above and designed to support each successive day's theme: Belonging [Day 1], Mastery [Day 2],Interdependence [Day 3], and Generosity [Day 4].

Every GONA is both a 'community-specific' needs assessment and subsequent individual and community intervention. The curriculum focuses on underlying issues that lead to individuals, families, and communities becoming at risk for addictions and self-destructive behaviors and recognizes that health for Native Americans is embedded in Native American culture, spirituality, and values. *Essentially, this means that for Native Americans that culture is a determinant of health.* ***The loss of culture is then a risk factor for poor health outcomes whereas re-connecting is protective on multiple***

***levels*. A powerful characteristic of the GONA is that it is considered to be a 'cultural booster shot' and that the evidence is clear that Native/Indigenous culture is a powerful social-determinant of health.**

Recent research has demonstrated that Native American culture (i.e., connection to culture) can be measured with instruments validated in Canada and the United States that provide empirical evidence that Native Culture is a powerful 'social-determinant of health' and that concluded that increased culture is an important program/intervention objective and thus a viable health outcome measure.

Research Questions

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

1. **MAIN Research Question: Do GONA youth participants experience an increase in mental health protective and resiliency factors determined to be important by the participating Native communities, as compared to baseline?**

2. Do GONA participants experience an increase connection to Native/Indigenous culture, between pre-GONA and post-GONA [day 4], as measured by the ***Cultural Connectedness Scale-CA?***
3. Do GONA participants experience an increase connection to Native/Indigenous culture, between pre-GONA and post-GONA [6-month follow-up], as measured by the ***Cultural Connectedness Scale-CA***?
4. Do GONA participants experience an increased measure of hope/wellness, between pre-GONA and post-GONA [day 4], as measured by the ***Herth Hope Index?***
5. Do GONA participants experience an increased measure of hope/wellness, between pre-GONA and post-GONA [6-month follow-up], as measured by the ***Herth Hope Index?***
6. Do GONA participants experience an increased measure of 'Community Engagement and Empowerment' between Pre-GONA and post-GONA [day 4], as measured by the ***Life Changers – community engagement subscale***?
7. Do GONA participants experience an increased measure of 'Community Engagement and Empowerment' between Pre-GONA and post-GONA [6-month follow-up 4], as measured by the ***Life Changers – community engagement subscale***?

STUDY 2 – Youth GONA 2023 Cost Analysis

1. From an organizational perspective, what was the Native American Health Center's overall unit cost (**cost/participant**) associated with NAHC facilities & infrastructure, staff planning time, staff delivery time, and 4-day GONA intervention implementation costs?
2. From an organizational perspective, what was the Native American Health Center's overall unit cost (**cost/participant/day**) associated with NAHC facilities & infrastructure, staff planning time, staff delivery time, and 4-day GONA intervention implementation costs? How would the calculated unit costs vary under different variable costs (i.e. sensitivity analyses)?

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

1. **MAIN Research Question: Do Adult Native Americans (18-28 years) living in California who completed a youth GONA (12-17 years) demonstrate increases in mental health/well-being and physical health factors compared to a Non-GONA control group?**

2. Do GONA graduates experience increased **connection to Native/Indigenous culture** compared to the Non-GONA control group, as measured by the ***Cultural Connectedness Scale-CA*?**
3. Do GONA graduates experience an increased **functional status** (functioning across 6 domains) compared to the Non-GONA control group, as measured by the ***Functional Status 6*?**
4. Do GONA graduates experience a decreased **risk of depression** compared to the Non-GONA control group, as measured by the ***CESD-10R*?**
5. Do GONA graduates experience a decreased risk of **Substance Use Disorder** compared to the Non-GONA control group, as measured by the ***CAGE-AID*?**
6. Do GONA graduates experience differences in 12-month **healthcare utilization** compared to the Non-GONA control group, as measured by the ***Functional Status 6*?**
7. Do GONA graduates experience an increase in **community engagement & empowerment** compared to the Non-GONA control group, as measured by the ***Life Changers – Community Engagement subscale*?**
8. Do GONA graduates experience increased healthy days or less disability days compared to the Non-GONA control group, as measured by the ***Health Related Quality of Life-4***?
9. Do GONA graduates experience increased Satisfaction With Life compared to the Non-GONA control group, as measured by the ***NAHC Healthcare Utilization Survey*?**

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

GONA Setting: Youth GONAs are typically delivered in the summer or other periods when school is not in session. This is because of the intensive 4-day 24-hour overnight curriculum that is delivered where participants and GONA facilitators stay together.

GONAs may be delivered in urban settings. However, NAHC typically delivers Youth GONAs in a rural or nature location such as camp settings to enhance the connection to world and the natural environment. In this time period, youth GONAs were implemented in: i) July 2023, ii) July 2024, and iii) March 2025.

Participants in the Youth Prospective GONA Study were recruited (identified and invited) by staff or from community-members or other Native American/Indigenous organizations in California affiliated with the California Consortium for Urban Indian Health (CCUIH). Eligibility criteria included: i) aged 12-17 at time of GONA; and ii) self-identification as Native American and/or Indigenous, First Nations, American Indian or Native Hawaiian/Pacific Islander. Participants could also report multiple Tribal Affiliations and race/ethnicity affiliations.

Participants were distributed across age range (12-17), Tribal affiliations, sex and gender identities reported. Three full GONAs were conducted in this time period: 1) July/Aug 2023 (13 Participants); 2) July/Aug 2024(18 Participants); 3) March 2025 (19) Participants).

The Youth GONA instrument packages was administered at three time periods: 1) Pre-GONA (typically during registration); 2) Post-GONA (at the end of Day-4 of GONA); and 3) Six Month Follow-up. Each participant was assigned unique identifiers for matched assessments. *[Note – the March 2025 GONA was an addition in non-usual time to include one more GONA in the SWE Post Assessment. A 6-month Local Evaluation was not conducted.]*

Youth Prospective GONA Instruments

1) Cultural Connectedness Scale-Short (10-items)
2) modified Herth Hope Index (12 items)
3) Life Changers engagement scale (5 items)

4) Previous GONA participation
5) Ethnicity, Indigenous identity, age, sex
6) GONA experience/end of day reflection (5 items)

STUDY 2 – Youth GONA 2023 Cost Analysis

Costs associated with NAHC facilities, infrastructure, staff time (GONA planning & delivery), staffing space/facility costs, and resort/location and travel costs were identified and quantified according to established methods (Drummond et al., 2005). Total cost per participant and cost/participant per day (and sensitivity analyses) were calculated. [Note – this was done to compare costs to other health services modalities.]

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

This study consisted of a retrospective program impact evaluation to assess the longitudinal [down stream'] impact of GONA on participants' cultural connectedness and other health-related measures. A GONA exposed group [N = 40] was compared to an non-GONA exposed control group [N = 52].

Participants were recruited by staff from Indigenous Health Organizations or community-members who knew of Youth GONA participants who are now adults. Eligibility criteria included: i) adults aged 18 – 28 who attended a Youth GONA (aged 12-17); ii) resided in California; and iii) self-identified as Native American and/or Indigenous, First Nations, American Indian or Native Hawaiian/Pacific Islander

Adult Retrospective (18 – 28 years) GONA Study Instruments

1) Cultural Connectedness Scale-CA 29 items
2) SF-6Dv1 (Functional Status) 6 items
3) CESD-10R (depression) 10 items
4) CAGE-AID Substance Use risk [past 12 months] 4 items
5) Healthcare Utilization Self Report 3+ items
6) Life Changers Community Engagement 6 items
7) HRQOL Health Days (physical & mental health) 4 items
8) Satisfaction With Life 5 items

KEY FINDINGS

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

The 2023, 2024 and March 2025 GONA's represented the first GONA's conducted since COVID and where the study design was a single Indian Health Organization (one site) compared to the previous multi-site GONA study in Phase 2 (CRDP). The result was fewer GONAs and total participants [N = 50] who were referred to the GONAs and a smaller sample size. The results of the current Youth GONA study replicate the results from previous research. This was the first GONA study where the 10-item Cultural Connectedness Scale-CA Short was implemented in place of the validated 29 item Cultural Connectedness Scale-CA.

Results in the current study replicate previous results. However, we can not claim the differences are statistically significant, given the small sample size.

1. Participation in a 4-day GONA is associated with increased connection to Native/Indigenous culture (a social-determinant of health) between baseline and post GONA, as measured by the 10-item CCS-CA Short.
2. Participation in a 4-day GONA is associated with increased connection to Native/Indigenous culture (a social-determinant of health) between baseline and at 6-month post GONA follow-up, as measured by the 10-item CCS-CA Short.

3. Participation in a 4-day GONA is associated with increased mental health/well-being between baseline and post GONA, as measured by the Herth Hope Index.
4. Participation in a 4-day GONA is associated with increased mental health/well-being between baseline and at 6-month post GONA follow-up, as measured by the Herth Hope Index.

5. Participation in a 4-day GONA is associated with increased community/family engagement and empowerment, between baseline and 6-month post GONA follow-up, as measured by the 'Life Changers Instrument- community engagement subscale. [***Note - the Life Changers tool was developed by GONA expert facilitators based upon their observations of GONA outcomes.***]

6. Participation in a 4-Day GONA is associated with an increased length of time of 'Sobriety' (absence from drugs/alcohol), as measured by the Modified Sobriety Tool. ***[Note - We only implemented the Sobriety Tool in the 2023 GONA. It was discontinued because some youth found the language difficult and also because it was not considered a 'strenght-based' approach.]***

7. **All GONA facilitators/clinicians (GONA intervention staff) were previous Youth GONA participants. They all wanted to become GONA Facilitators/Clinicians because of their positive experiences in Youth GONAs and their recognition of the effectiveness of the GONA as both an individual and community-level intervention.**

8. **GONA participants almost universally report that their experience with the GONA was very positive.** They felt welcomed, respected and understood by adults. Most GONA participants indicated they would participate in the GONA again and that they plan to keep in touch with participants who were in their group

STUDY 2 – Youth GONA 2023 Cost Analysis

This study was a comprehensive approximately 6-month endeavor to identify and quantify all resources associated with NAHC's delivery of the first annual GONA since COVID.

Costs associated with NAHC facilities, infrastructure, staff time (GONA planning & delivery), staffing space/facility costs, and resort/location and travel costs were identified and quantified according to established methods (Drummond et al., 2005). Total cost per participant and cost/participant per day (and sensitivity analyses) were calculated. [Note – this was done to compare costs to other health services modalities and under different GONA situations such as different number of participants.]
Note – this was the first post COVID GONA with 13 participants. In previous years the number of participants would have been around 26 (which is what was used for the sensitivity analysis).

COST CATEGORY Base Case Costs

A. Costs of Staff Time

1) Planning $2,901.14 2) Training $13,054.61 3) Event$16,822.13

B. Supply Costs for Event	$1,700.90	
C. Event Location/Rent	$9,112.90	
D. Staff Travel Costs	$113.18	
E. NAHC Facilities/Infrastructure	$9,112.04	
Total Estimated Cost	**$53,119.65**	**N = 13 Participants**
Total Cost Per Participant	$4,086.13	N = 13 Participants
Cost/Participant/Day	$1,021.53	N = 13 Participants

Sensitivity Analyses [Cost/Participant/Day]

$426.28	Cost/Participant/Day [Excluding Training & Location Rental]	N = 13 Participants
$510.90	Cost/Participant/Day [All costs]	N = 26 Participants
$212.66	Cost/Participant/Day [Excluding Training & Location Rental]	N = 26 Participants
$127.00	Lower Cost Area/Oklahoma: Cost/Participant/Day [Excluding Training & Location Rental]	N = 26 Participants

Study 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

This study consisted of a retrospective program impact evaluation to assess the longitudinal impact of GONA on participants' cultural connectedness and other health-related measures. A GONA exposed group [N = 40] was compared to a non-GONA exposed control group [N = 52]. \

Statistical analyses: Analyses were performed as appropriate: ANOVA, Kruskal-Wallis; chi-square tests multivariable regression including multiple linear regression with an identity link and normal distribution, generalized linear model with a log-link and gamma distribution, Poisson or Negative Binomial regression, depending on the presence of overdispersion.

1. **With all other covariates remaining constant, a GONA participant had, on average, a CCS-CA score of 15.95 points higher than those in the non-GONA group. (p=0.0002)**
2. Participants in the GONA group had on average, a Life Changers score of 4.46 points higher than those in the non-GONA group. (p = 0.0001)
3. Holding covariates constant, individuals who participated in a GONA had, on average, 5 less days where they experienced limitations when compared to those that did not participate. (p=0.047)
4. Participants in the GONA group had, on average a Satisfaction With Life Scale score higher than the non-GONA group. (p =0314).

5. Holding other variables constant, a GONA participant experienced 0.55 days less of good physical health, compared to those who in the non-GONA group (not statistically significant p = 0.8293).
6. Holding other variables constant, a GONA participant experienced 1.29 additional days of good mental health, compared to those who did not participate in a GONA (not statistically significant 0.6237).
7. Participants in the GONA group experienced less urgent clinic visits by 25%, although not statistically significant.
8. Participants in the GONA group experienced less Emergency Department visits by 22%, although not statistically significant.

CONCLUSIONS

Studies in Canada and California [N_{total} = 1,304) using the validated Cultural Connectedness Scale (**CCS**) found that increased connection to Indigenous culture is associated with: 1) better: mental health, physical health, life satisfaction, self-efficacy, hope; and 2) decreased risk for: depression, substance use disorder, and suicide. *For Native Americans/Indigenous peoples, the loss of culture is then a risk factor for poor health outcomes whereas re-connecting is protective on multiple levels*. **A powerful characteristic of the GONA is that it is considered to be a 'Cultural Booster Shot 'and that the evidence is clear that Indigenous Culture is a powerful Social-Determinant of Health.**

Small samples in the Adult study contributed to the lack of statistically significant findings ***in some variables***. As part of this, the Adult cohort was 18 – 28 years of age, a relatively healthy age cohort, and expected to have less morbidity and healthcare utilization compared to older cohorts. However, results pointed in the direction of the GONA supporting future mental health, physical health and well-being.

- **RE Adult Retrospective Study – The <u>results of this study may be the most important</u> result of the evaluation of the GONA as a Native American/Indigenous Intervention (CDEP) as this demonstrates the mental health benefits of participating in a Youth GONA (ages 12 -17) extend 10 year or more into the future. GONA participants Cultural Connectedness Scale scores were significantly higher compared to the non-GONA control group.**

- **The results from STUDY 2 (Cost Analysis, cost/participant/day), when combined with STUDY 1 & 2 suggests an economic evaluation of the GONA, when compared to Western modalities (e.g., inpatient rehab stays, or acute care stay), would be cost-effective and/or have a good cost-benefit ratio**. [***Note - Econ Eval is still in progress.***]

- **Participating in a Youth GONA was associated with: a) increased strengthening of Indigenous Culture (i.e., a social determinant of health); and b) improved mental health, hope, empowerment, and well-being on multiple measures that is sustained 6 months post intervention.**

- **The Adult Retrospective Study demonstrated that mental health benefits of participating in a Youth GONA (ages 12 -17) extend 10 years or more into the future.**

- **A positive dose-response was observed.** More GONAs was associated with increased CCS scores. This was observed in previous Youth GONA studies.

POLICY IMPLICATIONS

- **Increased integration of Native/Indigenous CDEPs into healthcare has the potential to address health inequities experienced by Native Americans**. An urban Native-specific Needs Assessment (N = 544) found that 78% wanted increased access to Indigenous health practices/healers and CDEPs in their healthcare and that 51.3% reported not wanting to return for care because the providers/staff did not understand or respect their /Indigenous culture (Wheeler et al, 2023).

- **There is a need and value for the dominant culture (e.g., government and healthcare) to better understand, accept and integrate Native/Indigenous epistemologies and approaches to delivering and *evaluating Indigenous health/healing practices and interventions like the GONA.***

3. INTRODUCTION/LITERATURE REVIEW

Indigenous communities around the globe have long-standing practices for maintaining healing and wellness that have sustained across time and are identified by local communities as effective for promoting their health and wellbeing (Adekson, 2013; 2016; Earle, K. A., 1998; George et al, 2018; Hartman & Gone, 2012; Hodge et al., 2009; Kirmayer, Moorehead, Gone, et al., 2015). However, ongoing attempts of colonization by Europeans have resulted in a significant disruption to the way of life for most indigenous communities, impacting the use of these long-standing practices and, thus, the health and wellbeing of the community. In the attempts to colonize, Indigenous peoples were dehumanized and subjected to ongoing genocidal practices that ultimately resulted in a loss of many of those traditional healing ways, some of which survived by going underground to hide from United States laws that claimed traditional spiritual practices illegal (Brook, 1998; Fenelon & Trafzer, 2014; Madley, 2019; Piccard, 2013). It was not until the American Indian Religious Freedman Act passed in 1976 that these practices started to come back into the light, after hundreds of years of persecution, spiritual wounding, and loss (Harjo, 2004; Harjo, 2018; Suhr-Sytsma, 2013).

The physical, mental, emotional, and spiritual traumas that indigenous people faced in the past are still impacting the current generations in the form of historical and intergenerational trauma and loss that has gone unresolved (Brave Heart & DeBruyn, 1998; Brave Heart et al., 2011; Brown-Rice, 2013; Whitbeck et al., 2004). There is little time to heal when the trauma continues to shape under different forms, shifting from overt to covert and becoming institutionalized in policy and practice (Czyzewski, 2011).

Today this ongoing and unresolved trauma, grief, and loss results in the current health, mental health, substance abuse, and social and economic disparities indigenous peoples face (Elamoshy et al., 2018; Grayshield et al, 2015; Skewes & Blume, 2019; Struthers & Lowe, 2003; Walters et al., 2011a; Walters et al., 2011b). ***While some western methods have demonstrated effectiveness when combined with cultural practices , western practices have also been identified as ineffective at best and harmful at worst for treating the many side effects of unresolved trauma, grief, and loss*** (Bigfoot & Schmidt, 2009; Gone, 2011; Mills, 2003; Garcia, 2020; Goodkind et al., 2015; Hodge et al., 2009; Weaver et al., 2004). For example, while western models have been the majority of approved and funded evidence-based practices being used for decades with tribal communities for screening, treatment, and recovery of suicide, the suicide problem in US American Indian communities was first documented in the scientific literature 50 years ago (Westermeyer, 1971) and those disparities persist today (SAMHSA, 2020). Many of these western models lack the cultural relevance and depth to deal with the underlying historical trauma, and there are not identified evidence-based models being funded for healing from historical and intergenerational trauma at the community level even as research indicates that culture is significantly linked to positive mental health and has been used effectively to improve community outcomes (Barnet et al., 2020; Barraza et al., 2016; King et al., 2019; Mateson, Bombay, & Anisman, 2018).

Supporting the above are studies in Canada and California. For example, Chandler and Lalonde, in a 5-year study of Native youth suicides (N = 2,495) in 196 Indigenous communities in Canada, investigated ‘cultural rehabilitation’ initiatives that included reclaiming and indigenizing [i.e., reclaiming and strengthening culture] policies (i.e., restoring and rebuilding a sense of cultural continuity) in areas relating to self-government, land claims, education, health services, police and fire protection, and implementing cultural facilities. They found that communities that addressed all the aforementioned areas/steps experienced nearly zero suicide rates, whereas communities that did not

initiate any of the six protective steps had suicide rates 5 to 100 times the provincial average (Chandler & Lalond, 1998). In addition, recent large sample studies in Canada and California have demonstrated that Indigenous culture is: a) an important social-determinant of health; b) can be measured with validated instruments (e.g. Cultural Connectedness Scale); c) it an important intervention objective, and d) a viable health outcome measure (Snowshoe et al., 2015, Snowshoe et al., 2017, Masotti et al., 2020; Masotti et al., 2023).

History of the GONA Curriculum

In 1993 the Center for Substance Abuse Prevention (CSAP) funded 250 Community Partnerships across the United States and Puerto Rico to reduce and prevent alcohol and other drug abuse (Native American Center for Excellence, 2010). Fifteen of these communities were indigenous Community Partnerships. To meet the training and technical assistance needs, a number of Institutes were developed, which included a 5-day Community Partnership Institute, a Multicultural Leadership Institute, an Institute for Partnership Development, and a number of 1–2-day community training workshops. In addition, there were four ethnic-specific trainings developed, one of which was the ***Gathering of Native Americans*** (GONA). The GONA was manualized in 1999 in response to the disparities Indigenous communities were facing, and to honor the healing power of gathering for Indigenous communities. The four-day curriculum development was led by a native organization (Kauffman and Associates, Inc.) through regional focus groups and a national planning meeting attended by a cadre of primarily Native American educators, prevention specialists, and trainers. Approximately 30 individuals were involved in the writing of the curriculum (Substance Abuse Mental Health Services Administration, 2014). Of all the curriculum developed and delivered during the Community Partnership Initiative, only the GONA has consistently been delivered in its original form. The first pilot GONA was on the territory of the Cherokee Nation. Now, over thirty years after the initial training of facilitators held in Santa Barbara, California, a GONA is being planned or delivered somewhere in Indian country nearly every week of the year.

The GONA curriculum is set up in a framework that includes building Belonging, Mastery, Interdependence, and Generosity to heal as a community from historical and intergenerational trauma, grief, and loss. While the curriculum includes examples from specific tribes the hope is always for the curriculum to be infused with local tribal language, creation stories, practices, beliefs, and ceremonies. Adaptations have been implemented throughout the United States, in Australia, and in other countries and indigenous territories including Canada, Hawaii, New Zealand, and Guam (SAMHSA Tribal Training and Technical Assistance Center, July 6, 2014 https://www.youtube.com/watch?v=8NibF9GeMkA; Personal communication Seprieono Locario July 28, 2021).

Native American Health Center: GONA History

The Native American Health Center [NAHC] has been planning and delivering GONAs since **1999.** NAHC was one of the first Indigenous Health Organizations to modify the GONA for Youth and to make it a special 4-day overnight intervention. NAHC recognized the power and value of an intensive 4-day/overnight experience particularly for youth. The intensity of the 24 hour overnight intervention strengthened the sense of 'community' that developed among the youth participants. This is entrenched in the recognition that 'community' serves as a determinant of health. In fact, GONA participants frequently report maintaining long-term relationships and friendships with people who were in their 'Clan' at their Youth GONA (Personal communication, Breanna Wheeler, 2022, Crystal Salas, 2024).

In California, the GONA community expanded to include many Indigenous Health Organizations and communities. Out of this, the 'GONA Collaborative' emerged in 2012 – 2015 to include organizations affiliated with the California Consortium for Urban Indian Health [CCUIH]. Partners in the GONA Collaborative included: Native American Health Center (NAHC), Fresno American Indian Health Project (FAIHP), Sacramento Native American Health Center (SNAHC), San Diego American Indian Health Center, Friendship House of American Indians of San Francisco, and Indian Health Center of Santa Clara Valley.

A number of products advanced during this time period, such as: a) updates to the GONA Fidelity Tool that guides GONA planning and implementation analyses; and b) the development of a GONA Therapeutic Brief to support providers and policy makers in better understanding the therapeutic values for each GONA curriculum elements that had been identified in the GONA Fidelity tool.

In addition, a significant product that derived directly during this period and directly because of the CRDP funding was the development and validation of the Cultural Connectedness Scale-California [**CCS-CA**] that measures connection to Indigenous culture and includes three distinct sub-scales: Traditions, Identity and Spirituality. Subsequent CCS-CA research demonstrated that increased connection to Indigenous culture was associated with better mental and physical health measures. The CCS-CA was developed specifically to address issues with the 'Western' medical model and approaches to evaluations including: i) program evaluation requirements by government funders that were not considered an appropriate method of evaluating if their programs improved health, resiliency, strength, and other positive outcomes in youth (i.e., they did not capture what was essential in culture-based alternative drug free activities programs); 2) were not aligned with traditional AI/AN strength-based approaches; and 3) that there was an interest in providing an approach that recognized the relationship between Indigenous/Native culture and health. In many respects, the CCS-CA was developed to be an Indigenous developed tool to measure Indigenous Community-Defined Evidenced Practices (**CDEPs**) from an Indigenous perspective and using Indigenous strength-based epistemologies.

What do we know about CDEPs and why they are important?

Community Defined Evidence Practices were developed by specific communities for the communities and are entrenched in knowledge and characteristics of the communities, including:

a. what is important,
b. what works or doesn't work,
c. when and why to do it,
d. who are best positioned to deliver the CDEP,
e. what are the important credentials of CDEP providers
f. what are the important/known/intended outcomes
g. how to evaluate based upon culture specific values and epistemologies

Some CDEPs, such as Native American culture-based CDEPs, effectively deliver all of primary, secondary and tertiary prevention strategies and are known to provide benefits at multiple levels such as individual, family and community. It is also known that some Native American CDEPs have been practiced for generations or in the case of the GONA are designed based upon principals/practices observed and known to work for hundreds of years. **Research also indicates that Native Americans/Indigenous people want increased access to 'traditional Native' healing/health practices (i.e., Indigenous CDEPs) in healthcare. For example, a recent Native-specific urban Needs Assessment project (N = 544) with 169 Tribal affiliations reported, found that 78% of respondents wanted increased access in their healthcare and that 51.3% reported not wanting to return for care because the providers/staff did not understand or respect their Native/Indigenous culture (Wheeler et al, 2023).**

It can also be argued that an ‘Evidence-based Practice’[EBP] is then by default a CDEP in that an EBP is defined/credentialed/evaluated by one community (i.e., the dominant or more powerful community); whereas a CDEP is defined, credentialed, and evaluated by other communities (i.e., those historically less powerful or non-dominant communities (Masotti, 2024).

4. CDEP PURPOSE, DESCRIPTION, & IMPLEMENTATION

4. A. CDEP PURPOSE

CDEP = Gathering of Native Americans (GONA) a 4-day manualized intervention.

Research evidence has clearly demonstrated that Native American/Indigenous ***culture is a powerful 'Social-Determinant of Health***' [i.e., mental, physical, spiritual, family & community]. ***The GONA has been described as a 'cultural booster shot'***. As part of this, we have learned that it is important to contextualize or help educate 'non-Native people, about what culture is and means to Native American's.

What is the meaning of Culture to Native Americans and why is this important for Non-Native persons to understand?

> *"Culture for Native Americans is not about esteem, taste, or music but rather a cognitive map on how to be. Culture can be thought of as all the things and ways in which Native people understand who they are, where they come from and how they are to interact with others. Native Americans learn these principles including beliefs, values, and behavior from traditional stories, ceremony and language instructed by family and community.*
>
> *It is important for Native people to engage with core elements of culture (e.g., creation stories/mythology, ceremony, and language) because it promotes intergenerational transmission of historical and traditional knowledge, positive identity development of youth, and a strengthening of social ties within families (i.e., interdependence). Hundreds of years across many generations have taught us that culture-based activities & interventions improve our health & wellbeing.* (Cheyenne Seneca in Masotti et al., 2023)

After over 30 years of consecutive GONA implementation with diverse Native youth, local community members described the GONA outcomes to include an increased sense of pride/identity in who they were as Native peoples, improved drive and belief in a positive future for themselves, and improved outcomes in education, jobs, and increased sense of connection to family and community.

4 B. CDEP Description and Implementation

NAHC practices an intensive 4-day overnight GONA for the Youth GONA intervention. This is entrenched in the recognition that a 24-hour setting more strongly helps create the 'community' that then strengthens the components that make the GONA powerful and effective. GONA's can be delivered to adults, elders, families and others in non-overnight methods. But NAHC has found that for Youth (12-17) the overnight method brings benefits. The GONA is both a 'Community Needs Assessment' and 'Community Intervention' that can be modified to address current community needs/issues while still maintaining standard 'Fidelity' across sites/communities.

The GONA is delivered by community members who have completed an intensive GONA Training of Facilitators program that includes a full Training of Facilitators GONA. Most GONA facilitators are youth GONA graduates who attended multiple GONAs and want to then give back to the community.

The GONA is a manualized curriculum that provides a framework for communities to address and heal from historical and intergenerational trauma, grief, and loss following four main themes of:
Belonging [Day 1] Mastery [Day 2] Interdependence [Day 3] Generosity [Day 4]

The curriculum is community and needs specific but always follows the events indicated in the Fidelity Tool [**See Figure 1 below for the pocket (short) version of the Tool and the full Fidelity Tool in the appendices.**] These themes apply across many diverse indigenous tribes, groups, and peoples. The GONA was developed by Natives for Natives and is implemented in partnership with local cultural and spiritual leaders so that the implementation of the framework is localized and culturally and linguistically specific and meaningful. Gender identity as included in surveys has always included diverse options, which include a commonly identified category of "Two-spirit". Early on, sexual orientation was asked but those questions were dropped by the participating youth councils who advised that it was okay to ask questions about who they were as a person (i.e, gender identities) but asking who they were interested in sexually was not relevant for the GONA and they felt it was overly intrusive. Across participating sites, a process evaluation finding identified the need to increase outreach and recruitment to ensure that transgender and/or two-spirit identifying individuals were included in future GONAs through policy and practice.

Figure 1: GONA Curriculum & Pocket Fidelity Tool

FIDELITY TOOL CHECKLIST

A. Core GONA Elements

- □ Prayers
- □ Mental Health; providers were involved in the GONA as a resource
- □ Curriculum; ensured all youth received the same teachings and lessons throughout GONA
- □ Rules/Norms
- □ Team Building
- □ Cultural Strengths
- □ Pictures
- □ Honor the Land
- □ Spirit/Quiet Table/House/Place
- □ Youth Clans; youth are interacting in new circles
- □ Elders; ensured clan elders stayed with clans throughout GONA
- □ Belmont Process
- □ Risk Taking; used risk tokens throughout the GONA

B. Belonging

- □ Definition
- □ Creation Story
- □ History; presented with pre-colonial history of Native Peoples with intent to learn about healthy societies
- □ Connection of Belonging
- □ Present/Clan Shield
- □ Begin Gift Giving; initiate gift giving conversation and/or activities

C. Mastery

- □ Definition
- □ What broke apart the Indian World Session (or equivalent)
- □ Community Traumas; reviewed traumas that have occurred within the local community
- □ Historical Trauma/Colonization
- □ Lateral Trauma
- □ What will heal our world Session (or equivalent)
- □ Affirmation Wall
- □ Letting go of historical trauma

D. Interdependence

- □ Definition
- □ Healing Model (medicine wheel or local cultural equivalence) and how it relates to community wellness and balance
- □ Interconnection Activities
- □ Problem Solving
- □ Link to Generosity

E. Generosity

- □ Definition
- □ Plan for Beyond GONA; outlined tangible plan for youth to follow after GONA and made connections with youth for follow-up care
- □ Gift Giving
- □ Honoring Ceremony; recognize youth that took healthy risks
- □ Commitment Ceremony; commitments for the next year for youth and staff

4B2 CDEP delivery (when, where duration) including cycles of/length of intervention that occurred up until end of data collection.

NAHC's Youth GONA was conceptualized as a four-day campout that is delivered once a year to support youth and community healing. The GONA includes a full day of curriculum and evening therapeutic and community building activities like Sweat Lodges and Talking Circles, as well as fun events like dances, skits, and movies that carry GONA related messages. Although GONAs can be delivered in urban area such as school gyms or conference rooms. ***NAHC has found that Youth GONAs work best when***

delivered in natural settings, given the strong relationships Indigenous peoples have with the land and natural environment. NAHC typically holds youth GONAs in remote nature settings.

GONA Dates	When/Duration		Where
2023	July 31 – August 3	N = 13	Nature Bridge Resort
2024	July 29 – August 2	N = 18	Nature Bridge Resort
2025	March 27 – 31	N = 19	Camp Via West Resort

4B3 Demographics of Populations and Sub-populations Served

The GONA was developed by Native Americans for Native Americans (Indigenous Peoples) and is entrenched in Native culture, teachings and epistemologies. GONAs have been delivered to groups of all ages, whether combined or separated (e.g., Youth, Adult, Elders, Men, Women).

NAHC's intended population as part of the CRDP is youth ages 12 – 17. Eligibility criteria during registration was self-identification as Native American/Indigenous and youth ages 12-17. Native American youth as a group are considered an 'at-risk' group for mental health disparities.

Youth participating in the GONAs were referred from community-members. Most lived in the San Francisco Bay area although some came from Southern California. Participants were distributed across age groups within the 12-17 years eligibility. Youth could self-identify as multi-Tribal and multi-racial.

4B4 CDEP Participant Attrition (# of CDEP participants dropped/left and reasons)

STUDY 1 - Youth Prospective GONA Study

All participants who registered and then arrived for the GONAs in 2023, 2024 and 2025 completed the GONA curriculum. **This is one of the benefits of an overnight 4-day intervention.** This allowed for evaluation instruments to be implemented at baseline (Pre-GONA) and post (Day 4 of GONA). NAHC typically conducts a 6-month follow-up survey to GONA participants. For the Spring (March 2025) GONA, NAHC revised the 6-Month follow-up to 1 month to accommodate PARC's request and did not conduct a local evaluation 6-month Follow-up.

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

Attrition in this study was not an issue. Participants in this study were invited because they were known by community members to have completed a Youth GONA or they were part of a convenience sample of adult Native Americans who lived in California and were 18-28 years of age.

GONA Exposed Group N = 40
Comparison Group N = 52

4B5 Strategies used to incorporate indigenous knowledge (local, cultural or LGBTQ-specific knowledge) in CDEP development or implementation

The GONA was developed by Indigenous people for Indigenous people. Thus the intervention is entrenched in traditional Indigenous knowledge. In addition, each GONA curriculum is designed around a theme that is important to the community in which it will be delivered. This ensures local Indigenous knowledge and perspective.

Sites engaged in months of planning in partnership with local community, cultural, and spiritual leaders so that tribal languages, stories, practices, and ceremonies were incorporated into the agenda. The GONA curriculum is also founded in indigenous knowledge.

4B6 Relevant or significant changes made to CDEP components activities or delivery (this information may be reported in other sections, e.g., fidelity/flexibility)

No significant changes were made per standard GONO protocol and Fidelity Tool: The GONA is a community-specific Needs Assessment planning tool which is then operationalized by the community-specific theme to address in the GONA and curriculum topics all while maintaining fidelity to the manualized (standard) curriculum following the 4-day standard: Belonging (Day 1), Mastery (Day 2), Interdependence (Day 3) and Generosity (Day 4). Thus fidelity is maintained but themes or messaging may differ. This is in much the same way that a Youth Group Therapy intervention would work.

5. RESEARCH QUESTIONS

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

1. **MAIN Research Question: Do GONA youth participants experience an increase in mental health protective and resiliency factors determined to be important by the participating Native communities, as compared to baseline?**

2. Do GONA participants experience an increase connection to Native/Indigenous culture, between pre-GONA and post-GONA [day 4], as measured by the ***Cultural Connectedness Scale-CA?***
3. Do GONA participants experience an increase connection to Native/Indigenous culture, between pre-GONA and post-GONA [6-month follow-up], as measured by the ***Cultural Connectedness Scale-CA***?

4. Do GONA participants experience an increased measure of hope/wellness, between pre-GONA and post-GONA [day 4], as measured by the ***Herth Hope Index?***
5. Do GONA participants experience an increased measure of hope/wellness, between pre-GONA and post-GONA [6-month follow-up], as measured by the ***Herth Hope Index?***

6. Do GONA participants experience an increased measure of 'Community Engagement and Empowerment' between Pre-GONA and post-GONA [day 4], as measured by the ***Life Changers – community engagement subscale***?
7. Do GONA participants experience an increased measure of 'Community Engagement and Empowerment' between Pre-GONA and post-GONA [6-month follow-up 4], as measured by the ***Life Changers – community engagement subscale***?

8. Do GONA participants report decreased use of drugs or alcohol between Pre-GONA and Post 6-Month Follow-up, as measured by the ***Modified Sobriety Tool?*** GONA participants report less

9. From an organizational perspective, what was the Native American Health Center's unit cost (cost/participant) of planning, implementing, and evaluating a community GONA?

STUDY 2 – Youth GONA 2023 Cost Analysis

1. From an organizational perspective, what was the Native American Health Center's overall unit cost (**cost/participant**) associated with NAHC facilities & infrastructure, staff planning time, staff delivery time, and 4-day GONA intervention implementation costs?
2. From an organizational perspective, what was the Native American Health Center's overall unit cost (**cost/participant/day**) associated with NAHC facilities & infrastructure, staff planning time, staff delivery time, and 4-day GONA intervention implementation costs?
3. How would the calculated unit costs vary under different variable costs (i.e. sensitivity analyses)?

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

1. **MAIN Research Question: Do Adult Native Americans (18-28 years) living in California who completed a youth GONA (12-17 years) demonstrate increases in mental health/well-being and physical health compared to a Non-GONA control group?**

2. Do GONA graduates experience an increased **connection to Native/Indigenous culture** compared to the Non-GONA control group, as measured by the ***Cultural Connectedness Scale-CA*?**

3. Do GONA graduates experience an increased **functional status** (functioning across 6 domains) compared to the Non-GONA control group, as measured by the ***Functional Status 6*?**

4. Do GONA graduates experience a decreased **risk of depression** compared to the Non-GONA control group, as measured by the ***CESD-10R*?**

5. Do GONA graduates experience a decreased risk of **Substance Use Disorder** compared to the Non-GONA control group, as measured by the ***CAGE-AID*?**

6. Do GONA graduates experience differences in 12-month **healthcare utilization** compared to the Non-GONA control group, as measured by the ***Functional Status 6*?**

7. Do GONA graduates experience an increase in **community engagement & empowerment** compared to the Non-GONA control group, as measured by the ***Life Changers – Community Engagement subscale*?**

8. Do GONA graduates experience increased healthy days or less disability days compared to the Non-GONA control group, as measured by the ***Health-Related Quality of Life-4***?

9. Do GONA graduates experience increased Satisfaction With Life compared to the Non-GONA control group, as measured by the ***NAHC Healthcare Utilization Survey*?**

5.1 Changes made to research questions

No significant changes were made.

5.1 Explanation of research questions that could not be answered.

Not applicable. Designed permitted evaluations.

6. EVALUATION DESIGN AND METHODS

6.B. DESIGN

Strategies used to incorporate Indigenous knowledge (local, cultural or LGBTQ-specific knowledge) in local evaluation plan development or implementation. For example, the validated Cultural Connectedness Scale-CA was developed as part of the CRDP and the Life Changers tool (not validated) was developed by Indigenous youth who had participated in previous GONAs. Both of these instruments are entrenched in Indigenous 'strenght-based' approaches to evaluations.

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

Methods included a mixed methods longitudinal youth outcome study of GONA participants for each annual GONA (2023, 2024, 2025). **GONA specific instrument packages were administered at:**

1) Baseline (pre-GONA);
2) Post (Day 4 of GONA); and
3) 6-month follow-up

(Note – 6-month follow-up was not completed for the 2025 Spring GONA in which the SWE-specific 1-month survey was administered.)

Qualitative components consisted of open-ended questions about GONA experiences and perceptions of outcomes.

Quantitative components consisted of measurable differences between: Pre, Post and 6-month responses to validated instruments (e.g., Cultural Connectedness Scale-CA, Herth Hope Index, and Life Changers tool). We also asked demographic questions (age, sex, Tribal affiliation(s) and previous GONA exposures.

STUDY 2 – Youth GONA 2023 Cost Analysis

A prospective cost analysis of the 2023 GONA was conducted, from the payer's perspective, according to established methods (Drummond et al., 2005; Gold et al., 1996). A cost analysis identified NAHC's facilities/infrastructure and personnel resources, combined with location costs, used in the planning and delivery of GONA. This entailed determining unit costs of these resources and the calculation of the: a) total cost of the delivering GONA; b) cost per participant; and c) cost per participant per day. Sensitivity analyses were also performed to evaluate costs under different variables.

STUDY 3 – Adult Retrospective GONA STUDY – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

In this economic evaluation, we:

(i) used the results from the STUDY 1 Youth GONA **prospective cost analysis**;
(ii) evaluated the long term ('down-stream') impact of the GONA on the cultural connectedness and quality of life of Indigenous adults; and
(iii) assessed the cost-effectiveness of the GONA program included any healthcare service utilization savings.

This study consisted of a retrospective program impact evaluation to assess the longitudinal ['downstream'] impact of GONA on participants' cultural connectedness and other health-related measures. **A GONA exposed group [N = 40]** was compared to a **non-GONA control group [N = 52**].

Empirical evidence demonstrates that Native American/Indigenous culture is: 1) an important 'social-determinant of health'; 2) an important intervention objective; 3) a viable health-related outcome measure; and 4) can be measured with the validated/published Cultural Connectedness Scale-CA.

6.B. SAMPLING METHODS AND SIZE

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

6.B.1 Sampling Method(s)
6.B.2. Inclusion/Exclusion Criteria
6.B.3. Participant Recruitment Strategies Including use of CBPR
6.B.4. Intended Sample Size (Power Analysis)
6.B.5. Final Sample Size

Participants Sampling Methods and Inclusion/Exclusion Criteria

Youth Prospective GONA Study participants were recruited (identified and invited) by staff, or referred by community-members or other Native American/Indigenous organizations in California affiliated with the California Consortium for Urban Indian Health (CCUIH). Eligibility criteria included: i) aged 12-17 at time of GONA; and ii) self-identification as Native American and/or Indigenous, First Nations, American Indian or Native Hawaiian/Pacific Islander. Participants could also report multiple Tribal Affiliations and race/ethnicity affiliations. ***Note, it is frequently observed that GONA referrals came from the Youth's parents who themselves have attended GONAs in the past.***

NAHC's youth GONA is a 4-day overnight intervention which is typically delivered during the summer when youth are not in school. Our 2023 and 2024 GONAs were held during the summer. Whereas, we held a Spring 2025 GONA in March during the 2025 Spring Break. In the past, the number of GONA participants exceeded 30. However, COVID-19 impacted many things including available NAHC staff and referrals from other Indian Health Organizations. Our 2023 GONA was the first since COVID. Participants and locations in our 2023, 2024, and 2025 GONAs are indicated below.

GONA Dates	When/Duration		Where
2023	July 31 – August 3	N = 13	Nature Bridge Resort
2024	July 29 – August 2	N = 18	Nature Bridge Resort
2025	March 27 – 31	N = 19	Camp Via West Resort
	Total	**N = 50**	

Sample Size Power Analysis -Youth GONA [Not Applicable]

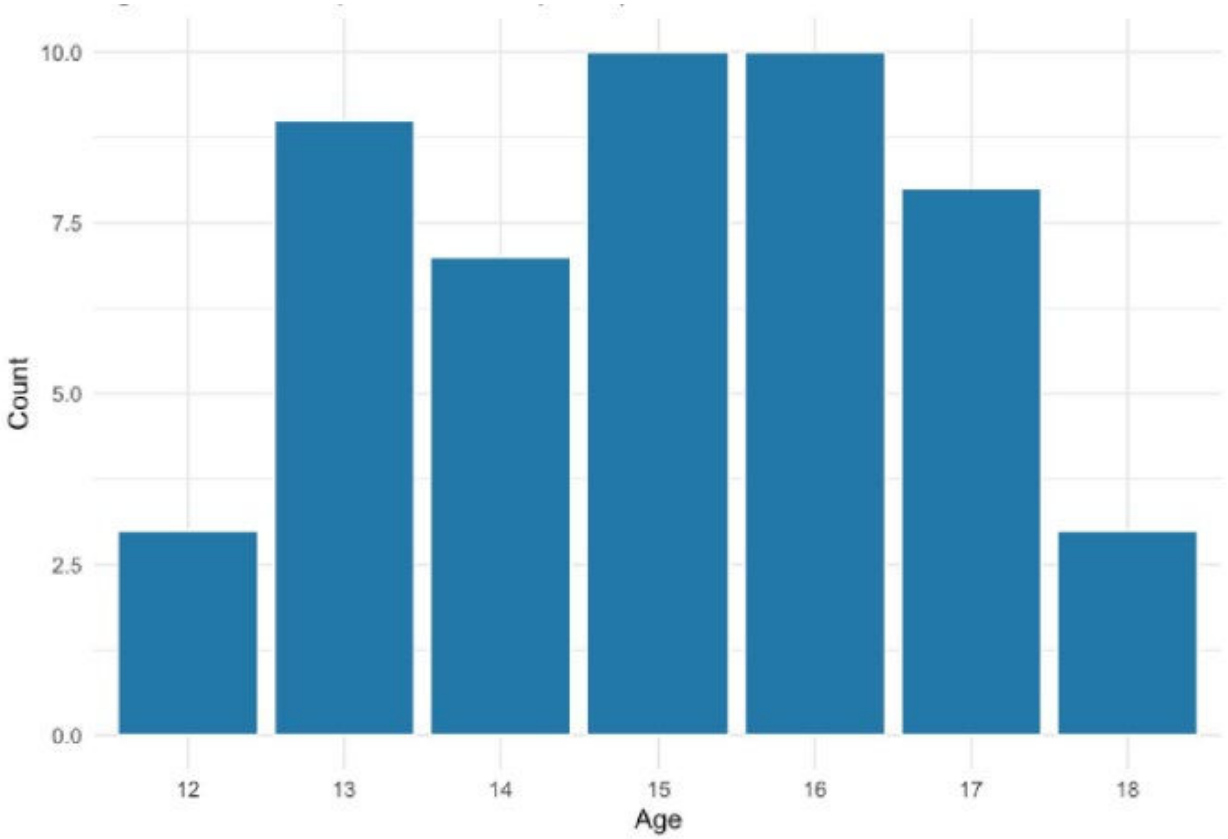
This was not conducted. NAHC Youth GONAs typically are delivered to groups of 20 – 32 and take place in the summer, when school is out, given 4-day overnight intervention. **\Given this, it was known in advance that there would be three GONAs with a maximum of 32 participants per GONA.**

6.B.6. Descriptive Demographic Statistics Youth GONAs 2023, 2024, 2025

Descriptive Demographics Across 2023-2025 GONAS

Total Participants	N = 50
Male	27
Female	21
Non-Binary	2
Previous GONA	25
First Time GONA	25
Tribe Morongo	4
Tribe DNK	2
Tribe Muscogee Creek	4
Tribe Cocas	2
Tribe Pomo-Wailaki	2
Tribe Klamath	1
Tribe Robinson Ranchero	2
Tribe Navajo	4
Tribe Choctaw	1
Tribe Luisino/Cavhilla	1
Tribe Bear River Band	1
Tribe Unknown	26

Age Distribution Across Youth GONA: 2023, 2024, 2025



GONA Dates	When/Duration		Where
2023	July 31 – August 3	N = 13	Nature Bridge Resort
2024	July 29 – August 2	N = 18	Nature Bridge Resort
2025	March 27 – 31	N = 19	Camp Via West Resort
	Total	**N = 50**	

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

Participants Sampling Methods and Inclusion/Exclusion Criteria

GONA Exposed Group: Participants in the Adult Retrospective GONA Study were recruited (identified and invited) by staff from Indigenous Health Organizations or community-members who knew of Youth GONA participants who are now adults. Eligibility criteria included: i) adults aged 18 – 28 who attended a Youth GONA (aged 12-17); ii) resided in California; and iii) self-identified as Native American and/or Indigenous, First Nations, American Indian or Native Hawaiian/Pacific Islander

Non-GONA Exposed Group: Mixed methods were used to identify/recruit participants into the control group. Community-members could refer eligible community-members or community members could self-refer responding to a flyer that was produced. Eligibility criteria included: i) adults aged 18 – 28 who: a) resided in California; and b) self-identified as Native American and/or Indigenous, First Nations, American Indian or Native Hawaiian/Pacific Islander

Note, we found it surprisingly difficult to recruit the GONA exposed group, give we wanted to limit the age eligibility to transition ages. We did manage to just slightly exceed the minimum sample size [N = 37] in the GONA exposed group. After data cleaning, there were 40 participants in the GONA group and 52 in the non-GONA control group.

Sample Size Calculation: The calculated sample size needed was n = 35 in the GONA exposed group and n = 35 in the non-GONA group.

The sample size calculation was based upon the instruments in the instrument package and results from previous Culture is Prevention research where those validated instruments were implemented.

What is needed for the sample size is the Cohen's d which is a standardized effect size. It measures the differences between two group means divided by the pooled standard deviation. To identify the expected effect size, we looked to published literature. The meta-analysis conducted by Hall et. al., 2016 found that the average effect size between the groups that participated in a culturally adapted mental health program and those that did not was 0.67. This is the Cohen's d. It is standard to use 0.05 as the alpha and 0.8 as the power, which means our beta is 0.2 (1-0.8).

And so: d = 0.67
Z1-alpha/2 = 1.96 (two tailed alpha =0.05)
Z1-beta = 0.84 (0.2 beta)

N=2[Z1-alpha/2 + Z1-beta]^2 / d^2
N= 2 * (1.96 + 0.84)^2 / 0.67^2
=15.68 / 0.4489 **N=34.93 = 35**

35 is only for one group (at least 35 are needed for the GONA and 35 for the non-GONA), therefore, our sample size of 40 and 52 should be adequate.

6.B.5. Final Sample Size

GONA Exposed Group	n = 40
Non-GONA Group	n = 52

6.B.6. Descriptive Demographic Statistics

STUDY 2 – Adult Retrospective GONA Study – Economic Evaluation [Descriptive Statistics]

Gender Identity

Table 1. Gender identity stratified by participation in a previous GONA. Note that this category was multi-select, therefore someone can identify to multiple categories.

Gender Identity	GONA (n=40)	Comparator (n=52)
Woman	18	15
Man	25	39
Two-Spirit	3	3
Nonbinary	1	1
Genderqueer/gender non-conforming	1	1
Gender diverse (Two-spirit, nonbinary, non-conforming, or transgender)	4	3

- **There were no statistically significant differences between groups.**

Race and/or Ethnicity

Table 2. Self-identification of race/ethnicity stratified by participation in a previous GONA. Note that this category was multi-select, therefore someone can identify to multiple categories and numbers will not sum to 40.

Race and/or Ethnicity	GONA (n=40)	Comparator (n=52)
Indigenous	38	48
Hispanic	7	13
White	2	5
Hawaiian*	4	0
Asian	1	3
Black	2	1
Other	0	1

- ***There was a statistically significant difference between groups where there are 4 Hawaiians in the GONA group and none in the comparator (p=0.037)**

Sexual Orientation

Table 3. Sexual orientation stratified by participation in a previous GONA. Note that there is missing datum for 2 participants from the GONA group as well as 2 in the comparator.

Sexual Orientation (% of group)	GONA (n=38)	Comparator (n=50)
Straight/Heterosexual	28 (73.68)	41 (82.00)
Gay/Lesbian	4 (10.53)	2 (4.00)
Bisexual	5 (13.16)	5 (10.00)
Pansexual	1 (2.63)	2 (4.00)

- **There were no statistically significant differences between groups.**

Sex

Table 4. Sex stratified by participation in a previous GONA.

Sex (% of group)	GONA (n=40)	Comparator (n=52)
Female	23 (57.50)	39 (75.00)
Male	17 (42.50)	13 (25.00)

- **There were no statistically significant differences between groups.**

Education

Table 5. Education status stratified by participation in a previous GONA. Note that there is missing datum for 8 participants from the GONA group and 4 in the comparator.

Education (% of group)	GONA (n=36)	Comparator (n= 46)
Some high school	1 (2.94)	3 (6.52)
High school graduate	11 (32.35)	25 (54.35)
Some college or technical school	13 (38.24)	12 (26.09)
College graduate (*combined some graduate/professional school)	9 (26.47)	6 (13.04)

- **There were no statistically significant differences between groups.**

Employment

Table 6. Employment status orientation stratified by participation in a previous GONA.

Employment (% of group)	GONA (n=40)	Comparator (n=52)
Full-time employment (40+ hours/week)	11 (27.50)	15 (28.85)
Part-time employment (1-39 hours/week)	17 (42.50)	17 (32.69)
Unemployed, looking for work	6 (15.00)	16 (30.77)
Unemployed, not looking for work	4 (10.00)	2 (3.85)
Other	2 (5.00)	2 (3.85)

- **There were no statistically significant differences between groups.**

Tribal Reservation/Nation

Table 7. Living on a Tribal Reservation/Nation, stratified by participation in a previous GONA.

Lives on a Tribal Reservation/Nation	GONA (n=40)	Comparator (n=52)
Yes	3 (7.50)	19 (36.54)
No	37 (92.50)	33 (63.46)

- **There existed a statistical significance between groups where the GONA group has less participants that live on a Tribal Reservation/Nation, p=0.0012.**

Table 8. Most common tribal/indigenous affiliations.

Tribal/Indigenous Affiliations (Total)	GONA	Comparator
Navajo Nation (11)	7	4
Susanville Indian Rancheria (9)	3	6

Household Income

Table 9. Household income stratified by participation in a previous GONA. Note that there is missing datum for 3 participants from the GONA group and 6 in the comparator.

Household Income (% of group)	GONA (n=37)	Comparator (n=46)
$0 – 9,999	7 (18.92)	10 (21.74)
$10,000 – 24,999	4 (4.82)	15 (32.61)
$25,000 – 49,999	12 (32.43)	12 (26.09)
$50,000 – 74,999	8 (21.62)	4 (8.70)
$75,000+	6 (16.22)	5 (10.87)

- **There were no statistically significant differences between groups.**

Housing Status

Table 10. Housing status stratified by participation in a previous GONA.

Housing Status (% of group)	GONA (n=40)	Comparator (n=52)
I own my home	0 (0)	6 (11.54)
I rent my home	21 (52.50)	22 (42.31)
Staying with friends/family (without payment of rent)	15 (37.50)	18 (34.62)
Living in a temporary shelter, a hotel, a car/vehicle, or unhoused	1 (2.50)	1 (1.92)
Other	3 (7.50)	5 (9.62)

- **There were no statistically significant differences between groups.**

Age

The median age in years for the **GONA group was 25.59**, and, for the **comparator, it was 25.18**.

- **There exists no statistically significant differences between groups.**

Household Size

The median household size for the GONA group was 2, and, for the comparator it was 4.

- **There is a statistically significant difference between groups (p=0.0277).**

6.B.7. Extent to which the evaluation sample is representative of the CDEP participant universe (qualitative or quantitative description)

- STUDY 1 – Youth GONA.
  All participants met the eligibility criteria for Youth GONAs (i.e., self-identified as Native/Indigenous.

- STUDY 3 – Adult Retrospective GONA Study.
  All participants met the eligibility criteria for Youth GONAs (i.e., self-identified as Native/Indigenous.

6.B.8. Local evaluation attrition (# dropped/left and reasons)

Not Applicable

6.B.9. Institutional Review Board (IRB) Approval

IRB Approval was received for both the Youth and Adult studies. Participating community, members of the NAHC Community Wellness Department-Youth Services were engaged in the process of submitting the IRB application through discussions with staff/community and submission and final IRB approval by IRB NET. PIRE as the Native Hub TA providers were NAHC's contacts at IRBNet.

IRB approval was first received for Study 1 – Youth Prospective GONA Study (Youth Ages 12-17) and then for Study 2 (Study 2 – Adult Retrospective GONA Study) as the methods in Study 2 took longer to finalize and the study was intended to start after the Youth study.

IRB approval was obtained on September 15, 2022 and has gone through annual IRB reviews and re-approval as required by IRB NET protocol

6.C. MEASURES AND DATA COLLECTION PROCEDURES

Copies of the instrument packages use in the two studies are include in the Appendices.

6.C.1. Quantitative & Qualitative Measures

STUDY 1 - Youth Prospective GONA Instruments

			Pre	Post	6-Month
1)	Cultural Connectedness Scale-Short	(10-items)	X	X	X
2)	modified Herth Hope Index	(12 items)	X	X	X
3)	Life Changers engagement scale	(5 items)	X	X	X
4)	Previous GONA participation		X		
5)	Ethnicity, Indigenous identity, age, sex		X		
6)	Modified Sobriety/Substance Use Tool	(1 item)	X		X
7)	GONA perception/experience	(7 items)			X
8)	GONA end of day reflection	(2 items)	Days 1-4 of GONA		

Note – All of the above were included in the GONA Tool surveys implemented during three periods: Pre (Baseline), Post (GONA Day 4), and 6-Month Follow-up. (See Appendices).

STUDY 2 – Adult Retrospective GONA Study – Economic Evaluation Instruments

Adults 18-28 who completed a Youth GONA ages 12-17]

1) Cultural Connectedness Scale-CA 29 items
2) SF-6Dv1 (Functional Status) 6 items
3) CESD-10R (depression) 10 items
4) CAGE-AID Substance Use risk [past 12 months] 4 items
5) Healthcare Utilization Self Report 3+ items
6) Life Changers Community Engagement 6 items
7) HRQOL Health Days (physical & mental health) 4 items
8) Satisfaction With Life 5 items

Cultural Connectedness Scale-California (CCS-CA): The original Cultural Connectedness Scale was developed by Dr. Angela Snowshoe, [Anihšināpē (Ojibwe) and Métis, to measure cultural connections among First Nations people in Canada. Following a 2015 consultation with Dr. Snowshoe, the Native American Health Center [NAHC], in Oakland, California worked with Urban Indian Health Organizations and Community Advisory Boards to adapt the original Cultural Connectedness Scale (CCS) to be a better fit for the much more multi-Tribal communities in the San Francisco Bay area.

The CCS-CA is a 29-item validated and published instrument that measures the Native American culture/cultural connectedness on three subscales: Identity, ii) Spirituality, and iii) Traditions. Individuals participating in the development of this tool were from 37 distinct Tribal nations across the United States. During the pilot testing and validation phase, 105 distinct Tribal nations were represented. One of the changes in development of the CCS-California, was the addition of the Examples Lists that helped make the original CCS a better fit for the much more multi-Tribal communities in the San Francisco Bay area. Some of the language in the questions was also changed to be a better multi-Tribal fit. Higher scores on the CCS-CA are associated with positive mental health outcomes. The California version was renamed the Cultural Connectedness Scale-California (CCS-CA) to distinguish from the original CCS. (**Snowshoe et al., 2015; King et al., 2019; Masotti et al., 2020; Masotti et al., 2025**).

Cultural Connectedness Scale-California (CCS-CA) Short – 10 Items

In the Youth Prospective GONA study, we piloted the CCS-CA (Short 10 items). Angela Snowshoe validated her version in Canada. We then assumed that since we validated our CCS-CA (Long 29) that the CCS-CA Short would also be valid. (**Snowshoe et al., 2017**)

Life Changers Instrument: The Life Changers instrument is a 16-item tool developed by Native youth, and the local staff of the participating communities to measure prosocial behaviors, healthy mental practices, and positive family and community engagement. *In this study we only used the 4 questions on the 'Community-engagement' subscale which measured empowerment and giving back to the community [See below]***.**

I help out my family (like washing dishes, babysitting or other activities).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

I help out in my community (like helping elders, taking care of the environment, volunteering at school or at the local Indian center).

Never	Once/Twice past	Every	Every	Every

	6 months	Month	Week	Day

I attend healthy community events (like dinners, pow-wows, and youth program activities).

Never	Once/Twice past	Every	Every	Every
	6 months	Month	Week	Day

I believe I can be a leader in my community (if given the chance).

Yes No

Herth Hope Index (HHI): The HHI was adapted for use in this study. ***The HHI is a 12-item validated and widely used instrument and is considered a good proxy measure for mental health and wellness.*** The HHI is designed to capture the multidimensional aspects of hope on three subscales: i) temporality and future, ii) positive readiness and expectancy, and iii) interconnectedness. Increased HHI measures are associated with: perceptions of recovery, coping with illness, motivation, positive adjustment, mental health recovery, positive physical health, and strong psychological benefits. The HHI has a reported Cronbach's alpha of 0.97 (Herth, 1989 & 1991) and a two week test-retest reliability estimate of 0.91 (Herth, 1992). The tool was modified by the GONA Collaborative with permission from the author to exchange the term "faith" with the term "spiritual" to improve application and reduce reported trauma triggers for indigenous populations **(Herth, K., 1989; Herth, K., 1991;, Herth, K., 1992; Van Gestel et al., 2010)**.

Modified Sobriety Tool

We used one question from the Sobriety Tool developed by One Fire Associates/Lower Brule Tribe that was designed to be a strength-based measure versus a measure of risk. This question allows for a measure of the degree of sobriety.

1. *I have never used drugs or alcohol in my life.* ○
If you have answered "TRUE (Never Used)" to Question 1 → Skip Next Question

2. *Please indicate how many days, months, or years you have been completely free and clean of any amount of alcohol. (**How long ago since you last had some drugs or alcohol**?)*
_____ Days _____ Months _____ Years

Health Related Quality of Life-14: The CDC HRQOL-14 contains fourteen items to measure health-related quality of life. The items are designed to measure broad influences on life, including distal social and environmental factors such as housing, income, social support, and access to care (**Moriarty et al., 2003; CDC & Prevention**)

Satisfaction With Life Scale: The SWLS is a 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life and well-being. Scores on the SWLS have been shown to correlate with measures of mental health and to be predictive of future behaviors such as suicide attempts (**Pavot & Diener, 2008**).

Center for Epidemiologic Studies - Depression Scale (CES-D) The CES-D scale is a brief self-report scale that measures self-reported symptoms associated with depression experienced in the past week. The CES-D has been shown to be a reliable measure for assessing the number, types, and duration of depressive symptoms across racial, gender, and age categories **(Knight et al., 1997; Roberts et al., 1989; Radloff, 1977)**.

CAGE-AID: The CAGE-AID is questionnaire where the focus of each item on the original CAGE was expanded from alcohol alone to include alcohol and drugs. This allows for the concurrent screening of substance abuse and dependence issues (e.g., alcohol and drugs) (Leonardson et al., 2005).

Functional Status 6A (FS-6) health assessment is a shorter version of the SF-12. It measures a patient's functioning across six different domains, including their physical functioning in activities of daily living, role function (work/household), social function, and psychological function. Patients are scored on a scale indicating the severity of dysfunction in each area, providing a comprehensive overview of their overall health and ability to perform tasks in different aspects of life. The SF-6 is used to calculate quality-adjusted life years (QUALs) that allow for health status comparisons across different interventions (Brazier, 2004; Rasanen,2006).

Healthcare Utilization
A simple utilization survey was developed by the research team to collect data on past 12-Month utilization for: i) walk-in clinics & ER; and ii) days hospitalized.

GONA Fidelity Tool: The GONA Fidelity Tool was developed by the GONA Collaborative. It is a 13 page document that is used to guide the planning/development of each community's GONA and then to support each GONA's implementation and implementation analysis.

6.C.2. Data collection procedures

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

Consenting/Assenting was completed by CITI trained staff and researchers using a recruitment script. Consenting/Assenting occurred by telephone and/or JotForm or face-to-face if registration took place the day of the GONA. Documentation of parent/guardian consent was completed.

Baseline and Post GONA Data Collection
GONA pre (Baseline), post (Day 4 GONA) and packets [paper versions] and 6-Month Follow-up [virtual] tools were created for each youth under an assigned unique number. This unique number is linked to a master list of participants that is secured in a locked cabinet by a CITI trained staff person at each of the participating sites.

Baseline: On Day 1, before the GONA began, each youth received a paper pre-assessment packet marked with their unique number and completed this tool on site. Assessment tools were inside a large manila folder increasing privacy in returning the tools to trained staff/researchers.

Post: Day 4, end of GONA: Each youth received an paper post-assessment packet in a similar fashion.

6-Month Follow-up: Six months later youth were contacted via email addresses provided during registration. The 6-month follow up conducted using a Qualtrics platform.

6.C.2. Data collection procedures

STUDY2 – Youth GONA 2023 Cost Analysis

A prospective cost analysis was conducted according to established methods (Drummond et al., 2005; Gold et al., 1996). A cost analysis identified resources used in the delivery of GONA. This entailed determining unit costs of these resources and the calculation of the total cost of the delivering GONA. Specifically, we:

(a) selected a time period for the analysis,
(b) counted the participants served during the time period,
(c) categorized costs,
(d) conducted and inventory of resources consumed in specific units,
(e) estimated cost per unit of each resource type, calculated total costs of delivering GONA, and expressed this on a per participant basis, and
(e) conducted one-way and multi-way sensitivity analysis to determine what the costs of GONA would be given different circumstances and to check that results are robust.

The cost analysis was conducted from the payer's perspective (any indirect costs, such as productivity losses, and out of pocket expenses (e.g., travel, elder care, childcare) were excluded from this analysis, as were any costs associated with conducting the cost evaluation. All costs were expressed in 2023 US dollars. This report addresses only the determination of GONA programmatic costs and does not present data related to program effectiveness or benefits. The latter are planned for the future. Neither does this analysis include any research and evaluation resources.

Selection of time period, number of participants – The present evaluation included 13 participants enrolled in GONA. The time frame considered included planning, implementation, and debriefing, spanning between **January 1, 2023, and December 31, 2023**.

Categorization of costs – We identified resources as variable and fixed costs. Variable costs vary with program output and are related to resources needed per participant for the implementation of GONA. Fixed costs do not vary with the quantity of output in the short-run and include facilities, administrative time and communication.

Inventory of resources – For the prospective cost data collection, GONA staff completed forms to record time and resources allocated to the implementation of GONA. The forms contained information about **a)** GONA personnel time, **b)** personnel compensation and facility costs, and **c)** intervention materials, administration and other costs.

Intervention staff time form – GONA personnel recorded the time they spent on GONA related activities to the nearest quarter of an hour and allocated this time to GONA. The GONA intervention provider forms included categories for: **a)** training and supervision (formal and informal training, including any time spent receiving or providing supervision or intervention activities, **b)** four day session GONA activities (preparing for sessions, waiting for participants to arrive, conducting sessions, and post sessions activities), **c)** GONA-related travel for preparing for sessions/buying materials and travelling to the facilities for delivering GONA, **d)** GONA resource guide updates (developing and updating GONA-specific guides for participants).

Personnel compensation and facility cost form – These forms were completed over one year by GONA administrators to determine staff compensation and facility-related costs necessary to provide the GONA intervention. These costs included: **a)** per hour and per year personnel compensation costs for staff members planning, delivering and supervising the GONA intervention, **b)** monthly/yearly facility ownership/rental costs, including the percentage of office space and time used for GONA-related activities, vehicle standard mileage rates multiplied by number of miles travelled (https://www.irs.gov/tax-professionals/standard-mileage-rates). Depreciation was assigned using 3% interest rate of time preference (Drummond et al., 2005; Gold et al., 1996). In instances where the GONA intervention project was not charged for facility use, the fee for facility was estimated.

Intervention materials, administrative, and other costs form – Data reflecting monthly/yearly use of intervention materials, administrative time and other costs were collected by GONA project staff. The form contained three categories: **a)** participant materials (material costs related to the GONA intervention sessions), **b)** GONA intervention related expenses (telephone calls, office materials), and **c)** administrative support time.

Total costs, cost per participant – During the project period, we used specific counts of resource units. Through the multiplication of unit costs (e.g., hourly salaries and percentage of time allocated to the GONA intervention related activities) by the number of units use during the program period, we determined the cost of resources for the one-year duration of the project (including preparatory activities and post organization activities).

Sensitivity analysis – One-, two- and multi- way sensitivity analysis were conducted varying the following parameters to determine their impact on total costs, to assess how sensitive the results were to varying these parameters of the base-case analysis:

- **i)** doubling the number of participants (because previous GONAs had those numbers);
- **ii)** excluding location event costs; and
- **iii)** lower cost of living (since California has a high cost of living, percentage factor was applied to total costs to reduce the general cost of living, equivalent to Oklahoma, for example).

6.C.2. Data collection procedures

STUDY 3 – Adult Retrospective GONA Study [Adults 18-28 who completed a Youth GONA ages 12-17]

Participants in the Adult Retrospective GONA Study were recruited (identified and invited) by staff from Indigenous Health Organizations or community-members who knew of Youth GONA participants who are now adults. Eligibility criteria included: i) adults aged 18 – 28 who attended a Youth GONA (aged 12-17); ii) resided in California; and iii) self-identified as Native American and/or Indigenous, First Nations, American Indian or Native Hawaiian/Pacific Islander
Data collection consisted of a one-time instrument package that was identical for both the GONA-exposed group and the Non-GONA Group.

Participants who indicated an interest in the study were provided with an email address and phone number for the Native American Health Center research team. Follow-up took place by phone or email. When the prospective participant confirmed interest and that they met eligibility criteria (i.e., self identified as

Native/Indigenous, were 18-28 years), they were sent a link to the Virtual Instrument Package (Qualtrics platform). Informed consent was obtained via the introduction in the Instrument Package and clicking on a link indicating they agree to participate and consent.

6.C.3. Measures and data collection procedures used, including modifications to existing measures and/or procedures, are centered on indigenous knowledge (local, cultural or LGBTQ-specific knowledge)

The original Herth Hope Index used the term "faith-based" which triggered trauma for some participants as the word "faith" is connected to "religion" which devastated many California indigenous peoples who were enslaved to build the Missions across the state. The term "faith-based" was changed to "spiritual" to be more inclusive of traditional indigenous spiritual ways which are not organized religions.

The Cultural Connectedness Scale (Snowshoe original in Canada) and the Cultural Connectedness Scale-California (Modified for use in the multi-Tribal communities in California) were both developed Native/Indigenous people for use among Indigenous people. These tools, validated in both Canada and California, are 'strength-based' and entrenched in Native/Indigenous knowledge and epistemologies.

6.C.4. Administrative data used to assess or contextualize outcomes

Not-applicable - Administrative Data was not used in the evaluation of the GONA or the Adult Retrospective study.

6.D. FIDELITY AND FLEXIBILITY

6.D.1.a) Adherence (CDEP delivered as it was designed or written)

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

<u>The GONA Fidelity Tool (See Appendices)</u> is a **15-page tool** that was developed in 2013 by the GONA Collaborative that is comprised of multiple GONA delivering community organizations in California. Aragon et al., recently published the Tool (Aragon et al., 2025). A copy of the pocket version is pasted below.

The Fidelity Tool is used to:

a) Plan GONAs as a community-needs assessment tool;
b) Guide the implementation of a community-specific GONA while still maintaining fidelity to the general GONA 4-Day curriculum, while implementing the community-specific adaptation based upon the planning process.
c) Support Continuous Quality Improvement of the GONA

GONA facilitators have 'pocket versions' of the Fidelity to review during GONA implementation each day. At the end of each day, the facilitators review the Fidelity Tool and discuss if things were implemented as planned, what was changed, what worked well or didn't work well. What could be done differently or better next time.

Figure 1: GONA Curriculum & Pocket Fidelity Tool

FIDELITY TOOL CHECKLIST

A. Core GONA Elements

- ☐ Prayers
- ☐ Mental Health; providers were involved in the GONA as a resource
- ☐ Curriculum; ensured all youth received the same teachings and lessons throughout GONA
- ☐ Rules/Norms
- ☐ Team Building
- ☐ Cultural Strengths
- ☐ Pictures
- ☐ Honor the Land
- ☐ Spirit/Quiet Table/House/Place
- ☐ Youth Clans; youth are interacting in new circles
- ☐ Elders; ensured clan elders stayed with clans throughout GONA
- ☐ Belmont Process
- ☐ Risk Taking; used risk tokens throughout the GONA

B. Belonging

- ☐ Definition
- ☐ Creation Story
- ☐ History; presented with pre-colonial history of Native Peoples with intent to learn about healthy societies
- ☐ Connection of Belonging
- ☐ Present/Clan Shield
- ☐ Begin Gift Giving; initiate gift giving conversation and/or activities

C. Mastery

- ☐ Definition
- ☐ What broke apart the Indian World Session (or equivalent)
- ☐ Community Traumas; reviewed traumas that have occurred within the local community
- ☐ Historical Trauma/Colonization
- ☐ Lateral Trauma
- ☐ What will heal our world Session (or equivalent)
- ☐ Affirmation Wall
- ☐ Letting go of historical trauma

D. Interdependence

- ☐ Definition
- ☐ Healing Model (medicine wheel or local cultural equivalence) and how it relates to community wellness and balance
- ☐ Interconnection Activities
- ☐ Problem Solving
- ☐ Link to Generosity

E. Generosity

- ☐ Definition
- ☐ Plan for Beyond GONA; outlined tangible plan for youth to follow after GONA and made connections with youth for follow-up care
- ☐ Gift Giving
- ☐ Honoring Ceremony; recognize youth that took healthy risks
- ☐ Commitment Ceremony; commitments for the next year for youth and staff

6.D.1.a) Adherence (CDEP delivered as it was designed or written)

STUDY 3 – Adult Retrospective GONA Study [Adults 18-28 who completed a Youth GONA ages 12-17]

- **Not Applicable in this cohort study.**

6.D.1.b) Exposure or dose (the amount of CDEP intervention received by participants)

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

The ***4-day manualized GONA curriculum*** and the Fidelity Tool worked to ensure that all Youth GONA participants receive the same 4-day GONA dose.

The GONA pre-assessment tool had a question about how many GONAs the person had attended before. Previous Youth GONA research has indicated that a dose-response exists where youth with prior-GONA exposure had increase connection to Native/Indigenous culture (as measured by the Cultural Connectedness Scale) and where published research, from multiple large sample studies, found that increased connection to Native/Indigenous culture(s) is associated with better mental health and physical health outcomes.

6.D.1.b) Exposure or dose (the amount of CDEP intervention received by participants)

STUDY 2 – Adult Retrospective GONA Study [Adults 18-28 who completed a Youth GONA ages 12-17]

The adult retrospective study instrument asked the GONA exposed group about multiple GONA exposures. As with previous Youth GONA studies, the adult GONA participants with multiple GONA experiences had higher CCS-CA scores.

6.D.1.c) Quality of delivery (the manner in which the CDEP was delivered by staff/volunteers)

As indicated above, at each GONA, the Fidelity Tool was used to plan, deliver and monitor each GONA that was implemented.

GONA support staff and facilitators reviewed the Fidelity Tool at end of each day to evaluate implementation and discuss what worked well or not and future best practices.

6.D.1.d) Participant responsiveness (manner in which participants react to/engage in the CDEP) RE:

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

- Day 1 of the GONA can be stressful for some Youth who are experiencing difficulties or who have never been away from home/parents.
- Day 3 of the GONA: Youth are clearly becoming members of their 'Clan' (sort of a new family). The cohesion and sense of community and belonging is very apparent.
- Day 4 of the GONA: A positive sense of community and increased confidence/empowerment is easily observable.
- The vast majority of youth have an overwhelmingly positive experience with GONA. Youth generally report wanting to come back for another GONA or to become a trained GONA facilitator. The 'Life Changers' community-engagement subscale demonstrates increased sense of empowerment and connection to community.

Compared to a western medical model intervention, a strength or power of the GONA is that previous GONA participants recognize the effectiveness of the GONA and the long-term benefits. This is clearly demonstrated by the referrals from previous GONA participants (such as parents) to the GONA. This characteristic demonstrates an important difference between the GONA as an intervention (treatment) and the Western medical model acute care treatment/service. Another reported outcome of the GONA is that participants report ongoing (multiyear/decades) relationships with GONA participants.

6.C.e) Program differentiation (CDEP elements/components essential for its success)

GONA "elements" are defined in the GONA Fidelity tool items and were being tracked across previous GONAs and GONAs in this youth outcome study.

A strength of the GONA 4-day manualized curriculum, combined with the Fidelity Tool, is the ability to be adapted to be a community-specific, community needs assessment, and community-solutions intervention while still maintaining GONA fidelity regardless of where it is implemented.

6.D. 2. Changes made to the CDEP (or recommended for future implementation) based on fidelity assessment information (this information may be reported in other sections, e.g., Discussion)

- No changes affecting dose or fidelity were made during this time period.
- Recommendations for smaller GONAs (closer to N = 20) compared to larger GONAs were suggested given the increased capacity of GONA facilitators to provide more 1:1 attention for some participants.

6. D.3.) Implementation of fidelity data used in the analysis and/or explanation of CDEP outcome findings

As explained previously, a GONA Fidelity Tool is used to both plan and delivery each GONA. This ensures that 'community needs/issues' are addressed in the planning (which allow for theme differences between GONAs) while still keeping Fidelity to the documented GONA 4-Day Curriculum.

The same Pre, Post, 6-Month instruments were used for each of the three GONAs evaluated in this time period. Two exceptions include: 1) the modified Sobriety tool was only implemented in the 2023 GONA (See below); and 2) we did not implement the 6-month instrument in the 2023 Spring GONA because this was an additional GONA implemented to allow one more SWE pre-post analysis but where the 6-month date went past the data collection date specified by PARC. In the 2023 GONA we implemented the SWE Post survey at one-month after the GONA per PARC's suggestion.

We removed Sobriety Tool question in the 2024 and 2025 GONA because the results replicated previous research (where GONA is associated with increased Sobriety) and because the question was considered confusing for some youth participants. The original purpose of the Sobriety Tool was to implement s strength-based measure (i.e., aligned with Indigenous evaluation approaches) as compared to a 'risk or defecit-based' measure as is the norm in the western medical model approach.

Modified Sobriety Tool

We used one question from the Sobriety Tool developed by One Fire Associates/Lower Brule Tribe that was designed to be a strength-based measure versus a measure of risk. This question allows for a measure of the degree of sobriety.

3. *I have never used drugs or alcohol in my life.* ○
If you have answered "TRUE (Never Used)" to Question 1 → Skip Next Question

4. *Please indicate how many days, months, or years you have been completely free and clean of any amount of alcohol. (**How long ago since you last had some drugs or alcohol**?)*
_____ Days _____ Months _____ Years

6.D.4. Balancing of fidelity & flexibility (e.g., formative evaluation methods, including CBPR, to explore/understand if the CDEP was working and whether changes were needed to strengthen it to meet the needs of the participants, IPP, community, local/state circumstances, etc.).

Balancing fidelity to the GONA and flexibility to meet the community context and culture was identified as a very important component for the development and implementation of the **GONA fidelity tool**. The GONA is considered a community-specific needs assessment tool designed to then implement a

community-specific intervention all while maintaining fidelity to the GONA curriculum. Thus, CBPR is by default part of the GONA process.

6.E. DATA ANALYSES PLAN IMPLEMENTED

6.E.1.) Qualitative Analytic Strategies

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)
Qualitative components of the Youth Prospective study included: 1) end of day Youth Reflections; and 2) open ended and yes/no questions in the Post (Day 4) and 6-Month Follow-up surveys.
End of Day Reflection Questions

1) What was the highlight of the day for you?
2) What was one part of the day that was challenging for you?
3) What was one thing you learned from today's activities?

Day 4 (Post GONA)* and 6-Month** Follow-up Questions

1) If given the chance, I would participate in GONA again. *
2) I feel connected to my family. *
3) I feel connected to my community. *
4) One day, I want to help other youth as a staff or volunteer at the GONA. *
5) In what ways have the different themes of the GONA (i.e., Belonging, Mastery, Interdependence & Generosity) shown up in your life since the GONA? *

6) Based on what you learned from GONA, how does (Belonging, Mastery, Interdependence & Generosity) show up in your day-to-day life?**
7) I stay in contact with people I met at the GONA.**

6.E.1.) Qualitative Analytic Strategies

STUDY 2 – Adult Retrospective GONA Study [Adults 18-28 who completed a Youth GONA ages 12-17] ***There was no Qualitative Analysis in Study 2.*** This study consisted of a retrospective program impact evaluation to assess the longitudinal [downstream'] impact of GONA on participants' cultural connectedness and other health-related measures. A GONA exposed group [N = 40] was compared to a non-GONA exposed control group [N = 52].

6.E.2.) Quantitative Statistical Analyses

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)
STUDY 2 – Youth GONA 2023 Cost Analysis

Statistical analyses in the Youth Prospective study primarily consisted of evaluating mean within group scores from the evaluation tools at: Pre (Baseline), Post (Day 4) and 6-month follow-up.

1) Cultural Connectedness Scale-Short (10 items, range 10 -50)
2) modified Herth Hope Index (12 items, range 12 -60
3) Life Changers – Community Engagement (5 items, range 5 – 25)
4) Sobriety Tool (sober all days, have used in past 30 days)

In this study, given the small sample size, we did not conduct T-tests or other tests of significance. We know from other large sample studies that better mental health and physical health were associated with increases in culture as measured by the Cultural Connectedness Scale (long, 29 item).

In prior Youth GONA research, we used the Cultural Connectedness Scale (long, 29 item) with the modified Herth Hope Index and demonstrated that the GONA was associated with both increased Pre-Post (and 6 month) score in the Cultural Connectedness Scale and Herth Hope Index.

Note – Herth Hope Index is a well-known proxy measure for mental health/well-being).
Note – The Cultural Connectedness Scale is a well-known validated measure where increased connection is
associated with multiple mental health and physical health measures.

In this study, we piloted the use of the Cultural Connectedness Scale-Short (10 items) and combined with the Herth Hope Index to address the research questions 1-5 that evaluate if the GONA is associated with an increased connection to Native/Indigenous culture (i.e., a known evidence-based social-determinant of health) and increased degree of mental health/well-being (i.e., as measured by the Herth Hope Index).

STUDY 2 – Youth GONA 2023 Cost Analysis
A prospective cost analysis was conducted according to established methods (Drummond et al., 2005; Gold et al., 1996). A cost analysis identified resources used in the delivery of GONA. This entailed determining unit costs of these resources and the calculation of the total cost of the delivering GONA. Specifically, we:

(a) selected a time period for the analysis,
(b) counted the participants served during the time period,
(c) categorized costs,
(d) conducted and inventory of resources consumed in specific units,
(e) estimated cost per unit of each resource type, calculated total costs of delivering GONA, and expressed this on a per participant basis, and
(e) conducted one-way and multi-way sensitivity analysis to determine what the costs of GONA would be given different circumstances and to check that results are robust.

The cost analysis was conducted from the payer's perspective (any indirect costs, such as productivity losses, and out of pocket expenses (e.g., travel, elder care, childcare) were excluded from this analysis, as

were any costs associated with conducting the cost evaluation. All costs were expressed in 2023 US dollars. This report addresses only the determination of GONA programmatic costs and does not present data related to program effectiveness or benefits. The latter are planned for the future. Neither does this analysis include any research and evaluation resources.

Selection of time period, number of participants – The present evaluation included 13 participants enrolled in GONA. The time frame considered included planning, implementation, and debriefing, spanned between **January 1, 2023 and July 31, 2023**.

Categorization of costs – We identified resources as variable and fixed costs. Variable costs vary with program output and are related to resources needed per participant for the implementation of GONA. Fixed costs do not vary with the quantity of output in the short-run and include facilities, administrative time and communication.

Inventory of resources – For the prospective cost data collection, GONA staff completed forms to record time and resources allocated to the implementation of GONA. The forms contained information about **a)** GONA personnel time, **b)** personnel compensation and facility costs, and **c)** intervention materials, administration and other costs.

Intervention staff time form – GONA personnel recorded the time they spent on GONA related activities to the nearest quarter of an hour and allocated this time to GONA. The GONA intervention provider forms included categories for: **a)** training and supervision (formal and informal training, including any time spent receiving or providing supervision or intervention activities, **b)** four day session GONA activities (preparing for sessions, waiting for participants to arrive, conducting sessions, and post sessions activities), **c)** GONA-related travel for preparing for sessions/buying materials and travelling to the facilities for delivering GONA, **d)** GONA resource guide updates (developing and updating GONA-specific guides for participants).

Personnel compensation and facility cost form – These forms were completed over one year by GONA administrators to determine staff compensation and facility-related costs necessary to provide the GONA intervention. These costs included: **a)** per hour and per year personnel compensation costs for staff members planning, delivering and supervising the GONA intervention, **b)** monthly/yearly facility ownership/rental costs, including the percentage of office space and time used for GONA-related activities, vehicle standard mileage rates multiplied by number of miles travelled (https://www.irs.gov/tax-professionals/standard-mileage-rates). Depreciation was assigned using 3% interest rate of time preference (Drummond et al., 2005; Gold et al., 1996). In instances where the GONA intervention project was not charged for facility use, the fee for facility was estimated.

Intervention materials, administrative, and other costs form – Data reflecting monthly/yearly use of intervention materials, administrative time and other costs were collected by GONA project staff. The form contained three categories: **a)** participant materials (material costs related to the GONA intervention sessions), **b)** GONA intervention related expenses (telephone calls, office materials), and **c)** administrative support time.

Total costs, cost per participant – During the project period, we used specific counts of resource units. Through the multiplication of unit costs (e.g., hourly salaries and percentage of time allocated to the GONA intervention related activities) by the number of units use during the program period, we determined the cost of resources for the one-year duration of the project (including preparatory activities

and post organization activities).

Sensitivity analysis – One-, two- and multi- way sensitivity analysis were conducted varying the following parameters to determine their impact on total costs, to assess how sensitive the results were to varying these parameters of the base-case analysis:

- **iv)** doubling the number of participants (because previous GONAs had those numbers);
- **v)** excluding location event costs; and
- **vi)** lower cost of living (since California has a high cost of living, percentage factor was applied to total costs to reduce the general cost of living, equivalent to Oklahoma, for example).

6.E.2.) Quantitative Statistical Analyses

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Adults 18-28 who completed a Youth GONA ages 12-17]

In this economic evaluation, we: (i) evaluated the long term ('down-stream') impact of the GONA on the cultural connectedness and quality of life of Indigenous adults; and (ii) assessed the cost-effectiveness of the GONA program included any healthcare service utilization savings.

We were interested in between group differences [GONA and non-GONA] in the measures listed below.

1)	Cultural Connectedness Scale-CA	29 items
2)	SF-6Dv1 (Functional Status)	6 items
3)	CESD-10R (depression)	10 items
4)	CAGE-AID Substance Use risk [past 12 months]	4 items
5)	Healthcare Utilization Self Report	3+ items
6)	Life Changers Community Engagement	6 items
7)	HRQOL Health Days (physical & mental health)	4 items
8)	Satisfaction With Life	5 items

7. RESULTS (A-E)

7.A. QUANTITATIVE DATA FINDINGS

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17) Mean Scores (within Group)

2023 GONA	Pre-GONA (Baseline)	Post GONA (Day 4)	6 Month Follow-up	Difference Increase (Baseline-6 Mon)	% Increase (Baseline to 6-Mon
Cultural Connectedness Scale -CA	36.92	38.46	41	**4.08**	**11.05**
CCS-Spirituality [sub-scale]	10.54	12.31	11	**0.46**	**4.36**
CCS-Traditions [sub-scale]	10.85	10.89	13	**2.15**	**19.82**
CCS-Identity [sub-scale]	15.54	15.56	17	**1.46**	**9.40**
mHerth Hope Index	40.08	49.77	50.63	**10.55**	**26.32**
Home and Community Engagement	17.15	-	19.75	**2.6**	**15.16**

CCS-CA Score Range (10-50)
Herth Hope Index Score Range (12-60)
Home and Community Engagement Score Range (5 - 20)

2024 GONA	Pre-GONA (Baseline)	Post GONA (Day 4)	6 Month Follow-up	Difference Increase (Baseline-6 Mon)	% Increase (Baseline to 6-Mon
Cultural Connectedness Scale -CA	35.11	40.17	42.4	**7.29**	**20.76**
CCS-Spirituality [sub-scale]	10.33	11.5	11.6	**1.27**	**12.29**
CCS-Traditions [sub-scale]	10	11.67	13.7	**3.7**	**37.00**
CCS-Identity [sub-scale]	14.72	17	17.1	**2.32**	**15.76**
mHerth Hope Index	40.08	50.42	53.6	**4.88**	**12.18**
Home and Community Engagement	19.05		19.4	**0.35**	**1.84**

CCS-CA Score Range (10-50)
Herth Hope Index Score Range (12-60)
Home and Community Engagement Score Range (5 - 20)

2025 GONA	Pre-GONA (Baseline)	Post GONA (Day 4)	6 Month Follow-up	Difference Increase Baseline-Post GONA (End Day 4)	% Increase Baseline to Post GONA (End Day 4)
Cultural Connectedness Scale -CA	36.58	37.94	NA	**1.36**	**3.72**
CCS-Spirituality [sub-scale]	9.79	10.58	NA	**0.79**	**8.07**
CCS-Traditions [sub-scale]	11.16	11.42	NA	**0.26**	**2.33**
CCS-Identity [sub-scale]	15.63	15.95	NA	**0.32**	**2.05**
mHerth Hope Index	47.21	50.53	NA	**3.32**	**7.03**

CCS-CA Score Range (10-50)
Herth Hope Index Score Range (12-60)
6-Month Follow-up Not Implemented

Summary - These findings replicate findings in previous GONA research. Both the Cultural Connectedness Scale-CA scores [e.g., a Social Determinants of Health Measure] and Herth Hope Scores (e.g., measure for mental health and well-being) increased as a result of completing the GONA (Post CCS scores) and remain above baseline when re-measured at 6-months. Home and Community Engagement scores (e.g., a measure for community engagement and empowerment/confidence) increased between baseline and 6-month follow-up.

7.A. QUANTITATIVE DATA FINDINGS

STUDY 2 – Youth GONA 2023 Cost Analysis

A prospective cost analysis was conducted according to established methods (Drummond et al., 2005; Gold et al., 1996). This analysis identified resources used in the planning and delivery of GONA. This entailed determining unit costs of these resources and the calculation of the total cost of the delivering GONA. Specifically, we **(a)** selected a time period for the analysis, **(b)** counted the participants served during the time period, **(c)** categorized costs, **(d)** conducted and inventory of resources consumed in specific units, (d) estimated cost per unit of each resource type, calculated total costs of delivering GONA, and expressed this on a per participant basis, and (e) conducted one-way and multi-way sensitivity analysis to determine what the costs of GONA would be given different circumstances and to check that results are robust.

The cost analysis was conducted from the payer's perspective (any indirect costs, such as productivity losses, and out of pocket expenses (e.g., travel, elder care, childcare) were excluded from this analysis, as were any costs associated with conducting the cost evaluation. All costs were expressed in 2023 US dollars. This report addresses only the determination of GONA programmatic costs and does not present data related to GONA evaluation resources or program effectiveness or benefits. **See: Costs and the Sensitivity Analyses are illustrated in the Table below.**

Inventory of resources – For the prospective cost data collection, GONA staff completed forms to record time and resources allocated to the implementation of GONA. The forms contained information about **a)** GONA personnel time for both planning and delivery, **b)** personnel compensation and facility costs, and **c)** intervention materials, administration and other costs.

Sensitivity analysis – One-, two- and multi- way sensitivity analysis were conducted varying the following parameters to determine their impact on total costs, to assess how sensitive the results were to varying these parameters of the base-case analysis: **i)** doubling the number of participants; **ii)** excluding location event costs; and lower cost of living (since California has a high cost of living, percentage factor was applied to total costs to reduce the general cost of living, equivalent to Oklahoma, for example).

Rational for Analyses: a) Doubling the number of participants, b) Excluding rent/location costs, and c) Lower costs of living.

These calculations were conducted for the following- reasons:

1. NAHC's 2023 GONA had 13 participants; whereas, in the past for the numbers (pre-COVID) were typically around 26 or more.
2. NAHC does not have the camping/overnight facilities; whereas, other organizations or communities may have them and not need to rent.
3. The San Francisco Bay area is a high cost-of-living area. Thus, we did the SA based upon an other location in the United States with a lower cost-of-living.

GONA Costs			One-way SA		Multi-way SA
Cost Category*	Base case costs	SA** costs (**N = 26**) double # participants)	SA** costs (excl event location)	SA** costs (lower cost of living)	SA** costs (double # participants, excl event location, lower cost of living)
A. Costs of staff time					
i) Planning	$2,901.14	$2,901.14	$2,901.14	$1,728.68	$1,728.68
ii) Training	$13,054.61	$13,054.61	$1,121.95	$7,778.75	$668.52
iii) Event	$16,822.13	$16,822.13	$16,822.13	$10,023.67	$10,023.67
B. Supply costs for event	$1,700.90	$1,700.90	$1,700.90	$1,013.50	$1,013.50
C. Cost of event location rental	$9,112.04	$9,112.04	$9,112.04	$5,429.52	$5,429.52
D. Cost of travel to GONA event	$113.18	$113.18	$113.18	$67.44	$67.44
E. Facilities	$9,415.65	$9,415.65	$9,415.65	$5,610.43	$5,610.43
Total costs	**$53,119.65**	**$53,119.65**	**$41,186.99**	**$31,651.98**	**$24,541.76**
Cost per participant	**$4,086.13**	**$2,043.06**	**$3,168.23**	**$2,434.77**	**$943.91**
Cost/participant/day	**$1,021.53**	**$510.90**	**$792.06**	**$608.69**	**$235.98**
Cost/participant/day Excluding Training & Location Rental $	**$426.28 [n=13]**	**$212.66 [n=26]**		**$254.01[n=13]** **$127.00 [n = 26]**	

costs in 2023 USD; **SA = sensitivity analyses; number of participants (GONA 2023) N = 13 **N= 26**

[Note: SA was done for N = 26, because prior to COVID it was usual to have approximately 26 participants/GONA.

Notable Results of the 2023 GONA Cost Analyses

1. The actual cost per participant per day was $1,021. 53. (Based upon the 13 partipcipants.
2. Excluding the 'training and hotel/resort rental' expenses the actual cost/participant/day was $426.28.
3. The cost per participant per day would have been $210.66 with the more standard 26 participants and excluding the 'training and hotel/resort rental' expenses.
4. The calculated cost per participant per day, including all costs, but in a lower cost-of-living area (e.g., Oklahoma) was $608.69/day for **13** participants.
5. The calculated cost per participant per day, excluding 'training and hotel/resort rental expenses, and with **26 participants**, was $127.00.

7.A. QUANTITATIVE DATA FINDINGS

STUDY 3 – Adult Retrospective GONA Study – Economic Evaluation

Multiple linear regression
The model was adjusted for age, gender, and whether the individual lived on a reservation.

Outcome	GONA Estimate	p-value
CCS-Total	15.95	0.0002
Good Physical Health Days	-0.55	0.8293
Good Mental Health Days	1.29	0.6237
Limited Health Days	-4.54	0.0472

Table 1.

Differences in survey outcomes between GONA participants and those that did not participate in the GONA, using multiple linear regression

- With all other covariates remaining constant, a **GONA participant had, on average, a CCS-CA score of 15.95 points (p=0.0002) higher than those who did not participate in the GONA.**
- Holding other variables constant, a GONA participant experienced 0.55 days less of good physical health, compared to those who did not participate in a GONA, (not statistically significant p = 0.8293).
- Holding other variables constant, a GONA participant experienced 1.29 additional days of good mental health, compared to those who did not participate in a GONA (not statistically significant 0.6237).
- Holding covariates constant, individuals who participated in a GONA had, on average, 5 less days (p=0.047) where they experienced limitations when compared to those that did not participate.

Poisson and Negative binomial:
The model was adjusted for age, gender, and whether the individual lived on a reservation. The exponentiated estimate is the multiplicative change.

Outcome	GONA Estimate	Incidence Rate Ratio	p-value
Urgent Clinic Visits	-0.28	0.75	0.4400
Emergency Department Visits	-0.25	0.78	0.5246

Table 2. Incidence rate ratio of healthcare visits between GONA participants and those who did not participate in the GONA, using a Negative Binomial and Poisson distributions

- Participants in the GONA group experienced less urgent clinic visits by 25%, although not statistically significant.
- Participants in the GONA group experienced less Emergency Department visits by 22%, although not statistically significant.

Table 3. Combined results

Outcomes: Linear Regression	GONA Estimate	p-value
CCS-Total	15.95	0.0002
Good Physical Health Days	-0.55	0.8293
Good Mental Health Days	1.29	0.6237
Limited Health Days	-4.54	0.0472
Outcomes: Poisson and Binomial	**Incidence Rate Ratio**	**p-value**
Urgent Clinic Visits	0.75	0.4400
Emergency Department Visits	0.78	0.5246

Life Changers Tool (Community Engagement subscale)

- Participants in the GONA group had on average, a Life Changers score of 4.46 points higher than those in the non-GONA group. (p = 0.0001). The Life Changers Tool was developed by GONA experts and measures empowerment and connection to community.

Satisfaction With Life Scale (subjective measure of Wellbeing)

- Participants in the GONA group had, on average a Satisfaction With Life Scale score higher than the non-GONA group. (p =0314).

7.B. QUALITATIVE DATA FINDINGS

STUDY 1 – Youth Prospective GONA Study (Youth Ages 12-17)

Overview/Summary

- **All GONA facilitators/clinicians (GONA intervention staff) were previous Youth GONA participants. They all wanted to become GONA Facilitators/Clinicians because of their positive experiences in Youth GONAs and their recognition of the effectiveness of the GONA as both an individual and community-level intervention.**

- **GONA participants almost universally report that their experience with the GONA was very positive.** They felt welcomed, respected and understood by adults.

- **Most GONA participants indicated they would participate in the GONA again and that they plan to keep in touch with participants who were in their group.** (Author's note: participants are placed in groups of 5-8 to form a Clan for the activities. Previous GONA participants report ongoing communications with their Clan member 10 years after their Youth GONA.)

- The structure was viewed favorably, a nice mix of prepared activities and free time. The site was comfortable and relaxing; by and large was a nice change from home environments.

- They felt it was a safe place to express and hear ideas and emotions.

Examples of Frequent Youth GONA Participant Responses

What was the highlight of the day for you?	**What was one part of the day that was challenging for you?**
• The 3 T's: talk, treat, touch [be respectful and don't let people be disrespectful] • Being able to come and hear everyone's story • Everybody crying with love and joy • How everyone came together to support each other when we were feeling down during the talking circle • Seeing everybody be comfortable enough to show their emotions • Being able to connect with others on a different level • Burning all the negative things at the fire. [Author's note – this was part of the healing intervention.] • Making my gift to give • Letting go of all my negatives • Talking with my new Clan. • **The community coming together. Everyone laughing**	• To let out my emotions. Letting go of certain things • Not getting scared and running to the dorm • Seeing other people cry • Talking about big feelings I've had • Making a list of things to improve • Something that challenged me was the feather wrapping

What was one thing you learned from today's activities?	**In what ways has the GONA changed your point of view?**
• It is ok to say no • To work as a group. Working together. • That I'm not alone and there are people like me. • That this is a trusted space. That this is a safe space. • Everyone is supportive - no matter what • I learned to collaborate and learned more about my peers. • To open up to others without being judged. • I got to understand people better and speak how I feel. • Crying. I never cry so this was weird that I felt so comfortable to cry • It is ok to be vulnerable. Take a chance. To let go • To show kindness. To communicate better • Never take drugs from people • The purpose of smoke in Native rituals. • The 3 T's: talk, treat, touch [be respectful and don't let people be disrespectful] • **I would like to come again**.	• I am able to understand others point of view and can grasp the situation better. • I am able to open up to people. That it is ok to express your emotions. • It made me more comfortable around people I just met. • GONA has changed the ways I think about negative & positive energy & how other people's emotions belong to other people, not me. • Changed my point of view by discussing my emotions and that they are valid. • It changed how I see Native Medicine. • Change my view by teaching me about being Native.

Examples of Frequent Youth GONA Participant Responses [continued]

What do you think will change your life or behaviours because of GONA?

I think my habits (bad habits) will change. My way of making decisions and my overall view on day to day life and day to day decision-making.
How I improve myself & think about my & other's actions & emotions.
I have more patience and I feel that I was able to break out of my shell.
Not being disrespectful to my parents like talking back.
Viewing people differently
Ability to meet more people.
I want to start burning medicine and going to Pow Wows

DISCUSSION AND CONCLUSION

Empirical Evidence Demonstrating Native/Indigenous Culture is a Social-Determinant of Health

Large sample studies in Canada and California [N_{total} = 1,304) using the validated Cultural Connectedness Scale instruments have found that increased connection to Indigenous culture is associated with: 1) better: mental health, physical health, life satisfaction, self-efficacy, hope; and 2) decreased risk for: depression, substance use disorder, and suicide as measured by well-known validated instruments: 1) Satisfaction With Life Scale; 2) Sense of Self in the Present and Future; 3) AMHS-IV Self Efficacy Scale; 4) Herth Hope Index; 5) Health Related Quality of Life 14; 6) CESD-R; and 7) CAGE-AID (Snoweshoe, 2015; Snowshoe, 2017, Masotti, 2020; Masotti, 2023).

For Native Americans/Indigenous peoples, the loss of culture is then a risk factor for poor health and social outcomes; whereas, re-connecting is protective on multiple levels. **A powerful characteristic of the GONA is that it is considered to be a 'Cultural Booster Shot 'and the evidence is clear that Native/Indigenous Culture is a powerful Social-Determinant of Health**. This in part, helps explain the longevity of the GONA (practiced for decades) and that it is delivered in multiple countries that experienced colonization,

The GONA as an Effective Determinant of Health Vehicle

Studies 1 and 3 presented in this report provide clear evidence that the 4-Day GONA intervention strengthens culture or connection to Indigenous culture:

1) in the short term (e.g., immediately after completing a GONA);
2) continuing through 6-months after the GONA; and
3) longer term, continuing into early adult years.

Given the above, the GONA demonstrably taps into Native American/Indigenous culture as an effective Social-Determinant of Health. In addition, given that Native/Indigenous culture can be measured with validated instruments, we can assert that increased strength or connection to Native/Indigenous culture is both: 1) an important intervention objective; and 2) a viable health outcome measure.

Key Take Home Messages from the Three Studies

- **STUDY 2 – Adult Retrospective GONA Study [Adults 18-28 who completed a Youth GONA] The results of this study may be the most important result of the evaluation of the GONA as a Native American/Indigenous Intervention (CDEP) as this demonstrates the mental health benefits of participating in a Youth GONA (ages 12 -17) extend 10 year or more into the future.**

- **The results from STUDY 2 (Cost Analysis, cost/participant/day), when combined with STUDY 1 & 2 suggests an economic evaluation of the GONA, when compared to Western modalities (e.g., inpatient rehab stays, or acute care stay), would be cost-effective and/or have a good cost-benefit ratio**. [***Note - Econ Eval is still in progress.***]

- **GONAs are well received by participants who often refer the next generation to a GONA based upon their experiences and perceptions of good outcomes.**

- **Youth GONA participants are very likely to want to be trained to become a GONA facilitator when they are adults.**

- **Participating in a Youth GONA was associated with: a) increased strengthening of Indigenous Culture (i.e., a social determinant of health); and b) improved mental health, hope, empowerment, and well-being on multiple measures that is sustained 6 months post intervention.**

- **A positive dose-response was observed.** More GONAs was associated with increased CCS scores. This was observed in previous Youth GONA studies.

What do we know about CDEPs and why they are important?

CDEPs address an inherent characteristic of the healthcare system and medical model in the United States where the system/model was developed by the dominant culture for the dominant culture and thus is rooted in historically ineffective and sometime racist practices towards those diverse non-dominant populations. Generations of health inequities experienced by these populations support this assertion.

Increased integration of CDEPs (such as the GONA) has the potential to address health inequities, increase patient/client satisfaction, improve non-Native clinicians ability to treat/serve and thus increase overall system capacity.

Community Defined Evidence Practices were developed by specific communities for the communities and are entrenched in knowledge and characteristics of the communities, including: a) what is important; b) what works or doesn't work; c) when and why to do it; d) who are best positioned to deliver the CDEP; e) what are the important credentials of CDEP providers; f) what are the important/known/intended outcomes; and g) how to evaluate based upon culture specific values and epistemologies.

Some CDEPs, such as Native American culture-based CDEPs, effectively deliver all of primary, secondary and tertiary prevention strategies and are known to provide benefits at multiple levels such as individual, family and community. It is also known that some Native American CDEPs have been practiced for generations or in the case of the GONA are designed based upon principals/practices observed and known to work for hundreds of years. **Research also indicates that Native Americans/Indigenous people want increased access to 'traditional Native' healing/health practices (i.e., Indigenous CDEPs) in healthcare. For example, a recent Native-specific urban Needs Assessment project (N = 544) with 169 Tribal affiliations reported, found that 78% of respondents wanted increased access in their healthcare and that 51.3% reported not wanting to return for care because the providers/staff did not understand or respect their Native/Indigenous culture (Wheeler et al, 2023).**

It can also be argued that an 'Evidence-based Practice'[EBP] is then by default a CDEP in that an EBP is defined/credentialed/evaluated by one community (i.e., the dominant or more powerful community); whereas a CDEP is defined, credentialed, and evaluated by other communities (i.e., those historically less powerful or non-dominant communities (Masotti, 2024).

POLICY IMPLICATIONS

- **There is a need and value for the dominant culture (e.g., government and healthcare) to better understand and accept Native epistemologies and approaches to delivering and *evaluating Indigenous health/healing practices and interventions like the GONA.***

- **Health Inequity - Increased integration of Native/Indigenous CDEPs into healthcare has the potential to address health inequities experienced by Native Americans.** Research is clear that Indigenous culture(s) are powerful determinants of health.

- **Native Americans/Indigenous Peoples want increased access to traditional Indigenous health practices/healers and culture-based practices (i.e. CDEPs) in their healthcare.**A Native-specific Needs Assessment study (N = 544) with 169 Tribal affiliations reported, found that 78% of respondents wanted increased access to traditional health practices and community-based healers. 51.3% reported not wanting to return for care because the providers/staff did not understand or respect their Native/Indigenous culture (Wheeler et al, 2023). ***We hypothesize that research among other BIPOC & LGBTQ communities would demonstrate the same results***.

- **Integration of CDEPs into healthcare has the potential to address current health system weaknesses while also increasing effectiveness, client satisfaction, patient outcomes, and overall system capacity.**

- **These studies and the growing Culture is Prevention evidence base supports the assertion that for Native Americans/Indigenous peoples, increased strength in or connection to or reclaiming of their culture(s) is a more important intervention objective and health outcome measure than minor changes to risky behaviours that are typical outcomes measures in similar mental health/well-being research.**

  To quote Janet King: "Health is embedded in our culture".

PERSONSL STATEMENT – Lead Author: Paul Masotti, PhD, MS.HSA, BA, BPHE

I have had the opportunity to observe (as a researcher/evaluator) 4 Youth GONAs and to have interviewed adult GONA graduates and adults who later became trained GONA facilitators because of their conclusion of the high value and effectiveness of the GONA upon health and well-being for Native American/Indigenous people.

My understanding of the GONA is that it is very unique and powerful intervention that produces long-term benefits to the individuals, their families and their communities. The GONA has the ability to address all of primary, secondary and tertiary preventions. I did not see this comprehensive and effectiveness in my positions (in my previous life) working with Youth in two acute care psychiatric facilities. For example, GONA participants are proud to meet their GONA clinicians in public and years down the road. And adult GONA graduates often bring their youth to their first GONA.

CHALLENGES

Scheduling and 4-Day Overnight Youth GONAs: The Youth GONAs delivered by NAHC have typically been 4-Day overnight interventions. While this brings strengths to the GONA during implementation that definitely works best with youth aged (12-17) participants. It also creates challenges with scheduling during school or summer vacations.

GONA Facilitator Training and Costs: GONA facilitators typically participate in a few youth or adult GONAs then complete a separate full 4-day GONA 'Training of Facilitators' program. If the training is provided by SAMHSA's Tribal Tech, the cost per community could be $1,000 -$2,000 per day depending upon how many are being trained.

GONA Setting for Youth GONA's: NAHC has found that, particularly for an urban dwelling native diaspora, that GONAs in a camp/wilderness environment works best. This is because of the natural Indigenous spiritual connecting to land and nature. However, this presents challenges with additional intervention costs and finding available locations – if the Native Health Organization does not have it's own wilderness location.

LIMITATIONS

We did not have a Youth GONA Control Group or conduct an RCT – or wait-listed design. RCTs are not consistent with Native Evaluation approaches. However, a prospective wait-listed approach would work if we had more time needed to conduct the 4-day overnight GONAs. Note – that we did have an Adult Retrospective Study Control Group

Practical or theoretical importance of findings

These studies indicate the GONA framework and process can be an important component for individual and community healing, is generalizable for use across different communities, and can impact individual, family, system, and entire community change.

Future Research

- It is recommended that future research focus on longer term follow-up studies.
- More research on mental health short and long-term outcomes among elders.

REFERENCES

Aragon, Barbara, Albert Titman Sr, Julie Fuentes, Crystal Salas, Anthony Lopez, Ruben Garcia, Arianna Antone-Ramirez, Candace Fleming, and Jami Bartgis. "Measuring Implementation Fidelity for the Gathering of Native Americans (GONA)." *American Indian & Alaska Native Mental Health Research: The Journal of the National Center* 32, no. 1 (2025). https://openurl.ebsco.com/EPDB%3Agcd%3A8%3A2383240/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A183975745&crl=c&link_origin=scholar.google.com

Adekson, Mary Olufunmilayo. "Similarities and Differences Between Yoruba Traditional Healers (YTH) and Native American and Canadian Healers (NACH)." Journal of Religion and Health, vol. 55, no. 5, 2016, pp. 1717–1728., www.jstor.org/stable/24735455. Accessed 4 May 2021.

Adekson, M. O. (2013). Native American and Canadian medicine man, healers and helpers. Saarbrucken: Lap Lambert Academic Press.

Barnett, Jodi D, Schmidt, Tara C, Trainor, Bridie, & Wexler, Lisa. (2020). A Pilot Evaluation of Culture Camps to Increase Alaska Native Youth Wellness. *Health Promotion Practice*, *21*(3), 363–371. https://doi.org/10.1177/1524839918824078

Barraza, R., Bartgis, J., & Fresno Youth Council (2016). Indigenous youth-developed self- assessment: The Personal Balance Tool. American Indian Alaska Native Mental Health Research 23(3):1-23. doi: 10.5820/aian.2303.2016.1.

BigFoot, D., & Schmidt, S. R. (2009). Science-to-practice: Adapting an evidence based child trauma treatment for American Indian and Alaska native populations. *International Journal of Child Health and Human Development*, *2*, 33–44.

Brave Heart, M. Y. H., & DeBruyn, L. M. (1998). The American Indian holocaust: Healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research*, *8*(2), 56-78. http://dx.doi.org/10.5820/aian.0802.1998.60

Brave Heart, M. Y. H., Chase, J., Elkins, J., & Altschul, D. B. (2011). Historical trauma among Indigenous peoples of the Americas: Concepts, research, and clinical considerations. *Journal of Psychoactive Drugs*, *43*(4), 282-290. http://dx.doi.org/10.1080/02791072.2011.628913

Brazier JE, Roberts J. The estimation of a preference-based measure of health from the SF-12. Med Care. 2004;42:851–9.

Brook, D. (1998). Environmental Genocide: Native Americans and Toxic Waste. *The American Journal of Economics and Sociology*, *57*(1), 105–113. https://doi.org/10.1111/j.1536- 7150.1998.tb03260.x

Brown-Rice, Kathleen. (2013). Examining the Theory of Historical Trauma Among Native Americans. *The Professional Counselor (Greensboro, N.C.)*, *3*(3), 117–130. https://doi.org/10.15241/kbr.3.3.117

Centers for Disease Control and Prevention. Health-Related Quality of Life (HRQOL). https://www.cdc.gov/hrqol/faqs.htm Accessed March 21, 2022.

Chandler MJ, Lalonde C. Cultural Continuity as a Hedge against Suicide in Canada's First Nations. Transcult Psychiatry [Internet]. 1998 Jun [cited 2024 Aug 25];35(2):191–219. Available from: http://journals.sagepub.com/doi/10.1177/136346159803500202

CRDP Strategic Plan, Native American Population Report *Native Visions: A Focus on Improving Behavioral Health Wellness for California Native Americans. March 2012.* https://www.cdph.ca.gov/programs/Documents/07_CRDP%20Population%20Report%20Fact%2 0Sheet-Color.pdf Accessed September 17, 2015.

Czyzewski, K. (2011). Colonialism as a Broader Social Determinant of Health. *The International Indigenous Policy Journal,* 2(1) . Retrieved from: https://ir.lib.uwo.ca/iipj/vol2/iss1/5 **DOI:** 10.18584/iipj.2011.2.1.5

Drummond MF, Sculpher MJ, Claxton K, Stoddart GL, Torrance GW. Methods for the Economic Evaluation of Healthcare Programmes. New York: Oxford University Press; 2005.

Earle, K. A. (1998). Cultural diversity and mental health: The Haudenosaunee of New York State. Social

Elamoshy, R., Bird, Y., Thorpe, L.U., Moraros, J. (2018). Examining the association between diabetes, depressive symptoms, and suicidal ideation among Aboriginal Canadian peoples living off-reserve: a cross-sectional, population-based study. Diabetes Metab Syndr Obes, 11: 767–780. doi: 10.2147/DMSO.S184058

Fenelon, James V, & Trafzer, Clifford E. (2014). From Colonialism to Denial of California Genocide to Misrepresentations. *The American Behavioral Scientist (Beverly Hills)*, *58*(1), 3–29. https://doi.org/10.1177/0002764213495045

Garcia, Jessica L. (2020). Historical Trauma and American Indian/Alaska Native Youth Mental Health Development and Delinquency. *New Directions for Child and Adolescent Development*, *2020*(169), 41–58. https://doi.org/10.1002/cad.20332

George J, MacLeod M, Graham K, Plain S, Bernards S, Wells S. Use of Traditional Healing Practices in Two Ontario First Nations. Journal of Community Health. 2018;43(2):227-237. doi:10.1007/s10900-017-0409-5

Gold MR, Siegel JE, Russell LB, Weinstein MC. Cost-effectiveness in health and medicine. New York: Oxford University Press; 1996.

Goodkind, Jessica R, Gorman, Beverly, Hess, Julia Meredith, Parker, Danielle P, & Hough, Richard L. (2015). Reconsidering Culturally Competent Approaches to American Indian Healing and Well-Being. *Qualitative Health Research*, *25*(4), 486–499. https://doi.org/10.1177/1049732314551056

Gone, Joseph P. (2011). The Red Road to Wellness: Cultural Reclamation in a Native First Nations Community Treatment Center. *American Journal of Community Psychology*, *47*(1), 187–202. https://doi.org/10.1007/s10464-010-9373-2

Grayshield, Lisa, Rutherford, Jeremy J, Salazar, Sibella B, Mihecoby, Anita L, & Luna, Laura L. (2015). Understanding and Healing Historical Trauma: The Perspectives of Native American Elders. *Journal of Mental Health Counseling*, *37*(4), 295–307. https://doi.org/10.17744/mehc.37.4.02

Harjo, S. (2004). Keynote Address: The American Indian Religious Freedom Act: Looking Back and Looking Forward. *Wicazo Sa Review, 19*(2), 143-151. Retrieved August 7, 2021, from http://www.jstor.org/stable/1409504

Harjo, S.S. (Sept 12, 2018). Harjo: American Indian Religious Freedom Act at 25; Updated. Indian Country Today. Retrieved on August 11, 2021 from https://indiancountrytoday.com/archive/harjo-american-indian-religious-freedom-act-at-25

Hartmann, William E, & Gone, Joseph P. (2012). Incorporating Traditional Healing Into an Urban American Indian Health Organization: A Case Study of Community Member Perspectives. *Journal of Counseling Psychology*, *59*(4),

542–554. https://doi.org/10.1037/a0029067

Herth, K. (1992). Abbreviated instrument to measure hope: Development and psychometric evaluation. Journal of Advanced Nursing, 17(10), 1251-1259. https://www.ncbi.nlm.nih.gov/ pubmed/2063043

Herth KA. The relationship between level of hope and level of coping response and other variables in patients with cancer. In Oncology Nursing Forum 1989 Jan 1 (Vol. 16, No. 1, pp. 67-72). https://europepmc.org/abstract/med/2911529

Kaye Herth PhD RN. Development and refinement of an instrument to measure hope. Research and theory for nursing practice. 1991 Apr 1;5(1):39. https://search.proquest.com/ openview/26bef71b4e3dbf8f219016254b790c3f/1?pq-origsite=gscholar&cbl=28849

Hodge, David R, Limb, Gordon E, & Cross, Terry L. (2009). Moving from Colonization toward Balance and Harmony: A Native American Perspective on Wellness. *Social Work (New York)*, *54*(3), 211–219. https://doi.org/10.1093/sw/54.3.211

Honoring Innovations Report.(HIR) A Newsletter for Systems of Care Communities in Indian Country. Issue #5, March 2012 http://www.nicwa.org/mental_health/SystemsOfCare/documents/GONABPNewsletterMarch201 2.pdf Accessed September 17, 2015.

King, J. Masotti, P., Dennem, J., Hadani, S., Linton, J., Lockhart, B., & Bartgis, J. (2019). The Culture is Prevention Project: Adapting the Cultural Connectedness Scale for Multi-Tribal Communities, Journal of American Indian and Alaska Native Mental Health Research, 26 (3), 104. 135. doi: 10.5820/aian.2603.2019.104.

King, P.E., Vaughn, J.M., Yoo, Y., Tirrell, J.M., Dowling, E.M., Lerner, R.M., Geldhof, G.J., Lerner, J.V., Iraheta, G., Williams, K., & Sim, A.T.R. (2020). Roles of Spirituality and Social Connections among Salvadoran Youth. Religions, 11, 75. doi:10.3390/rel11020075

Kirmayer, L., Simpson, C., & Cargo, M. (2003). Indigenous Populations Healing traditions: culture, community and mental health promotion with Canadian Aboriginal peoples. *Australasian Psychiatry*, *11*, S15. https://doi-org.hmlproxy.lib.csufresno.edu/10.1046/j.1038- 5282.2003.02010.x

Knight RG, Williams S, McGee R, Olaman S. Psychometric properties of the Centre for Epidemiologic Studies Depression Scale (CES-D) in a sample of women in middle life. Behaviour research and therapy. 1997 Apr 1;35(4):373-80. DOI: 10.1016/s0005-7967(96)00107-6

Kraus, C., Bartgis, J., Lahiff, L., Auerswald, C.L. (2017). The Gathering of Native Americans Intervention, Hope and Meaningful Relationships for Urban American Indian Adolescents in California, Journal of Adolescent Health, Platform Research Presentations: Cultivating Connections, 60 (2), Supplement 1, doi: https://doi.org/10.1016/j.jadohealth.2016.10.024

Leonardson GR, Ness FK, Daniels MC, Kemper E, Koplin BA, Leonardson GA. Validity and reliability of the audit and CAGE-AID in Northern Plains American Indians. Psychological reports. 2005 Aug;97(1):161-6. doi:10.2466/pr0.97.1.161-166

Madley, Benjamin. (2019). California's Yuki Indians Defining Genocide in Native American History. *California History (San Francisco)*, *96*(4), 11–37. https://doi.org/10.1525/ch.2019.96.4.11

Masotti P. The Value of Integrating Community-defined Evidenced Practices (CDEPs) and why the California Reducing Disparities Project (CRDP) is innovative, important and timely. Native American Health Center; 2024 Dec.

Masotti P, Dennem J, King J, Bañuelos K, Valerio-Leonce G, Hadani S, Patel C, Seneca C. Promoting culture, a social determinant of health for Native Americans is a must to promote health equity and social justice. In APHA's 2020 VIRTUAL Annual Meeting and Expo (Oct. 24-28) 2020 Oct 28. APHA. https://apha.confex.com/apha/2020/meetingapi.cgi/Paper/462638?filename=2020_Abstract462638.html&template=Word

Masotti P, Dennem J, Bañuelos K, Seneca C, Valerio-Leonce G, Inong CT, King J. The Culture is Prevention Project: measuring cultural connectedness and providing evidence that culture is a social determinant of health for Native Americans. BMC Public Health. 2023 Apr 21;23(1):741.

Masotti, P., Dennem, J., Hadani, S., Banuelos, K., King, J., Linton, J., Lockhart, B., & Patel, C. (2020). The Culture Is Prevention Project: Measuring Culture as a Social Determinant of Mental Health For Native/Indigenous Peoples. Journal of American Indian and Alaska Native Mental Health Research, 27 (2), 86-111. doi: 10.5820/aian.2701.2020.86

Matheson, K., Bombay, A., & Anisman, H. (2018). Culture as an ingredient of personalized medicine. *Journal of Psychiatry & Neuroscience*, *43*(1), 3–6. https://doi.org/10.1503/jpn.170234

Mills, P.A. (2003) Incorporating Yup'ik and Cup'ik Eskimo Traditions Into Behavioral Health Treatment, Journal of Psychoactive Drugs, 35:1, 85-88, DOI: 10.1080/02791072.2003.10399998

Moorehead Jr, Virgil D, Gone, Joseph P, & December, Damia. (2015). A Gathering of Native American Healers: Exploring the Interface of Indigenous Tradition and Professional Practice. *American Journal of Community Psychology*, *56*(3), 383–394. https://doi.org/10.1007/s10464- 015-9747-6

Moriarty DG, Zack MM, Kobau R. The Centers for Disease Control and Prevention's Healthy Days Measures–Population tracking of perceived physical and mental health over time. Health and quality of life outcomes. 2003 Dec;1(1):1-8. doi:10.1186/1477-7525-1-37

Pavot W, Diener E. The satisfaction with life scale and the emerging construct of life satisfaction. The journal of positive psychology. 2008 Apr 1;3(2):137-52. The Satisfaction with Life Scale and the emerging construct of life satisfaction: The Journal of Positive Psychology: Vol 3, No 2 (tandfonline.com)

Piccard, Ann. (2013). Death by boarding school: "the last acceptable racism" and the United States' genocide of Native Americans. *Gonzaga Law Review*, *49*(1), 137.

Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. Applied psychological measurement. 1977 Jun;1(3):385-401.

Räsänen P, et al. Use of quality-adjusted life years for the estimation of effectiveness of health care: a systematic literature review. Int J Technol Assess Health Care. 2006;22:235–41.

Roberts RE, Vernon SW, Rhoades HM. Effects of language and ethnic status on reliability and validity of the Center for Epidemiologic Studies-Depression Scale with psychiatric patients. Journal of Nervous and Mental Disease. 1989 Oct. https://doi.org/10.1097/00005053-198910000-00001

Skewes, M.C. & Blume, A.W. (Jan. 2019). Understanding the Link Between Racial Trauma and Substance Use among American Indians. American Psychologist, 74(1): 88–100. doi: 10.1037/amp0000331

Substance Abuse and Mental Health Services Administration (SAMHSA; 2020). Results from the 2019 National Survey on Drug Use and Health: Mental Health Detailed Tables. Table 8.39B. Retrieved on August 11, 2021 from https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=39

SAMHSA. Gathering of Native Americans Fact Sheet.
https://www.samhsa.gov/sites/default/files/tttac_gona_fact_sheet_1.pdf

Kraus, C., Bartgis, J., Lahiff, L., Auerswald, C.L. (2017). The Gathering of Native Americans Intervention, Hope and Meaningful Relationships for Urban American Indian Adolescents in California, Journal of Adolescent Health, Platform Research Presentations: Cultivating Connections, 60 (2), Supplement 1, doi: https://doi.org/10.1016/j.jadohealth.2016.10.024

Suhr-Sytsma, M. (2013). In the Light of Reverence and the Rhetoric of American Indian Religious Freedom: Negotiating Rights and Responsibilities in the Struggle to Protect Sacred Lands. *Wicazo Sa Review*, *28*(2), 60–86. https://doi.org/10.5749/wicazosareview.28.2.0060

Snowshoe A, Crooks CV, Tremblay PF, Craig WM, Hinson RE. Development of a Cultural Connectedness Scale for First Nations youth. Psychological Assessment. 2015 Mar;27(1):249. http://dx.doi.org/10.1037/a0037867

Snowshoe A, Crooks CV, Tremblay P, Hinson RE. Cultural connectedness, and its relation to mental wellness for First Nations youth. The Journal of Primary Prevention. 2017 Apr;38(1):67-86. https://link.springer.com/article/10.1007/s10935-016-0454-3

Struthers, R & Lowe, J. (2003). Nursing in the Native American Culture and Historical Trauma. *Issues in Mental Health Nursing*, *24*(3), 257–272. https://doi.org/10.1080/01612840305275

Walters, K. L., Beltran, R., Huh, D., & Evans-Campbell, T. (2011a). Dis-placement and dis-ease: Land, place, and health among American Indians and Alaska Natives. In L. M. Burton, S. A. Matthews, M. Leung, S. P. Kemp, & D. T. Takeuchi (Eds.), *Communities, neighborhoods, and health: Expanding the boundaries of place.* New York, NY: Springer. https://dx.doi.org/ 10.1007/978-1-4419-7482-2_10

Walters, K. L., Mohammed, S. A., Evans-Campbell, T., Beltrán, R. E., Chae, D. H., & Duran, B. (2011b). Bodies don't just tell stories, they tell histories: Embodiment of historical trauma among American Indians and Alaska Natives. *Du Bois Review: Social Science Research on Race*, *8*(1), 179-189. https://doi.org/10.1017/S1742058X1100018X

Weaver, Hilary. (2004). The Elements of Cultural Competence: Applications with Native American Clients. Journal of Ethnic and Cultural Diversity in Social Work. 13. 19-35. 10.1300/J051v13n01_02.

Westermeyer, J. (July, 1971. Disorganization: Its Role in Indian Suicide Rates. *American Journal of Psychiatry*, 128(1), p. 123

Whitbeck, L.B., Adams, G.W., Hoyt, D. R., Chen, X. (2004), Conceptualizing and Measuring Historical Trauma Among American Indian People, American Journal of Community Psychology, 33(3-4):119-30.DOI: https://doi.org/10.1023/B:AJCP.0000027000.77357.31

Van Gestel-Timmermans H, Van Den Bogaard J, Brouwers E, Herth K, Van Nieuwenhuizen C. Hope as a determinant of mental health recovery: a psychometric evaluation of the Herth Hope Index-Dutch version. Scandinavian journal of caring sciences. 2010 Dec;24:67-74. http://dx.doi.org/10.1111/j.1471-6712.2009.00758.x Walter, M

Wheeler B, Mack H, Masotti P, Guzman A. A medicine bundle for urban native people: Culturally-based care offers a path to health equity. APHA 2023 Annual Meeting and Expo 2023; 2023 Nov 12; Atlanta.

Yaghoobzadeh, A., Soleimani, M.A., Allen, K.A., Chan, Y.H., & Herth, K.A. (2017). Relationship Between Spiritual Well-Being and Hope in Patients with Cardiovascular Disease. Journal of Religion and Health, 57, 938-

950. DOI: 10.1007/s10943-017-0467-0

LIST OF APPENDICIES

BMC Public Health

RESEARCH

Open Access

The Culture is Prevention Project: measuring cultural connectedness and providing evidence that culture is a social determinant of health for Native Americans

Paul Masotti[1*], John Dennem[2], Karina Bañuelos[1], Cheyenne Seneca[1], Gloryanna Valerio-Leonce[1], Christina Tlatilpa Inong[3] and Janet King[1]

Abstract

Background It is important for non-Native persons to understand that the meaning of culture to Native American/Indigenous Peoples is not about esteem, taste or music but rather is described as a cognitive map on how to be. Native American/Indigenous culture can be thought of as all the things and ways in which Native/Indigenous people understand who they are, where they come from and how they are to interact with others. Hundreds of years across many generations have taught that culture-based activities and interventions improve Native/Indigenous health and wellbeing. We explore if increased Native American culture/cultural connectedness is associated with better mental health/well-being and physical health.

Methods We analyzed data from a two-phased study ($N = 259$ and $N = 102$) of 361 urban Native Americans in California (2018–2021). The 29 items validated Cultural Connectedness Scale-California (CCS-CA) measured Native culture/cultural connectedness. Mental health/well-being and physical health were assessed using the: modified Herth Hope Index (mHHI), Satisfaction with Life (SWL), Center for Epidemiologic Studies Depression Scale-Revised (CESD-R-10), Substance Abuse (CAGE-AID), and Health Related Quality of Life (HRQOL). We conducted Pearson correlations and stepwise regression analyses with CCS-CA as the independent (predictor) variable to explore our main research questions: 1) Is increased Native American/Indigenous culture associated with: 1) better mental health/well-being; and 2) better physical health?

Results Increased Native/Indigenous culture (CCS-CA scores) is significantly associated with better mental health/well-being (mHHI, $p < .001$) and satisfaction with life (SWL, $p < .001$) predicts good physical health days (HRQOL, $p < .001$). Increased connection to Native American/Indigenous culture (CCS-CA scores) is significantly associated with decreased risk for depression (CESD-R-10, $p < .0$) and substance abuse and (CAGE-AID, $p < .07$). Significant results for culture as protective against risk for substance abuse (CAGE-AID) was most likely affected (p value approaching significance) due to an error in language on the measure (i.e., created double negative).

Conclusions Native American/Indigenous culture is a predictor of improved outcomes for mental health/well-being and physical healthy days. Native culture is an important social determinant of health. We add to the evidence

*Correspondence:
Paul Masotti
paulm@nativehealth.org
Full list of author information is available at the end of the article

that Native/Indigenous culture (i.e., cultural connectedness) be considered an important intervention objective and health-related outcome measure.

Keywords Native American, Indigenous, Culture, Mental health, Physical health, Determinant of health, Prevention

Introduction

This paper describes results from the multi-phased Culture is Prevention Project which has a primary aim of exploring the link between Native American/Indigenous culture and health outcomes. Enshrined in the Culture is Prevention project is the recognition that for Native Americans/Indigenous Peoples, culture is a social determinant of spiritual, mental, emotional, physical and community health.

Prior to colonization, Native Americans across North America maintained health and wellness since time immemorial through culturally based practices. According to Indigenous worldviews, the environment, mind, body, and emotional health are inextricably linked to collective human behavior, practices, wholeness, and, hence, wellness [1, 2]. Unfortunately, colonization and government policy had a devastating impact on eroding Native culture resulting in the subsequent impact on ill health [3, 4]. Examples include the removal from traditional lands, loss of ways of life, disruption of the practice of culture, removing children from homes for involuntary attendance at Boarding Schools where they were punished for speaking their languages or 'behaving Native' and removing Native children from their families via our Child Welfare system and making it illegal to practice Native culture [3–6]. Health and social consequences of colonization include: i) multi-generational trauma; ii) loss of land and culture; iii) high prevalence rates for chronic disease, suicide, and substance abuse; and iv) poor social outcomes such as homelessness, unemployment, family violence, and incarceration [7–13]. Historical and ongoing impacts of colonization continue to plague Indian Country in ways that aim to break apart Native communities from cultural practices.

What is the meaning of Culture to Native Americans and why is this important for Non-Native persons to understand?

The meaning of culture to Native Americans is an imperative foundation that non-Native people need to understand, and is well described by Seneca (2020):

> *"Culture for Native Americans is not about esteem, taste, or music but rather a cognitive map on how to be. Culture can be thought of as all the things and ways in which Native people understand who they are, where they come from and how they are to interact with others. Native Americans learn these principles including beliefs, values, and behavior from traditional stories, ceremony and language instructed by family and community.*
>
> *It is important for Native people to engage with core elements of culture (e.g., creation stories/mythology, ceremony, and language) because it promotes intergenerational transmission of historical and traditional knowledge, positive identity development of youth, and a strengthening of social ties within families (i.e., interdependence). Hundreds of years across many generations have taught us that culture-based activities & interventions improve our health & well-being [14]."*

Indigenous approaches to assessing cultural connectedness, physical health and mental health/well-being

Native American/Indigenous peoples have known for generations that health is embedded in their cultures. This means for Native/Indigenous peoples, that culture is determinant of health, and that loss of culture is a risk factor; whereas strengthening, reconnecting or reclaiming is protective on multiple levels. The extant research has provided strong evidence supporting the above assertion. Chandler and LaLonde [15], in a 5-year multi-community study ($N=196$ communities) of 2,495 Native youth suicides in Canada, evaluated the relationships between cultural continuity, self-continuity, and local communities' initiatives at 'cultural rehabilitation' (i.e., reclaiming and indigenizing) that included: i) self-government, ii) land claims, iii) education, iv) health services, v) police & fire protection, vi) implementing 'cultural facilities'. Conclusions included: a) communities that initiated changes to rehabilitate their cultures had dramatically lower suicide rates; and b) communities that did not initiate any of the six protective steps had suicide rates 5 to 100 times the provincial average [15].

Studies also demonstrate an expanding need in developing and using Native/Indigenous approaches to conceptualize community health [16] and also in approaches to assessing cultural connectedness and the link to health outcomes (i.e., Indigenizing health research). For example, Snowshoe et al., developed the Cultural Connectedness Scale (29 items) and Cultural Connectedness Scale-Short (10 items) to demonstrate the important relationships between culture and mental health/well-being

[5, 13]. Peters et al., developed the Wicozani instrument (9 items) as an Indigenous measure of 'overall health and well-being' [17], and Walls et al., developed a 'social-cultural integration' measure [18]. In addition to these, King et al., (2019) and Masotti et al., (2020) adapted and validated the Canadian Cultural Connectedness Scale for use in an urban dwelling diasporic Native/Indigenous California community [19, 20].

These studies and other research provide support and evidence towards trends in the development of Native/Indigenous, holistic, strength-based approaches that are embedded in Native/Indigenous epistemological approaches versus using the Western model's more deficit/risk based approach. This paradigm and model shift, has support and is being argued by multiple researchers to move away from interventions and measurement tools solely created from western paradigms (See, [13–21]). With this paper we provide further support to continue this approach. Our findings further support the assertion that 'culture is prevention' and also establish the for the first time, in the Culture is Prevention project using the CCS-CA instrument, the link between Cultural Connectedness and physical health.

What is the Culture is Prevention Project and why was it started?

The Culture is Prevention Project was initiated by the Community Advisory Workgroup, comprised of six Urban Indian Health Organizations in the San Francisco Bay area. This was in response to issues that emerged in projects funded by the SAMHSA and the California Department of Public Health's innovative California Reducing Disparities Project.

Issues identified included: i) the lack of culturally informed methods to evaluate, from an Indigenous/Native perspective, the positive outcomes of culture-based programs to improve health and well-being; and ii) interest in providing an approach that recognized the relationship between Native American/Indigenous culture and health [19, 20]. The Culture is Prevention Project evolved into a 6-phased community-based participatory research (CBPR) program (See Table 1).

Phases 1–2 were presented in a 2019 paper [20] where the most notable results were the identification of the original Cultural Connectedness Scale (CCS) developed by Dr. Angela Snowshoe, an Indigenous scholar in Canada. Snowshoe developed the CCS to measure the degree of cultural connectedness with the objective of demonstrating the link between Indigenous culture as an important protective factor for health, resiliency, and well-being [5]. In Phase 3, we worked with six Urban Indian Health Organizations to adapt the CCS to be appropriate for the multi-tribal diasporic communities in California. The result was what we refer to as the Cultural Connectedness Scale-California (CCS-CA). Following this, and in a 2020 paper, we report the results from Phase 4 where we validated the CCS-CA in a sample of Native adults and where we replicated Dr. Snowshoe's results that increased culture was associated with better mental health and well-being [5, 14].

We report our findings from the Culture is Prevention research program that includes components of Phases 5 and 6. COVID-19 deeply impacted the participation capacity of our partnering organizations thus causing delays in data gathering and requiring methodological changes. However, we believe the results and implications are robust, notable, and interesting.

Methods

Design (COVID impact)

This project was funded by Blue Shield of California Foundation and originally had a different data collection design, timeline and sample size. This was originally two different studies with study one in the San Francisco Bay Area and the study two in other urban areas (e.g. Sacramento, Fresno). We began collecting data for the original study and then COVID negatively impacted the project. We had to interrupt the original study, modify its design, and move all measures onto Qualtrics. At that time some measures, that under the original design would have been included in study two and would have been analyzed in two separate studies. were now going to be included in a two-step single study. We had to do a small pilot study to

Table 1 Culture is Prevention Project

Phase 1	Consensus Generating Workshop
Phase 2	Literature Search & Knowledge Synthesis
Phase 3	Adapting the Snowshoe Cultural Connectedness Scale (CCS) for Multi-Tribal Communities in California
Phase 4	Pilot Testing/Validation of the Cultural Connectedness Scale – California (CCS-CA) and Evaluation of the Relationship between Culture and Mental Health/Well-being
Phase 5	Exploring the Predictive Properties of the CCS-CA
Phase 6	Cultural Connectivity, Integration, Health (Physical/Mental), & Health Services Utilization

ensure accuracy of all measures that were moved online that were not used in step one.

We had to limit the participation from other sites in the project due to remoteness and online access limitations without access to direct support. The data was then analyzed separately for step one and then step two. We then aggregated data on instruments that were both in step one and step two and report them here (See Table 4).

Participants

Our participants (~ 300 adults) identified as Urban Dwelling Native American (and/or Indigenous, First Nations or American Indian). The original study design (i.e., prior to COVID-19) was to conduct a two-step study where Steps 1–2 shared a 'baseline' grouping of instruments and in Step two we added several instruments to specifically measure risk for depression and substance abuse.

Step one (2018– 2019, N = 259)

Step one focused on diasporic Urban Dwelling Native American adults in the San Francisco Bay area. Over three hundred agreed to participate. However, after review and data cleaning, 259 full instrument packages were appropriate for analyses. Participant recruitment employed mixed methods: a) invitations to clinic patients who identified as Native American/Indigenous and who received services in the previous 18 months; b) convenience samples at cultural events; c) Community Advisory Board that agreed to identify community members; and d) referrals from clinic staff and community leaders. Step one participants completed paper versions of the instrument packages.

Step two (2019–2021, N = 102)

Step two was intended to include a sample from among nine Urban Indian Health Organizations (UIHOs) affiliated with the California Consortium for Urban Indian Health. Unfortunately, COVID-19 decreased the UIHOs capacity to participate. The final sample ($N = 102$ versus 205 planned) encompassed San Francisco Bay area, North to Santa Rosa and Southeast to Fresno. To adjust for COVID, we implemented the use of Qualtrics as a virtual data collection system. Table 2 provides descriptive statistics for the participants.

Research questions and hypotheses

Research questions

1. In Adult Native Americans living in urban California, does the CCS-CA and its subscales link levels of cultural connectedness to levels of hope and satisfaction with life (measures of eudemonic wellbeing) as measured by the mHHI and SWLS?
2. In Adult Native Americans living in urban California, does the CCS-CA and its subscales link levels of cultural connectedness to those experiencing or at risk for depression as measured by the CESD-R-10?
3. In Adult Native Americans living in urban California, does the CCS-CA and its subscales link levels of cultural connectedness to those experiencing or at risk of substance/alcohol abuse as measured by the CAGE-AID?
4. In Adult Native Americans living in urban California, does the CCS-CA link levels of cultural connectedness to those experiencing or at risk of domestic

Table 2 Participant descriptive statistics

Participants	Step 1 *N* = 259	Step 2 *N* = 102
Age (Range, Mean, *SD*)	(18–84, 45.1, *17.57*)	(18–79, 41.8, *16.4*)
Gender Identity		
Female	157	75
Male	78	25
Transgender	2	1
Two Spirit	13	0
Gender Queer/Non-Conforming	2	1
Did Not Identify	1	0
Tribal Affiliations (total separate Tribes = 105)		
One	194	69
Two	44	22
Three	12	6
Four or More	9	5

violence as measured by the Perception of Domestic Violence-Short Form?
5. In Adult Native Americans living in urban California, does the CCS-CA link levels of cultural connectedness to levels of physical health (i.e., number of good health days) as measured by the HRQOL-14?

Hypotheses

1. The CCS-CA will be positively correlated and a significant predictor of mHHI and SWLS (Eudemonic Wellbeing) indicating culture is a social determinant of health.
2. The CCS-CA will be negatively correlated and a significant predictor of substance/alcohol abuse, and depression. As measured by the CAGE-AID and CESD-R.
3. The CCS-CA will be negatively correlated and a significant predictor of perception of domestic violence (a proxy for DV risk).
4. The CCS-CA will be a significant predictor of physical health (i.e., number good health days) as measured by the HRQOL-14.

Measures

Except for the Perceptions of Domestic Violence instrument (which we discontinued use), the measures used had good reliability with Cronbach alphas > 0.60 (See Table 3).

Cultural connectedness scale-California (CCS-CA)

The CCS-CA is a 29-item validated instrument that measures the Native American/Indigenous culture/cultural connectedness on three subscales: i) Identity, ii) Spirituality, and iii) Traditions [5, 14, 19]. (The CCS-CA was adapted from the original CCS developed by Dr. Angela Snowshoe in Canada.)

Table 3 Reliability of measures

Measure	Cronbach alpha	Confidence Interval 95%
CCS-CA	0.93[b]	(0.86,0.94)
mHHI	0.83[b]	(0.82,0.95)
SWL	0.9[b]	(0.86,0.93)
CESD-R	0.82	(0.77,0.86)
PDV	0.43[a]	(0.86,0.94)
HRQOL	0.70	(0.66,0.81)

[a] PDV was not included in any analysis as it was not a reliable measure

[b] Combined data used

Health related quality of life-14

The CDC HRQOL-14 contains fourteen items to measure health-related quality of life. The items are designed to measure broad influences on life, including distal social and environmental factors such as housing, income, social support, and access to care [22, 23].

Modified herth hope index

The modified Herth Hope Index (mHHI), is a 12-item instrument with good psychometric properties and has been validated in multiple populations. Hope serves as a proxy measure for mental health and well-being. Hope is known to positively influence the onset, duration, prognosis, and recovery from mental and physical illnesses [24–28].

Satisfaction with life scale

The SWLS is a 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life and well-being. Scores on the SWLS have been shown to correlate with measures of mental health and to be predictive of future behaviors such as suicide attempts [29].

Perception of domestic violence-short version

This 10-item instrument assesses perception of violence between intimate partners. Scenarios presented are considered examples of domestic violence with each scenario rated on a Likert scale: 1 = never, 2 = sometimes, 3 = often, and 4 = always [30]. We discontinued and do not report use of this instrument because results indicated a Cronbach alpha ($\alpha = 0.43$).

Center for epidemiologic studies—depression scale (CESD-R-10)

The CESD-R-10 scale is a brief self-report scale that measures self-reported symptoms associated with depression experienced in the past week. The CESD-R-10 has been shown to be a reliable measure for assessing the number, types, and duration of depressive symptoms across racial, gender, and age categories [31–33].

CAGE-AID

The CAGE-AID is questionnaire where the focus of each item on the original CAGE was expanded from alcohol alone to include alcohol and drugs. This allows for the concurrent screening of substance abuse and dependence issues (e.g., alcohol and drugs) [34].

Results

Overview

We found support for four of the five research questions. The CCS-CA and its subscales (i.e., Culture/Cultural Connectedness: i] Identity, ii] Spirituality, & iii] Traditions) are linked to eudemonic wellbeing as measured by

hope and satisfaction with life. In Step two the CCS-CA is linked with depression as measured by the CESD-R ($p < 0.001$), and although risk for substance use and abuse approached significance as measured by CAGE-AID ($p = 0.078$) it is not reported here, but the reason for this finding is discussed. The perception of domestic violence measure did not achieve reliability criteria during Step one ($\alpha = 0.43$) and is not reported here as we were unable to answer research question four. Finally, we established a link between CCS-CA and number of good health days as measured by the HRQOL-14.

The CCS-CA and its subscales has been established as a valid and reliable measure of Cultural Connectedness in this population with Cronbach Alpha range $\alpha = 0.87$ thru 0.92 across several studies [5, 14, 19]. We found support for all hypotheses except Hypothesis three. Hypothesis one was supported and establishes the CCS-CA and its subscales with links to Hope and Satisfaction with life (i.e., subscale Identity predicted Hope while Identity and Spirituality predicted Satisfaction with Life). Hypothesis two was supported in Step one with CCS-CA being negatively correlated and a significant predictor of substance/alcohol use and abuse as well as depression. Finally, Hypothesis four was supported with CCS-CA being the most significant positively correlated predictor of number of good physical health days in the past 30 days.

We suspect the Perception of Domestic violence measure may not be an appropriate measure for this population. Our findings provide ongoing support that the CCS-CA is a significant predictor of eudemonic wellbeing, risk for substance use and abuse as well as depression, and number of good physical health days. With this study and our previous studies [14, 19], it is putative with robust findings and support that Native culture is a social determinate of health, eudemonic wellbeing, and a protective factor in this population.

Results step one study

This was a correlational and regression analysis design. Initially data was collected ($N = 300$). After reviewing the instruments for completion and data cleaning the final sample size ($N = 259$).

We alternated the order of the step one instruments to evaluate if the order affected responses. We had three different ordered packets that were randomly handed to participants. Verbal and written consent were obtained from participants. We found that there was no order effect of the CCS-CA. F (2, 256) – 0.566, ($p = ns$).

We did regression analysis with CCS-CA (i.e., culture measure) as the independent variable (predictor) and mHHI as the dependent variable (i.e., mental health/well-being measure). We found CCS-CA was a significant predictor of mHHI F (1, 257) = 10.74 ($p < 0.001$) $B = 0.20$ with $R^2 = 0.04$. We did a regression analysis with CCS-CA as the independent variable (predictor) and SWL (i.e., Satisfaction with Life) as the dependent variable. We found CCS-CA was a significant predictor of SWL F (1, 257) = 25.79 ($p < 0.001$), $B = 0.30$ with $R^2 = 0.09$. This supported Hypothesis 1 with CCS-CA overall score was predictive of mHHI and SWL. We did not evaluate Hypothesis 3 as the DVP (i.e., Perceptions of Domestic Violence) did not meet minimum reliability for this population (See Table 3).

We then evaluated predictiveness of CCS-CA three subscales (i.e., Traditions, Identity, Spirituality). We ran regression analysis of all three subscales as the IV (predictor) and the mHHI (i.e., measure of mental health/well-being) as the DV (dependent). We found CCS-CA subscales Traditions and Spirituality did not predict mHHI ($p = ns$). We found the CCS-CA subscale Identity significantly predicted mHHI F (3, 255) = 7.45, ($p < 0.001$), with $R^2 = 0.18$. We also ran regression analysis of all three subscales as IV (predictor) and SWL as the DV. We found the CCS-CA subscale Traditions did not significantly predict SWL ($p = ns$) CCS-CA subscales Identity significantly predicted SWL F (3, 255) = 9.82, ($p < < 0.002$), with $R^2 = 0.29$ and Spirituality F (3, 255) = 8.757, ($p < 0.001$), with $R^2 = 0.19$. This indicates that although these subscales were highly correlated and had some shared variance [19] they are useful subscales and distinct subscales within the CCS-CA and in predicting different outcomes.

These findings partially supported other hypotheses in that traditions and identity subscale did not significantly predict mHHI. However, spirituality and identity subscales did significantly predict SWL. This also establishes that although the three subscales are highly correlated, they are separate constructs with different predictions as it relates to Hope and Satisfaction with Life scales. Overall, H1 was supported with CCS-CA (i.e., culture) being positively associated with both mHHI and SWL (i.e., mental health & well-being). H2 was supported as the CCS-CA was negatively correlated with risk of substance abuse and depression. H3 was not answered as the Domestic Violence measure did not reach the traditional minimal threshold for reliability. Finally, H4 was supported as the CCS-CA was a significant predictor of good physical health days.

Results step two study

This was completed after the measures were migrated onto an online format. We piloted the measures to ensure that they were correctly loaded. We set the program to alternate order of measures between subjects. The measures were loaded onto the Qualtrics platform (an online data collection program) ($N = 127$). After reviewing the instruments for completion and data cleaning the final

sample size ($N=102$). The Chi-Square goodness of fit was not significantly different between Step one data and Step two data for each of the scales and demographics.

Regression analysis of step two data found similar results to Step one data in that the CCS-CA was a significant predictor of Hope F (1,101) = 15.03, $p<0.001$ ($R^2=0.13$). The CCS-CA was also a significant predictor of Satisfaction with Life F (1,101) = 11.05, $p<0.001$ ($R^2=0.093$). The CCS-CA was a significant predictor of Depression F (1,101) = 6.26, $p<0.01$ ($R^2=0.06$).

Additionally, we included in Step two the CAGE-AID substance use screen to (Yes or No "I have used drugs or alcohol in the past 12 months). An independent sample *t-test* was not significant t (1) = 1.36, $p=0.078$. This non-significant finding may have been affected by the wording of the questions when moved to Qualtrics. The wording created a double negative and caused confusion. We ask about the number of bad days (Physical Health) on the Health-Related Quality of Life (HQROL) and then subtracted the number of bad days from 30 to establish the number of good days experience in the last 30 days taking a strength-based approach $M=20.09$. We performed a regression analysis of the CCS-CA to predict the number of good days. The CCS-CA (i.e., culture measure) was a significant predictor of Good Days, F (1, 101) = 12.75, $p<001$. We include descriptive data (i.e., *Mean* and *Standard Deviations*) for steps 1 and 2 as well as the combined data (See Table 4).

Aggregated data

There were differences between Step one Study and Step two Study collected data and measures. When we combine the data, we were only able to combine data on measures that were in both Step one and Step two. We did not collect data on the Domestic Violence Perception as it proved to be unreliable Cronbach ($a=0.43$) We then added the Depression scale (CES-D) to establish divergent validity and directly linking CCS-CA and Depression. We found there to be a significant negative correlation $p<0.05$. This was also in line with the negative correlation between the Satisfaction with Life Scale and Depression $p<0.01$ (See Table 5).

An analysis of the individual outcome variables and the predictor variable of CCS-CA was significant. The CCS-CA and Hope mHHI F (1,359) = 15.03, $p<0.001$. As expected, the variance accounted for increased monotonically as more variables were included. Throughout step one, step two and the aggregated data the single model predictor with the overall CCS-CA score being the best fit ($ps<0.001$).

Discussion and public health implications

Native/indigenous culture is an important social – determinant of health

This is the third large sample study using the Cultural Connectedness Scale in Canada (CCS $n=319$) and

Table 5 Bivariate correlations combined step one and step two

	1	2	3	4	5
1. Cultural Connectedness Scale (CCS-CA)	-				
2. Herth Hope Index (modified) (mHHI)	.36[b]	-			
3. Satisfaction With Life Scale (SWLS)	.32[b]	.32[b]	-		
4. Center Epidemiology Study Depression (CES-D)	-.23[a]	-.15	-.64[b]	-	
5. HRQOL No. Good Health Days	.13[b]	.25[b]	.33[b]	.20[b]	-

[a] Correlation is significant at < .01

[b] Correlation is significant at < .001

Table 4 Step one and step two with combined data descriptives

Variables	Step 1		Step 2		Combined	
	N = 259		*N* = 102		*N* = 361	
	M	*SD*	*M*	*SD*	*M*	*SD*
CCS-CA	4.21	.61	3.77	.60	4.10	.56
Herth Hope Index (modified) mHHI[a]	3.99	.55	3.91	.58	3.97	.56
Satisfaction with Life (SWL)	4.85	1.30	4.66	1.56	4.80	1.38
Perceptions of Domestic Violence PDV[b]	2.27	1.11	[c]	[c]	[c]	[c]
Center of Epidemiology Studies Depression Scale (CES-D)	[c]	[c]	2.04	.58	[c]	[c]
Historical Loss Scale (HLS)	[c]	[c]	3.47	1.18	[c]	[c]
Health Related Quality of Life (HQROL)	[c]	[c]	20.09	9.25	[c]	[c]

[a] Herth Hope Index was modified with permission from Dr. Herth to include (Neither/Nor)

[b] PDV not included in analysis

[c] Intentionally left blank

CCS-CA in California ($n=344$ and this study $n=361$) where all demonstrated that increases in Native/Indigenous culture is associated with better eudemonic well-being [5, 19]. Results from this project add to the evidence supporting the assertion that for Native Americans/Indigenous Peoples, traditional culture is an important social determinant of health [5, 13, 14, 19]. In addition, to our knowledge, this is the first study, that links Native/Indigenous Culture (measured by CCS-CA) with better physical health. This finding aligns with what Native Peoples have known for millennia which is that health is embedded in their culture.

Prevention and a need for a healthcare paradigm shift

Health for Native/Indigenous Peoples has been negatively impacted as a result of years of colonization and government policies that resulted in loss of culture and ways of life [4, 6, 13–19]. We know that Indigenous Peoples experience higher rates of morbidity and mortality and that the Western medical model and government responses, intended to address health and social disparities, have not been effective.

Given that the loss of culture has negatively impacted the health and well-being of Indigenous Peoples, we argue that the degree of reclaimed traditional culture or increased cultural connectedness is an important health-related outcome measure which at times may be more important than the reduction in frequency of some risky behaviors or risk factors commonly the focus of Western modalities. In addition, we argue that if government and healthcare is committed to improving Native American/Indigenous health, they should become cognizant that Indigenous cultures historically manufactured good health. All should try to better understand, learn from Indigenous epistemology and approaches to health/healing and support integration into the healthcare system. We argue that doing so will increase overall healthcare system capacity and serve to promote health equity and social justice.

To support the above assertion, we refer to our ongoing study of Native American adults in California ($n=500$), where 87% want increased access to traditional healers and spiritual leaders in healthcare. Additionally, 44% percent indicated they delayed care or did not want to return for healthcare services due to negative experiences with the medical professional (or staff) not understanding or respecting their culture or language. These results provide evidence indicating a possible contributing factor to community health disparities—as delayed access to medically necessary care is associated with increased, pain, suffering, mental anguish, deteriorations of current conditions, and mortality. Delay can also have high economic consequences such as work absenteeism, and decreased productivity or ability to work [35, 36].

Evaluating properties of the CCS

In Appendix B in our first paper [19], we provide directions on how the CCS-CA could be adapted for other Native American/Indigenous communities which would support future use and research. With more research, the twenty-nine item Cultural Connectedness Scale, with its three subscales (Identity, Spirituality & Traditions) has the potential to screen for strengths and risks associated with health (e.g., mental, physical, and domestic health). This research supports this potential. However, we feel it needs more research and consultations with Native American/Indigenous traditional healers. This could then guide health and healing prescriptions. In addition, the CCS-CA may be used in logic models when evaluating programs and their efficacy. Increased Cultural Connectedness can be a short-term, mid-term, or outcome measure based on culturally based interventions, program protocols and implementations.

Native domestic wellbeing/violence

There is an interest in developing a culturally driven Native/Indigenous instrument that focuses on measuring domestic well-being and identifying risk for domestic violence. The Native 'strength-based' approach to family health supports the assertion that: "Native culture and values are incompatible with domestic violence." An Indigenous-informed and developed instrument that can inform/guide domestic well-being and identity risk for domestic violence could then function as a therapeutic intervention.

Conclusion

Through this research we provide further evidence for a paradigm shift away from the long-held belief and deficit based models that Native Identity and Native Culture are linked with the development of health disparities. Walters and Simoni [21], proposed that Indigenous Identity and Culture could function as a buffer against these developments. Multiple researchers provide support for a paradigm shift (See, [13–20]). We have convergent support that higher levels of cultural connectedness are linked to higher levels of hope and satisfaction with life. We also have provided divergent support in that higher levels of cultural connectedness are linked to lower levels of depression. In the future researchers when designing programs of research, prevention or intervention should consider this strength-based resilience-based approach in that the strengthening of Native/Indigenous Cultural Connectedness can have an overall positive influence on mental and physical health outcomes for

Native/Indigenous people. That Western Psychological and Medical Models need to be cognizant and consider developing and implementing Native/Indigenous culturally informed community evidence-based practices that strengthen cultures and aids in cultural reclamation [15].

Abbreviations

CAGE-AID	CAGE-Adapted To Include Drugs
CBPR	Community-based Participatory Research
CESD-R	Center for Epidemiologic Studies Depression Scale-Revised
CCS-CA	Cultural Connectedness Scale-California
CCS	Cultural Connectedness Scale
HRQOL	Health Related Quality of Life
mHHI	modified Herth Hope Index
PDV	Perception of Domestic Violence
SWLS	Satisfaction With Life Scale
SAMHSA	Substance Abuse and Mental Health Administration
UIHO	Urban Indian Health Organizations

Acknowledgements

The authors acknowledge the contributions of the adult and transition aged youth Community Advisory Boards (Blanket Weavers and San Francisco Intertribal Unity Council) for support and guidance. We would also like to acknowledge the contributions of the following Urban Indian Health Organizations that advised and collaborated on this project: California Consortium for Urban Indian Health; California Indian Museum and Cultural Center; and the Fresno American Indian Health Project.

Authors' contributions

PM and JD directed the study design, implementation and wrote the manuscript. JD analyzed the data. JK, KB, CS, GVL and CTI provided technical support in survey design and implementation, data collection, reviewed and revised/edited the manuscript. Authors have read and approved the final manuscript.

Funding

This study and publication were made possible through funding by the Blue Shield of California Foundation as part of the Exploring the Value of Prevention initiative.

Availability of data and materials

Summary information based upon the data from this study is available from the corresponding authors. However, since this is a CBPR project, all community-level data is owned by the participating Native American/Indigenous communities and could not be made available by the authors without explicit permission from the participating communities.

Declarations

Ethics approval and consent to participate

All methods were conducted in accordance with relevant guidelines and regulations. Study ethics approval was obtained from the Department of Health & Human Services, Indian Health Services, National Institutional Review Board project number N19-N-01**.** The study was also reviewed and approved by community advisory boards in the participating Native/Indigenous communities. All subjects were adults 18 years nd older. Informed consent was obtained from all subjects.

Consent for publication

Not applicable.

Competing interests

We, the authors, have no conflicts of interests to declare.

Author details

[1]Native American Health Center, Community Wellness Department, 3124 International Blvd., Oakland, CA 94601, USA. [2]Claremont Graduate School Applied Social Psychology Health and Prevention Lab, 150 E. 10Th Street, Claremont, CA 91711, USA. [3]The California Indian Museum and Cultural Center, 5250 Aero Dr, Santa Rosa, CA 95403, USA.

Received: 25 October 2022 Accepted: 3 April 2023
Published online: 21 April 2023

References

1. Brave Heart MY, Chase J, Elkins J, Altschul DB. Historical trauma among Indigenous peoples of the Americas: Concepts, research, and clinical considerations. J Psychoact Drugs. 2011;43(4):282–90. https://doi.org/10.1080/02791072.2011.628913.
2. Walters KL, Beltran R, Huh D, Evans-Campbell T. Dis-placement, and dis-ease: Land, place, and health among American Indians and Alaska Natives. In: Communities, neighborhoods, and health. New York: Springer; 2011. p. 163–99. https://doi.org/10.1007/978-1-4419-7482-2_10.
3. Stamm BH, Stamm HE. Trauma and loss in Native North America: an ethnocultural perspective. In: Nader K, Dubrow N, Stamm BH, editors. Honoring differences: cultural issues in the treatment of trauma and loss. Philadelphia: Taylor & Francis; 1999. p. 49–75.
4. Heart B, DeBruyn LM. The American Indian holocaust: Healing historical unresolved grief. Am Indian Alsk Native Ment Health Res. 1998;8(2):56–78. https://doi.org/10.5820/aian.0802.1998.60.
5. Snowshoe A, Crooks CV, Tremblay PF, Craig WM, Hinson RE. Development of a cultural connectedness scale for first nations youth. Psychol Assess. 2015;27(1):249. https://doi.org/10.1037/a0037867.
6. Irwin L. Freedom, law, and prophecy: a brief history of Native American religious resistance. Am Indian Q. 1997;21(1):35–55. https://doi.org/10.2307/1185587.
7. Castor ML, Smyser MS, Taualii MM, Park AN, Lawson SA, Forquera RA. A nationwide population-based study identifying health disparities between American Indians/Alaska Natives and the general populations living in select urban counties. Am J Public Health. 2006;96(8):1478–84. https://doi.org/10.2105/AJPH.2004.053942.
8. Chartier K, Caetano R. Ethnicity, and health disparities in alcohol research. Alcohol Res Health. 2010;33(1–2):152. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3887493/.
9. Ehlers CL, Gizer IR, Gilder DA, Yehuda R. Lifetime history of traumatic events in an American Indian community sample: heritability and relation to substance dependence, affective disorder, conduct disorder and PTSD. J Psychiatr Res. 2013;47(2):155–61. https://doi.org/10.1016/j.jpsychires.2012.10.002.
10. Kolahdooz F, Nader F, Yi KJ, Sharma S. Understanding the social determinants of health among Indigenous Canadians: priorities for health promotion policies and actions. Glob Health Action. 2015;8(1):27968. https://doi.org/10.3402/gha.v8.27968.
11. Kenney MK, Singh GK. Adverse childhood experiences among American Indian/Alaska native children: the 2011–2012 national survey of children's health. Scientifica. 2016 ;2016. https://doi.org/10.1155/2016/7424239.
12. Mitchell FM. Reframing diabetes in American Indian communities: a social determinants of health perspective. Health Soc Work. 2012;37(2):71–9. https://doi.org/10.1093/hsw/hls013.
13. Snowshoe A, Crooks CV, Tremblay P, Hinson RE. Cultural connectedness, and its relation to mental wellness for first nations youth. J Prim Prev. 2017;38(1):67–86. https://link.springer.com/article/10.1007/s10935-016-0454-3.
14. Masotti P, Dennem J, King J, Bañuelos K, Valerio-Leonce G, Hadani S, Patel C, Seneca C. Promoting culture, a social determinant of health for Native Americans is a must to promote health equity and social justice. In APHA's 2020 VIRTUAL Annual Meeting and Expo (Oct. 24–28) 2020 Oct 28. APHA. https://apha.confex.com/apha/2020/meetingapi.cgi/Paper/462638?filename=2020_Abstract462638.html&template=Word.
15. Chandler MJ, Lalonde C. Cultural continuity as a hedge against suicide in Canada's First Nations. Transcult Psychiatry. 1998;35(2):191–219. https://journals-sagepub-com.ccl.idm.oclc.org/doi/pdf/10.1177/136346159803500202.
16. Carroll SR, Suina M, Jäger MB, Black J, Cornell S, Gonzales AA, Jorgensen M, Palmanteer-Holder NL, De La Rosa JS, Teufel-Shone NI. Reclaiming indigenous health in the US: moving beyond the social determinants of health. Int J Environ Res Public Health. 2022;19(12):7495.
17. Peters HJ, Peterson TR, Community DW. Developing an indigenous measure of overall health and well-being: the Wicozani Instrument. Am Indian Alaska Native Mental Health Res (Online). 2019;26(2):96. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6800221/.
18. Walls M, Hautala D, Cole A, Kosobuski L, Weiss N, Hill K, Ozhaawashkodewe'iganiikwe Williams S. Socio-cultural integration, and holistic health among indigenous young adults. BMC Public

Health. 2022;22(1):1–0. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-022-13395-3.
19. King J, Masotti P, Dennem J, Hadani S, Linton J, Lockhart B, Bartgis J. The Culture is Prevention Project: adapting the cultural connectedness scale for multi-tribal communities. Am Indian Alsk Native Ment Health Res. 2019:104–35. https://doi.org/10.5820/aian.2603.2019.104.
20. Masotti P, Dennem J, Hadani S, Banuelos K, King J, Linton J, Lockhart B, Patel C. The culture is prevention project: measuring culture as a social determinant of mental health for native/indigenous peoples. Am Indian Alsk Native Ment Health Res. 2020;27(1):86–111. https://doi.org/10.5820/aian.2701.2020.86. (PMID: 32259276).
21. Walters KL, Simoni JM. Reconceptualizing native women's health: an "indigenist" stress-coping model. Am J Public Health. 2002;92(4):520–4. https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.92.4.520.
22. Centers for Disease Control and Prevention. Health-Related Quality of Life (HRQOL).https://www.cdc.gov/hrqol/faqs.htm. Accessed 21 Mar 2022.
23. Moriarty DG, Zack MM, Kobau R. The centers for disease control and prevention's healthy days measures-population tracking of perceived physical and mental health over time. Health Qual Life Outcomes. 2003;1(1):1–8. https://doi.org/10.1186/1477-7525-1-37.
24. Herth KA. The relationship between level of hope and level of coping response and other variables in patients with cancer. In: Oncology Nursing Forum 1989 Jan 1 (Vol. 16, No. 1, pp. 67–72). https://europepmc.org/abstract/med/2911529.
25. Kaye Herth PhD RN. Development and refinement of an instrument to measure hope. Res Theory Nurs Pract. 1991;5(1):39. https://search.proquest.com/openview/26bef71b4e3dbf8f219016254b790c3f/1?pq-origsite=gscholar&cbl=28849.
26. Van Gestel-Timmermans H, Van Den Bogaard J, Brouwers E, Herth K, Van Nieuwenhuizen C. Hope as a determinant of mental health recovery: a psychometric evaluation of the Herth Hope Index-Dutch version. Scand J Caring Sci. 2010;24:67–74. https://doi.org/10.1111/j.1471-6712.2009.00758.xWalter,M.
27. Obayuwana AO, Collins JL, Carter AL, Rao MS, Mathura CC, Wilson SB. Hope Index Scale: an instrument for the objective assessment of hope. J Natl Med Assoc. 1982;74(8):761. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2552959/Snows.
28. Herth K. Abbreviated instrument to measure hope: development and psychometric evaluation. J Adv Nurs. 1992;17(10):1251–9. https://www.ncbi.nlm.nih.gov/PubMed/2063043.
29. Pavot W, Diener E. The satisfaction with life scale and the emerging construct of life satisfaction. J Positive Psychol. 2008;3(2):137–52. The Satisfaction with Life Scale and the emerging construct of life satisfaction: The Journal of Positive Psychology: Vol 3, No 2 (tandfonline.com).
30. McMullan EC, Carlan PE, Nored LS. Future law enforcement officers and social workers: perceptions of domestic violence. J Interpers Violence. 2010;25(8):1367–87. https://doi.org/10.1177/0886260509346062.
31. Knight RG, Williams S, McGee R, Olaman S. Psychometric properties of the Centre for Epidemiologic Studies Depression Scale (CES-D) in a sample of women in middle life. Behav Res Ther. 1997;35(4):373–80. https://doi.org/10.1016/s0005-7967(96)00107-6.
32. Roberts RE, Vernon SW, Rhoades HM. Effects of language and ethnic status on reliability and validity of the center for epidemiologic studies-depression scale with psychiatric patients. J Nervous Mental Dis. 1989. https://doi.org/10.1097/00005053-198910000-00001.
33. Radloff LS. The CES-D scale: a self-report depression scale for research in the general population. Appl Psychol Meas. 1977;1(3):385–401.
34. Leonardson GR, Ness FK, Daniels MC, Kemper E, Koplin BA, Leonardson GA. Validity and reliability of the audit and CAGE-AID in Northern Plains American Indians. Psychol Rep. 2005;97(1):161–6. https://doi.org/10.2466/pr0.97.1.161-166.
35. Barua B, Esmail N, Jackson T. The effect of wait times on mortality in Canada. Vancouver: Fraser Institute; 2014 May 20. https://www.fraserinstitute.org/sites/default/files/effect-of-wait-times-on-mortality-in-canada.pdf.
36. Kulkarni GS, Urbach DR, Austin PC, Fleshner NE, Laupacis A. Longer wait times increase overall mortality in patients with bladder cancer. J Urol. 2009;182(4):1318–24. https://www.auajournals.org/doi/epdf/10.1016/j.juro.2009.06.041.

Publisher's Note

THE *CULTURE IS PREVENTION PROJECT*: ADAPTING THE CULTURAL CONNECTEDNESS SCALE FOR MULTI-TRIBAL COMMUNITIES

Janet King, MSW, Paul Masotti, PhD, John Dennem, MA, CADC-II, Shir Hadani, MSc, Janice Linton, MLS, Bonnie Lockhart, MSW, and Jami Bartgis, PhD

Abstract: The Culture is Prevention Project is a multi-phased community-based participatory research project that was initiated by six urban American Indian and Alaska Native (AI/AN) health organizations in northern California. Issues driving the project were: i) concerns about the lack of culturally informed or Indigenous methods of evaluating the positive health outcomes of culture-based programs to improve mental health and well-being; and ii) providing an approach that demonstrates the relationship between AI/AN culture and health. Most federal and state funding sources require interventions and subsequent measures focused on risk, harm, disease, and illness reduction, rather than on strength, health, healing, and wellness improvement. This creates significant challenges for AI/AN communities to measure the true impact of local strength and resiliency-based wellness programs. This paper focuses on the methods and results from Phase 3 of the Culture is Prevention Project where we adapted the 29-item Cultural Connectedness Scale (CCS), developed in Canada, to be appropriate for California's multi-tribal communities. The resulting new Cultural Connectivity Scale – California (CCS-CA) was developed by urban AI/AN people for urban AI/AN people. The process, instrument, how to adapt for your community, and implications are reviewed.

INTRODUCTION

For American Indians and Alaska Natives (AI/ANs), culture is a social determinant of health, in which loss is a risk factor; whereas, strengthening or re-connecting to culture are protective factors on multiple levels (Chandler & Lalonde. 1998; Menzies & Lavallee, 2014, Walters, Beltran, Huh, & Evans-Campbell, 2011). Health for Indigenous people has been negatively affected by hundreds of years of colonization and historical traumas (Ehlers, Gizer, Gilder, & Yehuda, 2013; Burton, Matthews, Leung, Kemp, & Takeuchi, 2011; Walters,

Mohammed, et al., 2011; Brave Heart & DeBruyn, 1998). One of the more recent federal assimilation policies impacting the communities in this study is the Relocation Act of 1956 which began moving large numbers of Indigenous peoples off reservations and into cities throughout the United States. San Francisco, Oakland, Los Angeles, San Jose, and Sacramento were among the cities in California that Indigenous peoples were removed to. The Relocation Act resulted in California becoming the home for many out-of-state tribes in addition to the many Indigenous tribes of California.[1]

The long term consequences of colonization and government relocation policies included the loss of land and disruption of the practice of culture (Snowshoe, Crooks, Tremblay, Craig, & Hinson, 2015; Stamm & Stamm, 1999; Brave Heart & DeBruyn, 1998). Other consequences included down-stream historical trauma and subsequent high rates of ill-health (e.g., physical, mental, and emotional) and poor social conditions (Evans & Davis, 2018; Snowshoe et al., 2015; Walters, Mohammed, et al., 2011; Brave Heart & DeBruyn, 1998). Supporting this assertion is that pre-dating colonization, Indigenous people maintained wellness for thousands of years through culturally-based practices where the environment, mind, body, and emotional health were known to be linked to collective human behavior, practices, wholeness, and hence, wellness (Brave Heart, Chase, Elkins, & Altschul, 2011; Walters, Beltran, et al., 2011). Health in AI/AN communities was known to be a result of living in the community; participating in traditional ceremonial practices which involved foods, medicines, songs, and dances; and revering the land and all of her inhabitants as relatives. For generations, Indigenous people have practiced what we now call "Population Health," where traditional practices promoted health for all community members by increasing collective strengths and decreasing inequities (Menzies & Lavallee, 2014; Tucker, Wingate, & O'Keefe, 2016).

The traditional Indigenous holistic approach to health is much different compared to the Western individualistic approach to reducing risk or illness (Singer, 2009; Reading & Wien, 2009; Arquette et al., 2002). Despite the evidence that culture-based practices sustained Indigenous peoples' health and community-wellness for many generations (Mooney, 1890; Reading & Wien, 2009), the dominant culture historically has demonstrated an unwillingness to understand, value, or learn from what Indigenous peoples have been practicing for centuries. Instead, the focus of health care has been on Western epistemology and the Western medical model with subsequently

[1] In this paper we use Indigenous or American Indian/Alaska Native [AI/AN] interchangeably to represent the original peoples of North America prior to colonization.

different approaches than Indigenous people to decision-making, health, risk assessment, and evaluation (Bartgis, 2016; Ellerby, McKenzie, McKay, Gariépy, & Kaufert, 2000).

The Western medical model and government responses to the health and social disparities experienced by Indigenous peoples have not been effective at addressing health and, in many circumstances, have been poorly received and even harmful (Tucker et al., 2015; Walters, Mohammed, et al., 2011; McCormick, 1995). A result of the historical disrespect by the dominant culture was a poor understanding of the important determinants of health for Indigenous peoples such as the strong and interdependent relationships between health, cultural traditions (Powell & Gabel, 2018), spirituality, and the connection to traditional land, diets, language, and community (Wilson, 2003; Waldram, Herring, & Young, 2006; Lavallee & Poole, 2010; Levy, 2018). This has served to contribute to the ineffectiveness of many Western modalities in reducing health and social disparities for Indigenous communities (Lavallee & Poole, 2010; Bala & Joesph, 2007).

Another example of the difference, or "lack of understanding," by the dominant culture regarding producing Indigenous health is reflected in the different approaches to measuring health or wellness. Indigenous peoples focus more on building strength, resiliency, relationships, and community capacity; whereas, the dominant culture focuses more on decreasing individual illness/disease or risky behaviors without or with little examination of the environment producing risky behaviors and ill health (Gone, 2013; Walters & Simoni, 2002; Walters, Beltran, et al., 2011; Walls & Whitbeck, 2011). This difference then creates a cultural worldview "clash" (Bartgis, 2016). Driving this clash is that historically Indigenous knowledge and traditional ways of knowing were rarely considered or valued as important in health and healing. Supporting this assertion is the 128-year old statement from Mooney: "The Native practices of healing and their healers have been regarded as lacking any more knowledge in the field of herbal healing or practice than an ordinary housewife in the late 19th Century" (1890, p.45).

More recent examples illustrating this include government funder requirements to use "evidence based practices" (EBPs) where: a) the practices and/or instruments were not developed by and for Indigenous persons; and b) the practices/instruments were not tested in multiple culturally different Indigenous communities. Thus, it was not well known if the EBPs were effective or harmful. In addition, and until recently (such as with the California Reducing Disparities project), the dominant culture also did not demonstrate much willingness to understand or consider community-defined evidence practices as being evidence-based and deriving from equally valid methods based upon hundreds of years and multi-generational observations

(California Department of Public Health, 2019; Larios, Wright, Jernstrom, Lebron, & Sorensen, 2016; Whitbeck, Walls, & Welch, 2012).

Indigenous and dominant cultural differences in evaluation also exist. For example, government project officers or university-based researchers typically find it difficult to accept that the community programs reduce substance abuse (and subsequently support mental health/well-being) without specifically measuring and demonstrating reductions in substance use. However, Indigenous communities, such as the partner communities in the *Culture is Prevention Project*, argue that programs that strengthen or reconnect to culture achieve those outcomes as a result of the strengthening of Indigenous culture and that the supporting evidence (in part) is that substance abuse was not an issue prior to colonization. We do know that both traditional knowledge and recent research has linked culture as a protective factor for better health and social outcomes for Indigenous peoples (Snowshoe et al., 2015; Garroutte et al., 2003; Gone, 2013; McIvor, Napoleon, & Dickie, 2009; Pu et al., 2013; Walter & Simoni, 2002; Whitbeck, Hoyt, Stubben, & LaFromboise; 2001). Given this, we argue that culture is a determinant of health and that strengthening or reconnecting to culture can then be considered both an important program objective and program outcome that then could be measured.

Background and Context

The *Culture is Prevention Project* is a 6-phased project (See Table 1) that derived from a Substance Abuse and Mental Health Services Administration (SAMHSA) funded project intended to address youth alcohol and prescription drug abuse and in general, per the SAMHSA mission statement, the impact of substance abuse and mental health. The *Culture is Prevention Project* was initiated because of concerns expressed by the 30-person Community Advisory Workgroup comprised of staff and community members from the six participating urban AI/AN health organizations. Specifically, the workgroup members were concerned about the program evaluation questions required by SAMHSA. Workgroup members and the participating Indigenous health organizations understood that the purpose of the funding was to reduce alcohol and prescription drug abuse in youth. However, the programs being delivered by the organizations were broad in purpose, scope, and objectives and expected outcomes. All fit into the Center for Substance Abuse and Prevention (CSAP) strategy type *Alternative Drug Free Activities* (USDHHS, 2017), where the interventions were further described by the partnering health services organizations as *Alternative Drug Free Activities – Traditional Culture-Based Activity/Ceremony*. There were

concerns that some of the strengths and outcomes of interventions that were considered important by the providing communities were not of interest or being addressed by SAMHSA.

In addition, the evaluation questions required by SAMHSA do not identify or measure what make community-defined evidence practices work. For example, the required outcome measures addressed the use of alcohol and prescription drugs. Grantees were required to select one question from a list in each of the following three categories: i) consumption, ii) intervening variables, and iii) consequences. The Community Advisory Workgroup expressed concerns that the evaluation overly focused on alcohol and prescription drug use and did not place enough emphasis on Indigenous approaches and values. Specific concerns presented were that the measures/questions: 1) were not an appropriate method of evaluating if their programs improved health, resiliency, strength, and other positive outcomes in youth (i.e., they did not capture what was essential in culture-based alternative drug free activities programs); 2) were not aligned with traditional AI/AN strength-based approaches; and 3) that some questions were potentially harmful. For example, one of the required questions presented to the Community Advisory Workgroup that was considered potentially harmful came from the intervening variable list: "How do you think your parents would feel about you having one or two drinks of an alcoholic beverage nearly every day?" (USDHHS, 2017; Michigan Department of Health & Human Services, 2019). Concerns were expressed about the number of youth without one or both parents and also that introducing this question could induce a trauma response. As a result of the concerns expressed, the Community Advisory Workgroup directed the project staff to look for or develop more culturally appropriate evaluation tools: thus, the genesis of the *Culture is Prevention Project*.

Table 1
Culture is Prevention Project

Phase 1	Consensus Generating Workshop
Phase 2	Literature Search & Knowledge Synthesis
Phase 3	Adapting the Snowshoe Cultural Connectedness Scale (CCS) for in Multi-Tribal Communities in California
Phase 4	Pilot Testing/Validation of the Cultural Connectedness Scale – California (CCS-CA) and Evaluation of the Relationship between Culture and Mental Health
Phase 5	Exploring the Predictive Properties of the CCS-CA
Phase 6	Cultural Connectivity, Integration, Health (Physical/Mental), & Health Services Utilization

A primary goal was to develop and implement a more culturally informed approach to demonstrating that the programs being delivered were achieving their objectives which included:

a) increasing and strengthening connection to AI/AN culture, values, history, teachings, and community; b) increasing skills; and c) building empowered, strong, and resilient youth. This community-based participatory research (CBPR) project is guided by a theory of change that the building and strengthening of Indigenous culture supports the development of youth to be resilient, emotionally and mentally healthy, and thus, less likely to engage in destructive behaviors such as alcohol/substance abuse and suicide.

Phase 1 & Phase 2

Overviews of Phases 1 and 2 are illustrated in Tables 2 and 3 below. A unique characteristic of the *Culture is Prevention Project* relates to the CBPR approach. The project started with direction from and continued involvement of the Community Advisory Workgroup. The results from Phase 1 logically supported the Workgroup's decisions to develop and initiate Phase 2, where again the results from Phase 2 guided the initiation and methods for Phase 3, the focus of this paper.

Table 2
Phase 1 Consensus Generating Workshop

Participants	Adult AI/ANs (*n* = 33). Included members of the Community Advisory Workgroup and additional community members considered to be knowledgeable community leaders.	
Research Questions	1) What traditional Native American practices are associated with positive changes in youth and community? 2) What are the positive health-related changes that result from these practices?	
Methods	Trained facilitators provided by SAMHSA – Center for Application of Prevention Technologies. Participants were randomly assigned to workgroup tables. Data collection and analysis took place during the workshop. Small group and large group consensus were achieved using a modified group consultation approach based upon the Nominal Group Technique (Jones & Hunter, 1995; Lloyd-Jones, Fowel, & Bligh, 1999; Masotti et al., 2015).	
Results	Our main interest was the results from the second question addressing health-related outcomes. The Workshop participants reached consensus that positive health-related changes that result from Native practices could be grouped into health-related outcomes in four categories:	
	1) Cultural Identity	Pride in being Native, reconnect to culture, revitalizing Native culture, knowledge of traditional practices and history, self-esteem, walking in two worlds (Native and non-Native), knowledge sharing
	2) Empowerment	Interdependence, competence, confidence, independence, locus of control, leadership
	3) Resiliency	Critical thinking, adapting in the face of adversity, trauma, tragedy, threats or significant sources of stress
	4) Generosity	Sense of contribution vs. burden to the community, volunteering, mentorship, sense of being a productive community member, sense of citizenship, natural helper, advocacy work, chores, and desire to give back

Table 3
Phase 2 Literature Search & Knowledge Synthesis

Research Questions	What is known from the existing literature about instruments developed by Native Americans for Native Americans that measure: 1) cultural identity/connectedness, 2) empowerment, 3) resiliency, and 4) generosity?
Methods	Developed by a medical librarian specializing in Indigenous health research, the literature search included publications between 1990-2015 and focused on countries with similar histories of colonization: Canada, United States, New Zealand, and Australia (Gracey & King, 2009; Guimond, Lawrence, Mitrou, Cooke, & Beauvon, 2007). **Concept #1** (i.e., Indigenous people) – Keywords: "Native American*" OR "Alaska* native*" OR "native Alaska*" OR "first nations" OR Ojibwa* OR Cree OR aboriginal OR dene OR tribal OR Cherokee OR Dakota OR Lakota OR Navajo OR Zuni OR Maori **Concept #2** (i.e., any type of survey or questionnaire used with the population or measure related to resiliency, strengths, assets, or indicators) – Keywords: Survey* OR questionnaire OR qualitative OR resilient* OR strength* OR asset* OR indicator* **Concept #3** (i.e., literature that was focused on youth, or that was used to measure drug or alcohol use, even if some or all subjects in the population were older) – Keywords: youth* OR adolescent* OR drug* OR alcohol The literature search included Scopus (includes Medline/PubMed, Embase), PsycINFO, and other mental health journals and a host of interdisciplinary databases via EBSCO-host including: Academic Search Complete, Child Development & Adolescent Studies, CINAHL, Family & Society Studies Worldwide, Mental Measurements Yearbook, Social Work Abstracts, and Women's Studies International. It also included Bibliography of Native North Americans and grey literature (e.g., IHS reports and tribal research studies). It was decided to keep the search broad and to use an iterative process recommended for scoping reviews and data analysis (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010).
Results	**2,809 references** were identified and reviewed by the librarian. **262 abstracts** met inclusion criteria and were reviewed and coded by the research team. **72 publications** met full review criteria and were selected for full review and coding. The main result was that we found only **one instrument developed by Indigenous persons for Indigenous persons** that was designed to measure any of the four Phase 1 outcomes. This was the ***Cultural Connectedness Scale*** developed by **Dr. Angela Snowshoe** for First Nations/Indigenous youth in Canada that was designed to measure connection to culture (Snowshoe et al., 2015).

Why the Snowshoe Study and the Cultural Connectedness Scale Were Important Findings

The Cultural Connectedness Scale (CCS) was developed in Canada by First Nations/Indigenous persons for First Nations/Indigenous persons. The 29-item CCS consists of three sub-scales: identity, traditions, and spirituality. A strength of Dr. Snowshoe's and her colleague's CCS is based in the development approach that was described as using an "Indigenous Quantitative Methodological framework" that embodies First Nations people's stand point, in which community and strengths-based approaches are the core of the framework. The development of the CCS included three main stages: 1) item generation (i.e., items were generated using key informants interviews and youth and community focus groups, which resulted in the

generation of 56 items); 2) judgment quantification (the 56 items were reviewed and evaluated by Indigenous/First Nation expert judges using a content validity index [Grant and Davis, 1997]); and 3) item selection (items were selected based on the review of rational expert judgments and the expert judgments' feedback on the items). This stage resulted in narrowing the number of items to 45 items that were then examined using exploratory and confirmatory factor analyses to refine and develop the final 29-item instrument (Snowshoe et al., 2015).

Dr. Snowshoe validated the instrument in a sample of First Nations, Metis, and Inuit youth (N = 319) living on-reserve (78%) and urban areas (22%) in Saskatchewan and Ontario, Canada. The three subscales demonstrated adequate score reliabilities with Cronbach's alpha values: a) .872 for Identity, b) .808 for Spirituality, and c) .791 for Traditions. The CCS criterion validity was assessed against proxy measures of well-being/mental health outcomes (See Table 4). Snowshoe et al (2015) reported that all correlations between the CCS subscales and their theoretically relevant measures were in the expected direction and were significant, demonstrating the CCS tool criterion validity. A conclusion in the study by Dr. Snowshoe was that culture is a determinant of mental health.

Table 4
Correlations between CCS Scales and Well-Being Measures

Variable	Identity	Traditions	Spirituality
Life Satisfaction	.176**	.006	.136**
Sense of Self in the Present	.166**	.131**	.136**
Sense of Self in the Future	.276***	.097*	.192***

*p < .05 **p < .01 ***p < .0001

Given the above, the CCS was an important find as it was an outcome directly requested by the Community Advisory Workgroup, which was to identify or develop an *Indigenous evaluation instrument* that was developed by Indigenous persons for Indigenous persons. The CCS was a most helpful start. However, following consultation by Dr. Snowshoe with the Community Advisory Workgroup, it was clear that the CCS was developed by/for communities that were much less multi-tribal compared to the San Francisco Bay area which has representation of over 100 North American Tribes (California Consortium for Urban Indian Health [CCUIH], n.d.). Given this, the Community Advisory Workgroup directed the project team to conduct the needed research

to adapt the Snowshoe instrument to be appropriate for our more multi-tribal community. This then initiated Phase 3.

METHODS

Phase 3: Adapting the Cultural Connectedness Scale for Multi-Tribal Communities

The methods for Phase 3 derived from the results of Phase 2 and were guided by a consensus decision made by the Community Advisory Workgroup which was to implement an approach to modify the original CCS instrument to be a better fit for urban AI/AN persons in the San Francisco Bay area. Because there are 109 federally recognized tribes in California (CCUIH, n.d.), urban Californian AI/AN communities are more multi-tribal than the First Nations, Métis, and Inuit populations that the Snowshoe instrument was developed for and tested in. Therefore, a tool in California urban communities would need to be applied across very diverse communities with a wide range of cultural beliefs, norms, and practices. To determine how best to adapt the CCS, we developed four research questions to guide the process consisting of focus groups and key informant interviews. To achieve this, we presented the original 29 questions of the CCS to the participants. The adaptation in our area of California involved a slight modification of the CCS questions by substituting the original terms: "Aboriginal/FNMI" with "Native American" to be more appropriate for our communities.

Phase 3 Research Questions (asked in the focus groups)

1. What does each question on the Cultural Connectedness Scale measure?
2. How is the specific measure linked to Native American/Indigenous culture, identity, or spirituality?
3. What changes in the language are needed to make the question more appropriate for diverse Native American/Indigenous persons living in California?
4. What additions or changes are needed to the measures' examples provided in CCS?

Overview

A series of five scripted focus groups were conducted at the participating AI/AN health services organizations in Oakland, San Francisco, Sacramento, and San Jose, and additional key informant interviews were conducted among AI/AN staff and community members (n = 20). The

focus groups were facilitated by an elder (and MSW) who was known by each community. Supporting the facilitator were two additional note takers in each focus group.

Participants and Focus Groups

Three adult focus groups were conducted. Adult participants were considered "key informants." They were recruited by the participating Indigenous health organizations that sent formal invitation letters that indicated they were considered to be knowledgeable community leaders. Two youth focus groups (ages 12-17) were held. Youth participants were recruited from summer intern programs conducted by the health organizations. Youth assent was given verbally after being informed of the purpose of the project and their subsequent decision to participate. The total number of focus group participants across all the groups was 60, where the reported number of Tribal affiliations was 37 (see Table 5). Inclusion criteria included: a) participants self-identified as Native American/Indigenous and b) were identified as leaders in their communities.

We recognized that a sense of community ownership and support for the project were important. To facilitate this and to contextualize the project, the facilitator provided background information at the beginning of each focus group that included: i) indicating the project was initiated by the Community Advisory Workgroup that included staff from the local AI/AN health services organization; ii) introducing Dr. Angela Snowshoe as the Indigenous university professor/scholar in Canada who spent years working with First Nations/Indigenous communities to develop the original CCS with the objective of demonstrating that Indigenous culture/cultural connectedness is an important protective factor in the health of Indigenous persons; and iii) indicating that the participants were providing important contributions to the *Culture is Prevention Project* by helping adapt the original CCS instrument so it could also be used in multi-tribal communities to demonstrate that Indigenous culture is a protective factor in health.

Table 5
Focus Group Tribal Affiliations

Apache	Kiwa Pueblo	Nez Perce Tribe	Shawnee	Wappo
Blackfoot	Konkow-Maidu	Northern Cheyenne	Taino	Washoe
Cherokee	Kootbah Indian Rancheria	Oneida	The 3 Affiliated Tribes of N. Dakota	Yaqui Apache
Chickasaw	Lakota	Osage	Tohono O'odham	Yokut
Choctaw	Lumbee	Paiute	Tongva	Yurok-Karuk
Dine	Miwok Tribe of Ione	Pomo	Tubatulabal	Yuki
Hopi	Nashville El Dorado Miwok	Quenchua	Uki	
Karuk	Navajo	Sac-N-Fox Nati		

Data Collection and Analysis

Each of the three sub-scales in the 29-item CCS instrument were presented and addressed separately: i) identity, ii) traditions, and iii) spirituality (See Table 6). Some of the words in the questions were modified from the original to be more appropriate (e.g., "Aboriginal/FNMI" was changed to "Native American"). For each of the 29 questions on the CCS, we asked the same questions:

a. Do you find any of the wording in the question confusing or do you have suggestions for how the wording could be changed to be less confusing or a better fit (for multi-tribal communities in California)?
b. Are there some examples/measures that you feel are missing and should be added?
c. Are there some examples (e.g., linking to Native American/Indigenous culture, traditions, or spirituality) that you feel are not a good fit for our multi-tribal Native American/Indigenous Communities?

Participant Responses

Responses generated by focus group participants for each of the individual questions were documented by the facilitator and the two note takers using the "Note Takers Worksheet" that included the focus group questions to guide notetaking. After the first two focus groups (one adult and one youth), common themes/responses emerged and were used to modify/guide the methods in the following focus groups. It became clear there was a need to create "Examples Lists" to address the multi-tribal characteristics of the communities. For example, the original CCS questions asked respondents to link a personal characteristic or measure (e.g., knowledge, plan, activity, attitude, or perception) to a Native or Tribally specific activity or outcome. Results from the first two focus groups indicated that adapting the questions to be more multi-tribal was not going to be achieved by some minor changes to the language but more so by creating Examples Lists, which served to address the multi-tribal characteristics of our communities (see Appendices A & C). For example, *I use tobacco for guidance* was changed to *I use ceremonial/traditional medicines* (see Examples List #1) *for guidance or prayers or other reasons* (see Examples List #2). The Examples List 1 that was developing/growing between focus groups was titled, *List #1 Ceremonial & Traditional Medicines,* whereas the developing/growing Examples List 2 was titled, *List #2 Uses of Ceremonial & Traditional Medicines*.

Following the first two focus groups, results were then presented to the following three focus groups to address consensus. As with the previous focus groups, these participants were also asked the same questions for each of the 29 CCS original questions and were also asked to identify items that should be included in the growing Examples Lists.

Table 6
Original CCS Subscales

IDENTITY

1. I plan on trying to find out more about my Native American culture, such as its history, traditions, and customs.
2. I have spent time trying to find out more about being Native American, such as its history, traditions and customs.
3. I have a strong sense of belonging to my Native American community or Nation.
4. I have done things that will help me understand my Native American background better.
5. I have talked to other people in order to learn more about being Native American.
6. When I learn something about my Native American culture, I will ask someone more about it later.
7. I feel a strong attachment towards my Native American community or Tribe.
8. If a traditional person, Elder, or Clan Mother spoke to me about being Native American, I would listen to them carefully.
9. I feel a strong connection to my ancestors.
10. Being Native American means I sometimes have a different way of looking at the world.
11. It is important to me that I know my Native American language.

TRADITONS

1. I use tobacco for guidance.
2. I have participated in a cultural ceremony.
3. I have helped prepare for a cultural ceremony.
4. Someone in my family or someone I am close with attends cultural ceremonies.
5. I plan on attending a cultural ceremony in the future.
   (Examples for 2-5: Sweat lodge, Moon Ceremony, Sundance, Longhouse, Feast, or Giveaway)
6. I have offered food or feasted someone/something for a cultural reason. *(Examples: Spirit Plate, Thank You Ceremony)*
7. How often do you make tobacco offerings for cultural purposes?
8. How often do you use sage, sweet grass, or cedar in any way or form?
9. How often does someone in your family or someone you are close with use sage, sweet grass, or cedar in any way or form?
10. I can understand some of my Native American language.
11. I have a traditional person, Elder, or Clan Mother who I talk to.

SPIRITUALITY

1. I know my cultural/spirit name.
2. In certain situations, I believe things like animals and rocks have a spirit like Native American people.
3. The eagle feather has a lot of meaning to me.
4. When I am physically ill, I look to my Native American culture for help.
5. When I am overwhelmed with my emotions, I look to my Native American culture for help.
6. When I need to make a decision about something, I look to my Native American culture for help.
7. When I am feeling spiritually disconnected, I look to my Native American culture for help.

RESULTS

The main outcome from this phase was the development of a revised instrument, which we call the *Cultural Connectivity Scale – California* (CCS-CA) illustrated in Appendix C. Our main objectives were to modify the original CCS to be more appropriate for our multi-tribal communities, in our service areas in California, while attempting to maintain fidelity to the original CCS instrument by retaining all items (and subscales) and question intent.

Some minor language changes or terms were made to the original CCS. These changes reflected the different tribes and multi-tribal characteristics in our communities compared to the Snowshoe study. However, the main adaptive change was the addition of the six Examples Lists: 1) Ceremonial & Traditional Medicines; 2) Uses of Ceremonial & Traditional Medicines; 3) Traditional, Tribal, & Cultural Ceremonies or Activities; 4) Cultural Uses of Food; 5) Traditional Persons, Elders, & Leaders; and 6) Feathers list. By adding to these lists, each question could then be more appropriate for the AI/AN communities residing within a 150-mile radius of the San Francisco Bay area.

In addition to the development of the CCS-CA, two other interesting results emerged during Phase 3. First, it became clear that the new CCS-CA could be easily adapted for other AI/AN communities and different tribes, on or off reservation, by using the same process, which would mostly focus on making appropriate changes to the Examples Lists and minor phrasing to match local words to refer to culture.

Second, the CBPR approach helped with generating new items and achieving consensus and face validity. It also helped address historical issues with negative or harmful research experiences and lack of trust (Hodge, 2012; Tom-Orme, 2006; Tsosie, 2007). For example, in one community, the health organization had a policy of not participating in research on their community members. This was based on the history of negative or poor research experiences including the knowledge of research causing harm to, or not producing benefits for, Indigenous communities as described by one community member who said: “We have been researched to death and nothing changes.” However, in the *Culture is Prevention Project*, we found the research experience appeared to be having the opposite effect. Focus group participants and key informants were very engaged and seemed to have a sense of pride and ownership over the process and results. Some participants indicated they were proud to be working on a project that was new, respectful, inclusive, supported their narratives, and which could benefit the current community and future generations. In addition, participants frequently wanted to know when they could obtain the final

instrument when it was developed and requested to keep copies of the Examples Lists they had worked to develop.

DISCUSSION

This project began with direction from the Community Advisory Workgroup to identify or develop evaluation approaches that were aligned with an AI/AN epistemology and culture. The directive included the need for the team to be mindful of the diverse multi-tribal differences within the urban AI/AN communities of the San Francisco Bay area. Given that over 100 Tribes are represented in the Bay area, we needed an approach that would work and be acceptable. This indicated that a CBPR approach was the most appropriate to blend Western research methods with Bay Area Indigenous perspectives, experiences, culture, and knowledge.

CBPR approaches help address some of the historical problems associated with non-Aboriginal researchers conducting research in Aboriginal communities by capitalizing on the strengths of both parties (Szala-Meneok & Lohfeld, 2005). Other strengths of CBPR include the sense of community ownership that often develops including pride regarding the outcomes or solutions (Masotti et al., 2006). A particular strength in the *Culture is Prevention Project* was that it was initiated by the Community Advisory Workgroup and was supported by decision makers in the participating Indigenous Health Organizations. The focus groups were facilitated by an Elder known to each community and essentially were run like workgroups where the participants could see the results of their knowledge and input throughout the process.

Throughout Phases 1-3, there was a high degree of interest and engagement among the overall team comprised of the Community Advisory Workgroup, staff from the participating Indigenous Health Organizations, and community members they brought into the project. In part, this was because people were addressing an issue relating to mental health/well-being using a more Indigenous perspective. For example, SAMHSA's mission is to reduce the impact of substance abuse and mental illness (SAMHSA, 2019). However, as indicated earlier, there were concerns that the required outcome measures were overly focused on decreasing ‘at-risk’ behaviors such as drug and alcohol use and that there did not appear to be interest in capturing ‘health promoting behaviors’ or strength-based outcomes known to Native persons to improve health at individual, family, and community levels. One of these missing areas was the importance of Native culture as a social determinant of health.

Participants in the *Culture is Prevention Project* frequently indicated they were pleased to be working on a project they considered to be timely and important and which was aligned with their Indigenous strength-based narrative. Increasing protective factors, quality of life, and well-being is more aligned with traditional Native holistic, strength-based, and resiliency-based approaches to health versus the Western approach, which focuses more on decreasing risk or illness (Bartgis, 2016; Singer 2009; Arquette et al., 2002). As described by Bartgis:

> Strength-based approaches to health and wellness in tribal communities are not new, but are embedded in diverse tribal best practices, established by systematic observation over centuries, that have been passed down orally from generation to generation. The oral transmission of tribal best practices results in increased supervision and fidelity through a one-on-one mentorship model in which training typically occurs over decades. … Unlike randomized clinical trials used in Western science, tribal science has collected knowledge of long-term effects of practices that are in tune to the role of the environment. (2016, pi)

Some components of the traditional Indigenous perspective on health is shared with the World Health Organization (WHO). For example, in 1946, the WHO described health as: "…a state of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity" (WHO, 1946). However, Indigenous peoples' traditional approaches to health broadened or improved upon this by also including population health approaches centuries before population health was recognized and embraced by Western medical professionals. Given this, we suggest an additional value of CBPR is the potential for bi-directional capacity building whereby both Indigenous community members and academic researchers (or government decision-makers) learn from each other to increase overall capacity to generate health in Indigenous communities and support culturally appropriate evaluation approaches (Masotti et al., 2006; Wallerstein et al., 2008).

Lessons Learned

Introducing the Project and CCS

How the project is introduced is important. After engagement with many people interacting with the *Culture is Prevention Project* and original CCS, it became clear that what people knew about the CCS in the beginning had an impact on how they viewed and accepted it. People were

open and willing to help when they were informed: a) that the original CCS was developed by an Indigenous person and scholar (Dr. Angela Snowshoe) in Canada for Indigenous persons with the objective of demonstrating the relationships between Indigenous culture and health; and b) that revised CCS-CA was developed by AI/ANs in California for AI/ANs. In some settings where the CCS-CA was presented without this history, the opposite reaction occurred. Individuals were immediately skeptical and assumed it was another attempt by science to quantify Native culture based upon Western concepts, biases, and assumptions. We thought this negative response could have been associated with a historical trauma response relating to negative or harmful impacts of outside research on AI/AN communities.

Adapting the CCS-CA for the Community

Adapting the CCS-CA to be community-specific using a CBPR approach, involving multiple community leaders and members, is an important and necessary first step to community acceptance and ownership. This CBPR approach facilitated the process of adapting the 29 questions to be a better fit and more acceptable to multi-tribal communities. In Appendix B we provide a three step approach that interested communities could use to adapt the CCS-CA to be community or tribally specific.

Implications

The Snowshoe study (2015), combined with historical knowledge and other evidence, indicates that culture is an important determinant of health for Indigenous peoples. Snowshoe demonstrated that cultural connectedness can be measured and was positively associated with mental health/well-being. (Note, in our next paper we will present the results of our pilot testing/validation study where we also evaluate the relationship between cultural connectedness and mental health/well-being.) Given this and that cultural connectedness can now be measured, we argue:

- The degree of culture or cultural connectedness can also be seen as an important health program objective.
- Given that the loss of culture has negatively impacted the well-being of Indigenous peoples (e.g., resulting in poor mental, emotional, spiritual, and physical health; lowered life satisfaction; and substance abuse), the degree of reclaimed culture or increased cultural connectedness may be a more important outcome measure, for Indigenous people, than the reduction in frequency of a risky behavior.

- CBPR projects, particularly those in Indigenous communities and in collaboration with government funders, may help to counteract some outcomes of colonization. This approach may facilitate a paradigm shift by increasing the willingness of the dominant culture to acknowledge and understand that some AI/AN practices have thousands of years of use and are successful in creating and supporting health/well-being and are therefore, by definition, "evidence based" (Brave Heart et al., 2011).
- Efforts should continue on the part of Indigenous people to push for increased promotion and use of Indigenous epistemology and approaches to program evaluation and health outcomes measures.
- Government, academia, and Western medicine should be cognizant that Indigenous cultures historically manufactured good health. Therefore, government, academia, and Western medicine should try to better understand and promote Indigenous epistemology and community-defined evidence practices and not undermine it.

Limitations

We do not suggest we speak for all Indigenous communities within or outside of California. The CCS-CA was modified from the original CCS for use with multi-tribal communities in the San Francisco Bay area. Focus groups were held within 100 miles of San Francisco. Although the sample included persons who identified as being affiliated with 36 tribes, it was not a complete representation of all tribes within the area, which is estimated to be over 100. It is expected that the CCS-CA instrument will need to be reviewed and tailored to the culture of the local community, but it will be important that any changes maintain the integrity of the measures, subscales, and scoring system. Therefore, some modifications to the CCS-CA instrument by local communities could impact the reliability or validity of the CCS-CA. Other communities interested in using the CCS-CA are advised to go through a similar process of community introduction and local adaptation. This will support local level acceptance and ownership. We present our suggestions for local adaptation and lessons learned in Appendix B.

Future Research

Future research will include completing Phases 4-6 of the *Culture is Prevention Project*. In the next paper, we will present the results of the pilot and psychometric testing (Phase 4) that

replicated parts of the Snowshoe study (2015) such as the evaluation of the relationship between cultural connectedness and measures of mental health/well-being. In Phase 5 (Developing the Predictive Properties of the CCS-CA), we plan to evaluate if the CCS-CA could be used to identify people who are doing well versus not doing well (e.g., strong, resilient, good well-being versus experiencing or at risk for depression, suicide, or substance abuse). And in Phase 6 (Cultural Connectedness, Integration, Health, Utilization, and Costs in Health Center), we plan to evaluate the relationships between culture, physical health measures, and health organization outcomes (e.g., cost, utilization).

REFERENCES

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19-32. http://doi.org/10.1080/1364557032000119616

Arquette, M., Cole, M., Cook, K., LaFrance, B., Peters, M., Ransom, J., & Stairs, A. (2002). Holistic risk-based environmental decision making: A Native perspective. *Environmental Health Perspectives*, *110*(Suppl 2), 259-264. http://dx.doi.org/10.1289/ehp.02110s2259

Bala, A., & Joseph, G. G. (2007). Indigenous knowledge and western science: The possibility of dialogue. *Race & Class*, *49*(1), 39-61. https://doi.org/10.1177/0306396807080067

Bartgis, J. (2016). Introduction. *American Indian and Alaska Native Mental Health Research*, *23*(3), i-v. http://dx.doi.org/10.5820/aian.2303.2016.i

Brave Heart, M. Y. H., Chase, J., Elkins, J., & Altschul, D. B. (2011). Historical trauma among Indigenous peoples of the Americas: Concepts, research, and clinical considerations. *Journal of Psychoactive Drugs*, *43*(4), 282-290. http://dx.doi.org/10.1080/02791072.2011.628913

Brave Heart, M. Y. H., & DeBruyn, L. M. (1998). The American Indian holocaust: Healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research*, *8*(2), 56-78. http://dx.doi.org/10.5820/aian.0802.1998.60

Burton, L. M., Matthews, S., Leung, M., Kemp, S., & Takeuchi, D. (Vol. Eds.). (2011). *Social Disparities in Health and Health Care*: *Vol 1. Communities, neighborhoods, and health: Expanding the boundaries of place*. New York, NY: Springer. https://link.springer.com/book/10.1007/978-1-4419-7482-2

California Consortium for Urban Indian Health (CCUIH). (n.d.). *Urban Indians.* Retrieved from http://ccuih.org/our-community/

California Department of Public Health. (2019). *California Reducing Disparities Project*. Retrieved from https://www.cdph.ca.gov/Programs/OHE/Pages/CRDP.aspx

Chandler, M. J., & Lalonde, C. (1998). Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry*, *35*(2), 191-219. https://doi.org/10.1177/136346159803500202

Ehlers, C. L., Gizer, I. R., Gilder, D. A., & Yehuda, R. (2013). Lifetime history of traumatic events in an American Indian community sample: Heritability and relation to substance dependence, affective disorder, conduct disorder and PTSD. *Journal of Psychiatric Research*, *47*(2), 155-161. http://dx.doi.org/10.1016/j.jpsychires.2012.10.002

Ellerby, J. H., McKenzie, J., McKay, S., Gariépy, G. J., & Kaufert, J. M. (2000). Bioethics for clinicians: 18. Aboriginal cultures. *CMAJ*, *163*(7), 845-850. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC80510/

Evans, W., & Davis, B. (2018). Exploring the relationship between sense of coherence and historical trauma among American Indian youth. *American Indian and Alaska Native Mental Health Research*, *25*(3), 1-25. http://dx.doi.org/10.5820/aian.2503.2018.1

Garroutte, E. M., Goldberg, J., Beals, J., Herrell, R., Manson, S. M., & the AI-SUPERPFP Team. (2003). Spirituality and attempted suicide among American Indians. *Social Science and Medicine, 56*(7), 1571-1579. https://doi.org/10.1016/S0277-9536(02)00157-0

Gone, J. P. (2013). A community-based treatment for Native American historical trauma prospects for evidence-based practice. *Spirituality in Clinical Practice, 1*(S), 78-94. http://dx.doi.org/10.1037/2326-4500.1.S.78

Gracey, M., & King, M. (2009). Indigenous health part 1: Determinants and disease patterns. *The Lancet, 374*(9683), 65-75. https://doi.org/10.1016/S0140-6736(09)60914-4

Grant, J. S., & Davis, L. L. (1997). Selection and use of content experts for instrument development. *Research in Nursing & Health*, *20*(3), 269-274. https://doi.org/10.1002/(SICI)1098-240X(199706)20:3<269::AID-NUR9>3.0.CO;2-G

Guimond, E., Lawrence, D., Mitrou, F., Cooke, M., & Beavon, D. (2007). Indigenous well-being in four countries: An application of the UNDP'S Human Development Index to Indigenous Peoples in Australia, Canada, New Zealand, and the United States. *BMC International Health and Human Rights, 7*(9), 1-11. https://doi.org/10.1186/1472-698X-7-9

Hodge, F. S. (2012). No meaningful apology for American Indian unethical research abuses. *Ethics & Behavior*, *22*(6), 431-444. https://doi.org/10.1080/10508422.2012.730788

Jones, J., & Hunter, D. (1995). Consensus methods for medical and health services research. *BMJ: British Medical Journal*, *311*(7001), 376-380. http://dx.doi.org/10.1136/bmj.311.7001.376

Larios, S. E., Wright, S., Jernstrom, A., Lebron, D., & Sorensen, J. L. (2011). Evidence-based practices, attitudes, and beliefs in substance abuse treatment programs serving American Indians and Alaska Natives: A qualitative study. *Journal of Psychoactive Drugs*, *43*(4), 355-359. http://dx.doi.org/10.1080/02791072.2011.629159

Lavallee, L. F., & Poole, J. M. (2010). Beyond recovery: Colonization, health and healing for Indigenous people in Canada. *International Journal of Mental Health and Addiction*, *8*(2), 271-281. https://doi.org/10.1007/s11469-009-9239-8

Levac, D., Colquhoun, H., & O'Brien, K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, *5*(1), 69. https://doi.org/10.1186/1748-5908-5-69

Levy, J. (2018). USDA Foods, Indigenous Health, and Self-Sufficiency on Pohnpei, Micronesia. In R. Henry, A. Lavallee, N. V. Styvendale, & R. Innes, (Eds), *Global Indigenous health: Reconciling the past, engaging the present, animating the future.* Tucson, AZ: University of Arizona Press.

Lloyd-Jones, G., Fowel, S., & Bligh, J. G. (1999). The use of the nominal group technique as an evaluative tool in medical undergraduate education. *Medical Education, 33*(1), 8-13. https://doi.org/10.1046/j.1365-2923.1999.00288.x

Masotti, P., George, M. A., Szala-Meneok, K., Morton, A. M., Loock, C., & Van Bibber, M. (2006). Preventing fetal alcohol spectrum disorder in Aboriginal communities: A methods development project. *PLoS Medicine, 3*(1), e8. https://doi.org/10.1371/journal.pmed.0030008

Masotti, P., Longstaffe, S., Gammon, H., Isbister, J., Maxwell, B., & Hanlon-Dearman, A. (2015). Integrating care for individuals with FASD: Results from a multi-stakeholder symposium. *BMC Health Services Research*, *15*(1), 457. https://doi.org/10.1186/s12913-015-1113-8

McCormick, R. (1995). Culturally appropriate means and ends of counselling as described by the First Nations people of British Columbia. *International Journal for the Advancement of Counselling*, *18*(3), 163-172. http://dx.doi.org/10.1007/BF01407960

McIvor, O., Napoleon, A., & Dickie, K. M. (2009). Language and culture as protective factors for at-risk communities. *Journal of Aboriginal Health, 5*(1), 6-25. https://doi.org/10.3138/ijih.v5i1.28975

Menzies, P., & Lavallee, L. (2014). Preface. In P. Menzies, & L. Lavallee (Eds.), *Journey to healing Aboriginal people with addiction and mental health issues: What health, social service and justice workers need to know* (pp. xi-xiii). Toronto, Canada: Centre for Addiction and Mental Health.

Michigan Department of Health & Human Services. (2019). *PFS Required Outcome Measures Table - State of Michigan.* Retrieved from https://www.michigan.gov/documents/mdhhs/PFS_Required_Outcome_Measures_Table_532077_7.pdf

Mooney, J. (1890). Cherokee theory and practice of medicine. *The Journal of American Folklore*, *3*(8), 44-50. http://dx.doi.org/10.2307/533027

Powell, A., & Gabel, C. (2018). Addressing inequalities: Understanding Indigenous health policy in urban Ontario, Canada. In H. R. Lavallee, A. Lavallee, N. V. Styvendale, & R. A. Innes (Eds.), *Global Indigenous health: Reconciling the past, engaging the present, animating the future*. Tucson, AZ: University of Arizona Press.

Pu, J., Chewning, B., St. Clair, I. D., Kokotailo, P. K., Lacourt, J., & Wilson, D. (2013). Protective factors in American Indian communities and adolescent violence. *Maternal and Child Health, 17*(7), 1199-1207. http://dx.doi.org/10.1007%2Fs10995-012-1111-y

Reading, C. L., & Wien, F. (2009). *Health inequalities and the social determinants of Aboriginal peoples' health*. Prince George, BC: National Collaborating Centre for Aboriginal Health.

Singer, M. (2009). *Introduction to Syndemics: A critical systems approach to public and community health.* San Francisco, CA: John Wiley & Sons Press.

Snowshoe, A., Crooks, C. V., Tremblay, P. F., Craig, W. M., & Hinson, R. E. (2015). Development of a cultural connectedness scale for First Nations youth. *Psychological Assessment, 27,* 249-259. http://dx.doi.org/10.1037/a0037867

Stamm, B. H., & Stamm, H. E. (1999). Trauma and loss in Native North America: An ethnocultural perspective. In K. Nader, N. Dubrow, & B. H. Stamm, *Honoring differences: Cultural issues in the treatment of trauma and loss*, (pp. 49-75). Philadelphia, PA: Taylor & Francis.

Substance Abuse and Mental Health Services Administration (SAMHSA). (2019). *Strategic Prevention Framework - Partnerships for Success*. https://www.samhsa.gov/grants/grant-announcements/sp-18-008

Szala-Meneok, K., & Lohfeld, L. (2005). The charms and challenges of being an academic qualitative researcher conducting participatory action research (PAR). In D. Pawluch, W. Shaffir, & C. Miall (Eds.), *Doing ethnography: Studying everyday life,* (pp. 352). Toronto, Canada: Canadian Scholar's Press.

Tom-Orme, L. (2006). Research and American Indian/Alaska Native health: A nursing perspective. *Journal of Transcultural Nursing*, *17*(3), 261-265. https://doi.org/10.1177/1043659606288379

Tsosie, R. (2007). Cultural challenges to biotechnology: Native American genetic resources and the concept of cultural harm. *The Journal of Law, Medicine & Ethics*, *35*(3), 396-411. https://doi.org/10.1111/j.1748-720X.2007.00163.x

Tucker, R. P., Wingate, L. R., & O'Keefe, V. M. (2016). Historical loss thinking and symptoms of depression are influenced by ethnic experience in American Indian college students. *Cultural Diversity and Ethnic Minority Psychology, 22*(3), 350-358. https://dx.doi.org/10.1037/cdp0000055

U.S. Department of Health and Human Services. (2017). *Community-Level Instrument – Revised (CLIR): Tips, recommendations, and question guide*. Retrieved from https://iseralaska.org/static/akpfs/CLI-R_Tips&Recommendations_V1_03312017.pdf

Waldram, J. B., Herring, A., & Young, T. K. (2006). *Aboriginal health in Canada: Historical, cultural, and epidemiological perspectives*. Toronto, Canada: University of Toronto Press.

Wallerstein, N., Oetzel, J., Duran, B., Tafoya, G., Belone, L., & Rae, R. (2008). What predicts outcomes in CBPR? In M. Minkler & N. Wallerstein (Eds.), *Community-based Participatory Research for Health* (pp. 371-392). San Francisco, CA: Jossey-Bass. http://dx.doi.org/10.13140/RG.2.2.25894.11844

Walls, M. L., & Whitbeck, L. B. (2011). Distress among Indigenous North Americans: Generalized and culturally relevant stressors. *Society and Mental Health*, *1*(2), 124-136. https://doi.org/10.1177/2156869311414919

Walters, K. L., Beltran, R., Huh, D., & Evans-Campbell, T. (2011). Dis-placement and dis-ease: Land, place, and health among American Indians and Alaska Natives. In L. M. Burton, S. A. Matthews, M. Leung, S. P. Kemp, & D. T. Takeuchi (Eds.), *Communities, neighborhoods, and health: Expanding the boundaries of place.* New York, NY: Springer. https://dx.doi.org/10.1007/978-1-4419-7482-2_10

Walters, K. L., Mohammed, S. A., Evans-Campbell, T., Beltrán, R. E., Chae, D. H., & Duran, B. (2011). Bodies don't just tell stories, they tell histories: Embodiment of historical trauma among American Indians and Alaska Natives. *Du Bois Review: Social Science Research on Race*, *8*(1), 179-189. https://doi.org/10.1017/S1742058X1100018X

Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing Native women's health: An "indigenist" stress-coping model. *American Journal of Public Health*, *92*(4), 520-524. https://dx.doi.org/10.2105/AJPH.92.4.520

Whitbeck, L. B., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2001). Traditional culture and academic success among American Indian children in upper Midwest. *Journal of American Indian Education, 40*(2), 48-60. http://www.jstor.org/stable/24398333

Whitbeck, L. B., Walls, M. L., & Welch, M. L. (2012). Substance abuse prevention in American Indian and Alaska Native communities. *The American Journal of Drug and Alcohol Abuse*, *38*(5), 428-435. https://doi.org/10.3109/00952990.2012.695416

Wilson, K. (2003). Therapeutic landscapes and First Nations peoples: An exploration of culture, health and place. *Health & Place*, *9*(2), 83-93. http://doi.org/10.1016/S1353-8292(02)00016-3

World Health Organization (WHO). (1946, June). *Constitution.* Retrieved from https://www.who.int/about/who-we-are/constitution

ACKNOWLEDGEMENTS

The paper represents the activities and results from the three research projects representing the first three of six phases of the Culture is Prevention Project. This work was supported by funding from SAMHSA (Partnerships for Success), the California Department of Public Health – Office of Health Equity (California Reducing Disparities Project), and the Native American Health Center (Department of Community Wellness). The research and this manuscript was approved by the Indian Health Service (I.H.S.) National Institutional Review Board (NIRB) N17-N-02 Culture is Prevention and the Community Advisory Board (Strategic Prevention Advisory Workgroup) comprised of staff and community members from the participating Native American health services organizations.

The authors would like to acknowledge the contributions of staff and community members from the six participating Native American health organizations and Community Advisory Boards/Workgroup that contributed to the project:

California Consortium for Urban Indian Health – San Francisco
Friendship House – San Francisco
Indian Health Center of Santa Clara Valley – San Jose
Native American Health Center – Oakland/San Francisco
Sacramento Native American Health Center – Sacramento
Urban Indian Health Institute – Seattle
The Blanket Weavers (Community Advisory Board) – San Francisco

We would like to acknowledge the early contributions to the genesis of the Culture is Prevention project by Mikayla Schaaf (NAHC Program Manager), Gerry Rainingbird & Jeremy Goldbach (SAMHSA – CAPT). We also very much would like to acknowledge the important original work by Dr. Angela Snowshoe (University of Regina) and colleagues that made this possible.

AUTHOR INFORMATION

Janet King is Program Manager of Policy and Advocacy at the Native American Health Center in Oakland, California.

Dr. Paul Masotti is Director of Research/Evaluation at the Native American Health Center in Oakland, California.

John Dennem is a PhD candidate and consultant at Claremont Graduate University in Claremont, California.

Shir Hadani is an evaluator at the Native American Health Center in Oakland, California.

Janice Linton is the Indigenous Health Librarian & Liaison Librarian for Community Health Sciences at the University of Manitoba in Winnipeg, Manitoba.

Bonnie Lockhart is a consultant and member of the Sherwood Valley Band of Pomo Indians in Willits, California.

Dr. Jami Bartgis is a consultant at One Fire Associates in Sand Springs, Oklahoma.

APPENDIX

Appendix A - Cultural Connectedness Scale – California, Sub Scales

Traditions - 11 Items

- I use ceremonial/traditional medicines ***(See Examples List #1)*** for guidance or prayer or other reasons. ***(See Examples List #2)*** [a]
- I have participated in a traditional/cultural ceremony or activity. ***(See Examples List #3)*** [a]
- I have helped prepare for a traditional/cultural ceremony or activity in my family or community. ***(See Examples List #3)*** [a]
- Someone in my family or someone I am close with attends traditional/cultural ceremonies or activities. ***(See Examples List #3)*** [a]
- I plan on attending a traditional/cultural ceremony or activity in the future. ***(See Examples List #3)*** [a]
- I have shared a meal with community, offered food or fed my ancestors for a traditional/cultural or spiritual reason.[a]
- How often do you offer a ceremonial/traditional medicine for cultural/traditional purposes? ***(See Examples List #1)*** [c]
- How often do you use ceremonial/traditional medicines? ***(See Examples List #1)*** [c]
- How often does someone in your family or someone you are close to use ceremonial/traditional medicines? ***(See Examples List #1)*** [c]
- I can understand some of my Native American/Indigenous words or languages. [a]
- I have a traditional person, elder or other person who I can talk to. ***(See Examples List #5)*** [a]

Identity - 11 Items

- I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal Identity, traditions, customs, arts and language. [a]
- I have spent time trying to find out more about being Native American/Indigenous, such as its history, tribal identity, traditions, language and customs. [b]
- I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation. [b]
- I have done things that will help me understand my Native American/Indigenous background better. [b]
- I have talked to community members or other people ***(See Examples List #5)*** in order to learn more about being Native American/Indigenous. [b]
- When I learn something about my Native American/Indigenous culture, history or ceremonies, I will ask someone, research it, look it up, or find resources to learn more about it. [b]
- I feel a strong attachment towards my Native American community or Tribe. [b]
- If a traditional person, counsellor or Elder who is knowledgeable about my culture spoke to me about being Native American/Indigenous, I would listen to them carefully. ***(See Examples List #5)*** [b]
- I feel a strong connection to my ancestors and those who came before me. [b]
- Being Native American means I sometimes have a different perception or way of looking at the world. [b]
- It is important to me that I know my Native American/Indigenous or Tribal language(s). [b]

Spirituality - 7 Items

- I know my cultural, spirit, Indian or Traditional Name. [a]
- I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People. [b]
- The eagle feather (or other feathers - ***See Examples List #6***) has a lot of traditional meaning for me. [b]
- When I am physically ill, I look to my Native American/Indigenous culture for help. [b]
- When I am overwhelmed with my emotions, I look to my Native American/Indigenous culture for help. [b]
- When I need to make a decision about something, I look to my Native American/Indigenous culture for help. [b]
- When I am feeling spiritually disconnected, I look to my Native American/Indigenous culture for help. [b]

Response Format

[a] = Yes, No (or Not Applicable)
[b] = Strongly Disagree, Disagree, Do Not Agree or Disagree, Agree, Strongly agree
[c] = Never, once/twice past year, every month, every week, every day

Appendix A – Examples Lists: Cultural Connectedness Scale – California

List #1 Ceremonial & Traditional Medicines	List #2 Uses of Ceremonial & Traditional Medicines	List #3 Traditional, Tribal & Cultural Ceremonies or Activities	List #4 Cultural Uses of Food	List #5 Traditional Persons, Elders & Leaders
• Angelica Root • Bear Root • Cedar • Corn Pollen • Copal • Greasewood • Jimson • Milk Weed • Mountain Tea • Mugwort • Palo de Santo, • Peyote • Sage • Sweet grass • Tobacco • Women's Tea	• Asking for a blessing in a sacred manner • Calmness • Cultural connections • Gifting to show respect • Give thanks • Guidance • Help Sleeping • To honor • Personal Healing • Prayer • Smudge • Spiritual connections • Spiritual Offerings • Steady Mind • Talk to the creator • Keep bad spirits away	• Acorn Ceremony • Beading Class • Bear Dance, Sun Dance, Round Dance or other Cultural Dance • Big Time • Burning of Clothes • Coming of Age • Deer Gathering • Drumming • Feast Giveaway • Fiesta (South of Kern Valley) • GONA • Longhouse • Moon Ceremony • New Years • Pot Latch • Pow Wow • Puberty Ceremony • Repatriation • Running is my High • Spring Ceremony • Story Telling • Sunrise Ceremony • Sun Rise (Alcatraz) • Sweat Lodge • Traditional Tattoo • Washing of the Face • Wiping of Tears • Young Men's Ceremony • Yuwipi	• Spirit Plate • Thank You Ceremony • Special Feast • Community Feed • Other	• Ceremonial Leader • Cultural Teacher • Doctor • Elder • Father • Feather Man • Feather Woman • God Father • God Mother • Head Heir • Head Man • Head Woman • Medicine People • Mother • Mother Bear • Regalia Leader • Spiritual Person • Timiiwal • Top Doc

List #6 Feathers
• Eagle • Condor • Flicker • Hummingbird • Raven • Hawk • Turkey • Quail • Woodpecker

Appendix B - Community-Specific Adaptation of the Cultural Connectedness Scale – California

We recommend the following three step approach to adapting the CCS-CA to be community or tribally specific.

Step 1: Develop or use an existing Community Advisory Board comprised of community leaders, elders, youth, and formal and informal community leaders. Provide background on the development of the CCS and CCS-CA: a) that they were developed by Indigenous/ Native persons for Indigenous/Native persons; and b) publications such as Snowshoe et al., 2015 and King et al., 2019.

1.1) Members of the Community Advisory Board will meet and complete Steps 2 and 3.

Step 2: Review each question to see if any changes to the language are needed to make the question more appropriate for the community/Tribe/Nation.

2.1) Review each question. Evaluate words and terms such as 'Native American', 'Indian', 'Indigenous', 'First Nations', or 'Aboriginal'.
2.2) Change terms or names to what is appropriate to be community or Tribally specific such as changing 'Clan Mother' or 'Traditional Person' to what is typically used in its place.
2.3) This step could also mean changing the possible answers such as what we did for the Question: I know my cultural/spirit name or Indian name, to include the possible answers to be: Yes, No or Not Applicable (We do not have/use 'Indian Names').

Note – it is important to try not to change what the question is intended to measure. Thus in this step, the objective is to mostly revise terms and names to be community or Tribally specific.

Step 3: Review and revise the Example Lists

3.1) Review each of the six Examples Lists and remove all examples that are not relevant for your community, Tribe, or Nation.
3.2) Add examples to each of the six Examples Lists that are appropriate for your community, Tribe, or Nation.

Appendix C – Operational Cultural Connectedness Scale – California

Background and Introduction

The *Cultural Connectedness Scale* is an instrument that was developed by an Indigenous researcher in Canada, Dr. Angela Snowshoe, to measure cultural connections among First Nations youth. The *Cultural Connectedness Scale - California* (CCS-CA) was adapted from the original Cultural Connectedness Scale (Snowshoe et al., 2015) and tested for use in California with urban Indigenous adults and youth. Individuals participating in the development of this tool were from 37 distinct tribal nations across the United States. During the pilot testing phase, 105 distinct tribal nations were represented.

One of the changes in the CCS-CA is the addition of an *Examples List* (See attached) that should be adapted (changed) for your community in order for the CCS-CA to work best for your location. This Examples List has already been adapted by a tribal nation and is being used in the Great Plains area.

Most people that complete the Cultural Connectedness Scale report a positive experience. However, a few people reported feeling sad, angry, shame, or a sense of loss from some of the questions. For example, some people may not know their *traditional, tribal or Indian name,* creating a sense of loss or a feeling of shame. These individuals may not have had the opportunity to have a *Naming Ceremony* due to a wide range of causes beginning from cultural losses that occurred when Europeans settled in America. Also, some may come from tribes in which Indian naming by ceremony is not a practice. These questions are not to judge or make anyone have a negative reaction, but to help us learn about what is valued and to measure connection to Native American/Indigenous culture(s).

If you feel negative or tender emotions about some of these questions, today or in the future as you recall the questions, it is a very normal reaction to having a loss or disconnection. It is important to be honest with yourself about any negative or unwanted feelings and reach out to a trusted healthy adult or professional in your local community to talk. You can also call a confidential national hotline, LIFELINE at (800)273-8255 (TALK).

We thank you for your participation!

Snowshoe, A., Crooks, C. V., Tremblay, P. F., Craig, W. M., & Hinson, R. E. (2015). Development of a cultural connectedness scale for First Nations youth. *Psychological Assessment, 27,* 249-259. http://dx.doi.org/10.1037/a0037867

Cultural Connectedness Scale - California

QUESTIONS 1 - 11, Circle the Most Accurate Answer

1. **I believe things like animals, rocks (and all nature) have a spirit like Native American/ Indigenous People.**
   Yes No

2. **I can understand some Native American/Indigenous words or language(s).**
   Yes No

3. **I know my Cultural, Spirit, Indian or Traditional Name.**
   Yes No Does Not Apply (We do not use these names)

4. **I use ceremonial/traditional medicines (See Examples List #1) for guidance or prayer or other reasons (See Examples List #2).**
   Yes No

5. **I have participated in a traditional/cultural ceremony or activity (See Examples List #3).**
   Yes No

6. **I have helped prepare for a traditional/cultural ceremony or activity in my family or community (See Examples List #3).**
   Yes No

7. **I have shared a meal with community, offered food or fed my ancestors for a traditional/cultural or spiritual reason (See Examples List #4).**
   Yes No

8. **Someone in my family or someone I am close with attends traditional/cultural ceremonies or activities (See Examples List #3).**
   Yes No

9. **I plan on attending a traditional/cultural ceremony or activity in the future (See Examples List #3).**
   Yes No

10. **I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.**
    Yes No

11. **I have a traditional person, elder or other person who I can talk to (See Examples List #5).**
    Yes No

QUESTIONS 12 - 29, Circle the Most Accurate Answer

12. I have spent time trying to find out more about being Native American/Indigenous, such as history, tribal identity, traditions, language and customs.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

13. I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

14. I have done things that will help me understand my Native American/Indigenous background better.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

15. I have talked to community members or other people (See Examples List #5) in order to learn more about being Native American/Indigenous
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

16. When I learn something about my Native American/Indigenous culture, history, or ceremonies, I will ask someone, research it, look it up, or find resources to learn more about it.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

17. I feel a strong connection/attachment towards my Native American community or Tribe.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

18. If a traditional person, counselor or Elder who is knowledgeable about my culture, spoke to me about being Native American/Indigenous, I would listen to them carefully (See Examples List #5).
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

19. I feel a strong connection to my ancestors and those that came before me.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

20. Being Native American/Indigenous means I sometimes have a different perception or way of looking at the world.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

21. The eagle feather (or other feathers) has a lot of traditional meaning for me (See Examples List #6).
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

22. It is important to me that I know my Native American/Indigenous or Tribal language(s).
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

23. When I am physically ill, I look to my Native American/Indigenous culture or community for help.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

24. When I am overwhelmed with my emotions, I look to my Native American/Indigenous culture or community for help.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

25. When I need to make a decision about something, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

26. When I am feeling spiritually ill or disconnected, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

Please answer how often you experience the following:

27. How often do you offer a ceremonial/ traditional medicine for cultural/traditional purposes? (See Examples List #1)

Never Once/Twice in the Past Year Every Month Every Week Every Day

28. How often do you use ceremonial/traditional medicines? (See Examples List #1)

Never Once/Twice in the Past Year Every Month Every Week Every Day

29. How often does someone in your family or someone you are close to use ceremonial or traditional medicines? (See Examples List #1)

Never Once/Twice in the Past Year Every Month Every Week Every Day

CCS-CA SCORING

Yes = 5 No = 1 NA = 3

Strongly Disagree = 1
Disagree = 2
Do Not Agree/Disagree = 3
Agree = 4
Strongly Agree = 5

Never = 1
Once/Twice Past Year = 2
Every Month = 3
Every Week = 4
Every Day = 5

CCS-CA Range: 29 – 145

Identity Subscale: 11 - 55
Traditions Subscale: 11 - 55
Spirituality Subscale: 7 - 35

Examples Lists: Cultural Connectedness Scale - California

List #1 Ceremonial & Traditional Medicines	List #2 Uses of Ceremonial & Traditional Medicines	List #3 Traditional, Tribal & Cultural Ceremonies or Activities	List #4 Cultural Uses of Food	List #5 Traditional Persons, Elders & Leaders
• Angelica Root • Bear Root • Cedar • Corn Pollen • Copal • Greasewood • Jimson • Milk Weed • Mountain Tea • Mugwort • Palo de Santo, • Peyote • Sage • Sweet grass • Tobacco • Women's Tea	• Asking for a blessing in a sacred manner • Calmness • Cultural connections • Gifting to show respect • Give thanks • Guidance • Help Sleeping • To honor • Personal Healing • Prayer • Smudge • Spiritual connections • Spiritual Offerings • Steady Mind • Talk to the creator • Keep bad spirits away	• Acorn Ceremony • Beading Class • Bear Dance, Sun Dance, Round Dance or other Cultural Dance • Big Time • Burning of Clothes • Coming of Age • Deer Gathering • Drumming • Feast Giveaway • Fiesta (South of Kern Valley) • GONA • Longhouse • Moon Ceremony • New Years • Pot Latch • Pow Wow • Puberty Ceremony • Repatriation • Running is my High • Spring Ceremony • Story Telling • Sunrise Ceremony • Sun Rise (Alcatraz) • Sweat Lodge • Traditional Tattoo • Washing of the Face • Wiping of Tears • Young Men's Ceremony • Yuwipi	• Spirit Plate • Thank You Ceremony • Special Feast • Community Feed • Other	• Ceremonial Leader • Cultural Teacher • Doctor • Elder • Father • Feather Man • Feather Woman • God Father • God Mother • Head Heir • Head Man • Head Woman • Medicine People • Mother • Mother Bear • Regalia Leader • Spiritual Person • Timiiwal • Top Doc

List #6 Feathers
• Eagle • Condor • Flicker • Hummingbird • Raven • Hawk • Turkey • Quail • Woodpecker

THE CULTURE IS PREVENTION PROJECT: MEASURING CULTURE AS A SOCIAL DETERMINANT OF MENTAL HEALTH FOR NATIVE/INDIGENOUS PEOPLES

Paul Masotti, PhD, John Dennem, MA, CADC-II, Shir Hadani, MSc, Karina Banuelos, MA, Janet King, MSW, Janice Linton, MLS, Bonnie Lockhart, ASW, and Chirag Patel

Abstract: This paper reports Phase 4 of the Culture is Prevention Project where we validated the Cultural Connectedness Scale – California (CCS-CA) with a sample of 344 Indigenous adults in the San Francisco Bay Area, California. In Phase 3 of this project, the CCS-CA was modified from the original Canadian Cultural Connectedness Scale (CCS) developed by Dr. Angela Snowshoe and colleagues to be a better fit for the more multi-tribal communities in urban California. Both the CCS-CA and CCS consist of 29 items that measure culture on 3 sub-scales: identity, traditions, and spirituality. The project demonstrated a positive link between cultural connectedness and mental health/well-being using the Herth Hope Index. We report results similar to the original CCS study by Snowshoe et al., where we found the CCS-CA to be a valid and reliable strength-based instrument and to support the conclusion that culture is a social determinant of mental health/well-being for Indigenous/Native peoples.

BACKGROUND

What tore the Indian world apart and how did it impact health?

Prior to colonization, Indigenous/Native[1] peoples across the North American continent maintained health and wellness for thousands of years through culturally-based practices. According to Indigenous worldviews, the environment, mind, body, and emotional health are inextricably linked to collective human behavior, practices, wholeness, and, hence, wellness (Brave Heart, Chase, Elkins, & Altschul, 2011; Walters, Beltran, Huh, & Evans-Campbell, 2011).

[1] In this paper we use 'Native/Indigenous' or 'American Indian/Alaska Native [AI/AN]' interchangeably to represent the original peoples of North America prior to colonization. The term 'cultural connectedness' refers to the degree to which an AI/AN (Indigenous person) is integrated within his or her Native/Indigenous culture.

For example, health in Indigenous communities was the result of living in the community; participating in traditional ceremonial practices, which involved foods, medicines, songs, dances; and revering the land and all her inhabitants as relatives (Menzies & Lavallee, 2014; Tucker, Wingate, & O'Keefe, 2016). For generations, Indigenous people have practiced what we now call "Population Health" where traditional practices promoted health for community members by increasing collective strengths and decreasing inequities. This approach is very different compared to the Western individualistic approach (e.g., deficit-based or disease-based) to promoting health by increasing strengths at multiple levels (King et al., 2019).

Colonization had a devastating impact on eroding Native culture through government policies that broke the Indian world apart (Stamm & Stamm, 1999; Brave Heart & DeBruyn, 1998). Decades of strategic colonization methods resulted in the subsequent down-stream impact on ill-health across Native/Indigenous communities. Examples where colonization negatively impacted these determinants of health include: 1) ethnic cleansing as operationalized by the Indian Removal Act of 1830; 2) removing children from homes for involuntary attendance at Boarding Schools where children were brutally punished for speaking their language or "behaving Native" (1879-1980's); and 3) government policies making it illegal to practice Native culture (Stamm & Stamm, 1999; Irwin, 1997). The long-term health and social consequences of colonization include: a) multi-generational trauma; b) loss of land and culture; c) unresolved grief; d) high prevalence rates for chronic disease, suicide, and substance abuse; and e) poor social outcomes such as homelessness, unemployment, family violence, and incarceration (Caster et al., 2006; Chartier & Caetano, 2010; Ehlers, Gizer, Gilder, & Yehuda, 2013; Kolahdooz, Nader, Kyoung, & Sharma, 2015; Kenny & Singh, 2016; Mitchell, 2012; Snowshoe, Crooks, Tremblay, Craig, & Hinson, 2015; Snowshoe, Crooks, Tremblay, & Hinson, 2017).

What will help bring the Native world back together and help to restore health?

Government and Western medical model responses to Indigenous/Native health and social disparities have not proven to be very effective and, in many circumstances, have been harmful (Tucker et al., 2015; Walters & Beltran et al., 2011). Factors attributed to this outcome include the historical disrespect and subsequent lack of understanding by the dominant culture about the important cultural determinants of health for Indigenous/Native peoples, such as the strong and interdependent relationships between health, cultural traditions, spirituality, and the connection to traditional land, diets, and community. This dismissal of Native knowledge has contributed to the

ineffectiveness of many Western modalities in reducing health and social disparities for Indigenous communities (Tucker et al., 2016; Walters & Mohammed et al., 2011; McCormick, 1995). Given this, restoration and reconnection to the strengthening of culture or Indigenous/Native identity, is an important part of the solution (Chandler & Lalonde, 1998; Chandler, 2014; Coser, Sittner, Walls, & Handeland, 2018; Gone, 2009; Snowshoe et al., 2017; Snowshoe et al., 2015). However, a paradigm shift in the dominant culture is also needed. This is best described by King:

> Government, academia, and Western medicine should be cognizant that Indigenous culture historically manufactured good health. Therefore, government, academia, and Western medicine should try to better understand and promote Indigenous epistemology and community-defined evidenced practices and not undermine it. (King et al., 2019, p. 120)

What is the *Culture is Prevention Project* and why was it initiated?

The *Culture is Prevention Project* is a research/instrument development project (see Table 1) that derived from a Substance Abuse and Mental Health Services Administration (SAMHSA) funded project to address youth alcohol and prescription drug abuse. The project was initiated by the "Community Advisory Workgroup," comprised of staff and community members from six Urban Indian Health Organizations. The *Culture is Prevention Project* was designed as a 6-phase community-based participatory research (CBPR) project to address issues identified by the Community Advisory Workgroup, with a focus on: i) the lack of culturally informed methods to evaluate, from an Indigenous/Native perspective, the positive health outcomes of culture-based programs to improve health and well-being; and ii) interest in providing an approach that recognized the relationship between Indigenous/Native culture and health.

Each phase in the project was guided by the Community Advisory Workgroup. A main goal was to develop and implement a more culturally informed approach to demonstrating that the programs and interventions being delivered were achieving their objectives, which included both restoring/reconnecting to culture and improved strengths, resiliency, mental health, and well-being. Methods and results from Phases 1-3 are presented in a previous paper (King et al., 2019).

Table 1
Culture is Prevention Project

Phase 1	Consensus Generating Workshop
Phase 2	Literature Search & Knowledge Synthesis
Phase 3	Adapting the Snowshoe Cultural Connectedness Scale (CCS) for in Multi-Tribal Communities in California
Phase 4	Pilot Testing/Validation of the Cultural Connectedness Scale – California (CCS-CA) and Evaluation of the Relationship between Culture and Mental Health
Phase 5	Exploring the Predictive Properties of the CCS-CA
Phase 6	Cultural Connectivity, Integration, Health (Physical/Mental), & Health Services Utilization

What are the Cultural Connectedness Scale and the Cultural Connectedness Scale-California (CCS-CA)?

The Cultural Connectedness Scale-California (CCS-CA) is presented in Appendix A, ordered by the three subscales. It was adapted from the original Cultural Connectedness Scale (CCS) developed for First Nations/Indigenous youth in Canada by Dr. Angela Snowshoe, an Indigenous professor/scholar (Snowshoe et al., 2015). Snowshoe and colleagues developed the CCS to measure the degree of cultural connectedness with the objective of also demonstrating the link to mental health/well-being outcomes. This was based in the historical knowledge that "culture is prevention" and that a culturally specific protective factor within the epistemology of First Nations/Indigenous culture could be identified, measured, and verified (Walters & Anderson, 2013).

The CCS and the adapted CCS-CA are 29-item instruments with three sub-scales (Identity, Traditions, & Spirituality). We identified the CCS in Phase 2 (literature search) and adapted it in Phase 3 of the *Culture is Prevention Project* (see King et al., 2019).

Snowshoe and colleagues validated the CCS in a sample (N = 319) of First Nations/Indigenous youth (Snowshoe et al., 2015; King et al., 2019). The study also reported that culture (measured by the CCS) was positively and significantly associated with measures of mental health/well-being (Zimmerman, Ramirez-Valles, Washienko, Walter, & Dyer, 1996). Strengths associated with the original CCS were that: 1) it was developed by Indigenous persons for Indigenous persons using what Snowshoe describes as Indigenous Quantitative methods (Walters & Anderson, 2013), that used a "strengths-based approach within a First Nations epistemology that can be scientifically measured and verified" (Snowshoe et al., 2015, p. 1); 2) working with multiple First Nations/Indigenous communities to investigate what is culture such as asking

community members to identify: a) what does being First Nations/Native mean to you; b) what does culture look like/sound like/feel like; and c) the multi-phased approach to identifying and refining the items generated into the reliable and valid final 29-item instrument.

A problem associated with using the Snowshoe et al., (2015) CCS in an urban California population was that urban communities are much more heterogeneous (i.e., multi-Tribal and diasporic) compared to the communities in the original CCS validation study. For example, there are over 100 Tribes represented in the San Francisco Bay Area (California Consortium for Urban Indian Health, nd). Given these differences in populations and following consultations with Dr. Snowshoe, it was clear we needed to adapt the instrument to be valid and reliable for the diasporic and multi-Tribal characteristics of urban California. This was completed in Phase 3 of the *Culture is Prevention Project* and is described in a previous paper (King et al., 2019).

Phase 4 - Pilot Testing/Validation of the CCS-CA and Evaluation of the Relationship between Culture and Mental Health

Our main purpose in Phase 4 of the *Culture is Prevention Project* was to replicate (in part) the original innovative Snowshoe et al. (2015) study conducted in Canada using the adapted version of the CCS instrument. Our objectives were to 1) validate the CCS-CA and evaluate whether it demonstrates similar characteristics as the original CCS instrument in a multi-Tribal community in California, and 2) investigate the relationship between culture (measured by the CCS-CA) and mental health/well-being (measured by the modified Herth Hope Index [mHHI]) to evaluate if we could also conclude (as did Snowshoe and colleagues) that culture is a social determinant of mental health/well-being for this population of Indigenous/Native peoples.

METHODS

Sampling

We implemented a two-step approach to participant recruitment. Inclusion criteria were that participants self-identified as Native American/Indigenous and were 18 years or older. In step one, we recruited 300 adults at cultural events held throughout the San Francisco Bay Area. These included Pow Wows, Round Dances, other Native/Indigenous community events, and seminars held at Native/Indigenous cultural centers. The research team set up tables at these events where the study was mentioned by the announcers, and participants were invited (thus could self-select)

to complete the instrument package. In step two, we were interested in recruiting urban Indigenous adults who were not frequent participants at the cultural events utilized in step one. To recruit this group, we worked with the local Community Advisory Board (CAB). CAB members are well connected to the urban Indigenous community in the San Francisco Bay Area. CAB members went to the community with specific instructions to identify and invite community members who self-identified as Native/Indigenous and were not likely to frequently attend the cultural events in step one. CAB members were known and trusted in the community and, thus, were successful in recruiting an additional 100 participants. Participants in both steps were offered raffle tickets for $25.00 gift cards as incentives. Participants were informed of the purpose of the project and that it was approved by the Indian Health Service. When participants agreed to complete the instruments, informed consent was obtained verbally.

Participants

Participants sample was taken from a diasporic urban dwelling Native/Indigenous population in the San Francisco Bay Area and surrounding areas (N = 344). In total, 407 people agreed to participate in the study. Of these, 40 participants were excluded for not meeting the criteria, and an additional 23 participants were excluded for leaving five or more items blank on measures. The resulting sample size was 344. Of these participants, the mean age was 43.3 years (range = 18-79 years, SD = 14.9). In the sample, 61% (n = 211) identified as female, 36% (n = 124) identified as male, and 3% (n = 9) identified as two-spirit or other. Participants could self-identify multiple Tribal affiliations. There were 107 individual tribal affiliations represented in our sample in which 76.7% identified one Tribal affiliation, 19.2% with two Tribes, and 4.1% with three Tribes or more (see Table 2).

Measures

The instrument package consisted of three instruments: 1) demographic questionnaire; 2) CCS-CA; and 3) mHHI. Demographic questions included gender, age, and Tribal affiliation. Participants could identify multiple Tribes based upon their ancestry. Instrument packages were paper-based and administered to the participants by research staff after achieving informed consent. Participants frequently reacted positively when they were informed that the original CCS and CCS-CA were developed by Indigenous persons for Indigenous persons.

Table 2
Self-identified Tribal Affiliations (*N* = 107)

Tribe	*n*	Tribe	*n*	Tribe	*n*	Tribe	*n*
Acoma Pueblo	1	Dine	23	Navajo	56	Shawnee	1
Agua Caliente Band of Cahuilla	1	Gabrielino	12	Northern Cheyenne	3	Sherwood Valley Rancheria	1
Algonquian	3	Grindstone Rancheria	1	Ohlone	1	Shoshoni	4
Apache	17	Hoopa	12	Ojibwe	6	Sioux	7
Arikara	3	Hopi	3	Oneida	2	Siqua	1
Athabasken	2	Huichol	1	Osage	1	Taino	2
Azteca	3	Inupiaq	1	Otomí	1	Tepehuan	1
Blackfeet	6	Jemez Pueblo New Mexico	1	Pacheedaht	1	Tewa	1
BSR Mono	2	Kanik	1	Paiute	11	Tlingit	2
Caddo Delaware	1	Karuk	4	Pame	1	Tohono O'odham	8
Calaveras County Mountain Miwak	1	Kashia Pomo	2	Pascua	1	Tongra	2
Caynee	1	Kewa	4	Pawnee	1	Torres Martinez Desert Cahuilla	1
Cheraw	1	Kickapoo	1	Pima	1	Tribe of Huslia	1
Cherokee	30	Klamath	5	Piqute	1	Tsalagi	2
Cheyenne River Sioux	3	Lakota	16	Piru	1	Tulumne Mewuk	1
Chickahominy	1	Lumbee	2	Piscatawa Nation	1	Umatilla	1
Chickasaw	2	Maidu	4	Pit River	8	Umpqua	2
Chippewa	2	Maya	2	Pomo	27	Waho	1
Choctaw	15	Maya Xicana	1	Ponca	3	Washoe	3
Chukchansi	3	Maya Yucateco	5	Pueblo	3	Winnebago	1
Chumash	5	Metis	3	Purepecha	3	Yaqui	2
Cloverdale Rancheria	1	Minnesota Chippewa Tribe	1	Rajamuji	1	Yavapai	1
Comanche	1	Miwuk	5	Redwood Valley Rancheria	1	Yupik	3
Confederated Tribes of Grand Ronde	1	Mohawk	4	Round Valley Concow	2	Yuroh	1
Coyote Valley	1	Mono	5	Sac and Fox	1	Zapoteco	2
Cree	2	Moor	1	Salish	1	Zuni	2
Creek	3	Muscogee	7	Shasta	1		

Cultural Connectedness Scale-California (CCS-CA)

The CCS-CA is a 29-item instrument modified from the CCS developed in Canada (Snowshoe et al., 2015) that measures connection to Indigenous/Native culture and includes three sub-scales: i) Identity, ii) Traditions, and iii) Spirituality. The CCS-CA differs from the original CCS due to the inclusion of the "Examples Lists" page. These examples were developed as part of the adaptation of the CCS-CA in order to be more appropriate for the multi-tribal communities in the San Francisco Bay Area (King et al., 2019). The Examples Lists were developed to support the link in the original CCS questions, which often addressed culturally-specific knowledge, plans,

beliefs, or activities, that connects Tribal/Indigenous characteristics. Additionally, some terms were changed to be more inclusive of multi-Tribal communities. For example, the CCS question: "I use tobacco for guidance" was changed to "I use ceremonial/traditional medicines (See Example List 1) for guidance or prayer or other reasons (See Example List 2)" in the CCS-CA adaptation. These lists are illustrated in Appendix 1.

Modified Herth Hope Index (mHHI)

The HHI is a well-known 12-item validated instrument. For example, a simple Google Scholar search provided 3,040 results and indicated that it has been widely used, has good psychometric properties, and has been adapted for multiple populations (Van Gestel-Timmermans, Van Den Bogaard, Brouwers, Herth, & Van Nieuwenhuizen, 2010). Cronbach's alpha for the original HHI was 0.97 (Herth, 1989 & 1991) with a two-week test retest reliability of 0.91 (Herth, 1992). It measures the multidimensional aspects of hope on three subscales: 1) temporality and future, 2) positive readiness and expectancy, and 3) interconnectedness. Hope serves as a proxy measure for mental health and well-being. Hope is known to influence the onset, duration, prognosis, and recovery from mental and physical illnesses (Obayuwana et al., 1982; Herth, 1992). In our study, we used the modified Herth Hope Index where in item number 5, the word 'faith' was changed to 'spiritual' to be more culturally appropriate. The revised version is "I have a spiritual belief that gives me comfort" (Kraus, Bartgis, Lahiff, & Auerswald, 2017).

RESULTS

Analysis

We performed correlation and confirmatory factor analysis of the adapted CCS-CA to determine its efficacy for use in diasporic urban dwelling Native/Indigenous communities. Descriptive statistics are provided for total CCS-CA, subscales, and mHHI in Table 3. Results also show correlations between the CCS-CA, its subscales, and the theoretically linked measure, the HHI (e.g., proxy for mental health/well-being), were significant at the $ps < 0.001$ (using a Pearson Correlation on SPSS Version 21.0, see Table 4) and in the expected direction, providing evidence for criterion validity (see King et al., 2019). In addition, Standardized factor loadings for the 29 items grouped by sub-scales are illustrated in Table 5**.**

Chi-square goodness-of-fit test was conducted to determine whether an equal number of participants from each of the gender types were recruited to the study. The goodness of fit test

indicated that the number of females, males, two spirit, and other participants were equally represented by the participants recruited to the study, χ^2 (2) = 77.334, p = 1.[2]

Table 3
Cultural Connectedness Scale – California, CCS-CA Subscales, and Herth Hope Index

	n	Range	Mean	Median	*SD*
CCS-CA Total Score	344	37.0 - 145.0	124.26	129.00	18.51
Traditions	344	11.0 - 55.0	46.44	49.00	8.91
Identity	344	15.0 - 55.0	49.05	51.00	6.94
Spirituality	344	7.0 - 35.0	28.79	30.00	5.59
HHI	344	16.0 - 48.0	41.78	43.00	4.78

Table 4
Correlations between the Cultural Connectedness Scale – California and Herth Hope Index

	CCS-CA Total Score	Traditions	Identity	Spirituality
CCS-CA Total Score	-			
Traditions	. 856*	-		
Identity	. 836*	.482*	-	
Spirituality	. 884*	.625*	.733*	-
HHI	.326*	.260*	.282*	.282*

We did a visual check of the histogram, and there was no evidence that the CCS-CA scores were skewed. However, the CCS-CA is made up of 29 items consisting of three subscales. Prior to analysis of Confirmatory Factor Analysis (CFA), we checked multivariate normality (MVN) using the Mardia test. The multivariate and univariate normality were violated. Given that the data are not multivariate normal and that variables are not univariate normal, a maximum likelihood estimation with robust (MLR) standard errors was selected for the CFA. Research has shown that MLR best estimates the model with smaller sample sizes and violations of MVN, which is common in social science research (Boomsma, 1982; Green, 1984). Model fit as well as model comparison were conducted; as expected, and as found in Snowshoe et al. (2015 & 2017), the three-factor model (i.e., Tradition, Identity, & Spirituality) had the best fit (CCS, χ2 (3) = 64.138, p < .001; CMIN = 2.56; CFI = 0.913; AGFI = 0.988; and RMSEA of 0.077 90% C.I. (0.071, 0.084).

[2] p-value had to be simulated due to the small observed frequencies (i.e., with Two Spirit and Other). This simulation of p-values can be thought of being a version of Fisher's exact test, which does not rely on a chi-square approximation.

Table 5
Items and Standardized Factor Loading

Q#	Subscales	CCS-CA Standardized Loads
	Traditions - 11 Items CCS-CA	
4	I use ceremonial/traditional medicines (See List 1) for guidance or prayer or other reasons. (See List #2)	0.805
5	I have participated in a traditional/cultural ceremony or activity. (See List #3)	0.855
6	I have helped prepare for a traditional/cultural ceremony or activity in my family or community. (See List #3)	0.749
8	Someone in my family or someone I am close with attends traditional/cultural ceremonies or activities. (See List #3)	0.588
9	I plan on attending a traditional/cultural ceremony or activity in the future. (See List #3)	0.619
7	I have shared a meal with community, offered food or fed my ancestors for a traditional/cultural or spiritual reason.	0.752
27	How often do you offer a ceremonial/traditional medicine for cultural/traditional purposes? (See List #1)	0.648
28	How often do you use ceremonial/traditional medicines? (See List #1)	0.725
29	How often does someone in your family or someone you are close to use ceremonial/traditional medicines? (See List #1)	0.593
2	I can understand some of my Native American/Indigenous words or languages.	0.485
11	I have a traditional person, elder or other person who I can talk to. (See List #5)	0.431
	Identity - 11 Items CCS-CA	
10	I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.	0.281
12	I have spent time trying to find out more about being Native American/Indigenous, such as its history, tribal identity, traditions, language and customs.	0.652
13	I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe or Nation.	0.725
14	I have done things that will help me understand my Native American/Indigenous background better.	0.818
15	I have talked to community members or other people (See List #5) in order to learn more about being Native American/Indigenous.	0.77
16	When I learn something about my Native American/Indigenous culture, history or ceremonies, I will ask someone, research it, look it up, or find resources to learn more about it.	0.703
17	I feel a strong attachment towards my Native American community or Tribe.	0.742
18	If a traditional person, counsellor or Elder who is knowledgeable about my culture spoke to me about being Native American/Indigenous, I would listen to them carefully. (See List #5)	0.737
19	I feel a strong connection to my ancestors and those who came before me.	0.771
20	Being Native American means I sometimes have a different perception or way of looking at the world.	0.767
22	It is important to me that I know my Native American/Indigenous or Tribal language(s).	0.718
	Spirituality - 7 Items CCS-CA	
1	I know my cultural, spirit, Indian or Traditional Name.	0.174
3	I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People.	0.385
21	The eagle feather (or other feathers - See Example List #6) has a lot of traditional meaning for me.	0.711
23	When I am physically ill, I look to my Native American/Indigenous culture for help.	0.854
24	When I am overwhelmed with my emotions, I look to my Native American/ Indigenous culture for help	0.916
25	When I need to make a decision about something, I look to my Native American/ Indigenous culture for help.	0.889
26	When I am feeling spiritually disconnected, I look to my Native American /Indigenous culture for help.	0.881

There were two items that did not have significant factor loading. Item 10: "I plan on trying to find out more about my Native/Indigenous culture, such as history, Tribal identity, traditions, customs, art and language (.281)." and Item 1: "I know my cultural, spirit, Indian or Traditional Name (.174)," They were each below (.3), which is considered the standard threshold (Cronbach, 1951; DiStefano, Zhu, & Mindrila, 2009). These two items were left in as their removal served no practical purpose, and their inclusion did not affect the final analysis (Heene, Hilbert, Draxler, Ziegler, & Bühner, 2011). The lower factor loadings on these two items can be interpreted as an effect of colonization upon urban dwelling Native Americans. This diasporic population is dislocated from historical lands and cultural practices and therefore finding or accessing knowledge is difficult and sometimes not even possible (Walters, Beltran et al., 2011; Walters & Simoni, 2002; Whitbeck, Hoyt, Stubben, & LaFromboise, 2001). There were also significant positive correlations among all three latent factors (see Table 5). Lastly, overall reliability was evaluated with Cronbach Alpha $\alpha = .941$.

Research Staff Observations of Participants' Experience

During pilot testing, participants were observed by the research team while completing the instrument. Research staff reported that participants commonly appeared interested and frequently wrote comments on the questions pages or the Examples Lists regarding cultural elements. Participants also 'checked off' items on the Examples Lists. Research staff, who were not trained clinicians, reported that there seemed to be a therapeutic effect while completing the CCS-CA and that participants appeared positive and appreciative when returning the package. After returning a completed CCS-CA, research staff asked what participants thought about their experience. Frequent responses reported by research staff included: a) indicating that they liked completing the instrument; b) participants asking for a copy of the instrument; c) indicating the instrument was aligned with being Native/Indigenous; d) expressed appreciation for the thoroughness/ inclusiveness of the medicines and ceremonial practices listed; e) indicated that they felt more connected to their culture after learning about cultural concepts and practices through completing the instrument; and f) adding options familiar to their own tribal practices to the various answer lists. (Note – The methods did not include preplanning of an implementation analysis that included a systematic approach to evaluating and documenting participants' perceptions about the CCS-CA. The participants' frequent responses described in the list above derived from consensus decisions from research staff at team meetings following data collection.)

DISCUSSION

The main aim of Phase 4 of the *Culture is Prevention Project* was to investigate the psychometric characteristics of the CCS-CA and to evaluate the associations among cultural connectedness and mental health/well-being. We wanted to find out if, after working with our communities to adapt the CCS to be more community-specific (i.e., appropriate for our multi-tribal communities), the new CCS-CA worked as well as the CCS demonstrated in the Snowshoe et al. (2015) study. The results indicate that the CCS-CA performed as intended and also confirmed Snowshoe et al.'s conclusion that Indigenous/Native culture (i.e., cultural connectedness) is a social determinant of mental health/well-being (Snowshoe et al., 2015). Our results indicated that the CCS-CA is a valid and reliable measure within diasporic, urban-dwelling, and multi-Tribal Indigenous/Native communities.

These results further demonstrate the high degree of value and importance of the previous and innovative work, conducted by Dr. Snowshoe and colleagues, in the development and testing of the original CCS. We can now report that two large sample studies conducted in two countries, among different populations demonstrated similar results. This was accomplished using similarly operationalized definitions of culture, but differently adapted instruments. For example, in the Snowshoe et al., (2015) study (N = 319, ages 12-29, mean age 15.3) from Saskatchewan and Southwestern Ontario, the participants were First Nations, Métis, and Inuit. In that study, 78% of participants identified as living on-reserve; whereas, in our northern California study, participants were urban-dwelling adults (N = 344, ages 18-79, mean age 43.3) and were much more multi-Tribal with representation from 107 Tribes. Given the above, one strength of the methods employed by Snowshoe et al. (2015) is the portability and adaptability to other Indigenous communities. In our previous paper (King et al., 2019), we present a relatively simple local adaptation approach that could be implemented by other interested Indigenous/Native communities.

Implications for Native/Indigenous Communities in Other Areas

Indigenous peoples around the world are taking similar courses of action in movement towards cultural revitalization and connectivity across Indigenous territories. Mending collective memory and addressing the harm of colonization and historical trauma to reclaim and nurture what remains and what has been lost provides a pathway that Indigenous peoples around the

world go to for the betterment and health of their people. Through language, dance, teachings, or reclaiming and reinvention of traditions for solutions to contemporary problems, Indigenous communities can rectify continuing disavowal of Indigenous identity and language loss, and introduce belonging to those constructing their identity within the diaspora. In the case of Snowshoe and colleague's (2015) original CCS and the adapted multi-Tribal CCS-CA (King et al., 2019), we believe that indigenizing screening and evaluation materials that measure positive overall health outcomes and that link culture and better mental health and/or well-being has the potential to expand into culturally relevant adaptations across Turtle Island/Abya Yala.[3]

Western interpretations of illness onto Indigenous peoples and research with Indigenous peoples has led to a historical disconnect that is seen throughout Indigenous territories in North America, Central/South America, Australia, and New Zealand (Collier, Farias-Campero, Perez, & White; 2000; Martín & Millares, 2013; da Silva, Gabert-Diaz, & da Silva, 2015; Waterworth, Pescud, Braham, Dimmock, & Rosenberg, 2015). Indigenizing evaluation and assessments by adapting the CCS with an accompanying assessment tool to understand traditional definitions of mental health symptoms can assess and sustain well-being through blending culture and processing through the distressing and traumatic nature of development in these regions.

When other Indigenous communities are interested in or motivated to adapt the CCS-CA to their local population, there are several things to be considered in that process. Most steps have been delineated in our previous work on the development of and adaptation of the measure (see King et al., 2019). We are including the following for consideration during that process as well. The first is how the local team is chosen and the process to implementation. The team needs to be an integrated part of the process and understand they are working collaboratively with their advisory board. Second, the advisory board should reflect on the process of colonization and the specific historical impact upon their community. To assist in this matter, a third consideration is that the advisory board should consist of members of the local community who understand that colonization has a strategy but so does Indigenous healing and resiliency. The team needs to be the right team, at the right place, during the right time, and guided by prayer. Lastly, the recognition of the importance of interdependence in the process between the community informing the process, the advisory members being liaison, and the chosen team (i.e., no one

[3] Turtle Island comes from multiple Indigenous groups (Anishinaabe/Lenape/Mohawk) and across what is known as Canada and northeast United States to describe the North American continent. Similarly, Abya Yala comes from the Kuna people in what is now known as Panama to mean "land in its full maturity," and is used to refer to the entirety of the South American continent.

part is more important than another). This is a community-based participatory research approach for adaptation.

Future Directions

In 1946, the World Health Organization stated that culture is a social determinate of health (WHO, 1946). Since that time, effort has been made to better understand culture and its influence upon health outcomes. This then led to a better appreciation that Native/Indigenous culture is an important factor in preventing the development of health disparities, maintaining healthy communities, and returning Native/Indigenous people to health. However, it remains important to recognize that Indigenous/Native communities are very diverse, and one size does not fit all.

Future research could support the use of the CCS to inform interventions and programs. Culturally informed programs within the local Indigenous population have the potential to improve outcomes through strength-based and resilience-based interventions. For example, with further research, the Cultural Connectivity Scale (e.g., CCS or CCS-CA) may have the potential to be used as a screening instrument, diagnostic tool, or a guide for treatment plans. As part of this, we ask the questions: a) Can the CCS-CA identify persons who are doing well or not doing well; b) Do persons who are doing well, or not doing well, have different CCS-CA total response profiles or sub-scale specific profiles (e.g., Identity, Traditions, and Spirituality); and c) What if (at least initially) we could use the CCS-CA and did not have to ask questions about risk? We have received funding to begin addressing these questions which are aligned with Phases 5 and 6 of the *Culture is Prevention Project* indicated in Table 1.

Limitations

Our interests in this study included replication (in part) of the Snowshoe et al. (2015) study with the objectives of validating the CCS-CA and evaluating the relationships between culture/cultural connectedness and a proxy for mental health/well-being as measured by the HHI. Our plan was to begin preliminary investigation into links between culture and health outcomes as well as implement a strength-based approach, developed by Native/Indigenous persons for Native/Indigenous persons, within our limited resources. (Note, this project did not have 'project-specific' funding and was leveraged from other funded programs.) Given this, we did not attempt

to measure or control for historical trauma or perceived discrimination which impact mental health and, thus, would have influenced responses on the HHI. We only performed preliminary correlations analysis, and future research can investigate the predictiveness of the CCS-CA upon multiple health outcome dependent variables (e.g., depression, substance use disorders).

The CCS was developed by Indigenous/Native persons for Indigenous/Native persons; however, the HHI is not an instrument developed by Indigenous/Native persons or for multi-Tribal communities. Although the HHI is well-known and widely used, a more culturally appropriate proxy measure for mental health and well-being could have been more helpful for the purpose of our study.

In addition, although there were over 100 Tribes represented in our urban California sample, the CCS-CA cannot be generalized to any one Tribe or other urban communities. We then recommend that communities interested in using the CCS-CA also adapt the CCS-CA or CCS to be community/culturally appropriate.

CONCLUSION

This study and the study by Snowshoe and colleagues (2015) provide support for and add to the evidence as well as historical knowledge that culture is an important determinant of health for Indigenous peoples. Both studies demonstrated the capacities of the original CCS and the modified CCS-CA to measure cultural connectedness. This study successfully demonstrated the relative ease with which the original CCS, or for that matter the CCS-CA, could be modified to be a valid and reliable community or Tribal-specific instrument.

It has been established that culture (i.e., cultural connectedness) can be measured and that it is a social determinant of health. Strengthening connections or re-connecting to culture can be a viable program objective (and outcome measure) in developing programs and interventions for Indigenous/Native peoples. Going forward, governments, academia, and Western medicine should be cognizant that Indigenous/Native cultures historically manufactured good health. They should try to better understand and promote Indigenous epistemology and community-defined evidence practices (CDEPs) that support health and do not undermine traditional approaches to health. There should be more support for interventions developed by Indigenous persons for Indigenous persons and less emphasis on Western models of ‘evidence-based practices’ that were not developed by Native/Indigenous persons for Native/Indigenous persons. Governments and researchers should

recognize and do better at comprehending and understanding the value of strength-based resiliency models and culturally appropriate approaches to program evaluations and measuring health outcomes. It is possible to show a person or community is doing better by measuring more of the good (e.g., strengths and well-being) versus less of the bad (e.g., risk behavior and illness).

REFERENCES

Boomsma, A. (1982). The robustness of LISREL against small sample sizes in factor analysis models. *Systems under indirect observation: Causality, structure, prediction*, 149-173.

Brave Heart, M. Y. H., Chase, J., Elkins, J., & Altschul, D. B. (2011). Historical trauma among Indigenous peoples of the Americas: Concepts, research, and clinical considerations. *Journal of Psychoactive Drugs*, *43*(4), 282-290. http://dx.doi.org/10.1080/02791072.2011.628913

Brave Heart, M. Y. H., & DeBruyn, L. M. (1998). The American Indian holocaust: Healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research*, *8*(2), 56-78. http://dx.doi.org/10.5820/aian.0802.1998.60

California Consortium for Urban Indian Health. (n.d.). *Urban Indians.* Retrieved from http://ccuih.org/our-community/

Castor, M. L., Smyser, M. S., Taualii, M. M., Park, A. N., Lawson, S. A., & Forquera, R. A. (2006). A nationwide population-based study identifying health disparities between American Indians/Alaska Natives and the general populations living in select urban counties. *American Journal of Public Health*, *96*(8), 1478-1484. https://dx.doi.org/10.2105/AJPH.2004.053942

Chandler, M. J., & Lalonde, C. (1998). Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry*, *35*(2), 191-219. https://doi.org/10.1177/136346159803500202

Chandler, M. J. (2014). Cultural continuity and the social-emotional well-being of first nations youth. In F. Trovato & A. Romaniuk (Eds.), *Aboriginal populations: Social, demographic and epidemiological perspectives* (pp. 187-196). Edmonton: University of Alberta Press.

Chartier, K., & Caetano, R. (2010). Ethnicity and health disparities in alcohol research. *Alcohol Research & Health*, *33*(1-2), 152. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3887493/

Collier, G. A., Farias Campero, P. J., Perez, J. E., & White, V. P. (2000). Socio-economic change and emotional illness among the Highland Maya of Chiapas, Mexico. *Ethos, 28*(1), 20-53. https://www.jstor.org/stable/640700

Coser, A., Sittner, K. J., Walls, M. L., & Handeland, T. (2018). Caregiving stress among American Indians with type 2 diabetes: The importance of awareness of connectedness and family support. *Journal of family nursing*, *24*(4), 621-639. https://doi.org/10.1177/1074840718810550

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297-334. http://dx.doi.org/10.1007/BF02310555

DiStefano, C., Zhu, M., & Mindrila, D. (2009). Understanding and using factor scores: Considerations for the applied researcher. *Practical Assessment, Research & Evaluation*, *14*(20), 1-11. Retrieved from https://eric.ed.gov/?id=EJ933679

da Silva, H. B., Gabert Diaz, C. M., & da Silva, K. F. (2015). Culture and indigenous women's health: integrative review. *Journal of Research Fundamental Care – Online.* Federal University of Rio de Janeiro State. Translated into English, original Brazilian Portuguese. http://seer.unirio.br/index.php/cuidadofundamental/article/view/3374/pdf_1689.

Ehlers, C. L., Gizer, I. R., Gilder, D. A., & Yehuda, R. (2013). Lifetime history of traumatic events in an American Indian community sample: Heritability and relation to substance dependence, affective disorder, conduct disorder and PTSD. *Journal of Psychiatric Research*, *47*(2), 155-161. http://dx.doi.org/10.1016/j.jpsychires.2012.10.002

Gone, J. P. (2009). A community-based treatment for Native American historical trauma: Prospects for evidence-based practice. *Journal of Consulting and Clinical Psychology*, *77*(4), 751. http://dx.doi.org/10.1037/a0015390

Green, P. J. (1984). Iteratively reweighted least squares for maximum likelihood estimation, and some robust and resistant alternatives. *Journal of the Royal Statistical Society: Series B (Methodological)*, *46*(2), 149-170. https://doi.org/10.1111/j.2517-6161.1984.tb01288.x

Heene, M., Hilbert, S., Draxler, C., Ziegler, M., & Bühner, M. (2011). Masking misfit in confirmatory factor analysis by increasing unique variances: A cautionary note on the usefulness of cutoff values of fit indices. *Psychological Methods, 16*(3), 319-336. https://doi.org/10.1037/a0024917

Herth, K. (1989). The relationship between level of hope and level of coping response and other variables in patients with cancer. *Oncology Nursing Forum*,*16*(1), 67-72. Retrieved from https://europepmc.org/abstract/med/2911529

Herth, K. (1991). Development and refinement of an instrument to measure hope. *Research and Theory for Nursing Practice*, *5*(1), 39. Retrieved from https://search.proquest.com/openview/26bef71b4e3dbf8f219016254b790c3f/1?pq-origsite=gscholar&cbl=28849

Herth, K. (1992). Abbreviated instrument to measure hope: Development and psychometric evaluation. *Journal of Advanced Nursing*, *17*(10), 1251-1259. https://www.ncbi.nlm.nih.gov/pubmed/2063043

Irwin, L. (1997). Freedom, law, and prophecy: A brief history of Native American religious resistance. *American Indian Quarterly*, *21*(1), 35-55. http://dx.doi.org/10.2307/1185587

Kenny, M. K., & Singh, G. K. (2016), Adverse childhood experiences among American Indian/Alaska Native Children: The 2011-2012 National Survey of Children's Health, *Scientifica*, Article ID 742439, 1-14. http://dx.doi.org/10.1155/2016/7424239

King, J., Masotti, P., Dennem, J., Hadani, S., Lockhart. B., Linton. J., & Bartgis, J. (2019). The Culture is Prevention Project: Adapting the Cultural Connectedness Scale for multi-tribal communities. *American Indian and Alaska Native Mental Health Research*, *26*(3), 104-135. http://dx.doi.org/10.5820/aian.2603.2019.104

Kolahdooz, F., Nader, F., Kyoung, J. Y., & Sharma, S. (2015). Understanding the social determinants of health among Indigenous Canadians: Priorities for health promotion policies and action. *Global health action, 8*(1), 1-16. https://doi.org/10.3402/gha.v8.27968

Kraus, C., Bartgis, J., Lahiff, M., & Auerswald, C. L. (2017). The Gathering of Native Americans Intervention: Cultivating Hope and Meaningful Relationships for Urban American Indian Adolescents in California. *Journal of Adolescent Health*, *60*(2), S1. https://doi.org/10.1016/j.jadohealth.2016.10.024

Martín, I. Z., & Miralles, P. M. (2013). Aportaciones de la etnografía doblemente reflexiva en la construcción de la terapia ocupacional desde una perspectiva intercultural. *AIBR: Revista de Antropología Iberoamericana*, *8*(1), 9-48. https://doi.org/10.11156/aibr.080102

McCormick, R. (1995). Culturally appropriate means and ends of counselling as described by the First Nations people of British Columbia. *International Journal for the Advancement of Counselling*, *18*(3), 163-172. http://dx.doi.org/10.1007/BF01407960

Menzies, P., & Lavallee, L. (2014) Preface. In Menzies and Lavallee (Eds.) *Journey to healing Aboriginal people with addiction and mental health issues: What health, social service and justice workers need to know* (pp. xi - xiii). Toronto: Centre for Addiction and Mental Health.

Mitchell, F. M. (2012). Reframing diabetes in American Indian communities: A social determinants of health perspective, *Health and Social Work, 37*(2), 71-79. http://dx.doi.org/10.1093/hsw/hls013

Obayuwana, A. O., Collins, J. L., Carter, A. L., Rao, M. S., Mathura, C. C., & Wilson, S. B. (1982). Hope Index Scale: An instrument for the objective assessment of hope. *Journal of the National Medical Association*, *74*(8), 761. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2552959/

Snowshoe, A., Crooks, C. V., Tremblay, P. F., Craig, W. M., & Hinson, R. E. (2015). Development of a cultural connectedness scale for First Nations youth. *Psychological Assessment, 27*(1), 249-259. http://dx.doi.org/10.1037/a0037867

Snowshoe, A., Crooks, C. V., Tremblay, P. F., & Hinson, R. E. (2017). Cultural connectedness and its relation to mental wellness for First Nations youth. *The Journal of Primary Prevention*, *38*(1-2), 67-86. https://link.springer.com/article/10.1007/s10935-016-0454-3

Stamm, B. H., & Stamm, H. E. (1999). Trauma and loss in Native North America: An ethnocultural perspective. In K. Nader, N. Dubrow, & B. H. Stamm, *Honoring differences: Cultural issues in the treatment of trauma and loss*, (pp. 49-75). Philadelphia, PA: Taylor & Francis.

Tucker, R. P., Wingate, L. R., & O'Keefe, V. M. (2016). Historical loss thinking and symptoms of depression are influenced by ethnic experience in American Indian college students. *Cultural Diversity and Ethnic Minority Psychology, 22*(3), 350-358. https://dx.doi.org/10.1037/cdp0000055

Van Gestel-Timmermans, H., Van Den Bogaard, J., Brouwers, E., Herth, K., & Van Nieuwenhuizen, C. (2010). Hope as a determinant of mental health recovery: A psychometric evaluation of the Herth Hope Index-Dutch version. *Scandinavian Journal of Caring Sciences 24*, 67-74. http://dx.doi.org/10.1111/j.1471-6712.2009.00758.x

Walter, M., & Andersen, C. (2013). *Indigenous statistics: A quantitative research methodology*. Walnut Creek, CA: Left Coast Press.

Walters, K. L., Beltran, R., Huh, D., & Evans-Campbell, T. (2011). Dis-placement and dis-ease: Land, place, and health among American Indians and Alaska Natives. In L. Burton, S. Matthews, M. Leung, S. Kemp, & D. Takeuchi (Eds.), *Communities, neighborhoods, and health. Social disparities in health and health care,* Vol 1 (pp. 163-199). Springer, New York, NY. https://doi.org/10.1007/978-1-4419-7482-2_10

Walters, K. L., Mohammed, S. A., Evans-Campbell, T., Beltrán, R. E., Chae, D. H., & Duran, B. (2011). Bodies don't just tell stories, they tell histories: Embodiment of historical trauma among American Indians and Alaska Natives. *Du Bois Review: Social Science Research on Race*, *8*(1), 179-189. https://doi.org/10.1017/S1742058X1100018X

Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing Native women's health: An "indigenist" stress-coping model. *American Journal of Public Health*, *92*(4), 520-524. https://dx.doi.org/10.2105/AJPH.92.4.520

Waterworth, P., Pescud, M., Braham, R., Dimmock, J., & Rosenberg, M. (2015). Factors influencing the health behaviour of indigenous Australians: Perspectives from support people. *PloS one*, *10*(11), e0142323. https://doi.org/10.1016/j.foreco.2008.01.004

Whitbeck, L. B., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2001). Traditional culture and academic success among American Indian children in the Upper Midwest. *Journal of American Indian Education*, *40*, 48–60. https://www.jstor.org/stable/24398333

World Health Organization (WHO). (1946, June). *Constitution*. Retrieved from https://www.who.int/about/who-we-are/constitution

Zimmerman, M. A., Ramirez-Valles, J., Washienko, K. M., Walter, B., & Dyer, S. (1996). The development of a measure of enculturation for Native American youth. *American Journal of Community Psychology, 24*(2), 295-310. https://doi.org/10.1007/BF02510403

ACKNOWLEDGEMENTS

The paper represents the activities and results from four research projects representing the first four of six phases of the *Culture is Prevention Project*. The research and this manuscript was approved by the Indian Health Service National Institutional Review Board (N17-N-02: Culture is Prevention), and the Community Advisory Board (Strategic Prevention Advisory Workgroup), comprised of staff and community members from the participating Native American health services organizations.

The authors would like to acknowledge the contributions of staff and community members from the six participating Native American health organizations and Community Advisory Boards/Workgroup that contributed to the project:

- California Consortium for Urban Indian Health – San Francisco
- Friendship House Association of American Indians – San Francisco
- Indian Health Center of Santa Clara Valley – San Jose
- Native American Health Center – Oakland/San Francisco
- Sacramento Native American Health Center – Sacramento
- Urban Indian Health Institute – Seattle
- The Blanket Weavers (Community Advisory Board) – San Francisco

We would like to acknowledge the early contributions to the genesis of the *Culture is Prevention Project* by Mikayla Schaaf (NAHC Program Manager), Gerry Rainingbird, and Jeremy Goldbach (SAMHSA – CAPT). We also very much would like to acknowledge the important original work by Dr. Angela Snowshoe (University of Regina) and colleagues that made this possible.

HUMAN PARTICIPATION PROTECTION

The Indian Health Service (IHS) National Institutional Review Board (NIRB) reviewed and approved this research [N17-N-02: Culture is Prevention]. The research and publication were also approved by the Community Advisory Board.

FUNDING INFORMATION

This *Culture is Prevention Project* did not have 'project-specific' funding and was leveraged from other funded programs. Work was supported by funding from SAMHSA (Partnerships for Success), the California Department of Public Health – Office of Health Equity (California Reducing Disparities Project), and the Native American Health Center (Department of Community Wellness).

AUTHOR INFORMATION

Dr. Masotti is Director of Research/Evaluation at the Native American Health Center in Oakland, California and Principal Investigator of the *Culture is Prevention Project*. John Dennem is a PhD candidate at Claremont Graduate University in Claremont, California and Co-Principal Investigator of the *Culture is Prevention Project*. Shir Hadani is an evaluator at the Native American Health Center in Oakland, California. Karina Banuelos is Project Director at the Native American Health Center in Oakland, California. Janet King is Program Manager of Policy and Advocacy at the Native American Health Center in Oakland, California. Janice Linton is Indigenous Health Librarian and Liaison Librarian for Community Health Services at the University of Manitoba in Winnipeg, Canada. Bonnie Lockhart is a consultant and member of the Sherwood Valley Band of Pomo Indians in Willits, California. Chirag Patel is Director of the Community Wellness Department at the Native American Health Center in Oakland, California.

APPENDIX

Appendix A – Cultural Connectedness Scale – California, Sub Scales

Traditions - 11 Items

- I use ceremonial/traditional medicines ***(See Examples List #1)*** for guidance or prayer or other reasons. ***(See Examples List #2)*** [a]
- I have participated in a traditional/cultural ceremony or activity. ***(See Examples List #3)*** [a]
- I have helped prepare for a traditional/cultural ceremony or activity in my family or community. ***(See Examples List #3)*** [a]
- Someone in my family or someone I am close with attends traditional/cultural ceremonies or activities. ***(See Examples List #3)*** [a]
- I plan on attending a traditional/cultural ceremony or activity in the future. ***(See Examples List #3)*** [a]
- I have shared a meal with community, offered food or fed my ancestors for a traditional/cultural or spiritual reason.[a]
- How often do you offer a ceremonial/traditional medicine for cultural/traditional purposes? ***(See Examples List #1)*** [c]
- How often do you use ceremonial/traditional medicines? ***(See Examples List #1)*** [c]
- How often does someone in your family or someone you are close to use ceremonial/traditional medicines? ***(See Examples List #1)*** [c]
- I can understand some of my Native American/Indigenous words or languages. [a]
- I have a traditional person, elder or other person who I can talk to. ***(See Examples List #5)*** [a]

Identity - 11 Items

- I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal Identity, traditions, customs, arts and language. [a]
- I have spent time trying to find out more about being Native American/Indigenous, such as its history, tribal identity, traditions, language and customs. [b]
- I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation. [b]
- I have done things that will help me understand my Native American/Indigenous background better. [b]
- I have talked to community members or other people ***(See Examples List #5)*** in order to learn more about being Native American/Indigenous. [b]
- When I learn something about my Native American/Indigenous culture, history or ceremonies, I will ask someone, research it, look it up, or find resources to learn more about it. [b]
- I feel a strong attachment towards my Native American community or Tribe. [b]
- If a traditional person, counsellor or Elder who is knowledgeable about my culture spoke to me about being Native American/Indigenous, I would listen to them carefully. ***(See Examples List #5)*** [b]
- I feel a strong connection to my ancestors and those who came before me. [b]
- Being Native American means I sometimes have a different perception or way of looking at the world. [b]
- It is important to me that I know my Native American/Indigenous or Tribal language(s). [b]

Spirituality - 7 Items

- I know my cultural, spirit, Indian or Traditional Name. [a]
- I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People. [b]
- The eagle feather (or other feathers - ***See Examples List #6***) has a lot of traditional meaning for me. [b]
- When I am physically ill, I look to my Native American/Indigenous culture for help. [b]
- When I am overwhelmed with my emotions, I look to my Native American/Indigenous culture for help. [b]
- When I need to make a decision about something, I look to my Native American/Indigenous culture for help. [b]
- When I am feeling spiritually disconnected, I look to my Native American/Indigenous culture for help. [b]

Response Format

[a] = Yes, No (or Not Applicable)
[b] = Strongly Disagree, Disagree, Do Not Agree or Disagree, Agree, Strongly agree
[c] = Never, once/twice past year, every month, every week, every day

Appendix B – Cultural Connectedness Scale – California

QUESTIONS 1 - 11, Circle the Most Accurate Answer

1. **I believe things like animals, rocks (and all nature) have a spirit like Native American/ Indigenous People.**
   Yes No
2. **I can understand some Native American/Indigenous words or language(s).**
   Yes No
3. **I know my Cultural, Spirit, Indian or Traditional Name.**
   Yes No Does Not Apply (We do not use these names)
4. **I use ceremonial/traditional medicines (See Examples List #1) for guidance or prayer or other reasons (See Examples List #2).**
   Yes No
5. **I have participated in a traditional/cultural ceremony or activity (See Examples List #3).**
   Yes No
6. **I have helped prepare for a traditional/cultural ceremony or activity in my family or community (See Examples List #3).**
   Yes No
7. **I have shared a meal with community, offered food or fed my ancestors for a traditional/cultural or spiritual reason (See Examples List #4).**
   Yes No
8. **Someone in my family or someone I am close with attends traditional/cultural ceremonies or activities (See Examples List #3).**
   Yes No
9. **I plan on attending a traditional/cultural ceremony or activity in the future (See Examples List #3).**
   Yes No
10. **I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.**
    Yes No
11. **I have a traditional person, elder or other person who I can talk to (See Examples List #5).**
    Yes No

QUESTIONS 12 - 29, Circle the Most Accurate Answer

12. I have spent time trying to find out more about being Native American/Indigenous, such as history, tribal identity, traditions, language and customs.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

13. I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

14. I have done things that will help me understand my Native American/Indigenous background better.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

15. I have talked to community members or other people (See Examples List #5) in order to learn more about being Native American/Indigenous
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

16. When I learn something about my Native American/Indigenous culture, history, or ceremonies, I will ask someone, research it, look it up, or find resources to learn more about it.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

17. I feel a strong connection/attachment towards my Native American community or Tribe.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

18. If a traditional person, counselor or Elder who is knowledgeable about my culture, spoke to me about being Native American/Indigenous, I would listen to them carefully (See Examples List #5).
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

19. I feel a strong connection to my ancestors and those that came before me.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

20. Being Native American/Indigenous means I sometimes have a different perception or way of looking at the world.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

21. The eagle feather (or other feathers) has a lot of traditional meaning for me (See Examples List #6).
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

22. It is important to me that I know my Native American/Indigenous or Tribal language(s).
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

23. When I am physically ill, I look to my Native American/Indigenous culture or community for help.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

24. When I am overwhelmed with my emotions, I look to my Native American/Indigenous culture or community for help.
Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

25. When I need to make a decision about something, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

26. When I am feeling spiritually ill or disconnected, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

Please answer how often you experience the following:

27. How often do you offer a ceremonial/ traditional medicine for cultural/traditional purposes? (See Examples List #1)

Never Once/Twice in the Past Year Every Month Every Week Every Day

28. How often do you use ceremonial/traditional medicines? (See Examples List #1)

Never Once/Twice in the Past Year Every Month Every Week Every Day

29. How often does someone in your family or someone you are close to use ceremonial or traditional medicines? (See Examples List #1)

Never Once/Twice in the Past Year Every Month Every Week Every Day

CCS-CA SCORING

Yes = 5 No = 1 NA = 3

Strongly Disagree = 1
Disagree = 2
Do Not Agree/Disagree = 3
Agree = 4
Strongly Agree = 5

Never = 1
Once/Twice Past Year = 2
Every Month = 3
Every Week = 4
Every Day = 5

CCS-CA Range: 29 – 145

Identity Subscale: 11 - 55
Traditions Subscale: 11 - 55
Spirituality Subscale: 7 - 35

Examples Lists: Cultural Connectedness Scale - California

List #1 Ceremonial & Traditional Medicines	List #2 Uses of Ceremonial & Traditional Medicines	List #3 Traditional, Tribal & Cultural Ceremonies or Activities	List #4 Cultural Uses of Food	List #5 Traditional Persons, Elders & Leaders
• Angelica Root • Bear Root • Cedar • Corn Pollen • Copal • Greasewood • Jimson • Milk Weed • Mountain Tea • Mugwort • Palo de Santo, • Peyote • Sage • Sweet grass • Tobacco • Women's Tea	• Asking for a blessing in a sacred manner • Calmness • Cultural connections • Gifting to show respect • Give thanks • Guidance • Help Sleeping • To honor • Personal Healing • Prayer • Smudge • Spiritual connections • Spiritual Offerings • Steady Mind • Talk to the creator • Keep bad spirits away	• Acorn Ceremony • Beading Class • Bear Dance, Sun Dance, Round Dance or other Cultural Dance • Big Time • Burning of Clothes • Coming of Age • Deer Gathering • Drumming • Feast Giveaway • Fiesta (South of Kern Valley) • GONA • Longhouse • Moon Ceremony • New Years • Pot Latch • Pow Wow • Puberty Ceremony • Repatriation • Running is my High • Spring Ceremony • Story Telling • Sunrise Ceremony • Sun Rise (Alcatraz) • Sweat Lodge • Traditional Tattoo • Washing of the Face • Wiping of Tears • Young Men's Ceremony • Yuwipi	• Spirit Plate • Thank You Ceremony • Special Feast • Community Feed • Other	• Ceremonial Leader • Cultural Teacher • Doctor • Elder • Father • Feather Man • Feather Woman • God Father • God Mother • Head Heir • Head Man • Head Woman • Medicine People • Mother • Mother Bear • Regalia Leader • Spiritual Person • Timiiwal • Top Doc

List #6 Feathers
• Eagle • Condor • Flicker • Hummingbird • Raven • Hawk • Turkey • Quail • Woodpecker

GONA Pre Assessment – Youth 2023 (July 31- August 3)

About You

We are asking your help on a survey about GONA to find out how it's working and how it can be made better. Please answer the questions below with your honest beliefs and feelings. There are no right or wrong answers.

The survey should take you about 30 minutes, your answers will help us continue to improve the GONA but if you really don't feel comfortable answering some of the questions, you don't have to. Just answer as much as you feel comfortable. Thank you in advance
for your help!

1. Enter your personal identification number. This was provided to you by GONA staff. You must use this number to proceed with the survey. Please double check the number to make sure it is accurate.

2. What was your sex assigned at birth?

Female ☐ Male ☐ Intersex/Other ☐ Prefer not to answer ☐

3. Gender Identity: Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female or lives as a woman. What is your current gender identity?

☐ Female
☐ Male
☐ Trans male/Trans man
☐ Different Identity_____
☐ Two spirit
☐ Genderqueer/Gender non-conforming
☐ Trans female/Trans woman
☐ Prefer not to answer

4. How old are you? Enter the number of years ☐

About You

5. What best describes you? What is your ethnicity? (check all that apply)

- ☐ American Indian/Native American/Alaska Native/Indigenous
- ☐ Asian
- ☐ Black/African American
- ☐ Hispanic/Latinx
- ☐ White
- ☐ Native Hawaiian/ Pacific Islander
- ☐ Other (please specify_____

6. Do you identify as Indigenous from the Americas, Native American, American Indian, First Nations, Alaska Native or Indigenous peoples from the Pacific?

- ☐ No
- ☐ Yes. If yes, please indicate your Tribal or Indigenous affiliation(s)_____

7. Are you in school? (Select best answer)

- ☐ Yes If Yes, in what grade? ____
- ☐ Yes College/University
- ☐ Yes Home School
- ☐ No I am not in school
- ☐ Yes Technical School

GONA Experience

8. Have you participated * in a GONA before?

- ☐ Yes ☐ No

9. Have you been trained as a peacekeeper for the GONA?

- ☐ Yes ☐ No

GONA Experience

10. How many GONAs have you participated in before?

- ☐ This is my first GONA
- ☐ 1 time before
- ☐ 2 times
- ☐ 3 times
- ☐ 4 times
- ☐ 5 times
- ☐ 6 times
- ☐ 7 times (or more)

11. What type of GONA have you participated in? (Check all that apply)

- ☐ Day GONA
- ☐ Overnight GONA
- ☐ I have not participated in GONA
- ☐ Other (please specify) _____

12. How many days were the GONA(s) you participated in? (Check all that apply)

- ☐ 1 - day GONA
- ☐ 2 - day GONA
- ☐ 3 - day GONA
- ☐ 4-day GONA
- ☐ I have not participated in GONA
- ☐ Other (please specify) _____

Alcohol and Drugs

13. I am sober. I do not use alcohol or drugs* (*Unless the drugs were prescribed by my Doctor.)

- ☐ Yes I have never used alcohol or drugs
- ☐ Yes I have not used any drugs or alcohol for 6 months or more
- ☐ Yes I have not used any drugs or alcohol for 3-6 months
- ☐ Yes I have not used any drugs or alcohol for 1-3 months
- ☐ No I have used drugs or alcohol in the past month (30 days)

Home and Community Engagement – Life Changers (short version)

Circle the best answer

14. I help out my family (like washing dishes, babysitting or other activities).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

15. I help out in my community (like helping elders, taking care of the environment, volunteering at school or at the local Indian center).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

16. I attend healthy community events (like dinners, pow-wows, and youth program activities).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

17. I believe I can be a leader in my community (if given the chance).

Yes **No** **Unsure**

18. Even though I may feel a little nervous, I feel confident in my ability to speak in front of other people.

Yes **No** **Unsure**

Cultural Connectedness Scale – California Short

The *Cultural Connectedness Scale* was developed by an Indigenous researcher Dr. Angela Snowshoe to measure cultural connections among Indigenous/First Nations youth. Most people that complete the Cultural Connectedness Scale report a positive experience. However, a few people reported feeling sad, angry, or a sense of loss from some of the questions. If you feel negative emotions about some of these questions, it is important that you know you can approach your Clan Elder, the GONA facilitator or one of the Staff. [**Circle the best answer. Examples Lists are on next page**]

1 (1) **I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People**.

YES NO

2 (3) **I know my Cultural, Spirit, Indian or Traditional Name**

YES NO Does not apply (we do not use those names)

3 (4) **I use ceremonial/traditional medicines (See Examples List 1) for guidance or prayer or other reasons.**

YES NO **(See Examples List 2).**

4 (10) **I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.**

YES NO

5 (11) **I have a traditional person, elder or other person who I can talk to. (See example list #5)**

YES NO

6 (12) **I have spent time trying to find out more about being Native American/Indigenous, such as history, tribal identity, traditions, language and customs.**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

7 (13) **I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation.**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

8 (17) **I feel a strong connection/attachment towards my Native American community or Tribe.**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

9 (21) **The eagle feather (or other feathers) has a lot of traditional meaning for me. (See Examples List 6)**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

10 (29) **How often does someone in your family or someone you are close to use ceremonial or traditional medicines? (See Example List 1)**

Never	Once/Twice in the Past Year	Every Month	Every Week	Every Day

Examples Lists: Cultural Connectedness Scale - California

List #1 **Ceremonial & Traditional Medicines**	List #2 **Uses of Ceremonial & Traditional Medicines**	List #3 **Traditional, Tribal & Cultural Ceremonies or Activities**	List #4 **Cultural Uses of Food**	List#5 **Traditional Persons, Elders & Leaders**
• Angelica Root • Bear Root • Cedar • Corn Pollen • Copal • Greasewood • Jimson • Milk Weed • Mountain Tea • Mugwort • Palo de Santo, • Peyote • Sage • Sweet grass • Tobacco • Women's Tea	• Asking for a blessing in a sacred manner • Calmness • Cultural connections • Gifting to show respect • Give thanks • Guidance • Help Sleeping • To honor • Personal Healing • Prayer • Smudge • Spiritual connections • Spiritual Offerings • Steady Mind • Talk to the creator • Keep bad spirits away	• Acorn Ceremony • Beading Class • Bear Dance, Sun Dance, Round Dance or other Cultural Dance • Big Time • Burning of Clothes • Coming of Age • Deer Gathering • Drumming • Feast Giveaway • Fiesta (South of Kern Valley) • GONA • Longhouse • Moon Ceremony • New Years • Pot Latch • Pow Wow • Puberty Ceremony • Repatriation • Running is my High • Spring Ceremony • Story Telling • Sunrise Ceremony • Sun Rise (Alcatraz) • Sweat Lodge • Traditional Tattoo • Washing of the Face • Wiping of Tears • Young Men's Ceremony • Yuwipi	• Spirit Plate • Thank You Ceremony • Special Feast • Community Feed • Other	• Ceremonial Leader • Cultural Teacher • Doctor • Elder • Father • Feather Man • Feather Woman • God Father • God Mother • Head Heir • Head Man • Head Woman • Medicine People • Mother • Mother Bear • Regalia Leader • Spiritual Person • Timiiwal • Top Doc

List #6
• Eagle Feather • Condor • Flicker • Humming Bird • Raven • Hawk • Turkey • Quail • Woodpecker

Affect Index

(Modified Herth Hope Index)

INSTRUCTIONS: Listed below are statements. Please read each statement and place an [**X**] in the box that describes how much you agree with that statement right now**.**

	Strongly Disagree	**Disagree**	**Neither Agree or Disagree**	**Agree**	**Strongly Agree**
1. I have a positive outlook toward life.					
2. I have short and/or long-range goals.					
3. I feel all alone.					
4. I can see possibilities during difficult times.					
5. I have a spiritual belief that gives me comfort.					
6. I feel scared about my future.					
7. I can remember happy/joyful times.					
8. I have deep inner strength.					
9. I am able to give and receive caring/love.					
10. I have a sense of direction.					
11. I believe that each day has potential.					
12. I feel my life has value and worth.					

Thank you for completing this survey. All your responses will remain confidential.

GONA Post Assessment – Youth 2023 (July 31- August 3)

About You

We are asking your help on a survey about GONA to find out how it's working and how it can be made better. Please answer the questions below with your honest beliefs and feelings. There are no right or wrong answers.

The survey should take you about 30 minutes and you will receive an incentive valued at $10 for completing the survey. Your answers will help us continue to improve the GONA but if you really don't feel comfortable answering some of the questions, you don't have to. Participating in the survey is your choice and is completely confidential, meaning your name will not be included in any of the survey forms. Just answer as much as you feel comfortable. Thank you in advance for your help!

1. Enter your personal identification number. This was provided to you by GONA staff. You must use this number to proceed with the survey. Please double check the number to make sure it is accurate.

2. Do you identify as Indigenous from the Americas, Native American, American Indian, First Nations, Alaska Native or Indigenous peoples from the Pacific?

- ☐ No
- ☐ Yes. If yes, please indicate your Tribal or Indigenous affiliation(s)_____

GONA Experience

3 In what ways has GONA changed your point of view?

4. If given the chance, I would participate in GONA again.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

5. I feel connected to my family.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

GONA Post Assessment – Youth 2023 (July 31- August 3)

GONA Experience

6. I feel connected to my community.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

7. I will stay in contact with people I met at the GONA

☐ I will not stay in contact with anyone from the GONA

☐ I will keep in contact with 1 person

☐ I will keep in contact with 2-3 people

☐ I will keep in contact with 4-5 people

☐ I will keep in contact with MORE than 5 people

8. One day I want to help other youth as a staff or volunteer at the GONA.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

9. What do you think will change in your life or behaviors because of GONA?

10. Were there any concerns you had about GONA or things you didn't like? If so, please explain.

11. I believe I can be a leader in my community (if given the chance).

☐ **Yes** ☐ **No** ☐ **Unsure**

12. Even though I may feel a little nervous, I feel confident in my ability to speak in front of other people.

☐ **Yes** ☐ **No** ☐ **Unsure**

Cultural Connectedness Scale – California Short

The *Cultural Connectedness Scale* was developed by an Indigenous researcher Dr. Angela Snowshoe to measure cultural connections among Indigenous/First Nations youth. Most people that complete the Cultural Connectedness Scale report a positive experience. However, a few people reported feeling sad, angry, or a sense of loss from some of the questions. If you feel negative emotions about some of these questions, it is important that you know you can approach your Clan Elder, the GONA facilitator or one of the Staff. [**Circle the best answer. Examples Lists are on next page**]

1 (1) **I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People**.

YES NO

2 (3) **I know my Cultural, Spirit, Indian or Traditional Name**

YES NO Does not apply (we do not use those names)

3 (4) **I use ceremonial/traditional medicines (See Examples List 1) for guidance or prayer or other reasons.**

YES NO **(See Examples List 2).**

4 (10) **I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.**

YES NO

5 (11) **I have a traditional person, elder or other person who I can talk to. (See example list #5)**

YES NO

6 (12) **I have spent time trying to find out more about being Native American/Indigenous, such as history, tribal identity, traditions, language and customs.**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

7 (13) **I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation.**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

8 (17) **I feel a strong connection/attachment towards my Native American community or Tribe.**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

9 (21) **The eagle feather (or other feathers) has a lot of traditional meaning for me. (See Examples List 6)**

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

10 (29) **How often does someone in your family or someone you are close to use ceremonial or traditional medicines? (See Example List 1)**

Never	Once/Twice in the Past Year	Every Month	Every Week	Every Day

Examples Lists: Cultural Connectedness Scale - California

List #1 **Ceremonial & Traditional Medicines**	List #2 **Uses of Ceremonial & Traditional Medicines**	List #3 **Traditional, Tribal & Cultural Ceremonies or Activities**	List #4 **Cultural Uses of Food**	List#5 **Traditional Persons, Elders & Leaders**
• Angelica Root • Bear Root • Cedar • Corn Pollen • Copal • Greasewood • Jimson • Milk Weed • Mountain Tea • Mugwort • Palo de Santo, • Peyote • Sage • Sweet grass • Tobacco • Women's Tea	• Asking for a blessing in a sacred manner • Calmness • Cultural connections • Gifting to show respect • Give thanks • Guidance • Help Sleeping • To honor • Personal Healing • Prayer • Smudge • Spiritual connections • Spiritual Offerings • Steady Mind • Talk to the creator • Keep bad spirits away	• Acorn Ceremony • Beading Class • Bear Dance, Sun Dance, Round Dance or other Cultural Dance • Big Time • Burning of Clothes • Coming of Age • Deer Gathering • Drumming • Feast Giveaway • Fiesta (South of Kern Valley) • GONA • Longhouse • Moon Ceremony • New Years • Pot Latch • Pow Wow • Puberty Ceremony • Repatriation • Running is my High • Spring Ceremony • Story Telling • Sunrise Ceremony • Sun Rise (Alcatraz) • Sweat Lodge • Traditional Tattoo • Washing of the Face • Wiping of Tears • Young Men's Ceremony • Yuwipi	• Spirit Plate • Thank You Ceremony • Special Feast • Community Feed • Other	• Ceremonial Leader • Cultural Teacher • Doctor • Elder • Father • Feather Man • Feather Woman • God Father • God Mother • Head Heir • Head Man • Head Woman • Medicine People • Mother • Mother Bear • Regalia Leader • Spiritual Person • Timiiwal • Top Doc

List #6
• Eagle Feather • Condor • Flicker • Humming Bird • Raven • Hawk • Turkey • Quail • Woodpecker

Affect Index

(Modified Herth Hope Index)

INSTRUCTIONS: Listed below are statements. Please read each statement and place an [**X**] in the box that describes how much you agree with that statement right now**.**

	Strongly Disagree	**Disagree**	**Neither Agree or Disagree**	**Agree**	**Strongly Agree**
1. I have a positive outlook toward life.					
2. I have short and/or long-range goals.					
3. I feel all alone.					
4. I can see possibilities during difficult times.					
5. I have a spiritual belief that gives me comfort.					
6. I feel scared about my future.					
7. I can remember happy/joyful times.					
8. I have deep inner strength.					
9. I am able to give and receive caring/love.					
10. I have a sense of direction.					
11. I believe that each day has potential.					
12. I feel my life has value and worth.					

Thank you for completing this survey. All your responses will remain confidential.

GONA 6-Month Follow Up – Youth 2023 (July 31- August 3)

About You

We are asking your help on a survey about GONA to find out how it's working and how it can be made better. Please answer the questions below with your honest beliefs and feelings. There are no right or wrong answers.

The survey should take you about 30 minutes, your answers will help us continue to improve the GONA but if you really don't feel comfortable answering some of the questions, you don't have to. Just answer as much as you feel comfortable. Thank you in advance for your help!

1. What was your sex assigned at birth?

☐ Female ☐ Male ☐ Other ☐ Prefer not to answer

2. Gender Identity: Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female or lives as a woman. What is your current gender identity?

☐ Female
☐ Male
☐ Trans male/Trans man
☐ Different Identity_____
☐ Two spirit
☐ Genderqueer/Gender non-conforming
☐ Trans female/Trans woman
☐ Prefer not to answer

3. How old are you? Enter the number of years ☐

4. What best describes you? What is your ethnicity? (check all that apply)

☐ American Indian/Native American/Alaska Native/Indigenous
☐ Black/African American
☐ White
☐ Other (please specify_____
☐ Asian
☐ Hispanic/Latinx
☐ Pacific Islander/ Native Hawaiian

5. Do you identify as Indigenous from the Americas, Native American, American Indian, First Nations, Alaska Native or Indigenous peoples from the Pacific?

☐ No ☐ Yes. If yes indicate your Tribal/Indigenous affiliation(s)_____

GONA 6-Month Follow Up – Youth 2023 (July 31- August 3)

About You

6. Are you in school? (Select best answer)

- ☐ Yes If Yes, in what grade? ____
- ☐ Yes Home School
- ☐ Yes Technical School
- ☐ Yes College/University
- ☐ No I am not in school

GONA Experience

6. What community GONA did you attend last year?

- ☐ Oakland/San Francisco
- ☐ Sacramento
- ☐ Fresno
- ☐ San Diego
- ☐ Other (Please Specify)_____

7. How many GONAs have you participated in?

- ☐ Only 1 time
- ☐ 2 times
- ☐ 3 times
- ☐ 4 times
- ☐ 5 times
- ☐ 6 times
- ☐ 7 times (or more)

8. In what ways has the GONA change your point of view?

9. Given the chance, I would participate in GONA again

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

GONA 6-Month Follow Up – Youth 2023 (July 31- August 3)

Alcohol and Drugs

10. I am sober. I do not use alcohol or drugs* (*Unless the drugs were prescribed by my Doctor.)

- ☐ Yes I have never used alcohol or drugs
- ☐ Yes I have not used any drugs or alcohol for 6 months or more
- ☐ Yes I have not used any drugs or alcohol for 3-6 months
- ☐ Yes I have not used any drugs or alcohol for 1-3 months
- ☐ No I have used drugs or alcohol in the past month (30 days)

Home and Community Engagement – Life Changers (short version)

Circle the best answer

11. I help out my family (like washing dishes, babysitting or other activities).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

12. I help out in my community (like helping elders, taking care of the environment, volunteering at school or at the local Indian center).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

13. I attend healthy community events (like dinners, pow-wows, and youth program activities).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

14. I believe I can be a leader in my community (if given the chance).

Yes No Unsure

15. Even though I may feel a little nervous, I feel confident in my ability to speak in front of other people.

Yes No Unsure

GONA 6-Month Follow Up – Youth 2023 (July 31- August 3)

GONA Lessons - BELONGING

Definition: A time when infants and children learn who they are, where they belong and a sense of protection.

16. Based on what you learned from GONA, how does BELONGING show up in your day-to-day life?

17. I feel more connected to my family since participating in the GONA.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

18. I feel more connected to my community since participating in the GONA.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

19. GONA has improve my sense of who I am.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

GONA 6-Month Follow Up – Youth 2023 (July 31- August 3)

GONA Lessons - MASTERY

Definition: At time when adolescents and youth adults learn to understand their gifts, their vision, where they come from, and how to master their talents.

20. Based on what you learned from GONA, how does MASTERY show up in your day-to-day life?

GONA Lessons - INTERDEPENDENCE

Definition: A time for adulthood, responsibility to others and an understanding of our interconnectedness with all things.

21. Based on what you learned from GONA, how does INTERDEPENDENCE show up in your day-to-day life?

22. I stay in contact with people I met at the GONA

- ☐ I am not in contact with anyone from the GONA
- ☐ I keep in contact with 1 person
- ☐ I keep in contact with 2-3 people
- ☐ I keep in contact with 4-5 people
- ☐ I keep in contact with more than 5 people

23. If you are still in contact with people from the GONA, how do you stay in contact with them?
(Check all that apply)

☐ Facebook ☐ Twitter ☐ Email ☐ Telephone ☐ I am not in contact

☐ Text Message ☐ Other (please specify)_____

GONA 6-Month Follow Up – Youth 2023 (July 31- August 3)

GONA Lessons - GENEROSITY

Definition: A time when, as elders, we can give back to our families and communities through sharing of wisdom, teachings, culture, rituals, stories, and song.

24. Based on what you learned from GONA, how does GENEROSITY show up in your day-to-day life?

25. On day I want to help other youth as a staff or volunteer at the GONA.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

Cultural Connectedness Scale – California (Short Version)

The *Cultural Connectedness Scale* was developed by an Indigenous researcher Dr. Angela Snowshoe to measure cultural connections among Indigenous/First Nations youth. Most people that complete the Cultural Connectedness Scale report a positive experience. However, a few people reported feeling sad, angry, or a sense of loss from some of the questions. If you feel negative emotions about some of these questions, it is important that you know you can approach your Clan Elder, the GONA facilitator or one of the Staff. [**Circle the best answer. Examples Lists are on next page**]

1) I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People.

YES **NO**

3) I know my Cultural, Spirit, Indian or Traditional Name

YES **NO** Does not apply (we do not use those names)

4) I use ceremonial/traditional medicines (See Examples List 1) for guidance or prayer or other reasons.

YES **NO** **(See Examples List 2).**

10) I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.

YES **NO**

11) I have a traditional person, elder or other person who I can talk to. (See example list #5)

YES **NO**

12) I have spent time trying to find out more about being Native American/Indigenous, such as history, tribal identity, traditions, language and customs.

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

13) I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation.

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

17) I feel a strong connection/attachment towards my Native American community or Tribe.

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

21) The eagle feather (or other feathers) has a lot of traditional meaning for me. (See Examples List 6)

Strongly Disagree	Disagree	Do Not Agree or Disagree	Agree	Strongly Agree

29) How often does someone in your family or someone you are close to use ceremonial or traditional medicines? (See Example List 1)

Never	Once/Twice in the Past Year	Every Month	Every Week	Every Day

Examples Lists: Cultural Connectedness Scale - California

List #1
Ceremonial & Traditional Medicines

- Angelica Root
- Bear Root
- Cedar
- Corn Pollen
- Copal
- Greasewood
- Jimson
- Milk Weed
- Mountain Tea
- Mugwort
- Palo de Santo,
- Peyote
- Sage
- Sweet grass
- Tobacco
- Women's Tea

List #2
Uses of Ceremonial & Traditional Medicines

- Asking for a blessing in a sacred manner
- Calmness
- Cultural connections
- Gifting to show respect
- Give thanks
- Guidance
- Help Sleeping
- To honor
- Personal Healing
- Prayer
- Smudge
- Spiritual connections
- Spiritual Offerings
- Steady Mind
- Talk to the creator
- Keep bad spirits away

List #3
Traditional, Tribal & Cultural Ceremonies or Activities

- Acorn Ceremony
- Beading Class
- Bear Dance, Sun Dance, Round Dance or other Cultural Dance
- Big Time
- Burning of Clothes
- Coming of Age
- Deer Gathering
- Drumming
- Feast Giveaway
- Fiesta (South of Kern Valley)
- GONA
- Longhouse
- Moon Ceremony
- New Years
- Pot Latch
- Pow Wow
- Puberty Ceremony
- Repatriation
- Running is my High
- Spring Ceremony
- Story Telling
- Sunrise Ceremony
- Sun Rise (Alcatraz)
- Sweat Lodge
- Traditional Tattoo
- Washing of the Face
- Wiping of Tears
- Young Men's Ceremony
- Yuwipi

List #4
Cultural Uses of Food

- Spirit Plate
- Thank You Ceremony
- Special Feast
- Community Feed
- Other

List#5
Traditional Persons, Elders & Leaders

- Ceremonial Leader
- Cultural Teacher
- Doctor
- Elder
- Father
- Feather Man
- Feather Woman
- God Father
- God Mother
- Head Heir
- Head Man
- Head Woman
- Medicine People
- Mother
- Mother Bear
- Regalia Leader
- Spiritual Person
- Timiiwal
- Top Doc

List #6

- Eagle Feather
- Condor
- Flicker
- Humming Bird
- Raven
- Hawk
- Turkey
- Quail
- Woodpecker

Affect Index

(Modified Herth Hope Index)

INSTRUCTIONS: Listed below are statements. Please read each statement and place an [**X**] in the box that describes how much you agree with that statement right now**.**

	Strongly Disagree	**Disagree**	**Neither Agree or Disagree**	**Agree**	**Strongly Agree**
1. I have a positive outlook toward life.					
2. I have short and/or long-range goals.					
3. I feel all alone.					
4. I can see possibilities during difficult times.					
5. I have a spiritual belief that gives me comfort.					
6. I feel scared about my future.					
7. I can remember happy/joyful times.					
8. I have deep inner strength.					
9. I am able to give and receive caring/love.					
10. I have a sense of direction.					
11. I believe that each day has potential.					
12. I feel my life has value and worth.					

Thank you for completing this survey. All your responses will remain confidential. Please contact GONA staff for the best way to receive the incentive of your choice (i.e., mail, pick-up).

NATIVE AMERICAN HEALTH CENTER
Serving the community since 1972
a californiahealth+ center

Revised Jan 26, 2024

Date: _____ ID#:_____

Healthy Native Young Adult Survey

You are invited to participate in the "Healthy Native Young Adult" survey!

This survey asks questions about:

- Your physical and mental health
- Your connection to Native culture and tradition
- Your community engagement

Native/Indigenous peoples have long known that our culture helps us to be strong and healthy. This research project focuses on the healing impact of the Gathering of Native Americans (GONA) program for youth. **You can participate whether or not you have been to a GONA before**. Answering this survey helps us continue cultural programs, like the GONA, that support Native youth wellness.

Instructions: The survey will take about 15-20 minutes. You can skip any question or stop the survey at any time if you would like. To say thank you, you will receive a **$50 digital gift card** from your choice of 200+ vendors.

Questions and feedback: Contact the principal investigator, Dr. Paul Masotti (PaulM@nativehealth.org)

Confidentiality: Your answers will be kept confidential. They will be stored securely. They will be used for only for this research project. Your identity will be anonymous in any reports or publications about this research. We will ask for your email address to send your gift card, but this information will be deleted after and will not be attached to your survey responses.

Support: We understand that some individuals may experience difficult emotions when answering questions. If you need assistance and would like to speak to someone, please contact the services listed below:

- Text or call 988 for 24/7 access to trained crisis counselors.
- Native Crisis Text Line: text "Native" to 741741.

Please go to the next page.

SECTION 1: ABOUT YOU

Instructions: please tell us a bit about yourself.

1. What is your birth date *(month/day/year)*? _____/_____/_____
2. Which of the following best describes your race/ethnicity? *Please choose all that apply.*
    a. American Indian/Native American/Alaska Native/Indigenous
    b. Native Hawaiian or Pacific Islander
    c. Asian
    d. Black or African American
    e. White
    f. Other, please describe: _____
3. Do you identify as Indigenous from the Americas (including Central America, South America, or Mexico), Native American, American Indian, First Nations, Alaska Native, or Indigenous from the Australia, New Zealand, or the Pacific?
    a. No
    b. Yes
4. If yes, please list your Tribal or Indigenous affiliation(s), if known: _____
5. What is your gender identity? *Please choose all that apply.*
    a. Man
    b. Woman
    c. Two-Spirit
    d. Non-binary, genderqueer, or gender non-confirming
    e. Something else, please describe: _____
    f. Prefer not to say
6. What sex were you assigned at birth, on your original birth certificate?
    a. Female
    b. Male
    c. Something else, please describe: _____
    d. Prefer not to say
7. Which of the following best describes your sexual orientation? *Please choose all that apply.*
    a. Straight/Heterosexual
    b. Gay/Lesbian
    c. Bisexual
    d. Pansexual
    e. Asexual
    f. Something else, please describe: _____
    g. Prefer not to say

8. Have you ever attended a four-day Gathering of Native Americans (GONA)? *A GONA is a community event where Native community members gather to address community issues. It is interactive and reflects Native values, traditions, and spiritual practices. The GONA usually follows four themes: belonging, mastery, interdependence, and generosity.*
    a. No, I have never attended a GONA. *(If you have never attended a GONA, skip to question 14).*
    b. Yes, I have attended a GONA.
9. How many GONAs have you attended?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
    f. More than 5
10. When was the *first* GONA you attended? Year: _____
11. Who hosted/facilitated your *first* GONA?
    a. An urban Native-serving organization, such as a health clinic, cultural or community center, or residential treatment facility
    b. A Tribal organization, such as your tribal government or Indian Health Services facility
    c. Not sure
12. When was the *most recent* GONA you attended? Year: _____
13. Who hosted/facilitated your *most recent* GONA?
    a. An urban Native-serving organization, such as a health clinic, cultural or community center, or residential treatment facility
    b. A Tribal organization, such as your tribal government or Indian Health Services facility
    c. Not sure
14. Are you currently a student?
    a. Yes
    b. No
15. What is the highest grade or year of school you have completed?
    a. Never attended school or only attended kindergarten
    b. Grades 1 through 8 (Elementary)
    c. Grades 9 through 11 (Some high school)
    d. Grade 12 or GED (High school graduate)
    e. College 1 year to 3 years (Some college or technical school)
    f. College 4 years or more (College graduate)
    g. Some graduate or professional school
    h. Master's degree (MA, MS, MPH, MPA, etc.)
    i. Doctoral-level degree (PhD, MD, JD, DrPH, etc.)

16. Which of the following best describes your employment status?
    a. Employed, working 40 or more hours per week
    b. Employed, working 1-39 hours per week
    c. Not employed, looking for work
    d. Not employed, NOT looking for work
    e. Retired
    f. Disabled, not able to work
    g. Something else, please describe: _____

17. How many people are there in your household?
    A household includes anyone who you share finances with, but not those who have separate finances. Include yourself.
    For example, if you are married and live with your spouse and child, please answer 3. If you live with 3 roommates, all with separate finances, you would answer 1 (just yourself).
    a. 1 (myself only)
    b. 2
    c. 3
    d. 4
    e. 5
    f. 6
    g. 7
    h. 8+

18. What is your combined total household income? *Please include all income sources for all people in your household counted above.*

    a. $0 - $9999
    b. $10,000 - $24,999
    c. $25,000 - $49,999
    d. $50,000 - $74,999
    e. $75,000 - $99,999
    f. $100,000 - $124,999
    g. $125,000 - $149,999
    h. $150,000 - $174,999
    i. $175,000 - $199,999
    j. $200,000 and up
    k. Prefer not to answer

19. What zip code do you live in? _____

20. Do you currently live on a Tribal reservation/Nation?
    a. No
    b. Yes, please specify: _____
21. Which of the following best describes your current living situation?
    a. I rent my home
    b. I own my home
    c. Staying with friends/family (without payment of rent)
    d. Living in a residential treatment facility, assisted living facility, or group home
    e. Living in a temporary shelter, a hotel, a car/vehicle, or unhoused
    f. Something else, please describe: _____

SECTION 2: Cultural Connectedness Scale – California (CCS-CA)

***Instructions**: Please read each statement and answer to the best of your ability. Please read each statement carefully as some refer to an "Example List" which is on page 9. Please view the example list and choose the best answer.*

1. I believe things like animals, rocks (and all nature) have a spirit like Native American/Indigenous People.
   Yes No

2. I can understand some Native American/Indigenous words or language(s).
   Yes No

3. I know my Cultural, Spirit, Indian or Traditional Name.
   Yes No Does Not Apply (We do not use these names)

4. I use ceremonial/traditional medicines (*See Examples List 1*) for guidance or prayer or other reasons. (*See Examples List 2*).
   Yes No

5. I have participated in a traditional/cultural ceremony or activity. (*See Examples List 3*).
   Yes No

6. I have helped prepare for a traditional/cultural ceremony or activity in my family or community. (*See Examples List 3*).
   Yes No

7. I have shared a meal with community, offered food or fed my ancestors for a traditional/cultural or spiritual reason. (*See Examples List 4*)
   Yes No

8. Someone in my family or someone I am close with attends traditional/cultural ceremonies or activities. (*See Examples List 3*).
   Yes No

9. I plan on attending a traditional/cultural ceremony or activity in the future (*See Examples List 3*)
   Yes No

10. I plan on trying to find out more about my Native American/Indigenous culture, such as its history, Tribal identity, traditions, customs, arts and language.
    Yes No

11. I have a traditional person, elder or other person who I can talk to. (*See Examples List 5*)

    Yes No

12. I have spent time trying to find out more about being Native American/Indigenous, such as history, tribal identity, traditions, language and customs.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

13. I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

14. I have done things that will help me understand my Native American/Indigenous background better.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

15. I have talked to community members or other people *(See Example List 5)* in order to learn more about being Native American/Indigenous

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

16. When I learn something about my Native American/Indigenous culture, history, or ceremonies, I will ask someone, research it, look it up, or find resources to learn more about it.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

17. I feel a strong connection/attachment towards my Native American community or Tribe.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

18. If a traditional person, counselor or Elder who is knowledgeable about my culture, spoke to me about being Native American/Indigenous, I would listen to them carefully. *(See Example List 5).*

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

19. I feel a strong connection to my ancestors and those that came before me.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

20. Being Native American/Indigenous means I sometimes have a different perception or way of looking at the world.

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

21. The eagle feather (or other feathers) has a lot of traditional meaning for me. *(See Examples List 6)*

    Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

22. It is important to me that I know my Native American/Indigenous or Tribal language(s).

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

23. When I am physically ill, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

24. When I am overwhelmed with my emotions, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

25. When I need to make a decision about something, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

26. When I am feeling spiritually ill or disconnected, I look to my Native American/Indigenous culture or community for help.

Strongly Disagree Disagree Do Not Agree or Disagree Agree Strongly Agree

Please answer how often you experience the following:

27. How often do you offer a ceremonial/ traditional medicine for cultural/traditional purposes? (*See Example List 1*).

Never Once/Twice in the Past Year Every Month Every Week Every Day

28. How often do you use ceremonial/traditional medicines? (*See Example List 1*).

Never Day Once/Twice in the Past Year Every Month Every Week Every

29. How often does someone in your family or someone you are close to use ceremonial or traditional medicines? (*See Example List 1*)

Never Day Once/Twice in the Past Year Every Month Every Week Every

List #1 Ceremonial & Traditional Medicines • Angelica Root • Bear Root • Cedar • Corn Pollen • Copal • Greasewood • Jimson • Milk Weed • Mountain Tea • Mugwort • Palo de Santo • Peyote • Sage • Sweet grass • Tobacco • Women's Tea	List #2 Uses of Ceremonial & Traditional Medicines • Asking for a blessing in a sacred manner • Calmness • Cultural connections • Gifting to show respect • Give thanks • Guidance • Help Sleeping • To honor • Personal Healing • Prayer • Smudge • Spiritual connections • Spiritual Offerings • Steady Mind • Talk to the creator • Keep bad spirits away	List #3 Traditional, Tribal & Cultural Ceremonies or Activities • Acorn Ceremony • Beading Class • Bear Dance, Sun Dance, Round Dance or other Cultural Dance • Big Time • Burning of Clothes • Coming of Age • Deer Gathering • Drumming • Feast Giveaway • Fiesta (South of Kern Valley) • GONA • Longhouse • Moon Ceremony • New Years • Pot Latch • Pow Wow • Puberty Ceremony • Repatriation • Running is my High • Spring Ceremony • Story Telling • Sunrise Ceremony • Sun Rise (Alcatraz) • Sweat Lodge • Traditional Tattoo • Washing of the Face • Wiping of Tears • Young Men's Ceremony • Yuwipi	List #4 Cultural Uses of Food • Spirit Plate • Thank You Ceremony • Special Feast • Community Feed • Other	List#5 Traditional Persons, Elders & Leaders • Ceremonial Leader • Cultural Teacher • Doctor • Elder • Father • Feather Man • Feather Woman • God Father • God Mother • Head Heir • Head Man • Head Woman • Medicine People • Mother • Mother Bear • Regalia Leader • Spiritual Person • Timiiwal • Top Doc
List #6 • Eagle Feather • Condor • Flicker • Humming Bird • Raven • Hawk • Turkey • Quail				

SECTION 3: Health and Wellbeing: CAGE-AID

Instructions: *When thinking about drug use, include illegal or recreational drug use and the use of prescription drugs other than as prescribed. Please answer these questions for the past 12 months.*

1. Have you ever felt you ought to cut down on your drinking or drug use?

Yes No

2. Have people annoyed you by criticizing your drinking or drug use?

Yes No

3. Have you felt bad or guilty about your drinking or drug use?

Yes No

4. Have you ever had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover?

Yes No

SECTION 3: Health and Wellbeing (continued) SF-6Dv2:

Instructions: *For each area of health listed below, please select the statement that best represents your experiences of your physical and mental health.*

A. Physical functioning:

1. Limited in vigorous activities not at all
2. Limited in vigorous activities a little
3. Limited in moderate activities a little
4. Limited in moderate activities a lot
5. Limited in bathing and dressing a little
6. Limited in bathing and dressing a lot

B. Role limitation:

1. Accomplish less than you would like none of the time
2. Accomplish less than you would like a little of the time
3. Accomplish less than you would like some of the time
4. Accomplish less than you would like most of the time
5. Accomplish less than you would like all of the time

C. Social functioning:

1. Social activities are limited none of the time
2. Social activities are limited a little of the time
3. Social activities are limited some of the time
4. Social activities are limited most of the time
5. Social activities are limited all of the time

D. Pain:

1. No pain
2. Very mild pain
3. Mild pain
4. Moderate pain
5. Severe pain
6. Very severe pain

E. Mental health:

1. Depressed or very nervous none of the time
2. Depressed or very nervous a little of the time
3. Depressed or very nervous some of the time
4. Depressed or very nervous most of the time
5. Depressed or very nervous all of the time

F. Vitality:

1. Worn out none of the time
2. Worn out a little of the time
3. Worn out some of the time
4. Worn out most of the time
5. Worn out all of the time

SECTION 3: Health and Wellbeing (continued) (CES-D-R 10)

Instructions: *Below is a list of some of the ways you may have felt or behaved in the past week. For each statement below, please choose how often you have felt this way in the past week.*

1. In the past week… **I was bothered by things that usually don't bother me.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
2. In the past week… **I had trouble keeping my mind on what I was doing.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
3. In the past week… **I felt depressed.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
4. In the past week… **I felt that everything I did was an effort.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
5. In the past week… **I felt hopeful about the future.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)

6. In the past week… **I felt fearful.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
7. In the past week… **My sleep was restless.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
8. In the past week… **I was happy.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
9. In the past week… **I felt lonely.**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)
10. In the past week… **I could not "get going".**
    a. Rarely or none of the time (less than 1 day)
    b. Some or a little of the time (1-2 days)
    c. Occasionally or a moderate amount of time (3-4 days)
    d. All of the time (5-7 days)

Please go to the next page – SECTION 4 (Almost Done)

Section 4: Healthcare Utilization Survey

***Instructions**: The following survey applies to your use of healthcare services in the last 12 months.*

1. During the past 12 months, indicate the number of visits that you have made to a *walk-in clinic or an urgent care center.* Number of visits: _____

If you made at least one visit, please fill out the table below.

Visit number	Walk-in or urgent care center	Main reason for visit* **If uncomfortable answering, write N/A*
1	❑ Walk-in ❑ Urgent care	
2	❑ Walk-in ❑ Urgent care	
3	❑ Walk-in ❑ Urgent care	
4	❑ Walk-in ❑ Urgent care	
5	❑ Walk-in ❑ Urgent care	
6	❑ Walk-in ❑ Urgent care	
7	❑ Walk-in ❑ Urgent care	
8	❑ Walk-in ❑ Urgent care	
9	❑ Walk-in ❑ Urgent care	
10	❑ Walk-in ❑ Urgent care	
11	❑ Walk-in ❑ Urgent care	

2. During the past 12 months, indicate the number of visits that you made to a *hospital emergency department* for yourself.

Number of visits: _____

[If you visited for someone else (e.g., as a caregiver or as support for a family member or friend) do not include this.]

If you made at least one visit, please fill out the main reason for each visit.

Emergency department visit number	Main reason for emergency department visit* **If uncomfortable answering, write N/A*
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

3. During the past 12 months, indicate the number of times you were *hospitalized*.

Number of hospitalizations: _____

(This includes any admission to the hospital, whether planned or an emergency.)

If you were hospitalized at least once, fill out the main reason for each visit and how many days you were hospitalized.

Hospitalization number	Main reason for hospitalization* **If uncomfortable answering, write N/A*	For how many days were you hospitalized?
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

Note: If you left the hospital and then returned in a short time frame, include these as separate hospitalizations.

***Instructions**: Select the best answer.*

1. I help out in my community (like helping elders, taking care of the environment, or volunteering).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

2. I attend healthy community events (like dinners, pow-wows, and youth program activities).

Never	Once/Twice past 6 months	Every Month	Every Week	Every Day

3. I believe I can be a leader in my community (if given the chance).

Yes No Unsure

4. Even though I may feel a little nervous, I feel confident in my ability to speak in front of other people.

Yes No Unsure

5. I have experienced things I believe are important in life.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

6. I can see possibilities during challenging times.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

NEXT PAGE

***Instructions**: Select the best answer.*

1. In most ways my life is close to my ideal.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

2. The conditions of my life are excellent.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

3. I am satisfied with my life.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

4. So far I have gotten the important things I want in life.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

5. If I could live my life over, I would change almost nothing.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

Instructions: Select the best answer.

1. Would you say that in general your health is:
    a. Excellent
    b. Very good
    c. Good
    d. Fair
    e. Poor

2. Thinking about your physical health, for how many days during the past 30 days was your physical health good? (Answer using numbers. For example, 1 for one day or 5 for five days. Write 0 if zero days).

    a. Number of days: _____

3. Thinking about your mental health (which includes stress, depression, and problems with emotions), for how many days during the past 30 days was your mental health good? (Answer using numbers. For example, 1 for one day, 5 for five days, 0 for 0 days, or 30 for 30 days.)

    a. Number of days _____

4. During the last 30 days, for about how many days did your physical or mental health keep you from doing your usual activities such as self-care, work, or recreation? (Answer using numbers. For example, 1 for one day, 5 for five days, 0 for 0 days, or 30 for 30 days.)
    a. Number of days: _____

NATIVE AMERICAN HEALTH CENTER
Serving the community since 1972
a california health+ center

End of Survey

Thank you for taking part in our "Healthy Native Young Adult" survey.

Would you like to share more? To deepen our understanding of the healing impact of the youth Gathering of Native Americans (GONA), we will hold focus groups in late 2024.

The purpose of these focus groups will be to share stories that cannot be captured in a simple survey. Your wisdom will help us continue to offer important cultural programming for Native youth, including the GONA.

Participation is voluntary and not required. These groups will be held either virtually or in person, depending on where you are located. The focus groups will take about 90 minutes. For your time and effort, we will offer you an honorarium of $50 plus reimbursement for any travel expenses.

Would you be interested in participating in an upcoming focus group?
If you would like to participate in the interviews, please tell an NAHC staff member or contact our research team:

Breanna Wheeler (BreannaW@nativehealth.org) or
Paul Masotti, PhD (PaulM@nativehealth.org)

Collect your gift card!

Please give your completed survey to an NAHC staff member and collect your gift card.

Our research team would like to thank you for completing this survey. Gichi-miigwech, Ahéhee!

Life Changers

	Never	Once/Twice past 6 months	Every Month	Every Week	Every Day
I help out my family (like washing dishes or babysitting).					
I help out in my community (like helping elders, taking care of the environment, volunteering at school or at the local Indian center).					
I am physically active for my health (like walking, jogging, sports, or other physical activities).					
I eat healthy.					
I feel positive about my future.					
I have a good mood.					
I have a positive mind-set.					
I believe I can be a leader in my community (if given the opportunity).					
I feel like I have healthy and positive interactions with my friends.					
I feel like I have healthy and positive interactions with my family.					
I attend healthy community events (like dinners, pow-wows, and youth program activities).					
I talk with my family about healthy practices.					
I talk with my friends about healthy practices.					
I maintain a higher passing grade					
When school is in sessions I attend my classes					

One Fire Associates, LLC

Gathering of Native Americans (GONA) Fidelity Assessment Scale

This GONA fidelity tool (2013) was developed in partnership with three urban Indian health programs through technical support of the National Council of Urban Indian Health and the Native American Center for Excellence. The three programs supporting this tool include the Native American Health Center in Oakland, CA; the Sacramento Native American Health Center in Sacramento, CA; and the Fresno American Indian Health Project in Fresno, CA. In 2017, 2018, 2019, & 2021 the tool was updated with input from a number of GONA trained staff from Urban Indian Health Organizations, in partnership with the lead investigator from One Fire Associates, LLC; and representatives from the California Consortium of Urban Indian Health and the Substance Abuse and Mental Health Services Administration Training and Technical Assistance Center. The intent of this scale is to support fidelity to Core GONA curriculum elements and was developed for supporting evaluation across sites. It is expected that the fidelity elements will be adapted to meet the unique cultural needs and context of diverse communities and should be implemented in partnership with GONA Facilitators and the local youth/community members, as experts on their own cultures and communities. The tool has been identified to be useful as: 1) a GONA planning tool; 2) a Checklist for GONA facilitators; and 3) a research tool to support implementation of GONA elements across site. This tool should not be used to penalize individuals or organizations as there are many ways in which a community may implement GONA well. An effective GONA adapts these fidelity items to meet the unique language, cultural and community context.

Organization Name:
Rater's Name:
Date of Assessment:
Assessment Period:

Mark each of the GONA Elements with a check mark as it relates to your implementation of the GONA curriculum.

Rate each factor as:

Exceeds Intention (You have gone beyond just meeting this GONA Intention; it is achieved with advancements.)
Meets Intention (You are currently doing this.)
Approaching Intention (You are taking steps to achieve this Intention.)
Intention Not Met (No effort is being made yet to reach this Intention.)
Circle "NA" if an element does not apply.

A. Core GONA Elements

	Exceeds Intention	Meets Intention	Approaching Intention	Intention Not Met	Not Applicable	Examples of Adaptation
Honor the Process of GONA: GONA is a process. Flow through the curriculum must happen as a community, which requires ongoing communication (head huddles) and flexibility in the agenda on site in 'real time' to ensure the whole is 'ready' to proceed.						Communities only have 2 days of a GONA and only focus on Belonging, not moving to the other elements in the framework because there is not time to support safe (trauma informed) and healthy engagement of the entire GONA framework.
Please explain your rationale for this rating:						
Commitment to GONA as Ceremony: Participants, including helpers, must commit to GONA as a ceremony, which means they must participate from start to finish. People coming in late have missed belonging with documented disruption in the GONA process.						
Please explain your rationale for this rating:						
Play is therapeutic in GONA: Play achieved through icebreakers and team building is necessary to build belonging in relationships and supports bonding across generations.						
Please explain your rationale for this rating:						
Honor the Land & Elders: We made time to honor & connect to the land, space, and elders in the community.						Local elders introduce youth to a sacred site to share the significance of place for the people
Please explain your rationale for this rating:						

<u>Location in Connecting to Natural Elements supporting Holistic Health:</u> We encouraged access to natural elements (fire, water, air, earth/rock). There were healthy resources/activities for spiritual, mental, emotional, and physical health.						Offering a sunrise ceremony each morning around the fire to make offerings; offering sweat lodge each evening. Some communities have chosen not to use camp facilities because of policy related to burning traditional medicines; others selected sites with farm to table healthier food options.
Please explain your rationale for this rating:						
<u>Spirit/Quiet Table/House/Place/Resources:</u> An area was provided for the youth to meditate and or pray with spiritual resources (medicines and sacred items) that represent the diversity of the community spiritualities and is incorporated into ceremony at GONA.						Some urban communities work with area tribal spiritual leaders educate about medicines and how to use in a good way
Please explain your rationale for this rating:						
<u>Gift Giving Table/Space/Place</u>: An area was provided for the youth to develop gifts to show reciprocity, learning elder teachings about honoring each other by giving and receiving of gifts as a form of ceremony.						
Please explain your rationale for this rating:						
<u>Meeting in a Circle:</u> Clans and large groups meet in a circle to increase participation and interconnectedness among youth as the						

circle increases accountability among participants to one another.						
Please explain your rationale for this rating:						
Prayers: We opened and/ or closed each day with prayers, which may include songs, positive words, etc. that were appropriate for the participating group.						
Please explain your rationale for this rating:						
Mental Health: GONA trained Mental health providers were introduced actively participating throughout the entire event and were a resource for participants.						Spiritual leaders work with mental health providers for culturally based interventions and conflict resolution. Communities implemented "GONAizing Clinical Staff" throughout the year
Please explain your rationale for this rating:						
Curriculum: To the best of your ability you ensured that all youth received the same teachings and lessons throughout the GONA						
Please explain your rationale for this rating:						
Norms: At the beginning of GONA we established norms/guidelines with input from youth; Revisit the norms each day and allow for change, especially after conflict						
Please explain your rationale for this rating:						

Team Building: We incorporated team building exercises into the GONA every day.						Clan Challenges support team building activities that strengthen Clan connection
Please explain your rationale for this rating:						
Cultural Strengths: We identified cultural strengths and shared them with the youth.						
Please explain your rationale for this rating:						
Pictures: With youth approval, we placed pictures of every youth/staff on the wall to write positive affirmations.						Youth can include a drawing of what represents them instead of photo
Please explain your rationale for this rating:						
Youth Clans: We ensured that youth interacted with new peers outside of their normal social circle.						Scavenger Hunts provide a fun way to help youth find one another in their Clans
Please explain your rationale for this rating:						
Elders: The generations of elders were introduced and engage; trained Clan Elders stayed with the Clans throughout the GONA.						

Peacekeepers: We ensured that trained youth Peacekeepers were introduced and engaged as helpers throughout the GONA and to ensure youth-voice at the event.						
Please explain your rationale for this rating:						
Community Helpers: We ensured that Community Helpers (volunteers and staffs) were engaged in planning and were actively engaged in implementation.						
Please explain your rationale for this rating:						
Belmont Process: The Belmont Process was explained and used throughout the GONA.						Mental health providers lead norm development to increase familiarity
Please explain your rationale for this rating:						
Risk Taking: We presented the youth with "risk tokens" and used risk tokens throughout the GONA.						Youth are invited to make a tobacco offering that was to be offered up in prayer in the evening sweat lodge
Please explain your rationale for this rating:						
Daily Debriefing: We held a daily debriefing following norms established using the Belmont Process with all helpers at the event (Peacekeepers, Clan Elders, Mental Health Providers, etc.) that resulted in a shared plan for coordinating and communicating safe, effective implementation as a team.						

Please explain your rationale for this rating:

B. Belonging

	Exceeds Intention	Meets Intention	Approaching Intention	Intention Not Met	Not Applicable	Examples of Adaptation
Definition: We visually represented the definition of belonging with the youth, and had discussion about what it means.						
Please explain your rationale for this rating:						
Creating a Safe Space: We acknowledged that people are coming from different places and experiences and how everyone belongs. GONA community welcomed new youth coming in for the first time.						
Please explain your rationale for this rating:						
Tuckman's Stages of Group Development: Conflict is normalized as an expected opportunity to learn how to resolve and work together as a GONA community. Tuckman's Stages are visible.						
Please explain your rationale for this rating:						

Conflict Resolution Plan and Team: Introduce the trained conflict resolution team that includes spiritual leader, peacekeeper, & mental health. Public conflict is for the whole to resolve in real time at the event. Help participants know how to access conflict resolution support.						
Please explain your rationale for this rating:						
Creation Story: We presented local creation storie(s) and then engaged the youth in a discussion**.**						Community members act out creation stories as different animals bringing laughter and humor; Other communities replace this with other activities when the timing is not the season for storytelling
Please explain your rationale for this rating:						
History: The youth were presented with pre-Colonial history of Native Peoples with the intent to learn about healthy societies from the voices of local people.						Community used the Personal Balance Tool (based on the medicine wheel) to link to the precolonial wellness. Another community made a timeline of the contributions of local tribal people to society
Please explain your rationale for this rating:						
Connection of Belonging: The youth were presented with the idea of their connection with their ancestors and generations to come with the intent to help youth see their importance in life.						Some communities use a rite of passage ceremony to support youth in connection to ancestors/generations after; Other communities may take youth to a sacred place to meet with spiritual leaders to educate them about the land
Please explain your rationale for this rating:						

Present/Clan (Bands, Villages, Society, etc.) Flag/Banner/Logo: We had each team create a symbol, name, and song/chant with the intent of working together as a team to accomplish.						
Please explain your rationale for this rating:						
Gift Giving: We gave youth the opportunity to work on gifts during the day,. We provided space, time, resources and support to do so. Gift giving/generosity is a topic each day as an expression of our love and spirituality.						A community ask participants to bring gifts they have made to the event to share when limited time/resources; others have used skilled community members to help provide support in gift making in throughout the event and using craft kits; others have tied gifts to the spirit table
Please explain your rationale for this rating:						
Trauma Informed Transition to Mastery: There is a shared sense that the entire GONA community has belonging & togetherness to move safely into mastery with a sense of trust and support.						During a Day 1 GONA debriefing meeting the team determined that Belonging had not yet been achieved for some youth. In this decision they considered Tuckman's Stages of Team development and the responses/participation in the Belmont Process, among other signs of readiness (i.e., Clans are well formed, youth are taking healthy risks). The Team decided to include another session for Belonging on the morning of Day 2, which strengthened bonds for moving into Mastery.
Please explain your rationale for this rating:						

C. Mastery

	Exceeds Intention	Meets Intention	Approaching Intention	Intention Not Met	Not Applicable	Examples of Adaptation
Definition: We visually represented the definition of mastery with the youth, and had discussion about what it means.						
Please explain your rationale for this rating:						
What broke apart the Indian World Session (or equivalent): We presented the activity that helps youth learn about the historical factors that impacted health and wellbeing of communities.						Using tree drawing as a way to represent this session, with the roots being the traumatic events as historical trauma, leaves being the resiliency. Incorporating the *Personal Balance Tool* to help teach the concept of holistic wellbeing.
Please explain your rationale for this rating:						
Community Traumas: We reviewed the traumas that have occurred within the local community even up until today (historical and contemporary).						5 areas in the curriculum: BS, IGT, Self-Destructive: have 5 stations with 5 different teachers and youth get to hear in Clans about each of these experiences. Using Clay that can be later reshaped into the solution.
Please explain your rationale for this rating:						
Historical, Intergenerational Trauma/Colonization: We described and defined these topics.						A basket weighted with rocks representing "traumas" over generations in a family helped youth "feel"
Please explain your rationale for this rating:						

Lateral Trauma/Violence/Oppression: We described and defined lateral trauma and how it might occur in the community						Urban communities with individuals from many tribes explore the concepts of "pan-indianism" as an example of Lateral Trauma
Please explain your rationale for this rating:						
What will heal our world Session (or equivalent): We presented an activity with discussion that considers strategies for healing and show local examples of "Hero" leaders and advocacy work.						
Please explain your rationale for this rating:						
Affirmation wall: We ensured that all youth have positive affirmations on their wall photo.						Using Google Doc to share photos with boxes to include affirmations for virtual GONA, built affirmations into the agenda to allow time
Please explain your rationale for this rating:						
Letting go of historical trauma: We supported a discussion with youth for healing from historical trauma and we implemented some form of ceremony to support letting go (trauma informed closure) of historical trauma.						Wiping of the tears; Sweats; Offerings to the fire; Sharing with grandfather rock
Please explain your rationale for this rating:						
Trauma Informed Transition to Interdependence: There was a shared sense that the entire GONA community had closure						During a daily debriefing, the team determined closure had not yet occurred for many youth. This decision was supported by Tuckman's

in Mastery and were strengthened to work together as a group with readiness to move safely into Interdependence as a team. skits, participation in Clan activities).						Stages of Team development, responses/participation in the Belmont Process, and other signs of readiness (i.e., body language, ongoing youth conflict, etc.). The Team implemented a letting go ceremony followed by conflict resolution opportunities to solidify a GONA community working together.
Please explain your rationale for this rating:						

D. Interdependence

	Exceeds Intention	Meets Intention	Approaching Intention	Intention Not Met	Not Applicable	Examples of Adaptation
Definition: We visually represented the definition of interdependence with the youth, and had discussion about what it means.						
Please explain your rationale for this rating:						
Healing Model: We presented the medicine wheel (or local cultural equivalence) and how it relates to community wellness and balance.						Healing models have included Roundhouse, Corn, Canoe, Basket, Life Spiral, and others
Please explain your rationale for this rating:						
Interconnection Activities: We had activities for the youth focused on interconnectedness						Youth act out skits solving real local problems together.
Please explain your rationale for this rating:						

Problem Solving/Planning: We had the youth come together to discuss solutions to community problems and planning for future.						
Please explain your rationale for this rating:						
Link to Generosity: We linked lessons of Interdependence to Generosity so youth learn about their role in community healing.						
Please explain your rationale for this rating:						

E. Generosity

	Exceeds Intention	Meets Intention	Approaching Intention	Intention Not Met	Not Applicable	Examples of Adaptation
Definition: We visually represented the definition of generosity with the youth and had discussion about what it means.						
Please explain your rationale for this rating:						
Plan for beyond GONA: We outlined a tangible plan *with* the youth to follow after GONA and made connections with youth for follow-up care. Included plans for follow up.						Youth are entered into a raffle to sign up at the GONA on Instagram and other social media and help plan a 3-month 'GONA family reunion' event, including setting and saving the date.
Please explain your rationale for this rating:						

Gift Giving: We held a gift giving ceremony where the youth were able to present their gifts and affirmations to one another, honoring gifts given and received during GONA, not only from the physical, but also from the spiritual, mental, and emotional.						
Please explain your rationale for this rating:						
Honoring Ceremony: We held an honoring ceremony to recognize the youth that took healthy risks.						
Please explain your rationale for this rating:						
Commitment Ceremony: We held a commitment ceremony so that all youth and adults can speak out loud their commitments for the next year.						
Please explain your rationale for this rating:						
Honoring GONA Family: We honored the completion of ceremony together and how GONA bonds us like family.						Aged up youth share their experiences about GONA in making strong community connections and link youth to a GONA Family Facebook page and Digital Yearbook. Time was included in the agenda to make personal connections, sharing contact information and creating mechanisms to link into the GONA family network through Social Media platforms.
Please explain your rationale for this rating:						

<u>Follow-up</u>: After the event we held a debriefing to allow for reflections that will support growth and quality improvement. We developed a plan for following up with youth, especially for those identified who might be at risk, and implementation of follow up was documented.						Two youth were identified at risk for follow up, one had suicidal thoughts about returning to foster care and the other had experienced a trauma response at the GONA. The conflict resolution team mobilized on Day 4 to schedule same day family sessions for these youth when they returned to the local clinic. Both had positive outcomes, which include ongoing services to the youth and families involved.
Please explain your rationale for this rating:						

One Fire Associates, LLC

Gathering Of Native Americans

Clinical Crosswalk to Understand Therapeutic Value

In 2013, a measurement tool to track fidelity to the GONA curriculum was developed in partnership with three urban Indian health programs through technical support of the National Council of Urban Indian Health and the Native American Center for Excellence. The three programs supporting this tool include the Native American Health Center in Oakland, CA; the Sacramento Native American Health Center in Sacramento, CA; and the Fresno American Indian Health Project in Fresno, CA. In 2018 the GONA Fidelity Tool was updated with input from a number of GONA trained staff from Urban Indian Health Organizations across the state of California, in partnership with the lead investigator from One Fire Associates, LLC; and representatives from the California Consortium of Urban Indian Health and the Substance Abuse and Mental Health Services Administration Training and Technical Assistance Center. The intent of this scale is to support fidelity to the GONA curriculum and was developed as a tool for supporting evaluation across sites.

As a result of ongoing data collection and evaluation, it became evident that there was significant therapeutic value of the GONA intervention with youth participants. It also was identified across GONA participating sites that there was a need to educate others about this therapeutic value in western terms that could be understood by clinicians and decision makers. The lead investigator for the GONA Collaborative, a trained clinical psychologist that has evaluated the fidelity and outcomes of GONA across both tribal and urban multi-tribal communities, drafted a first crosswalk between the GONA fidelity tool and therapeutic value by developing a description and key words for each item on the fidelity tool. This crosswalk was then shared in draft form to clinicians participating in GONAs, GONA facilitators, and clinicians that are also trained as GONA facilitators. This feedback and input was incorporated into the final document. The table below summarizes the therapeutic value of implementing a GONA. It is expected that this tool will be helpful for engaging clinical staff in the GONA Event and identifying funding mechanisms for third party reimbursements of effective culturally based interventions for at-risk tribal youth.

CORE GONA ELEMENTS

Fidelity Tool	Tool Description	Clinical Cross Walk	Key Phrases
Prayers	We opened and/ or closed each day with prayers that were appropriate for the participating group	Spirituality has been consistently linked to positive health and mental health outcomes.	Integrated Care; cultural competence
Mental Health	Mental health providers were involved in the GONA as a resource for participants	Mental health providers at the event ensure that individuals that may be triggered by a trauma response have timely access to on-site mental health care.	Access, trauma-informed.
Curriculum	To the best of your ability you ensured that all youth received the same teachings and lessons throughout the GONA	Ensures that each youth receives the same quality dosage of GONA	Fidelity
Rules	At the beginning of the GONA we established rules/norms with input from the youth	Creates expectations and a safe place for talking about problems.	Trust/Rapport building; setting expectations
Team Building	We incorporated team building exercises into the GONA every day	Builds rapport between youth and helping adults. Also builds stronger connection with youth “peers” as supporters in the community.	Trust/Rapport building; building peer support network
Cultural Strengths	We identified cultural strengths of, and shared them with the youth	Identifying cultural strengths helps youth consider their own strengths for health and healing.	Strength-based approach; self-esteem building
Pictures	We placed pictures of every youth/staff on the wall for affirmations	Creates an opportunity for youth to receive positive affirmation from others as some youth attending the event may not receive positive comments from others in their daily life.	Positive reinforcement; self-esteem building
Honor the Land	We made time to honor land, space, and people	Increases youth sense of connection to the place and people.	Social support
Spirit/Quiet Table/House/Place	An area was provided for the youth to meditate and or pray.	Spirituality has been consistently linked to positive health and mental health outcomes.	Integrated care; cultural competence; aromatherapy

Youth Clans	We ensured that youth interacted with new peers outside of their normal social circle	Supports youth in breaking out of family cycles of communicating by observing other youth communication styles and interacting with youth that could be models, mentors, peer helpers, etc.	Social skills building; communication skills; links to peer-mentors
Elders	We ensured that clan elders stayed with the clans throughout the GONA	Elders serve as natural helpers in the community for youth. Having elders present and interacting with youth increases familiarity with these natural helpers for the future.	Mentorship
Belmost Process	The Belmont Process was explained and used throughout the GONA.	The Belmont process teaches youth to be in touch with and identify their own experiences, including their feelings.	Emotional Identification; Mindfulness
Small Clan Work	Youth were able to work in small clans throughout each day to help them process what they are learning. Clans provided "teach-backs" to the larger group.	Clan breakouts support youth in processing what they learned in smaller groups with a trained adult and youth Peacekeeper. The "teach-back" to the larger groups helps the administrators learn about what youth needs and solutions are to support strategic planning and build leadership and communication skills of youth.	Process groups; strategic planning; workforce development; public speaking skills
Risk Taking	We present the youth with "risk tokens" and used risk tokens throughout the GONA.	Risk Tokens serve as a behavioral reinforcement strategy to increase youth participation in the GONA event.	Behavioral reinforcements

BELONGING

Fidelity Tool	**Tool Description**	**Clinical Cross Walk**	**Key Phrases**
Definition	We presented the definition of belonging with the youth, discussed the definition with the youth, and wrote the definition on the wall	The definition of belonging creates a common language about the belonging of youth at the event and begins to build a sense of purpose in life.	Community Connections
Creation Story	We presented local creation stories and then engaged the youth in a discussion	The creations story supports youth building a stronger tribal identity, a known protective factor for Native youth in the research literature.	Self-esteem building
History	The youth were presented with pre-Colonial history of Native Peoples with the intent to learn about healthy societies	The pre-colonial history of Native peoples helps youth learn about pre-colonial healthy lifestyles to raise hope that healthy living can be obtained again, despite the current challenges.	Building sense of pride

Connection of Belonging	The youth were presented with the idea of their connection with their ancestors and generations to come with the intent to help youth see their importance in life	Helping youth see their connection to the ancestors and the generations to come increases their sense of purpose in the world to be the connector for their families and communities. It also helps youth see that they are not alone and are connected to something much bigger in building a stronger spiritual framework for daily living.	Community connections; building sense of pride; self-esteem building
Present/Clan Shield	We had each team create a clan shield, name, and song/chant with the intent of working together as a team to accomplish the activity	This activity supports youth in building social skills in connecting with others outside of their normal kin/friendships. It also serves to increase interactions with caring adults and other youth that can serve as peer-supports in the future.	Social skills building; team building; communication skills
Gift Giving	We gave the youth the opportunity to work on the generosity gifts during the day, and provided a space to do so	The gift giving (and generosity in general) support youth in giving to others, an activity that is associated with increased joy and happiness in the research literature.	Building sense of purpose

MASTERY

Fidelity Tool	**Tool Description**	**Clinical Cross Walk**	**Key Phrases**
Definitions	We presented the definition of mastery with the youth, discussed the definition with the youth, and wrote the definition on the wall	The definition of mastery helps youth learn about the special gifts they must learn to master in the world.	Building sense of purpose; Strength-based
What broke apart the Indian World Session (or equivalent)	We presented the activity that helps youth learn about the historical factors that impacted health and wellbeing of communities	This activity helps educate youth about the impact of historical traumas on the health of the local community and youth have time to process what they learned in Clans.	Psychoeducation; social justice; cultural competence; exposure intervention; process group
Community Traumas	We reviewed the traumas that have occurred within the local community	This activity identifies the community traumas that have impacted the local tribes/peoples.	Trauma informed psychoeducation; exposure intervention
Historical Trauma/Colonization	We described and defined these topics	This activity helps youth learn about historical trauma that occurred through the colonization process.	Psychoeducation; cultural competence; exposure intervention;

Lateral Trauma	We described and defined lateral trauma and how it might occur in the community	This activity helps youth learn about negative patterns of communicating or interacting with others in their family or community, as one of the side effects of historical trauma.	Psychoeducation; Identifying patterns of communication
What will heal our world Session (or equivalent)	We presented an activity with discussion that considers strategies for healing	This session supports youth in learning more about healing strategies for themselves, their family and community members.	Psychoeducation; solution focused; process group
Affirmation wall	We ensured that all youth have positive affirmations on their wall photo	Youth receive positive affirmation from others at the event.	Positive reinforcement; Self-Esteem building
Letting go of historical trauma	We supported a discussion with youth about healing from historical trauma and we implemented some form of ceremony to support letting go of historical trauma (eg: giving to rocks in sweat)	Supports youth in going through an activity that can create an emotional release from pain they may be carrying. This is also integrated with spirituality.	Integrated care; cultural competence; process group

INTERDEPENDENCE

Fidelity Tool	**Tool Description**	**Clinical Cross Walk**	**Key Phrases**
Definition	We presented the definition of interdependence with the youth, discussed the definition with the youth, and wrote the definition on the wall	The definition of interdependence supports youth in learning about their connection to others.	Community connection
Healing Model	We presented the medicine wheel (or local cultural equivalence) and how it relates to community wellness and balance	This session helps youth learn about cultural teachings for healing lifestyles. Communities that use the Personal Balance Tool support youth in developing their own health goals.	Psychoeducation; Holistic; cultural competence; integrated care; Self-care plans
Interconnection Activities	We had activities for the youth focused on interconnectedness (i.e., skits, etc.)	This session supports youth in role playing healthy behaviors as selected by the Clan. These may include things like, how to resist peer pressure to use alcohol; how to help a friend that may be suicidal; how to	Communication skills; team building skills; self-expression through theatre; role-playing healthy behaviors

		respond to sexual abuse and/or harassment; and many other realistic youth scenarios.	
Problem Solving	We had the youth come together to discuss solutions to community problems	Youth are able to consider solutions to problems and process those solutions with peers.	Problem solving skills; solution-focused; process group
Link to Generosity	We were able to link the lessons of interdependence and community wellness to the theme of Generosity with the intent of youth learning about their role in community healing	Increases the sense of belonging and purpose for the youth to master their special gifts so they may give back to a healthier self, family and world.	Community connections; sense of purpose; self-esteem building

GENEROSITY

Fidelity Tool	**Tool Description**	**Clinical Cross Walk**	**Key Phrases**
Definition	We presented the definition of generosity with the youth, discussed the definition with the youth, and wrote the definition on the wall	The definition of generosity helps youth consider how they may give back to others, an important behavior linked to happiness and joy.	Health Promotion; Hope for the future; sense of purpose
Plan for beyond GONA	We outlined a tangible plan for the youth to follow after GONA and made connections with youth for follow-up care	The plan for youth after GONA makes sure that they have resources to connect with for the rest of the year. This may also include supporting crisis intervention and warm referrals for youth that were identified at-risk at the event.	Self-Care plans; Crisis Plans and Referrals; Links to Health Promotion programming
Gift Giving	We held a gift giving ceremony where the youth were able to present their gifts and affirmations to one another	The ability to give something that you made to someone else at the event is the behavioral practice of generosity and is linked to positive mental health.	Integrated care; cultural competence; sense of purpose
Honoring Ceremony	We held an honoring ceremony to recognize the youth that took healthy risks	This activity honors all of the youth at the event for taking a healthy risk. This is usually done by reading comments from their affirmation photo that had been hanging on the wall all week and all of the attendees are present to honor each other for their participation at GONA.	Positive reinforcement; self-esteem building;
Commitment Ceremony	We held a commitment ceremony so that all youth and adults can	This activity supports everyone at the event, including staff and volunteers, in making commitments for a healthier self, family and/or community. The behavioral act of sharing a goal in public increases the	Goal setting; peer support; mentorship support

	speak out loud their commitments for the next year	chances the person will achieve that goal. Hearing the commitments of others can also give more confidence to the individual that they are not alone and others are committing to be there to help the youth.	

ELSEVIER

Journal of Adolescent Health 60 (2017) S1–S20

JOURNAL OF ADOLESCENT HEALTH

SAHM – 2017 Annual Meeting: Abstracts of Platform Research Presentations (1-35)

PLATFORM RESEARCH PRESENTATIONS: CULTIVATING CONNECTIONS

1.

THE GATHERING OF NATIVE AMERICANS INTERVENTION: CULTIVATING HOPE AND MEANINGFUL RELATIONSHIPS FOR URBAN AMERICAN INDIAN ADOLESCENTS IN CALIFORNIA

Carolyn Kraus, BA [1], Jami Bartgis, PhD [2], Maureen Lahiff, PhD [3], Colette L. Auerswald, MD [1].

[1]UCSF - University of California Berkeley Joint Medical Program; [2]University of Oklahoma Health Sciences Center, College of Medicine; [3]UC Berkeley.

Purpose: Native American adolescents in the United States suffer from significant health disparities in depression, substance use and suicide. Research regarding culturally competent, community based, youth positive interventions that promote youth connection is needed to inform a response. The Gathering of Native Americans (GONA) is a strengths-based intervention intended to promote adolescent wellbeing and resiliency. Published research regarding its effects is extremely limited. Our evaluation of the GONA intervention in two California sites in 2012-2014 employs mixed-methods in order to answer the primary research question: Among adolescent Native Americans, what is the relationship between participation in GONA and resilience?

Methods: Surveys were collected from 241 11-17 y.o. participants (> 95% response rate) in the 2012-14 Oakland and Fresno GONAs. The surveys for this CBPR project were developed through collaboration with three Native American advisory councils who selected strengths-based (vs. risk-based) outcomes. Surveys were administered to participants pre- and post the 4-day gathering. Hope (modified Herth Hope Index or mHHI; range: 4-48), self-perceived connection to community, and self-perceived connection to family (each 4-point Likert scales) were employed to measure resilience. In addition, open-ended answers to two items were collected from youth post-intervention ("In what ways has GONA changed your point of view?" and "What has changed in your life or behaviors because of GONA?") We investigated the change in hope, family connection, and community connection within each of three cohorts using paired t-tests. Qualitative data for the open-ended questions were coded by three coders and analyzed thematically.

Results: The mHHI increased significantly for all three cohorts (by 1.1, 1.4, and 2.5 in 2012, 2013, and 2015, respectively; $p<.05$ for all). Likewise, family connection increased in all three cohorts (by 0.2 in all years; $p< 0.05$ in 2012 and 2013, $p=0.059$ in 2014). Community connection increased very modestly each year (by 0.08, 0.039, and 0.015 in 2012, 2013 and 2014, respectively; $p<0.05$ in 2012 and 2013 and $p=0.057$ for 2014). Predominant themes arising from the qualitative data analysis included: increased sense of interdependence; increased interest in connecting with community ("I've become better aware of myself and how I fit into the community"); finding individual purpose ("It's a beautiful way to help us realize our priorities and ideals"); and increase in happiness "It has helped me open up and make new friends, and it's made me feel happier and more at peace."

Conclusions: Our findings suggest that the GONA intervention in Oakland and Fresno may be correlated with an increase in adolescent resilience as demonstrated by the intervention's effects on hope, family connection, and connection to community (subdomains of resilience). Larger studies with long-term follow-up are needed to assess whether GONA may serve as an effective intervention for addressing disparities in health and wellness through the promotion of connection and resilience in this highly vulnerable population of youth.

Sources of Support: Innovations for Youth, UC Berkeley School of Public Health; Schoeneman Award, UC Berkeley-UCSF Joint Medical Program; Joseph A. Meyers Center for Research on Native American Issues, UC Berkeley.

2.

IDENTIFYING SUPPORT SYSTEMS OF YOUNG WOMEN IN FOSTER CARE TO REDUCE RISKY BEHAVIOR: A MIXED METHODS SOCIAL NETWORK STUDY

Heather L. McCauley, DSc [1], Katherine Bogen, BA [2], Elizabeth Miller, MD, PhD, FSAHM [3].

[1]Michigan State University; [2]Butler Hospital; [3]Children's Hospital of Pittsburgh of UPMC.

Purpose: Adolescents in the foster care system are more likely than their peers to use alcohol and other drugs and engage in high risk sexual behavior, such as unprotected intercourse. However, studies among foster youth suggest that positive peer influences, trusting relationships with adults, positive expectations about their future, and increased self-efficacy are protective factors that reduce their risk for poor health. The purpose of this study was to understand the context and qualities of foster youths' social networks to inform interventions aimed at bolstering social support to mitigate risk among this vulnerable population.

Methods: We conducted mixed methods social network interviews (n=22) with adolescent and young adult women ages 16-24 recruited from youth-serving agencies in the Allegheny County, Pennsylvania foster care system. Participants completed a computer-based survey via EgoNet software, identifying 25 alters (e.g. people) in their social networks and the connections between each alter. They further indicated whether they used drugs or alcohol with each alter, how each person made them feel, and the direction of support provided by or for each alter. Using a spring-embedded algorithm, network maps were generated, yielding information including network density (mean=0.32), the degree of centralization (mean=64%) and number of inter-alter connections (mean=95). We then conducted face-to-face, semi-structured qualitative interviews with the network maps as a

TO:	Paul Masotti, PhD
FROM:	Elizabeth Waiters, PhD Office of Research Integrity and Compliance
DATE:	September 15, 2022
PROJECT TITLE:	CRDP: Gathering of Native Americans Cross-site Evaluation
IRBNET ID:	1080551-30
PROJECT CODE #:	
ACTION:	APPROVED
APPROVAL DATE:	September 15, 2022
EXPIRATION DATE:	September 15, 2023
SUBMISSION TYPE:	Continuation Report/Progress Report/Response/Follow-Up
REVIEW TYPE:	Expedited Review

Thank you for your Response/Follow-Up submission for this project. Pursuant to 45 CFR 46, Pacific Institute's PIRE IRB #1 has APPROVED your submission. This project has been determined to be a MINIMAL RISK project. The IRB has determined that this project requires continuing review by this committee on an annual basis. This IRB approval expires on September 15, 2023.

This approval is based on an appropriate risk/benefit ratio and a project design that minimizes the risks to research participants. All research must be conducted in accordance with this approved submission. Please note that any revision to approved protocols or materials must be approved by this IRB prior to implementation.

Unless the IRB has granted a Waiver of Informed Consent, Federal regulations require that investigators obtain the informed consent of subjects (or a legally authorized representative) in order to enroll them in the research. Please remember that informed consent is a process that begins with a description of the project and includes risks, benefits, and alternatives (if appropriate). Informed consent requires that participants understand their role in the research at the beginning of the project and throughout its duration.

In addition, unless the IRB has granted a Waiver of Documentation of Informed Consent, Federal regulations require investigators to obtain a signed consent form from each subject, and the person signing must be given a copy of the consent document.

All unanticipated problems involving risks to subjects or others must be reported promptly to PIRE's Office of Research Integrity and Compliance. All non-compliance issues or complaints regarding this project must also be reported promptly to this office.

When the project ends, you are required to submit a Closure/Final Report to the IRB. Please note that all research records must be retained for a minimum of three years after the completion of the project. The funder or other entities may require longer retention.

If you have any questions, please contact Elizabeth Waiters at 301-755-2757 or IRB@pire.org. Please include your project title and IRBNet ID number in all correspondence with this IRB and PIRE's Office of Research Integrity and Compliance.

NATIVE AMERICAN HEALTH CENTER
Serving the community since 1972

CRDP
California Reducing Disparities Project

2023 Youth Gathering of Native Americans Evaluation Report

Prepared by:

Breanna Wheeler, Research and Evaluation Assistant

Hannah Mack, MPH, Evaluator

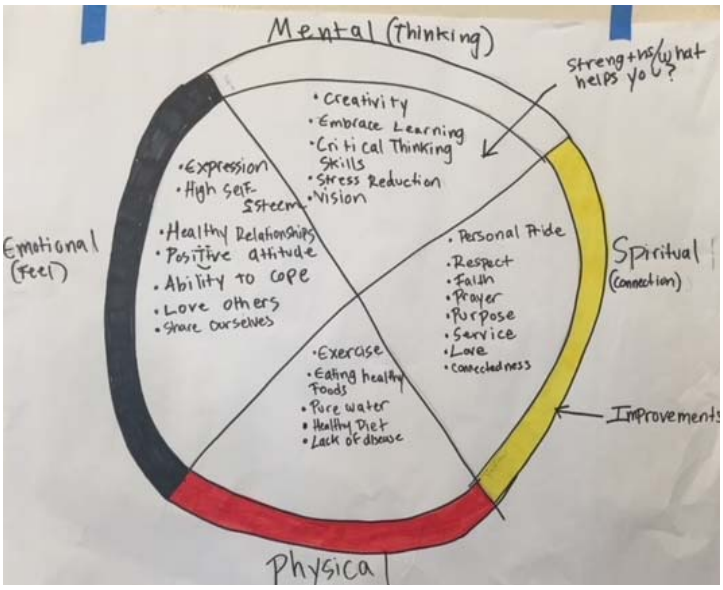
Dr. Paul Masotti, Director of Research and Evaluation

Revised October 23, 2025

About the Gathering of Native Americans

The Gathering of Native Americans, or GONA, was developed in 1992 by Native American social workers, healers, policy scholars and practitioners of alcohol and drug prevention in collaboration with the Substance Abuse and Mental Health Services Administration's (SAMHSA) Tribal Technical Assistance Center.

GONA is a multi-day community planning and healing event for American Indian, Alaska Native, and Native Hawaiian youth, adults, and elders. The curriculum addresses issues brought on by colonization and historical trauma including substance abuse, systemic racism and discrimination, and loss of culture and tradition, while uplifting resiliency, intergenerational healing, and cultural wisdom. GONA usually takes place over a four-day period, following the four themes of Belonging, Mastery, Interdependence, and Generosity.



1. A poster, created by youth participants at a previous NAHC GONA, depicting the four GONA themes corresponding to the four sacred directions.

Native American Health Center (NAHC) has been offering a youth-specific GONA almost annually since the 1990s. NAHC was one of the first organizations to transform the youth GONA into an overnight experience, creating a camp-like environment where youth and trusted adults could build relationships and explore the four GONA themes in a space outside of their typical environment. NAHC GONAs are typically four days in length, with one day for each of the themes, and often take place at the NatureBridge Conference Center in the Marin Headlands.

NAHC's 2023 Youth GONA

2. NAHC staff and youth at GONA in July 2023.

NAHC's 2023 Youth Gathering of Native Americans (GONA) took place from July 31st to August 3rd, 2023 at NatureBridge in the Marin Headlands.

We hosted 13 youth between the ages of 13-17 from Oakland and San Francisco for this year's 4-day GONA. This was the first time we were able to host youth for an in-person GONA since 2019, due to the COVID-19 pandemic. Our staff overcame obstacles related to staffing turnover, changes in funding sources, and recruitment of youth following the

pandemic to host a smaller, more intimate GONA. Recognizing these challenges, we sought to keep the topics light and build camaraderie and connection between our young people and staff.

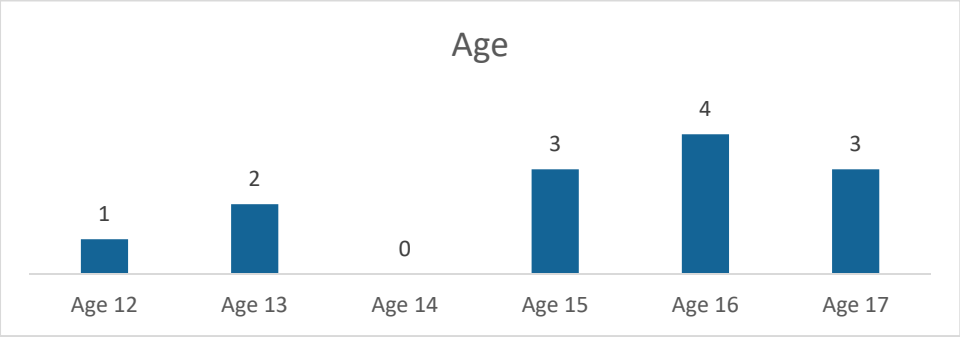
Evaluation Activities

To capture the depth of the GONA experience, there were several evaluation activities conducted at this year's GONA, detailed in the table below. We collected parent/guardian consent for youth to participate in evaluation activities virtually during program registration and youth verbal assent was collected prior to survey administration. The pre-GONA, post-GONA, and six-month follow-up evaluations were all incentivized with an offer of a $20 gift card each.

Type of Evaluation	**Implementation**	**Measure(s)**
Pre-GONA evaluation	Upon arrival at the GONA site	Modified Herth Hope Index Cultural Connectedness Scale-California (short 10-item version) Modified Sobriety Tool Home and community engagement questions
Post-GONA evaluation	Immediately after final day GONA activities conclude	Cultural Connectedness Scale-California (short 10-item version) Modified Herth Hope Index GONA content and quality feedback
End-of-day evaluations	End of each day during GONA	Highlights, challenges, and lessons from the day's activities
Six-month follow-up	Six months after GONA, virtual follow-up	Modified Herth Hope Index Cultural Connectedness Scale-California (short 10-item version) Modified Sobriety Tool Home and community engagement questions Reflection questions on GONA themes

Youth Demographics

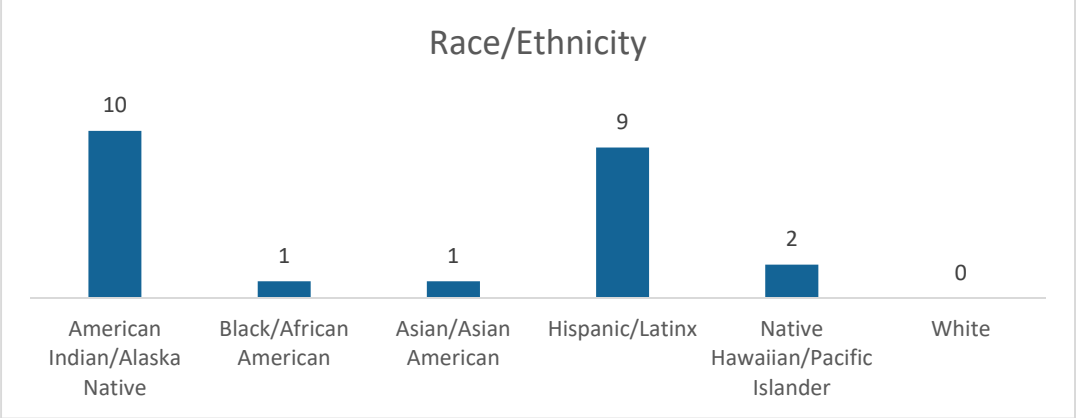
There were 13 GONA attendees, all between the ages of 12-17. Most participants were older than 14.



N=13.

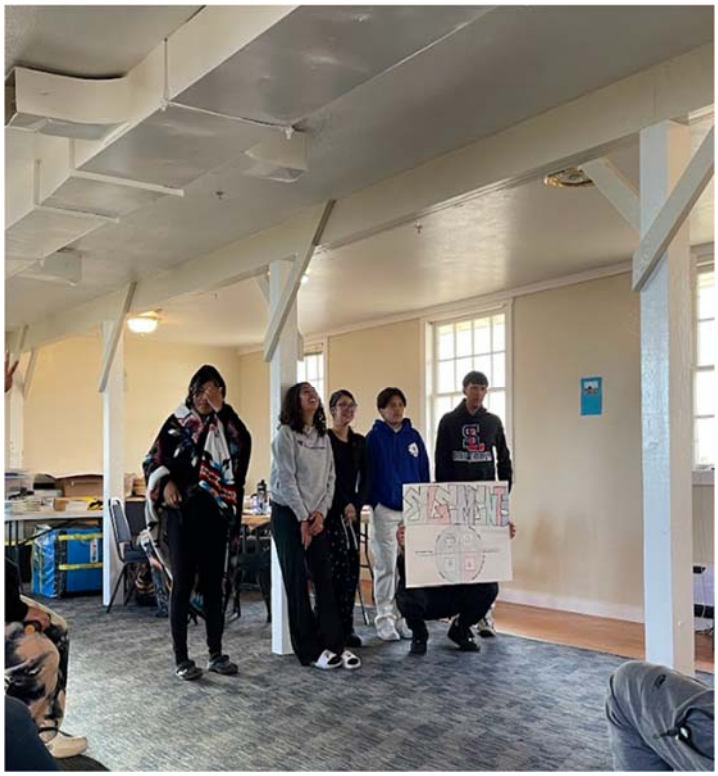
Most youth participants (n=10) self-identified as American Indian/Alaska Native (AI/AN), alone or in combination with other races/ethnicities. Many (n=9) also identified as Hispanic/Latinx.

Among those who identified as AI/AN, there were 7 different tribes represented, including Morongo, Muscogee/Creek, Robinson Rancheria, Pomo, Wailaki, and Klamath. 2 participants wrote "do not know" when asked their tribal affiliation.



N=13. Note: Attendees were asked to identify all races/ethnicities, so the total number here is higher than the actual N.

Participant Outcomes



3. Youth GONA participants presenting their clan shields.

To measure outcomes from the youth GONA program, we invited participants to complete a series of short evaluation surveys immediately before GONA, on the last day of GONA, and six months later as a virtual follow-up. For both the pre- and post-GONA evaluations, all 13 attendees participated. Recruitment was more challenging for the virtual six months follow-up, and only 8 attendees participated.

We utilize a combination of the Cultural Connectedness Scale-California (CCS-CA), the Modified Herth Hope Index (mHHI), a modified strengths-based sobriety tool, and home and community engagement questions. We also asked the youth to share highlights and challenges from GONA. For their time and effort, participants were offered three $20 virtual gift cards and raffle items.

Across the board, we observed increases across all measures of well-being, cultural connectedness, home and community engagement, and sobriety across pre-GONA, post-GONA, and at six months follow-up.

Measures

Cultural Connectedness Scale-California Short [CCS-CA Short]

The CCS-CA Short derived from the CCS-CA which is a 29-item validated instrument that measures Native American/Indigenous culture/cultural connectedness on three sub-scales: i) Identity, ii) Spirituality, and iii) Traditions. The CCS-CA was modified to be more appropriate for the multi-tribal community in the San Francisco Bay area. It was adapted from the original CCS developed and validated. in Canada by Dr. Angela Snowshoe. Our CCS-CA short is based upon the same validated 10 item CCS-short instrument developed by Dr. Snowshoe but using the CCS-CA questions/format.

Studies in Canada (N = 319, N = 280) and California (N = 344, N = 361) using the CCS (long and short) provide evidence that Native American culture is a social-determinant of health. Increased CCS scores (connection/culture) were positively associated with better mental health and well-being: i) Satisfaction with Life; ii) Sense of Self in Present; ii) Sense of Self in Future; iii) Self-efficacy; iv) Hope; and v) Good Physical Health Days. Whereas, decreased CCS scores were associated with increased risk for depression and substance use disorder. (King et al., 2019; Masotti et al., 2020; Masotti et al., 2023; Snowshoe et al., 2015; Snowshoe et al., 2017)

Changes in Overall Cultural Connectedness

This was our first time using the CCS-CA-Short for our GONA evaluation activities; we typically administer the 29-item long version of the CCS-CA. This change was made to shorten the overall length of evaluation surveys for participating youth.

At baseline, the average total cultural connectedness score, summed across 13 youth participants, was 36.92. This increased to 38.46 immediately after GONA, and 41 at six months follow-up. This reflects a 4.08-point increase from baseline.

Pre-GONA	Immediately post-GONA	Six month follow-up	Difference from before GONA
36.92	38.46	41	+ 4.08

Changes in Cultural Connectedness, by Sub-scale

The CCS-CA contains three sub-scales: Spirituality (ex.: *"I believe things like animals, rocks (and all nature) have a spirit."*), Tradition (ex.: "*I use ceremonial/traditional medicines for guidance or prayer or other reasons"*), and Identity (ex.: "*I have a strong sense of belonging to my Native American/Indigenous family, community, Tribe, or Nation").*

Spirituality and Tradition each contain three questions, and Identity contains four. At baseline, the total score by domain was 10.54 for Spirituality, 10.85 for Tradition, and 15.54 for Identity. We saw increases in scores across all three domains, with a 0.46-point increase in Spirituality, a 1.46 increase in Identity, and a 2.15 increase in Tradition.

Domain	Pre-GONA	Immediately post-GONA	Six month follow-up	Difference from before GONA
Spirituality	10.54	12.31	11	+0.46
Tradition	10.85	10.89	13	+2.15
Identity	15.54	15.56	17	+1.46

Modified Herth Hope Index [mHHI]

We (with permission) modified the Herth Hope Index by including a 'Nether Agree or Disagree' response to the standard 4 responses (i.e., Strongly Disagree, Disagree, Agree, Strongly Agree). The mHHI is a 12-item survey that measures feelings of hope across three dimensions: temporality and future (ex.: "*I have short and/or long-range goals"*), interconnectedness (ex.: "*I am able to give and receive caring/love"*), and sense of optimism ("ex.: *I can see possibilities during difficult times"*). The mHHI, has good psychometric properties and has been validated in multiple populations. Hope serves as a proxy measure for mental health and well-being. Hope is known to positively influence the onset, duration, prognosis, and recovery from mental and physical illnesses.

At baseline, total average mHHI scores for all participants totaled to 48.08, increasing to 49.77 immediately following GONA, and increasing overall to 50.63 at follow-up, reflecting a 2.55-point increase from baseline.

Pre-GONA	Immediately post-GONA	Six-month follow-up	Difference from before GONA
48.08	49.77	50.63	+ 2.55

Modified Sobriety Tool

The Modified Sobriety Tool is a strengths-based measure of substance use that was developed by One Fire Associates in collaboration with the Lower Brule tribe. It is just one statement: *I am sober. I do not use alcohol and drugs.*

There are five options for response to this statement:

- Yes, I have never used alcohol or drugs.
- Yes, I have not used any alcohol or drugs for 6 months or more.
- Yes, I have not used any alcohol or drugs for 3-6 months.
- Yes, I have not used any alcohol or drugs for 1-3 months.
- No, I have used drugs or alcohol in the past month (30 days).

We found that participants were often confused by the double negatives in the question and would select multiple "yes" responses, which made data entry and analysis difficult.

Most of the youth reported remaining sober across both time periods, and a few abstained for longer periods of time between GONA and during the six-month follow-up (ex.: at baseline, a participant reported using alcohol or drugs in the past 30 days, but reported not using for 3-6 months during the follow-up).

Pre-GONA	Six-months follow-up	Difference from before GONA
4.23	4.375	+ 0.145

Home and Community Engagement

The Home and Community Engagement questions derive from the 'Life Changers Instrument' which is a 16-item tool developed by Native youth, and the local staff of communities that have implemented GONA's in the past. The individual measures were identified by GONA facilitators and participants as outcomes deriving from GONAs that measure prosocial behaviors, healthy mental practices, and positive family and community engagement.

An important aspect of the GONA curriculum is focused on cultivating a feeling of responsibility and connection to ones' family and community. To assess participants' positive engagement with their family and community, we implemented the 5 questions from the Home and Community Engagement sub-scale from the Life Changers Instrument with a Yes/NO** response or Likert* responses: Never, Once/Twice Past Year, Every Month, Every Week, Every Day.

1) I help out my family (like washing dishes or babysitting). *
2) I help out in the community (like helping elders, taking care of the environment, volunteering at school or at the local Indian center). *
3) I feel like I have healthy and positive interactions with my friends. *
4) I attend healthy community events (like dinners, pow wows, and youth program activities). *
5) I believe I can be a leader in my community (if given the chance).**

At baseline, the sum of participants' home and community engagement scores were 17.15, increasing by 2.60 to 19.75 at follow-up.

Pre-GONA	Six-months follow-up	Difference from before GONA
17.15	19.75	+ 2.60

Data Limitations

There were a few notable limitations in the collection of evaluation data for the 2023 GONA. This was the first GONA we hosted in person since 2019 due to the COVID-19 pandemic. As a result, the research and evaluation team needed to develop new data collection, storage, and analysis processes. This was made more difficult by staff turnover during those four years and resulted in a delay in completing timely data entry and analysis. Our team was also aware that pandemic-era remote schooling and resulting interruptions in instructional time might introduce challenges with reading comprehension and classroom capacity for our youth.

While we were able to gather evaluation data from 100% of the 13 youth in person at the start and end of GONA, we chose to complete the six-month follow-up virtually in February 2024 as the youth were back to attending school. We emailed participants weekly for three weeks in February to invite them to participate in the follow-up evaluation on Qualtrics, offering a $30 gift card incentive. Email recruitment for youth to participate in the six-month follow-up was not as fruitful as we might have hoped; several youth either declined to participate or didn't receive the email invitation. Thus, we only collected responses from 8 youth, or 62% of participants.

Overall, while the quantitative data is important and shows a clear increased sense of hope, well-being, cultural connectedness, sobriety, and home and community engagement following GONA, the sample

size is small and these findings are not statistically significant. We are aware that these data must also be taken into the larger context of the overall GONA curriculum and experience and be viewed holistically, in combination with participant qualitative feedback.

GONA Cost Analysis & Economic Evaluation

As part of our comprehensive evaluation approach, we are also conducting a long-term economic evaluation and adult retrospective study of the youth GONA's downstream health and quality of life impacts on participants.

This table depicts the actual cost of holding our 2023 youth GONA (Column 2), inclusive of staff time, preparatory training, supplies, and operational costs. To account for the varying conditions in which GONAs might be held, such as doubling the amount of GONA participants, excluding the cost of renting a venue space (i.e., if NAHC owned a space for hosting GONA), holding GONA in an area with a lower cost of living, or excluding SAMHSA training costs (i.e. if GONA staff were already trained, or if NAHC had capacity to train staff in GONA curriculum), we conducted several sensitivity analyses. These scenarios are depicted in Columns 3-8.

This table demonstrates that with increased institutional support for GONA – owning and operating a space to hold events, having internal capacity to train staff, and increasing the number of community members attending GONA – the overall cost per participant could be as low as $1,257 for attendance at a four-day GONA. At NAHC, we intend to use these data to help us plan and budget for future GONA events.

Additionally, these cost calculations will enable a cost-benefit analysis of the youth GONA, as compared to other interventions for this population. In our adult retrospective study, we are utilizing the SF-6D questionnaire to assess the health status of past GONA participants now in young adulthood (ages 18-28). This will allow us to calculate the youth GONA's cost-per-Quality Adjusted Life Year (QALY) and compare the youth GONA to similar interventions. We expect to find the GONA a cost-effective intervention for improving mental and physical health in this group.

Cost Category*	**2023 GONA costs**	**SA** costs (double # participants)**	**SA** costs (excl. event location)**	**SA** costs (lower cost of living)**	**SA** costs (excl. training costs)**	**SA** costs (double # participants, excl. event location costs, lower cost of living)**	**SA **costs (double # participants, excl event location costs, excl. training costs)**
A. Costs of staff time							
i) Planning time	$2,901.14	$2,901.14	$2,901.14	$1,728.68	$2,901.14	$1,728.68	$2,901.14
ii) SAMHSA training cost	$13,054.	$13,054.61	$13,054.61	$7,778.75	$0.00	$7,778.75	$0.00
iii) Event time	$16,822.13	$16,822.13	$16,822.13	$10,023.67	$16,822.13	$10,023.67	$16,822.13
B. Supply costs for event	$1,700.90	$1,700.90	$1,700.90	$1,013.50	$1,700.90	$1,013.50	$1,700.90
C. Cost of event location and food	$7,142.02	$13,840.07	$866.96	$4,255.66	$7,142.02	$1,733.92	$1,733.92
D. Cost of travel to GONA event	$113.18	$113.18	$113.18	$67.44	$113.18	$67.44	$113.18
E. NAHC operating costs	$9,415.65	$9,415.65	$9,415.65	$5,610.43	$9,415.65	$5,610.43	$9,415.65
Total cost	$51,149.64	$57,847.68	$44,874.57	$30,478.13	$38,095.03	$27,956.38	$32,686.92
Cost per participant	$3,934.59	$2,224.91	$3,451.89	$2,344.47	$2,930.39	$1,075.25	$1,257.19
Cost per participant/day	$983.65	$556.23	$862.97	$586.12	$732.60	$268.81	$314.30

*Costs in 2023 USD; **SA = sensitivity analyses; # of GONA participants (2023) = 13; # of GONA participants (2023) = 26

End-of-Day Youth Reflections

At the end of each day, we completed a "snowball" evaluation activity where participants were asked to reflect on the day's events and write their thoughts on a piece of paper to share with the group anonymously.

Each day, participants were asked the following questions:

- What was the highlight of the day for you?
- What was one part of the day that was challenging for you?
- What was one thing you learned from today's activities?

This activity was skipped on day 1 (Belonging) due to scheduling. On the final day, we asked:

- What is one way you think something you experienced in this GONA will change your everyday life going forward?

4. A view of NatureBridge Conference Center.

Day 2, Mastery:

When asked about highlights of the day, many participants enjoyed getting to go to the beach, eating breakfast, and supporting each other in their clans. Two youth shared that they enjoyed spending time with our youth worker Shea Norris, and some shared the highlight of the day was getting to sleep.

"I loved that I was able to go to the beach and Shea is a W. People have good attitudes and I would like to come again. <3"

"My highlight of today was talking with my clan and getting deep with them."

When asked about learning takeaways from the day, several youth mentioned working in teams and communicating. Two respondents said they didn't learn much.

"I learned about things Natives did in the past."

"You can be the voice for another person when they have trouble speaking or sharing their thoughts."

"We work good together as a group."

On day two, many participants shared that it was challenging to wake up in the morning or stay awake during the day's activities. Two shared that talking about societal issues was challenging for them. One shared it was challenging to socialize and that they felt anxious.

"The issues and solutions (got 2 deep)."

"Waking up and staying up."

Day 3, Interdependence:

When asked to reflect on the highlights of day three, several participants enjoyed the music playing during the free creative time for making gifts. Some participants also enjoyed spending time with friends, and the food offerings such as breakfast sausage and fries at lunch.

"Vibing with people while the music was playing."

"Creating the generosity gifts."

There were similar lessons learned on day three as the previous day, including learning to work together in teams.

"Team work makes the dream work."

"We work good together."

The challenges participants shared on day three were similar to the previous day. Some participants found the day's activities of creating a skit based on a social issue and building an ideal community challenging, but fun. Two participants mentioned feeling social anxiety around another group of youth that arrived at NatureBridge. Some participants also felt tired or low energy.

"The mini town that we built but it was fun."

"Controlling my energy"

"The long line at lunch."

Day 4, Generosity:

On the final day, we opted to ask the youth how they felt attending GONA might change their everyday lives moving forward. Most of the responses mentioned feeling more connected and supported in sharing their emotions and feelings with others. Some responses discussed taking on more responsibility at home in the community as a mentor or leader.

"The love I have felt makes me feel like I belong here. It makes me want to better myself."

"Remembering that if your going through something you're not the only one because someone else may be going through the same thing."

"To know that there are people that will be there for me when I need it and be open too."

"I'm going to make more time for myself and acknowledge when I need a break."

"I am going to do a better job to be a leader + mentor."

Participant Satisfaction and Experience

On the final day of GONA, **100%** of attendees shared that they either agree or strongly agree with all of the following statements:

- "If given the chance, I would participate in GONA again."
- "I feel connected to my family."
- "I feel connected to my community."
- "One day I want to help other youth as a staff or volunteer at the GONA."

5. *The beach across from our site, NatureBridge.*

We also asked attendees to share how GONA has changed their point of view. Many attendees shared that GONA helped them feel connected to the community and increase their sense of social support.

"GONA has changed the way I see people, the world. Not everyone is perfect. And that there will always be a person that you can connect to."

"It's for sure made me more social and thankful in many ways. I made friends. If possible, I'd like to come again (my fav GONA)."

"If you're ever going through a stressful time find and surround yourself with people to support you."

"It has shown me I can talk to people and be a part of the community."

At follow-up, we asked attendees to reflect on how the different themes of GONA (Belonging, Interdependence, Mastery, and Generosity) show up in their lives today.

Attendees shared that the theme of **belonging** helped them be connected to their families and communities.

"Feeling like you can be somewhere that you feel safe and belong. A place where it doesn't seem like people are hating."

"A way in which belonging has shown up in my day to day life is being able to open up heart and mind to those around me."

Attendees shared about the various ways that **mastery** shows up in their lives.

"I have learned what where i come from can be a strength and aid to my visions of the future, the gifts i was born with, and in mastering talents within school and sports."

"When im in my community and I see the young ones playing with each other, it's like nostalgia. I think of when my family would teach me about where I came from and who my ancestors were."

And finally, attendees shared that **interdependence** shows up in their lives by encouraging them to feel a sense of responsibility.

"I understand that everyone and everything is connected and that certain things happen for a reason. Everything will work itself out in the end. I also take responsibility for myself and my actions."

"Interdependence shows up in my day to day life by being able to be on my own little by little."

When asked to reflect on the theme of **generosity,** many responses mentioned honoring elders.

"Ways in which generosity has shown up in my day to day life is by me showing my respect for elders sharing knowledge with younger generations."

"When elders give you advice i tend to listen more because they know what's up."

"When I'm teaching my younger relatives about respect and responsibilities. Another example can be when it's time to get our food, it's respectful to let the elders eat first."

Recommendations

This report highlights the vital importance of the youth GONA as a culturally appropriate intervention to support healing, wellness, and cultural connection of Native American and Indigenous youth. These data can be used by our program staff to continue to improve GONA for years to come; by listening to and honoring our young peoples' feedback, we will continue to build programming that better suits their changing needs.

Furthermore, our economic evaluation and retrospective study of the GONA will allow us to better anticipate what kinds of institutional support this program will require to continue being successful and financially viable. By investigating the downstream health-related outcomes of attending a GONA, and demonstrating GONA's cost effectiveness compared to other interventions, we have the opportunity to increase community members' access by advocating for GONA and other traditional healing pathways to become covered insurance benefits.

Conclusion and Key Takeaways

Our 2023 youth Gathering of Native Americans helped bring together 13 youth from Oakland and San Francisco for the first time since the beginning of the COVID-19 pandemic. We hosted a smaller, more intimate GONA to help build kinship and camaraderie between our young people and staff. We conducted a variety of evaluation activities, both daily during the GONA and at six-months follow-up, to help our team understand the positive outcomes of our GONA program and identify areas for

improvement. We also made headway on a long-term economic evaluation and retrospective adult study of the GONA's downstream health and quality of life impacts on participants.

As our youth participants displayed increased connection to their cultures and communities after attending GONA, they also demonstrated increasing senses of hope, levels of sobriety, and involvement with their families, cultures, and communities. Across the board, our evaluation findings revealed what Native American/Indigenous people have always known to be true: **that connection to culture and traditional practices are powerful protective factors and social determinants of health**.

References

King J, Masotti P, Dennem J, Hadani S, Linton J, Lockhart B, Bartgis J. The Culture is Prevention Project: Adapting the Cultural Connectedness Scale for Multi-Tribal Communities. American Indian and Alaska native mental health research (Online). 2019;26(3):104-35. https://coloradosph.cuanschutz.edu/docs/librariesprovider205/journal_files/vol26/26_3_2019_104_king.pdf

Masotti P, Dennem J, Hadani S, Banuelos K, King J, Linton J, Lockhart B, Patel C. The Culture is Prevention Project: Measuring culture as a social determinant of mental health for Native/Indigenous peoples. American Indian and Alaska Native Mental Health Research. 2020 Jan 1;27(1):86-111. https://www.researchgate.net/profile/John_Dennem2/publication/337379389_The_Culture_is_Prevention_Project_Adapting_the_Cultural_Connectedness_Scale_for_Multi-Tribal_Communities/links/5f52bf7e299bf13a31a0789e/The-Culture-is-Prevention-Project-Adapting-the-Cultural-Connectedness-Scale-for-Multi-Tribal-Communities.pdf

Masotti P, Dennem J, Bañuelos K, Seneca C, Valerio-Leonce G, Inong CT, King J. The Culture is Prevention Project: measuring cultural connectedness and providing evidence that culture is a social determinant of health for Native Americans. BMC Public Health. 2023 Apr 21;23(1):741. https://link.springer.com/content/pdf/10.1186/s12889-023-15587-x.pdf

Snowshoe A, Crooks CV, Tremblay PF, Craig WM, Hinson RE. Development of a Cultural Connectedness Scale for First Nations youth. Psychological Assessment. 2015 Mar;27(1):249. https://www.csmh.uwo.ca/docs/publications/Snowshoe,%20Crooks,%20Tremblay,%20and%20Craig%202015.pdf

Snowshoe A, Crooks CV, Tremblay PF, Hinson RE. Cultural connectedness and its relation to mental wellness for First Nations youth. The journal of primary prevention. 2017 Apr;38:67-86. https://www.csmh.uwo.ca/docs/Snowshoe2017_Article_CulturalConnectednessAndItsRel.pdf

NATIVE AMERICAN
HEALTH CENTER
Serving the community since 1972