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AMERICAN INDIAN TRADITIONAL CEREMONIAL PRACTICES: ADDRESSING PROBLEM SUBSTANCE USE IN A MULTI-TRIBAL URBAN COMMUNITY

By

D'SHANE BARNETT

M.S. Healthcare Administration, University of California, San Francisco, 2016
B.A. Sociology, University of Montana, Missoula, 2015

Dissertation

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Approved by:

Scott Whittenburg,
Graduate School Dean

Annie Belcourt, Ph.D., Chair
School of Public and Community Health Sciences

Curtis Noonan, Ph.D.
School of Public and Community Health Sciences

Blakely Brown, Ph.D.
School of Public and Community Health Sciences

Kimber McKay, Ph.D.
School of Public and Community Health Sciences

Catherine McKinley, Ph.D.
School of Social Work, Tulane University, New Orleans, Louisiana

Barnett, D'Shane, Ph.D., Spring 2022 Public Health

American Indian Traditional Ceremonial Practices: Addressing Problem Substance Use in a Multi-tribal Urban Community

Chairperson: Annie Belcourt, Ph.D.

ABSTRACT

Background: Traditionally, American Indian and Alaska Native (AIAN) communities and individuals held ecological knowledge that supported holistic wellness for their tribal members through a variety of medicines and ceremonies. Contemporary Western healthcare systems have largely alienated AIAN people from access to traditional ceremonial practices (TCPs). Despite decades of cultural adaptation of evidence-based practices (EBPs), the deleterious effects of historical and intergenerational trauma are widely documented. This includes disproportionately high rates of problem substance use in both reservation and urban AIAN community settings.

Purpose: In contrast to deficit-based paradigms, *Reziliency* posits that protective factors, approaches, and methods used within AIAN communities when faced with adversity or trauma create an environment for individuals to demonstrate resiliency. This study explored the potential for an intervention that draws on the protective role of TCPs to reduce problem substance use within an urban, multi-tribal setting.

Methods: We developed a sequential, mixed-methods study design in partnership with an urban Indian health center. Study One was a systematic review of the literature that identified existing evidence and knowledge about TCP-based substance use interventions in AIAN communities. Study Two was a cross-sectional investigation of TCP-related factors and substance use behaviors in the urban AIAN community. Study Three was a qualitative descriptive investigation in which members of the target AIAN community were interviewed about their experience and background with TCPs as well as their thoughts about how to design an effective TCP-based substance use intervention in an urban, multi-tribal setting.

Results: The systematic review yielded 10 eligible articles with quantitative evidence highlighting the association between TCPs and substance use reduction. In the cross-sectional survey ($N = 194$), 54.6% of respondents reported positive TCP protective factors and 36.7% reported high levels of intent to participate in TCPs. Respondents with more positive protective factors or greater intent to participate in TCPs were significantly less likely to report alcohol or other drug use. Interview ($N = 11$) themes highlight a strong belief that TCP-based interventions can be successful at reducing problem substance use in an urban, multi-tribal setting, that tribal elders should guide a process in identifying which ceremonies and spiritual practitioners should be employed, and that variation in ceremonies and tribal perspectives is important.

Conclusions: This research project demonstrates the potential for a community-informed, TCP-based problem substance intervention to be effective in an urban, multi-tribal setting, while underscoring the need for greater research in this area.

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ACKNOWLEDGEMENTS

Taškanito'ša! Nii-ųųnistáh haho eepeš. Waa'oonatka šiini waka'ni wahuuroš. Mináse ųmpa-košoš éhenoš. Mi'núetaaroš. Greetings! I say hello to you all. I come to this place with a good heart. My name is Whistling Elk. I am Mandan.

I don't know if this is the first doctoral dissertation to start off in the Núeta, or Mandan, language but I hope it is not the last. In that spirit, this work is dedicated to all the Native elders who came before me, to the Native children who will come after I am gone, and, most especially, to my own family and community for providing me with the support, guidance, and protection that I needed to make it to this place today.

This journey, like most, was not a solitary one. I had many people walk with me at one point or another. I am grateful to my parents and grandparents, for always being a source of inspiration and a foundation upon which to build myself. I am grateful to my husband and son, for their patience and tolerance during the many hours I had to put toward this journey rather than our own. And I am grateful to my colleagues and coworkers for their understanding and indulgence while I was stretching myself thin trying to do too many things at once.

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As I said above, this was far from a solitary journey. I have too many people to thank to fit into this one document, but I would be remiss if I didn't mention at least a few more. A huge thank you to Dr. Jovanka Voyich for her encouragement and belief in this work. To Dr. Laurie Walker, thank you for the inspiration and guidance you provided over many, many chats. You were one of the first who made me feel like I could do this. To Dr. Maja Pedersen and (future Dr.) Elizabeth Williams, who were not just classmates but springboards to success, I look forward to many more years of having you both in my life. To Drs. Jessica Liddell, Sophia Newcomer, Ethan Walker, and Bryan Cochran for taking time to help me move this research from thought to reality, thank you.

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CHAPTER ONE – Background

1.0 Introduction

Traditionally, American Indian and Alaska Native (AIAN)* communities and individuals held ecological knowledge that supported holistic wellness for their tribal members through a variety of medicines and ceremonies.[1,2] Today, empirical data to support the effectiveness of these interventions are scarce due to several factors. Beginning around 1883, laws were established outlawing the practice of traditional ceremonial practices (TCPs) under threat of imprisonment. Many of these laws remained in effect until the passage of the American Indian Freedom of Religion Act of 1978.[3] Additionally, past medical and research abuse has led to a persistent distrust of academia on the part of many AIAN communities and individuals.[4] Because of these factors, AIAN communities often hold a rational fear against sharing information about TCPs with non-AIAN individuals.

The impacts of historical and intergenerational trauma on the health of AIAN people are well documented and can include health disparities, such as disproportionately high rates of problem substance use.[5] In the 2020 National Survey on Drug Use and Health (NSDUH), for example, AIAN participants reported the highest past-year rates of marijuana and illicit drug use of any racial or ethnic group.[6] Alarmingly, although rates have remained steady or even decreased for other groups, AIAN participants reported a 37% increase in past-year illicit drug use between 2019 and 2020. The severity of the COVID-19 pandemic has only added to the crisis, with AIAN individuals experiencing the greatest drug overdose death rate (drug overdose

* This author subscribes to the belief that the most appropriate way to refer to any Indigenous person or tribe is using the term from their specific language or dialect. For consistency, throughout this manuscript I will broadly refer to Indigenous persons and peoples of the United States using the widely accepted term American Indian and Alaska Native (AIAN). However, other terms such as Indigenous, Native American, Native, American Indian, and Indian may be substituted based on context.

deaths per 100,000) of any racial or ethnic group in the United States between January and September, 2020, according to the CDC.[7]

As a healthcare administrator and Indigenous person working in the arena of American Indian health for more than two decades, a constant source of frustration has been the inability to receive funding for TCP-based interventions. I and other administrators have been repeatedly told by policymakers and payers that these services lack an "evidence base," despite millennia of practice-based evidence held by AIAN communities. This response is likely due, in no small part, to a concerted push at the national level toward substance use interventions that are based on research from Western social and behavioral sciences.[8] That movement began to swell in the 1990s and culminated with the development in 2007 of the National Registry of Evidence-based Programs and Practices (NREPP) under the U.S. Substance Abuse and Mental Health Services Administration(SAMHSA.[9] The development of the NREPP registry all but invalidated any attempt to pursue funding for programming that incorporated TCPs during a large portion of my tenure as an AIAN healthcare administrator.

AIAN community-informed and community-led research is gaining momentum, however, and data are becoming more widely available to support the integration of TCPs into Western therapeutic approaches with AIAN individuals and communities.[10-12] Emerging studies draw on qualitative and quantitative methods, up to and including the gold standard of randomized control trials, to evaluate the effectiveness of TCPs.[13-15] The research presented here is an attempt to promote further understanding of the potential benefits to the use of TCPs, with the goal of supporting AIAN communities in designing interventions and approaches to reduce problem substance that are both effective and culturally congruent.

Definition of Traditional Ceremonial Practices

In an exploration of AIAN traditional practices, a primary question that needs to be addressed is what constitutes ceremony. An ongoing source of dissonance between the Western scientific method and Indigenous Traditional Knowledge (ITK) is the fluidity that ITK affords definitions.[1] While some researchers have attempted to create an objective, operational definition of ceremony, ITK proscribes this detached approach in favor of a contextual process that is dependent upon time, person, and place.[16]

In application, ceremony can only be defined by the persons participating in it and several factors will influence that definition, including tribal affiliation, cultural connection, age, and geographic location, among others. Examples of common ceremonies include sweat lodge, pipe ceremony, and Sundance among Northern tribes; the Blessing Way, Enemy Way, and sandpainting ceremonies for the Navajo people of the Southwest; and talking circles and medicine circles of the Iroquois Confederacy.[17-19] However, it is important to note that according to the Federal Register[20] there are currently 574 federally recognized tribes and each tribe, both traditionally and contemporarily, may hold many types of ceremonies.

2.0 Rationale

Religiosity and spirituality in substance abuse prevention and treatment

For several decades, medical and behavioral health researchers have been exploring the role that spirituality and religiosity play in either preventing or treating substance abuse. In his 2015 systematic review,[21] Dr. Harold Koenig of Duke University Medical Center summarized research published between 1932 and 2010. In looking at approximately 3,300 studies, Dr. Koenig examined the relationship between religiosity/spirituality (R/S) and various indicators of physical and emotional wellness. Using a 10-point scale to evaluate the quality of the research

design, methods, measures, statistical analyses, and interpretation of the studies, the existing literature was separated into overlapping binary categories of "All Studies" and "Higher-quality Studies."

Dr. Koenig largely found support in the literature for the protective role of R/S in supporting wellness (see Table 1). From the higher-quality research, 98 studies found a positive association between R/S and mental well-being while only one study found a negative association. Substance abuse was categorized between alcohol and other drugs. R/S was positively associated as a protective factor against alcohol abuse in 131 studies, with only one study showing a negative association. Finally, R/S was positively associated as a protective factor against drug abuse in 96 studies, again with only one study showing a negative outcome.

Table 1. Selected findings from Koenig (2015).

	All Studies			**Higher-quality Studies**[a]		
	Negative[b]	No Assoc[c]	Positive[d]	Negative[b]	No Assoc[c]	Positive[d]
Mental Well-being	1% (3)	20% (67)	79% (256)	1% (1)	18% (21)	82% (98)
Substance Abuse						
Alcohol	1% (4)	12% (34)	86% (240)	1% (1)	9% (13)	90% (131)
Drugs	1% (2)	15% (28)	84% (155)	1% (1)	13% (15)	86% (96)

[a]Higher-quality studies are those rated a 7 or higher on a 10-point scale based on methodology.
[b]Indicates a worse emotional state or health outcome.
[c]Indicates no identified association, mixed results, or complex results (i.e., difficult to interpret).
[d]Indicates a better emotional state or health outcome.

As researchers and substance abuse professionals gain a better understanding of the role of R/S, newer work is exploring adaptions for culturally diverse populations such as African Americans and Latin/x Americans. However, much of this work draws from R/S concepts derived from Judeo-Christian roots as well as the Western ideology of individuality. Specifically, tools such as the Purpose in Life Scale, Religious Background and Behavior Scale, Religious Moral Belief Index, and Alcohol-related God Locus of Control Scale have been applied to studies examining a relationship between R/S and substance abuse,[21] with culturally-tailored

interventions based on the application of spirituality as encompassed in the African-American[22,23] and Latin-American[24] communities.

The acculturation experience of AIAN communities is distinct from that of any other group in the United States.[25] As members of colonized nations within the broader colonial nation, AIAN people have been subjected to attempted systematic genocide, forced assimilation and proselytizing through boarding and missionary schools, and removal from cultural homelands to urban metropolitan settings as part of the Bureau of Indian Affairs' (BIA) relocation program. Because of this, levels of both *acculturation* (affiliation with the majority culture) and *enculturation* (affiliation with Indigenous culture) among contemporary AIAN individuals run along a continuum between highly acculturated and highly enculturated.[26]

It is plausible that R/S concepts derived from Western theologies and ideologies could provide protective value for AIAN individuals who are located toward the *acculturation* end of the spectrum, as they do similarly for African- and Latin/x-Americans.[27] It is less plausible, perhaps even unlikely, that the same would hold true for highly *enculturated* AIAN individuals who often report physical and mental health risks, including increased substance abuse rates, in association with assimilation efforts and internalized oppression.[25,26]

TCPs and substance use prevention and treatment

While problem substance use is largely a contemporary issue for AIAN populations, Indigenous communities throughout the Americas have relied on traditional spiritual and medicinal practices in the treatment of physical and behavioral health conditions since time immemorial.[28] Where Western clinical practice recognizes randomized controlled trials (RCT) as the apex of research hierarchy, tribal communities draw on ITK—a comparable scientific methodology, or "way of knowing,"—that allows for similarly validated knowledge.[1] Narrative

studies over the last several decades have documented the desire on the part of AIAN individuals to include TCP-based interventions in behavioral health programming.[29-31]

Based on the premise that spirituality plays a role in substance abuse prevention and intervention, that ITK and qualitative evidence suggest AIAN adults benefit from participation in TCPs when trying to abstain from substance use, and that this issue is both relevant and pressing to support the success of prevention and intervention programs aimed at AIAN adults, it is hypothesized that participation in TCPs serves a protective role against substance abuse for AIAN adults.

3.0 Significance

This research contributes directly to our knowledge about TCPs, an essential, but understudied, tool for reducing problem substance use in AIAN populations. The sequential mixed-method design of the project allows for a robust exploration that includes both numerical data and the voice of the AIAN community. The goal of this effort is to help bridge the gap between Western evidence-based practices and AIAN practice-based evidence.

Specifically, this study takes place in an urban, multi-tribal community. A majority of AIAN individuals in the United States now live in an urban setting,[32] so it is vital that research be designed to support their health and wellness. Studies that focus on the substance use programming needs of urban AIAN communities are emerging. But, to our knowledge, this will be the first study that engages an urban AIAN community in the Rocky Mountain West to explore these unique programming needs. It is our hope that this research can serve as the impetus of further investigation into how TCP-based interventions can be effective at reducing problem substance use in urban, multi-tribal settings.

CHAPTER TWO – Study Proposal

1.0 Project Overview*

AIAN populations experience disproportionately high rates of problem substance use. Results from the 2017 National Survey on Drug Use and Health[33] (NSDUH) show that AIAN individuals report the highest rates of binge drinking (30.3%) and heavy drinking (7.7%) of any single racial group. Additionally, while rates of Illicit Drug Use Disorder are holding steady or even decreasing for other racial/ethnic groups, the rate for AIAN adults almost doubled between 2016 and 2017 (3.9% and 7.5%, respectively). Research studies over the last several decades have highlighted the potential for TCPs to support efforts to decrease or prevent substance abuse within AIAN communities.[11,34-37]

However, these studies have historically focused on reservation communities where tribal health programs typically deliver services to a population that is largely homogeneous in terms of tribal affiliation and customs. According to the 2010 Decennial U.S. Census,[38] roughly 71% of AIAN individuals live in urban metropolitan cities. In contrast to health programs located on tribal reservations, Urban Indian Health Programs (UIHPs) deliver services to a multi-tribal population located within multi-cultural, urban settings. Currently, there is a dearth of literature examining how AIAN people living in **urban areas** can effectively apply TCPs to treat problem substance use.

Guided by *Reziliency*,[39] an AIAN-adapted application of Resilience Theory, this strengths-based project sought to establish evidence regarding the potential protective nature of TCPs for urban AIAN populations. A mixed-methods, cross-sectional community assessment

* This research proposal was approved by the doctoral dissertation committee in 2021 and is included here as contextual reference for the three research studies. The document has been updated from its original format to past tense to reflect the completed project status.

was conducted to collect information regarding TCP protective factors in relation to current health status and adult substance use rates in an urban AIAN community. The project included the development, delivery, and analysis of a survey questionnaire that measured substance use rates, health indicators, and TCP variables (knowledge, attitudes, beliefs, access, and intent to participate) among AIAN adults in an urban setting. Additionally, semi-structured interviews were conducted with urban AIAN community members to provide a deeper context and understanding of 1) experiences with TCP access and participation; 2) existing community-level assets and strengths that could be incorporated into a problem substance use prevention intervention; and 3) environmental factors that influence health status and substance use. Studies Two and Three were informed by Study One, a rigorous Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)-guided systematic review of the published literature.[40,41] This project not only provided baseline data to inform surveillance efforts for the urban AIAN community, but also served as an example for how to develop and implement culturally tailored assessments and interventions to treat problem substance use in similar communities.

Quantitative Hypothesis (Study Two)

H_1: We expect that participation in AIAN traditional ceremonial practices will be associated with lower rates of problem substance use among urban AIAN people.

Qualitative Research Question (Study Three)

Q_1: How do participants, based on their lived experience and cultural orientation, perceive the potential role and efficacy of TCPs to prevent problem substance use?

Study One. A rigorous, PRISMA-guided systematic review of available literature and other data that explored the use of TCPs in preventing or treating problem substance use for AIAN adults broadly. Results were used to inform the selected constructs, measures, and themes of a community assessment questionnaire for an urban AIAN population. Deliverable/Publishable Item: Completion and publication of a PRISMA-guided literature review related to the use of TCPs in substance abuse programming for AIAN adults.

Study Two. Development, delivery, and analysis of a questionnaire to urban AIAN community members that assessed substance use rates (e.g., alcohol, marijuana, and other drugs) and health indicators as well as knowledge, attitudes, and beliefs (KAB), and access and intent to participate in TCPs. Deliverable/Publishable Item: Quantitative data analysis of the survey results.

Study Three. Using a qualitative descriptive approach, semi-structured interviews were conducted and analyzed to gain a deeper understanding of participants' views regarding the potential efficacy of an urban AIAN problem substance use intervention that incorporates TCPs. Deliverable/Publishable Item: Qualitative data analysis of the interview results.

2.0 Approach

The proposed research project sought to collect data to inform future development of problem substance use interventions for AIAN people living in urban areas and drew on community-driven, Indigenous research methodologies that acknowledge the inherit strengths and assets of AIAN people.

Reziliency

Resiliency Theory encompasses a strengths-based perspective that, rather than focusing on risk and vulnerability within a population or community, instead seeks to orient research to positive/protective factors that exist but are often overlooked.[42] Past scholarship and research in

AIAN communities —led largely by non-Indigenous investigators—sought to identify and address the perceived deficits within AIAN communities responsible for problematic trends and behaviors.[43] In contrast, this current project was novel in design, in that it elicited community assets and cultural strengths that can be leveraged as protective factors. Coined by Native researcher, Dr. Annie Belcourt, *Reziliency* encompasses the positive factors, approaches, and methods used within AIAN communities—both reservation-based and urban/off-reservation—when faced with experiences of adversity or trauma that create an environment for individuals to demonstrate resiliency.[39] The concept of *Reziliency* served as both the foundational theory and guiding framework for this research project.

Critical Indigenous Research Methodologies

In contrast to Western research methodologies, Critical Indigenous Research Methodologies (CIRM) are grounded in Indigenous ways of knowing, Indigenous sovereignty, and self-determination.[44,45] A key distinction between the two methodologies is rooted in the lens used to understand phenomena and the ways knowledge is shared with the wider scientific literature. Western methodologies seek to *define* a phenomenon and to operationalize it in ways that allow others to examine, dissect, and ultimately preserve cross-cultural understandings of knowledge, beliefs, behaviors, and worldviews.[46] For many years, this has led to the development of ethnographic ways of knowing that are based on carving down Indigenous epistemologies for wider consumption. This, in turn, has engendered inequity in knowledge ownership that has systematically biased non-Indigenous ways of knowing, resulting in misinterpretation, misrepresentation, and unethical uses of indigenous culture and peoples.[1,44,47] CIRM seeks to come into *relationship* with subjects and ideas that are being explored.[44,45] While CIRM and Western methodologies share the goal of examining a phenomenon so that it can be

understood, enhanced, and ultimately, if needed, shaped to improve health outcomes that support equity, the approaches to achieve these goals are informed by very different philosophies.

CIRM, similar to community-based participatory research (CBPR) methods, is focused on addressing on the prioritized needs of communities.[44] When applied by non-Indigenous researchers working with AIAN communities, CBPR is an external approach that draws on the voice of community members to inform the interpretation and appraisal of knowledge on the part of the researcher. In contrast, CIRM is an emic, or internal, approach rooted in Indigenous knowledge systems. CIRM is unapologetically anticolonial and provides a catalyst for Indigenous researchers to translate inexorable, lived ecological experience from within AIAN communities to an external thought-world that historically has attempted to colonize and subjugate knowledge production and ultimately serve to promote non-Indigenous scientific thought, theories, and approaches to core understanding of human existence.

From its inception, this project has been guided by CIRM and the perspective of Indigenous scientists. Most especially, the *6 Rs of Indigenous Research*—**R**espect, **R**elationship, **R**elevance, **R**eciprocity, **R**esponsibility, and **R**epresentation[48]—are foundational to each study as well as any future communication or publication of results (see Figure 1). The lead project author is an Indigenous person who has been working in the field of AIAN health for more than two decades. Throughout that time, the author has engaged in countless conversations with numerous AIAN community members, elders, and traditional practitioners about problem substance use and TCPs. Those conversations are part of the CIRM approach to knowledge generation and informed and guided the development of this project. In line with CIRM, this project draws on the values, beliefs, and practices of AIAN people both in how needs are defined (axiology) as well as what the research process entails and the type of knowledge generated (epistemology).

Figure 1. The 6 Rs of Indigenous Research. *Source:* Tsosie et al (2022).

Project Site

There are 41 IHS-funded Urban Indian Health Programs (UIHP) across the United States.[49] We partnered with a UIHP located in the Rocky Mountain West for this project. Like many other UIHPs nationally, the partner UIHP serves both AIAN and non-AIAN clients from various tribal and ethnic backgrounds. In March 2020, the board of directors of the partner UIHP approved a resolution in support of this project.

The staff of the partner UIHP was 83% Indigenous and these individuals largely reflected the local AIAN community in terms of tribal affiliation. Specifically, the partner UIHP employed two cultural specialists and a traditional practitioner. In addition to supporting the cultural vetting process for Studies Two and Three, these individuals also assisted in outreach to the broader AIAN community to encourage participation in the survey and qualitative interviews.

The project approach was based on the expectation that both the quantitative assessment and qualitative interviews would be completed within one year using clients from the partner UIHP, as well as the broader local AIAN community, as the study population. The partner UIHP

maintains a database of more than 750 AIAN households comprised of roughly 3,000 AIAN adults, youth, and children. That database served as the primary sampling frame for Studies Two and Three.

Project Model

This project aimed to highlight how participation in TCPs among an urban AIAN population may be associated with substance use behavior. The current COVID-19 pandemic, however, skewed our ability to accurately measure participation because most opportunities for TCPs were canceled in an effort to slow the spread of the virus. To address this challenge, this study measured proxy variables for participation in TCPs—specifically, respondents' knowledge, attitudes, and beliefs (KAB) regarding TCPs, self-reported levels of access to TCPs, and self-reported intent to participate in TCPs. While past participation in TCPs may also inform future behavior, the research team chose not to include this variable in order to lessen the impact of recall bias on the results.

In our conceptual model,[50] we expected that individuals with more positive KAB, as well as greater self-reported access and intent, would be more likely to participate in TCPs and, conversely, would report lower rates of problem substance use (see Figure 2). Since this study relied on nonprobability sampling methods, associations cannot be generalized to the target population but can inform further research. An intended goal of the quantitative analysis procedures was to identify proportions for the independent and dependent variables among the population (see *Analysis*, p. 20). Additionally, we expected that qualitative data would highlight the potential for future development of problem substance use prevention and treatment interventions for the local urban AIAN community that incorporate the use of TCPs.

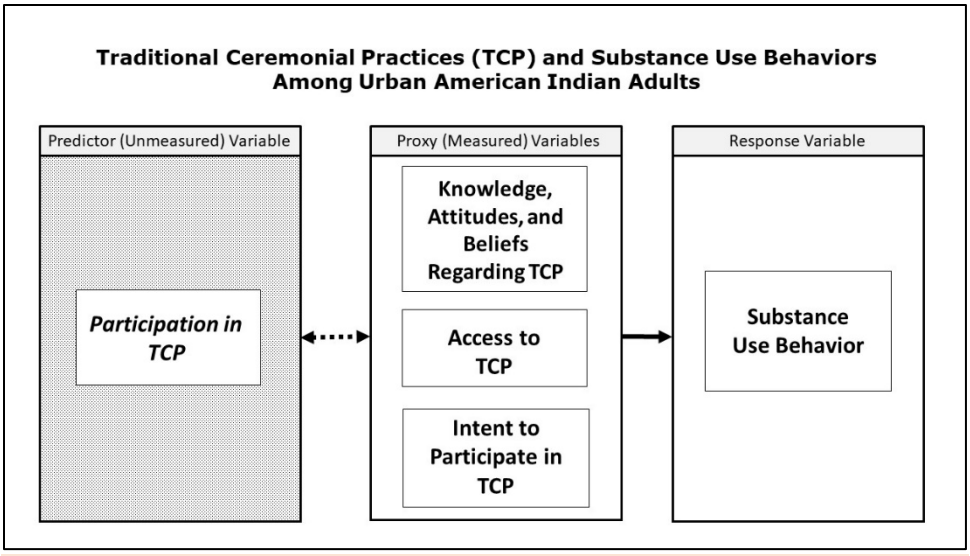

Figure 2. Proposed linkage between the unmeasured predictor variable, Participation in Traditional Ceremonial Practices (TCPs), via the measured proxy variables, (1) Knowledge, Attitudes, and Beliefs (KAB) regarding TCPs, (2) access to TCPs, and (3) intent to participate in TCPs, and the response variable, Substance Use Behavior, among urban American Indian and Alaska Native (AIAN) adults. The dashed causal pathway indicates hypothesized associations that will not be measured.

3.0 Project Studies

Study One: A rigorous, PRISMA-guided systematic review of the available literature and other data that explore the use of traditional ceremonial practices in substance abuse prevention and intervention efforts for AIAN adults.

While the use of TCPs, such as sweat lodges, talking circles, and other ceremonies, has been applied in AIAN communities for countless generations, academic literature exploring this approach has emerged more recently. The intent of the systematic review was to identify what interventions exist, how they have been applied, what adaptations, if any, researchers and practitioners have made to improve efficacy, and to obtain a picture of the current landscape within AIAN communities, both reservation-based and urban.

Methods

The study employed a review protocol that guided the search strategy (see Figure 2). Review parameters: Full text available, published in English in the year 2000 or later, peer-reviewed, limited to quantitative studies, including: clinical trials, comparative studies, evaluation studies, and observational studies. Case studies, qualitative studies, and books/chapters were not included. Review eligibility criteria: Focused on AIAN adults, included at least one intervention measure related to subject participation in TCPs, and at least one outcome measure related to alcohol or substance use.

Analysis

Qualitative results from the systematic review were used to inform the themes, constructs, and measures of the community assessment questionnaire for the selected urban AIAN population. Themes from the systematic review also guided the development of a schedule for qualitative interviews with community members and key informants.

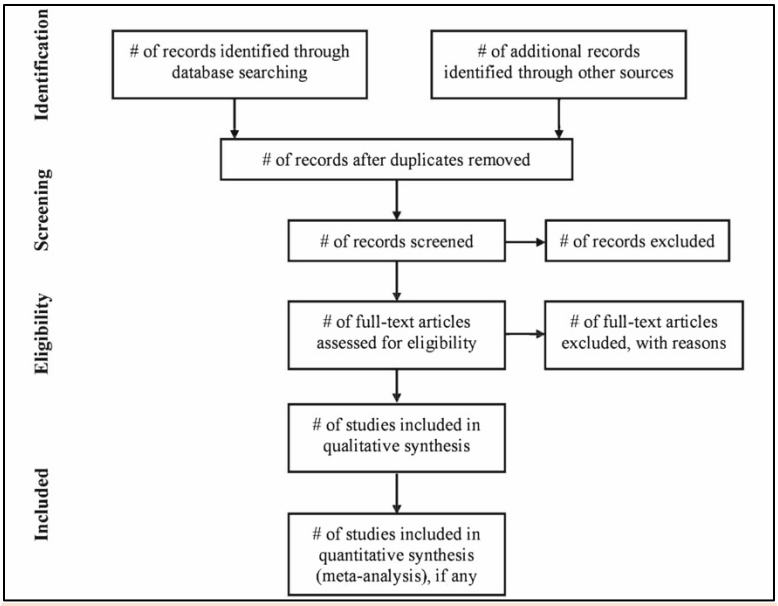

Figure 3. Flow of information through the different phases of a PRISMA-guided systematic review. *Source:* Liberati et al., 2009.[51]

Study Two: Development, delivery, and analysis of a cross-sectional questionnaire to an urban AIAN population that measured substance use rates as well as knowledge, beliefs, attitudes (KAB), and self-reported access and intent to participate in TCPs among community members.

The assessment questionnaire accomplished several important objectives. First, it provided benchmark data on substance use rates among AIAN adults in the target community, which is an essential step in understanding future trends. Second, it explored the current role of TCPs among an urban AIAN population. Due to the ongoing COVID-19 pandemic, questions measuring KAB were used in addition to questions about self-reported access and intent to participate in TCPs, as these variables were less likely to be impacted by pandemic response measures such as social distancing and sheltering in place. Regression analysis of the survey data was then used to elucidate the current relationship between TCPs and substance use/abstinence within the sample. Finally, the quantitative study provided information about which types of TCP might have the greatest effect on reducing substance use in a future intervention.

Methods

A CIRM-based vetting and pilot testing process guided development of the survey instrument. Key cultural informants from the local AIAN community were identified by All Nations staff as well as Native members of the research team. These informants were provided with a draft survey questionnaire that contained previously established measures related to substance use, health status, and access, intent, and KAB regarding TCPs, as well as some original COVID-specific measures and demographic questions.

Survey scales included:

General Health

- SF-12 (Edwards et al.)[52]
- COVID-19 health questions

Substance Use

- National Survey on Drug Use and Health (NSDUH) (Jordan et al.)[53]
- COVID-19 substance use questions

Access, Intent, and KAB – Traditional Ceremonial Practices

- HONOR Project (Town, Walters, and Orellana)[54]
- COVID-19 Indigenous Needs Assessment Survey (Duran et al., forthcoming)

The research team asked informants to provide feedback regarding community appropriateness, terminology/language, relevance, and other concepts, such as how well the survey aligned with community need and cultural values, and how the resulting data should be used to support the community in addressing any identified needs.

The finalized questionnaire was distributed via a mixed-mode process to participant emails or physical addresses. Inclusion criteria for the survey were: (1) 18 years of age or older; (2) currently living in Missoula or Ravalli counties; and (3) identified as Native American/American Indian/Indigenous. Participant recruitment employed a voluntary response sampling design. Specifically, participants were recruited through the electronic health record (EHR) system of registered clients of the partner UIHP who met the inclusion criteria.

The questionnaire was automated online using Qualtrics®, a survey software that is designed for building, distributing, and collecting survey data. Individuals who experience

difficulty with an online survey format—for example, elders or people living with disabilities—were provided the option to complete a paper version of the survey. Due to the current COVID-19 pandemic, all protocols for administering the survey were informed by public health practice and allowed for risk mitigation efforts, including social distancing.

Analysis

Preliminary analysis in Qualtrics® determined response rate, completion rate, and potential weighting. The data were then exported to Microsoft Excel format for further analysis using R Studio. Pearson's chi-squared testing was used to determine cross tabulation differences in type of KAB (positive/negative) regarding TCPs and levels of intent to participate in TCPs between comparison groups based on descriptive characteristics such as substance use behaviors, health status, or other observed sociodemographic variables.

Statistical analysis for the quantitative portion of the project had two objectives. First, to describe any association(s) that might exist between the exposure and outcome variables within the sample (see Table 1). As an exploratory study using a voluntary response sampling design, results may be heavily biased and were, therefore, not generalizable to the broader population. This limitation will be noted in any publication of analyses or results. However, descriptions of associations and trends within the sample provided valuable prefatory data that can inform more elaborate research on this issue.

Table 1. Exposure and outcome variables for statistical analysis.

Exposure Variables	Outcome Variables
Self-Reported Access to TCPs	Self-Reported Substance Use
Self-Reported Intent to Participate in TCPs	Self-Reported Health Status
KAB Regarding TCPs	

Development of the regression model employed purposeful selection, using bivariate analysis to identify those single variables which influenced the odds ratio between exposure and outcome by 10% or more.[55] ANOVA analysis was used to determine significant differences between the full model and more parsimonious models using a likelihood ratio test. This analysis, along with the systematic literature review, led to the development of the final logistic regression model.

To perform an a priori power analysis calculation for future cross-sectional studies, we must know the prevalence of the exposure variable within the target population. Rates of participation in TCPs for other urban AIAN communities vary widely, and the prevalence of participation in TCPs is not currently known for the target AIAN community. A second objective of this project was to inform future research by measuring the proportions of KAB and intent to participate in TCPs within the population.

Sampling

Sample size calculations were completed using OpenEpi (Version 3). While no literature was located that reported a similar methodology in assessing the exposure and outcome variables among the target population, several studies have been done on other urban AIAN populations.[56-59] Among these studies, the proportion of individuals who participated in TCPs ranged from 0.33 to 0.58. For this analysis, we assumed a slightly conservative proportion of 0.40 for participation in TCPs.

Sample Size for Frequency in a Population

Population size(for finite population correction factor or fpc)(*N*):	5000
Hypothesized % frequency of outcome factor in the population (*p*):	40%+/-6
Confidence limits as % of 100(absolute +/- %)(*d*):	6%
Design effect (for cluster surveys-*DEFF*):	1

Sample Size(*n*) for Various Confidence Levels

ConfidenceLevel(%)	Sample Size
95%	244
80%	108
90%	175
97%	296
99%	407
99.9%	631
99.99%	841

Equation

Sample size $n = [DEFF*Np(1-p)]/ [(d^2/Z^2_{1-\alpha/2}*(N-1)+p*(1-p)]$

Figure 4. A priori sample size estimates to identify frequency within the Missoula AIAN population. *Source:* OpenEpi.

Assuming a total AIAN population size of 5,000 in the target community, with 175 total respondents we would be able to identify a 40% frequency rate (+/- 6%) of intent to participate in TCPs at the 90% confidence level. This a priori estimate does not account for our response sampling design, however. Power analysis of the results were based on the actual completed number of surveys ($N = 194$), which surpassed the target of 175 responses.

As a novel, exploratory study, the limitation of potential power noted above must be weighed against the benefits that were derived from the research. In addition to the associations found through statistical analysis, the quantitative results also informed the qualitative portion of the current study, which was aimed at gaining a deeper understanding of the phenomenon. They may also inform potential future studies that are able to apply more rigorous research methods.

Study Three: To gain a deeper understanding of the research question, semi-structured interviews with AIAN adults were conducted and analyzed exploring their views regarding the potential efficacy of an intervention aimed at reducing problem substance use in an urban AIAN population that incorporates TCPs.

This project, in its entirety, was a sequential mixed-methods,[60] action research[61] study. Qualitative data explored the potential for a culturally tailored problem substance use intervention within the target population by drawing upon results and conclusions from previous segments of the study. Specifically, data from Studies One and Two helped identify participation trends, types of ceremonies, points of access, and KAB among community members. Drawing on *Reziliency*, in-depth interviews sought to describe community assets, cultural strengths, and TCP-based interventions that might prevent problem substance use within the local urban AIAN community.

Methods

Both CIRM and qualitative description informed the design and approach of this aim of the study. In two seminal articles,[62,63] Margarete Sandelowski outlined the qualitative descriptive methodology. This approach has been successfully applied to culturally sensitive research with AIAN populations[64] as well as broader health science research.[65] Although rigorous in its application, qualitative descriptive methods rely heavily on low-inference description of the data—meaning it draws on the voices of the participants *themselves* to describe a phenomenon, rather than a highly developed conceptual interpretation.

As outlined in Section 3c, what is studied, how it is studied, and how results are expressed and applied in CIRM-guided research are all informed and driven by traditional and contemporary wisdom and values from the community in question. For this study, cultural norms regarding interpersonal conversations, especially considering the benefit to the researcher, were observed. Interview participants were offered both a small monetary payment in the form of a gift card that recognizes and honors the value they contribute to the study (see *Sampling &*

Recruitment) as well as a traditional gift of medicine—either a bundle of sage or braid of sweet grass, depending on tribal affiliation.

Impact of COVID-19. In response to the global COVID-19 pandemic, all study subjects were given the option of participating in their interview via an online platform. Subjects were able to select a time and setting for the interview that was comfortable for them, including their preferred level of privacy. For those subjects who opted to participate in an in-person interview, strict risk mitigation procedures were followed, including sanitization of all surfaces and materials before and after participation, appropriate face coverings, and social distancing.

Sampling and Recruitment. Qualitative descriptive studies employ a range of sample sizes. As Patton[66(p.244)] states, "There are no rules for sample size in qualitative inquiry." Rather, what is important is that each study be guided by a rationale for the sample size that reflects the purpose for the inquiry and what makes sense as far as credibility and available resources.

For this formative study, we used stratified typical case sampling[66] to select interview participants. We conducted interviews with 11 adults between the ages of 24 and 72. Our participants reflected a diversity of gender identities and self-identified levels of enculturation (i.e., participants report higher or lower levels of access, intent, and KAB regarding TCPs). We propose that the diversity found within this sample highlights and informs potential applicability between and across demographics within the target population.

Subjects were recruited from a sampling frame of current clients of the target UIHP. Specifically, staff at the UIHP acted as gatekeepers[60] and identified potential participants based on their age, gender identity, and presumed level of enculturation—which was explored and either confirmed or negated during the interview. Participants who completed the interview

process were provided an honorarium, in the form of a $50 gift card, that recognized and honored their unique knowledge and contribution to the project.

Data Collection. This study employed standardized, open-ended interviews[67] to obtain data from subjects. In this approach, the research team determined the exact wording and order of the open-ended questions ahead of time, and the same sequence was used during all interviews. This increases comparability of the responses because each subject was asked a similar set of basic questions. While the effect of interviewer bias is lessened using this method, it is important to recognize that a certain level of bias is still present due to prompts and follow up questions that arose from the original responses to each open-ended question. The lead author, a Native American individual from the community under investigation, conducted the interviews either in person or via a secure Zoom account with intrusion-proofing measures such as password requirements and a waiting room.

We used the process outlined by Tolley et al.[67] in developing the semi-structured interview guide. The guiding research question, as outlined above, is how participants, based on their lived experience and cultural orientation, perceive the potential role and efficacy of TCPs to prevent problem substance use. Figure 5, below, illustrates the specific topic domains and subtopics for the inquiry. The interview guide also included an open-ended question aimed at allowing participants to add information that might not fit into the preconstructed domains.

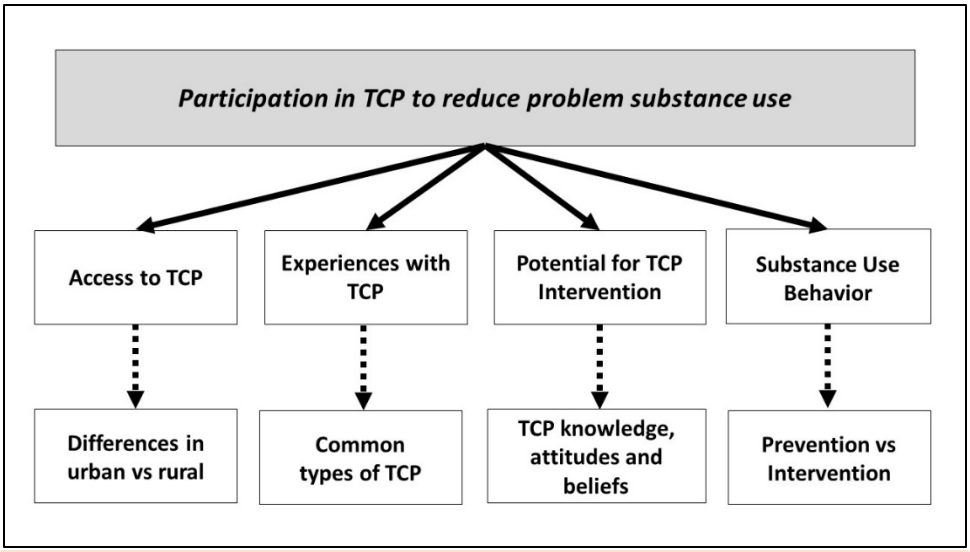

Figure 5. Domain, topics, and subtopics for the exploration of how traditional ceremonial practices might be used to prevent problem substance use among an urban, adult AIAN population.

Sequentially, the exploration began with questions related to subjects' current access to and experiences with TCPs. This was helpful in determining their level of enculturation, knowledge or expertise on the subject, and the perspective(s) from which they were answering questions on the topic of TCPs. Once they provided information about their general experience with TCPs, further questions explored their knowledge, attitudes, and beliefs (KAB) around the potential for TCPs to be incorporated into an intervention aimed at preventing problem substance use. While the primary aim of the study was investigation of community strengths and assets that can support *prevention* of problem substance use, this was also an opportunity to learn about perspectives related to *treatment* programming that incorporates TCPs as well.

Interviews generally lasted between 30 and 60 minutes. While no more than minimum harm was expected, out of an abundance of caution the interviewer was provided with contact information for a mental health counselor in case any study subject reported emotional or psychological distress during the interview. Subjects were not required to answer any question that might bother them or make them uncomfortable.

Contact Summary Form. At the conclusion of each interview, the interviewer completed a Contact Summary Form.[68] This document included questions about what the interviewer identified as main themes of the discussion, summarization of the input and feedback that was received during the interview, any intriguing or thought-provoking items that arose, and general environmental and contextual information.

Data Management. Subject interviews were digitally recorded on two password-protected devices, to ensure capture and quality in case of faulty recording or retrieval. Transcription of the interviews was accomplished through employment of a commercial transcriptionist with demonstrated expertise in research transcription. Before any original recordings were destroyed, transcripts were reviewed for accuracy and completeness. Once transcripts of an interview had been verified, digital recordings of that interview were permanently deleted from all devices.

Transcripts of the interviews are currently stored in electronic format on a secure, password-protected online server platform. Any field notes completed by the interview moderator were scanned and stored on the same platform. Written notes were then permanently destroyed. Signed informed consent forms are stored in a locked filing cabinet within a locked office accessible only to the lead author. No other identifying information was collected as a part of this study.

Each interview was assigned an archival number, using the format ANKI-INT-01 for All Nations (AN) Key Informant (KI) Interview (INT) number one and so on. A data log included each interview listed by archival number along with the date of the interview, interviewee subgroup, interviewer ID, and site/platform of interview. This information was also included in the header of all transcripts.

Analysis. Interviews were recorded, transcribed, and entered into NVivo to aid in analysis. In accordance with the 6 Rs of Indigenous Research, respect for participants and their right to privacy was honored at all stages. Interviewee names were not included in the transcripts and every effort was used to recognize and remove identifiable information from the data analysis. For CIRM-guided research ethics, attention was paid to information such as exact age, tribal affiliation, neighborhood of residence, etc. as these could constitute identifiable information within the particular community.

A directed content analysis[69] approach was used to analyze the data. This strategy is most appropriate when research on a phenomenon already exists, and the goal is further conceptualization or description. Drawing on the results from studies one and two, an initial coding scheme was developed by the data analysis team. This team consisted of the lead author, the Co-Principal Investigator, and two research assistants. The Co-PI has conducted extensive research in Native communities. The first research assistant is not Native but holds a PhD in health communications and has conducted research in several different Native communities. The second research assistant is a Native student in the MPH program and also a member of community under investigation. To ensure competence and consistency, all team members were required to review numerous background readings, as well as undergo group training in NVivo and data analysis procedures.

The lead author and research assistants performed coding analysis of all transcripts. Any data that did not fit into the initial coding scheme were identified and examined later by the data analysis team to decide if they represented a new category or a subcategory of an existing code. The analysis team met weekly during the coding process to discuss findings, clarify interpretations, and otherwise elucidate on emerging results. Once coding was completed, the

data analysis team checked and validated categories and subcategories within the context of prior research and cultural wisdom. Interview participants were provided with a copy of their interview transcripts, as well as themes identified by the analysis team, to allow them to confirm agreements or amend or clarify their original responses.

Once transcript analysis was completed, patterns within and between codes were identified and documented via analytic memo.[70] Finally, data displays were used to produce visual representation of the results.

Human Subjects Research Protections. As a study that included the involvement of human subjects, there were several ethical considerations that informed the design and delivery of this research. To maximize protection of the study participants, and because this is a vulnerable population that has historically experienced abuse on the part of researchers, the research team selected the Indian Health Service's National Institutional Review Board (NIRB) to review and approve all study protocols. Initial NIRB approval for the research was secured on July 2, 2020 (Project No. N20-N-03), and an amended approval on April 16, 2021, allowed for the involvement of human subjects.

Informed Consent. All study participants were provided a copy of the NIRB-approved Informed Consent Form, which outlined the purpose of the study, their role and rights as a participant, and potential risks and benefits associated with their participation. Members of the research team explained any information on the Informed Consent Form that is unclear and answered any questions about the study that arose. Most especially, participants were informed of their right to exit the study at any time, and without risk of any damage to their relationship with the target UIHP or the University of Montana.

Behavioral Health Support. Although the intent of the interview was to better understand community-defined challenges and solutions, if participants expressed desire or disclosed a need for substance use or mental health services, the research team was prepared to provide contact information for local counseling programs as well as 24-hour accessible support options.

Confidentiality and Privacy. As outlined above (see Data Collection and Data Management sections), every effort was made to protect the privacy and confidentiality of the study participants to the maximum extent possible. Each participant was assigned an archival identification number and this number was used on all documents, including interview transcripts, except for the signed Informed Consent Forms. These forms are stored in paper format within a locked filing cabinet and the project Principal Investigator (PI) is the only person with access. Once transcripts were verified by the PI, all audio or video recordings were permanently destroyed. Any quotes, vignettes, or other data were reviewed to ensure that potentially identifying information (age, tribal affiliation, neighborhood of residence, etc.) was removed and/or participant permission was received before publication.

Compensation. Participant time has value. To recognize and honor this value, participants were provided with a payment in the form of a gift card that has monetary value. The dollar amount of the compensation was informed by best practice, as well as guidance received by NIRB, to be reflective of the contribution of the participant to the study while avoiding coercion to participate unwillingly in order to receive compensation. The NIRB approved a $30 value for gift cards for this study.

Socially Responsible Research. This project was not only guided by NIRB input, but also by local community leaders in the form of staff and board members from the target UIHP. The research project was presented to the UIHP board of directors and received approval and support

through a board resolution. This resolution also led to the formation of an oversight committee that reviews the project to ensure its aims and activities are in the best interest of the organization and the community it serves. Whenever there was an identified conflict of interest between benefit to the organization or to the community, the community's interest was upheld.

Reflexivity

This project was designed as participatory action research,[61] in that, through their active engagement, it drew on the experience and history of the members of the community in which it took place and was intended to make changes to the status quo. The lead researcher was a Native health administrator who has been working in the American Indian health field for more than two decades. These two roles, Native person and health administrator, bring with them experiential and practice-based knowledge and data. As a Native person, the researcher has actively used TCPs for his own health and wellness. Within a community health setting, the researcher has employed TCPs as a strengths-based intervention in supporting mental and physical health. At the same time, guiding policy and, more importantly, funding for interventions has historically and consistently demanded a Western-oriented evidence base. This has led to an environment in which administrators at UIHPs are allowed to bill and receive funding from Medicaid, private insurance, and other payors when their medical provider sees a patient and prescribes medication to treat substance use, but these same payors refuse to provide funding for participation in TCPs because there is a perceived lack of evidence regarding their efficacy. This study was intentional in its aim to begin establishing this evidence. It did so not because the researcher or community are uncertain about the benefits of TCPs, but rather to enlighten those audiences unfamiliar with the extensive practice-based evidence of its legitimacy.

4.0 Project Timeline

With the National Institutes of Health (NIH) Clinical and Translational Research Program (CTRP) funding and the support from the target UIHP, the timeline in Figure 6 represents the workflow for the completion of all project aims.

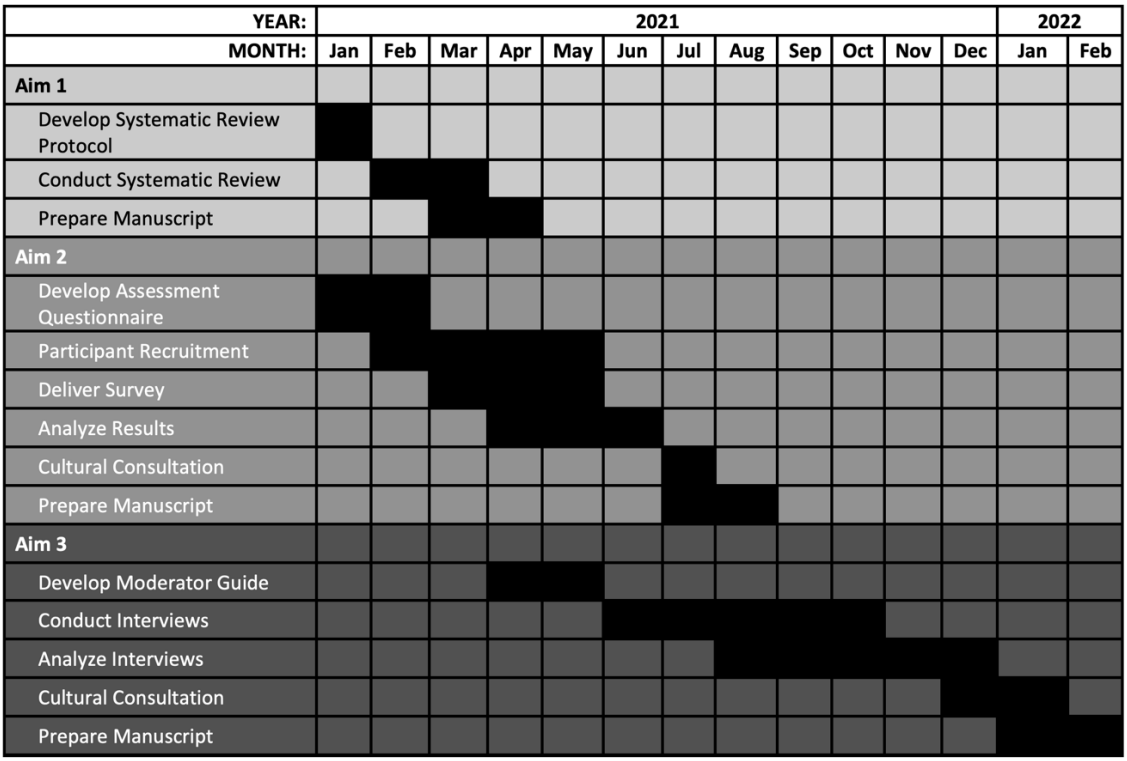

Figure 6. Project Timeline and Pre-Timeline Activities for All Aims.

CHAPTER THREE – Manuscript 1: Traditional ceremonial practices as a strategy to reduce problem substance use in American Indian communities: A systematic review

Publication Status:

In preparation for submission (anticipated submission May 2022). Preliminary co-author, community reviews complete.

Target Journal: American Journal of Public Health

Traditional ceremonial practices as a strategy to reduce problem substance use in American Indian communities: A systematic review

D'Shane Barnett[1], Jeffery Peterson[1], Jessica Liddell[2], Annie Belcourt[1]

1. School of Public and Community Health Sciences, University of Montana, Missoula, MT
2. School of Social Work, University of Montana, Missoula, MT

ABSTRACT

Objectives. We conducted a systematic review assessing the feasibility of American Indian traditional ceremonial practices (TCP) to address problem substance use in both reservation and urban settings.

Methods. Between September 24, 2021, and January 14, 2022, we systematically searched 160 databases–including PubMed, Global Health, Global Health Archive, CINAHL Complete, PsychInfo, Web of Science, Health and Wellness (Gale), Sage Online Journals, and ScienceDirect–applying culturally specific review protocols.

Selection Criteria. We included all quantitative study designs with a population of American Indian and Alaska Native (AIAN) adults that included a TCP predictor variable and substance use response variable. We excluded studies with a qualitative design, studies that were conducted outside of the United States, and studies that focused on a youth population sample.

Data Collection and Analysis. Two reviewers independently carried out title and abstract reviews against a guideline document. Full-text review of included studies was conducted by the entire research team. Discrepancies were resolved by discussion and consensus among the research team.

Main Results. Ten studies met the criteria for inclusion in the review. Among these, three were conducted with reservation populations and seven were from an urban setting. The most common TCP activities reported were drumming (n = 9), sweat lodge (n = 7), and talking circles (n = 6). All ten studies reported some type of quantitative data showing a reduction of substance use associated with TCP interventions or activities.

Conclusions. The current status of the literature is emerging and does not allow for meta-analysis of existing studies. However, the existing literature does indicate promise for the use of TCP to address problem substance use in AIAN communities in a way that is effective and also culturally congruent.

Keywords: traditional ceremonial practice; American Indian; substance use; intervention; ceremony

1.0. Plain Language Summary*

We conducted a systematic review of available literature on American Indian and Alaska Native (AIAN) traditional ceremonial practices (TCP) and problem substance use. Approaches and interventions that incorporate TCPs are essential tools for AIAN health programs trying to address problem substance use among AIAN adults. Although many studies have used a narrative method to provide evidence of the success of TCPs to reduce problem substance use, there is a paucity of data to support their effectiveness. We identified 10 studies that included quantitative data regarding TCP participation or TCP-based interventions. These studies included both urban and reservation-based populations. Several TCPs were represented in these studies, with the most common being sweat lodge ceremonies, drumming, and talking circles. Among the results of the studies, we found that by using TCPs communities were able to reduce problem substance use behaviors. Measures reported in the studies included odds ratios, difference in proportions, and difference in the amount or days of substance use. Each of the 10 studies reported some level of favorable change in substance use behaviors. A noteworthy finding of our review is that this protective ability of TCPs does not appear to vary depending on urban or reservation setting.

* This section is a requirement of the target journal.

2.0. Introduction

American Indian and Alaska Native (AIAN)* communities have successfully relied on long-held traditional ceremonial practices (TCPs) to survive and recover from historical traumas for generations.[2] Interventions that incorporate TCPs to prevent or treat problem substance use are increasingly replacing the more deficits-based clinical approaches employed by Western science.[71-73] Beyond merely introducing or strengthening aspects of culture—such as language, foods, games, or arts and crafts—AIAN communities are reviving TCPs in an effort to promote spiritual and emotional healing and, correspondingly, reduce rates of problem substance use associated with historical and intergenerational trauma.[74]

Increased efforts to incorporate TCPs into substance use programming are, in many ways, a form of contemporary resistance for many Indigenous peoples. Historically, it is important to remember that many of these practices were undervalued, disregarded, and even deemed illegal in this country, and this has resulted in a persistent distrust of research on the part of AIAN communities.[1,75] These factors have helped fuel a relative paucity of Western scientific evidence regarding the effectiveness of TCPs. This presents a challenge for administrators of substance use programs, because it has led to the current policy and funding environment in which, despite millennia of practice-based evidence supporting their effectiveness, traditional practitioners and TCP-based interventions are often not eligible for reimbursement through public and private insurers.[76]

* The authors subscribe to the belief that the most appropriate way to refer to any Indigenous person or tribe is using the term from their specific language or dialect. For consistency, throughout this manuscript we will broadly refer to Indigenous persons and peoples of the United States using the widely accepted term American Indian and Alaska Native (AIAN). However, other terms such as Indigenous, Native American, Native, American Indian, and Indian may be substituted based on context or original study language.

This trend is beginning to change, however, as greater emphasis is placed on community-based participatory research methods and as more research is conducted *by* AIAN investigators *for* AIAN communities.[72] Studies have emerged over the last few decades, and are increasing in number, that specifically explore the effectiveness of TCPs to reduce problem substance use. One issue, however, is that many of these studies take place outside of the United States and focus on Indigenous communities in Canada, Australia, New Zealand, or other parts of the world.[12,77,78] For studies inside the U.S., AIAN adolescents are often the focus, due in part to the severity of health disparities in substance use-related mortality for AIAN teens.[10,11,36] How these extra-territorial and youth-focused studies generalize to AIAN adults is not well-established.

Another issue is that Indigenous and community-based participatory research methods can seem to lend themselves more easily to a narrative, or qualitative, inquiry. This is perhaps due to the emphasis on relational communal values, rather than a more compartmentalized, quantitative approach to understanding health.[79] This effect has resulted in a greater preponderance of *qualitative* literature exploring the role and effectiveness of TCP in reducing problem substance use in AIAN communities.[1,14,80] This is problematic because quantitative methods are often prioritized by funding institutions and scientists, even though qualitative methods are an important source of insight for examining indigenous healing methods. The gap within extant literature of studies that examine cross-cultural health and healing with the inferential power of quantitative methods adds to the continued designation of TCPs as a non-evidence-based practice. This project seeks to fill this lacuna by providing a review of quantitative data to address the question: What are the associations between interventions that incorporate traditional ceremonial practices (TCP) and problem substance use, and do the relationships vary by reservation or urban settings?

2.1. What are TCPs?

Given the significant heterogeneity among tribal nations, activities that are considered TCPs are diverse. Most tribes consider TCPs as ethically protected tribal knowledge. However, some examples of TCPs include sweat lodge, drumming, talking circles, naming ceremonies, puberty ceremonies, or other spiritual ceremonies practiced by tribal nations. This review was guided by Critical Indigenous Research Methodologies (CIRM).[44] A basic tenet of CIRM is tribal self-determination. This means that Indigenous communities have the right to identify an activity as a TCP, without a need to define or operationalize the practice for researchers. Thus, for the purposes of this review, the research team considered an activity or intervention as a TCP if that is how it was regarded by the respective AIAN communities.

3.0. Methods

The study team consisted of four researchers, two of whom are American Indian and two of whom are not but who have extensive backgrounds working with AIAN populations. The researchers come from four distinct social science fields–public health, health communications, social work, and clinical psychology–to enhance the perspective of the team when reviewing studies from various disciplines. Between September 24, 2021, and January 14, 2022, we conducted a systematic search of the literature and selection of articles in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement.[40,41] The full review protocol was registered with PROSPERO (ID #CRD42021269710) before the search was conducted and is included as Appendix A.

Search Terms. Because the introduction of TCP into clinical and academic study is relatively recent, there is no standardized language to facilitate literature reviews. To ensure we

captured as many relevant studies as possible, we developed a broad search strategy—realizing that this would produce a greater number of initial items to be combed through to eventually find the very few articles that would meet the criteria for inclusion in the review.

Our search terms were informed by meetings with behavioral health staff from several Urban Indian Health Organizations (UIHOs). These staff identified the substances most often associated with problem use by their AIAN clientele as alcohol, methamphetamines, and opioids. Because of this, the search included terms for general substance use as well as for these three substances specifically.

Table 1. Search terms for the PRISMA-guided systematic literature review.

American Indian (OR) Native American (OR) Indigenous	**(AND)**	Spiritual* (OR) Ceremon* (OR) Cultur* (OR) Tradition* (OR) Community	**(AND)**	Substance Use (OR) Substance Abuse (OR) Addiction (OR) Alcohol Use (OR) Alcohol Abuse (OR) Meth* Use (OR) Meth* Abuse (OR) Opioid Use (OR) Opioid Abuse (OR) Prescription Medicine (OR) Prescription Drug

Data extraction. Via a university library OneSearch function, we searched 160 databases including PubMed, Global Health, Global Health Archive, CINAHL Complete, PsychInfo, Web of Science, Health and Wellness (Gale), Sage Online Journals, and ScienceDirect. We performed a limited gray literature review via Google Search. After an initial review that included websites for organizations such as the Indian Health Service, SAMHSA, and NIH, among others, we found that studies located via Google largely had already been identified through databases or were not eligible for inclusion, therefore we focused our limited resources on reviewing the academic literature. References were uploaded to EndNote (version 20.2) for organization and review.

The first and second authors (DB and JP, respectively) independently screened each title and then each remaining abstract for inclusion. Abstracts were screened against a guideline document[81] to determine if full article review was appropriate (see Appendix B). DB and JP resolved discrepancies through discussion until consensus was reached. Full articles were initially reviewed against a guideline by DB and assigned either as exclude, potentially exclude, or potentially include. Those articles that were assigned as potentially exclude or potentially include were then brought to the full research team for discussion and final consensus.

We included studies exploring the association between TCP and substance use prevention or treatment for AIAN adults that used a quantitative design. Our original intent was to include studies that tested interventions, but due to the low number of these types of studies we decided to also include cross-sectional studies in which a TCP measure was clearly defined and reported on. While we did not expect to find consistency among the studies that would allow for a meta-analysis, our aim was to report on quantitative, rather than qualitative, data from each study.

Because our intent is to potentially inform the development and delivery of TCP-based interventions with AIAN adults, we excluded articles and studies that focused on youth (under 18 years of age) or populations outside of the United States. We also excluded qualitative studies, including case studies, due to the pervasiveness of qualitative data currently associated with this topic in the literature. We do not discount or underrate the value of qualitative methodologies; it is merely our aim to fill a particular gap in the literature.

Study Quality and Bias. As mentioned in our introduction, there exists a historical gap between Indigenous wisdom and Western science. Significant advancement has been made to narrow this gap, including the establishment of the Native American Research Centers for Health (NARCH) program in 2000 as a partnership between the National Institutes of Health (NIH) and

the Indian Health Service (IHS).[82] By 2018, however, NARCH funding represented less than one-half of one percent of the NIH budget.[83]

The chronic underfunding of AIAN health research, and the persistent distrust many AIAN communities have developed after experiencing abuse by researchers, must be considered when examining the quality of studies undertaken with this population. Because of this, our research team decided to assess cultural, rather than clinical, bias among the studies. Before including an article in this review, we examined whether the research was (1) either Indigenous-led or Indigenous-informed, (2) that TCP was delivered or overseen by AIAN traditional practitioners, and (3) that implementation and evaluation processes were culturally justified in the narrative. For example, a study examining the effect of sweat lodge ceremonies on problem substance use in the Navajo Nation included a traditional counselor as its second author, employees of both the Navajo Nation and the Indian Health Service (IHS) as additional authors, and the narrative included information for how the intervention and evaluation methods were grounded in Navajo tradition and culture.[80] We argue that by meeting these criteria, this and other studies contribute significantly to an area of research that could benefit greatly from future increases in attention and resources.

Full Articles. After screening, 54 full text articles were considered for this review. Figure 1 provides a detailed outline of the article selection process. We excluded 44 articles for the following reasons:

1. other reviews, including systematic reviews, scoping reviews, and meta-analyses (n = 8);
2. no predictor (TCP) or response (substance use) measures were reported (n = 13);
3. no predictor measure (TCP) was reported (n = 17);
4. no response measure (substance use) was reported (n = 3);
5. study did not include an AIAN adult sample (n = 2); and
6. study did not employ a quantitative design (n = 1).

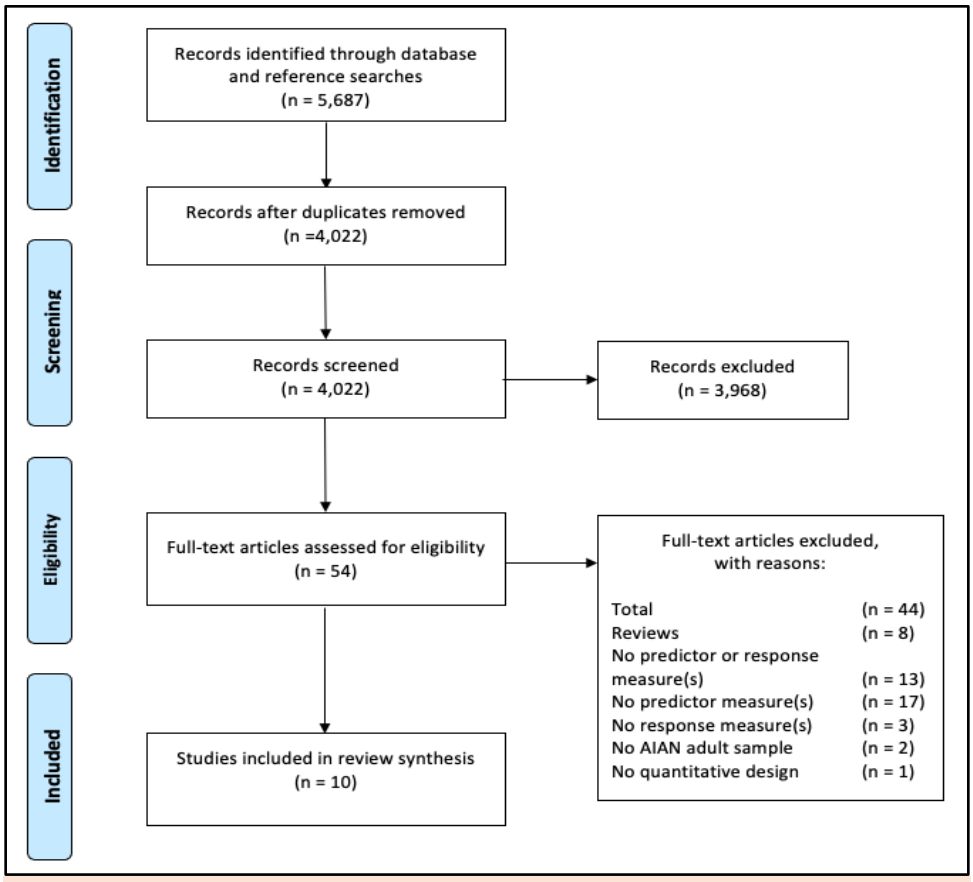

Figure 1. Flow diagram of PRISMA-guided study selection process.

4.0. Results

A total of 10 studies reporting quantitative measures met the inclusion criteria for our review. Included were: 1 randomized control trial; 1 pilot study; 1 prospective cohort study; 4 evaluation studies; and 3 cross sectional studies. All 10 studies were published in academic journals between 2003 and 2021. Study environments included both reservations (n = 3) and urban settings (n = 7). Five of the studies targeted participants in either an inpatient or outpatient substance use treatment program, two studies targeted specific reservation communities, one study targeted inmates, one study targeted homeless AIAN individuals, and one study targeted AIAN college students.

Table 1. Summary of included studies for the systematic review of traditional ceremonial practices (TCP) as a potential strategy against problem substance use in adult American Indians.

Study	Design	Sample Size Urban/Reservation	Predictor/ Exposure	Response/ Outcome	Results
Dickerson et al.[13] 2021	RCT	*N* = 63 Urban	Twelve 3-hour sessions (total of 36 hours) of therapeutic drum behavior therapy for AI/AN adults with AOD use disorders.	Quantity and frequency of substance use by participants.	DARTNA participants reported fewer drinks per day (d = − 0.39, 95% CI = − 1.04, 0.27), and lower odds of marijuana use in past 30 days (odds ratio = 0.50, 95% CI = 0.10, 2.54) compared to usual care.
Dickerson et al.[84] 2014	Pilot study	*N* = 10 Urban	3-hour treatment of therapeutic drum behavior therapy protocol sessions provided 2 times per week for 12 weeks.	Quantity and frequency of substance use by participants.	Eighty percent (8/10) completed at least the 6-week (midpoint) assessments. Fifty percent (5/10) completed the 12-week DARTNA program. 75% (6 of 8 participants) reported no alcohol or drug use at follow up.
Gossage et al.[80] 2003	Evaluation study	*N* = 190 Reservation	Navajo traditional practitioners conducted sweat lodge ceremonies with inmate/patients (I/Ps).	Quantity and frequency of substance use by participants.	At follow up, IPs were drinking about 1.5 drinks less than before the intake data were collected (5.4 versus 6.8).

					-Lower proportion of past-month drug use among respondents who participate in traditional ceremony: 16.1% and 25.5%, respectively (p = 0.041).
Greenfield et al.[85] 2018	Cross-sectional survey	*N* = 347 Urban	Survey scale for *Traditional Spiritual Activities* as well as a single item – "how important are traditional spiritual values to the way you lead your life?" Response options on a 4-point Likert rating scale.	Quantity and frequency of substance use by participants.	-Lower proportion of past-month marijuana use among respondents who participate in traditional ceremony: 10.5% and 17.4%, respectively (p = 0.079). -Lower proportion of past-month alcohol use among respondents who participate in traditional ceremony: 39.3% and 48.3%, respectively (p = 0.102). -Lower proportion of past-month binge drinking among respondents who participate in traditional ceremony: 23.6% and 30.5%, respectively (p = 0.177).

Herman-Stahl et al.[86] 2003	Cross-sectional survey	*N* = 2,449 Reservation	Survey measure included items regarding participation in traditional practices.	Quantity and frequency of substance use by participants.	-"More American Indian oriented" were less likely to report alcohol use than "bicultural" and "less American Indian oriented" (20.4%, 51.1%, and 58.6%, respectively; p = <0.001); less likely to report heavy alcohol use (11.2%, 28.8%, and 39.9%, respectively; p = <0.001); and less likely to report illicit drug use (12.2%, 26.9%, and 27.9%, respectively; p = <0.001). -Compared to "more American Indian oriented" heavy drinking OR for "bicultural" was 2.88 [95% CI (1.85 – 4.47); p = <0.05] and for "less American Indian oriented" was 4.38 [95% CI (2.56 – 7.49); p = <0.05].

Saylors[87] 2003	Evaluation study	*N* = 742 Urban	AIAN cultural healing activities include prayer, singing, drumming, sweat lodges, smudging, herbs, and use of tobacco in ceremonies. Talking circles were held regularly at the clinic for clients and staff.	Quantity and frequency of substance use by participants.	-Within the pre/post matched sample, alcohol use decreased 13% after six months and drinking alcohol to intoxication was reduced by 19%. -Of those women who had used marijuana, non-prescription methadone, hallucinogens, uppers, downers, and inhalants at intake, none reported use at six months. -Heroin use was down 93%.
Torres-Stone et al.[88] 2006	Cross-sectional survey	*N* = 980 Reservation	Survey scale for T*raditional Spirituality Scale.* Response options on a 4-point Likert rating scale.	Alcohol cessation was measured as a dichotomous variable, indicating they no longer drank alcohol after a prior period of alcohol use or abuse.	Alcohol cessation was significantly and positively associated with participation in traditional spiritual activities (r = 0.23, p = <0.01).
Tonigan et al.[89] 2020	Prospective cohort	*N* = 61 Urban	Frequency of attendance at either standard Alcoholics Anonymous (AA) or AA that was culturally adapted (CA-AA) to include TCP.	Two alcohol use measures were computed: Proportion of days abstinent from alcohol (PDA) and Drinks per drinking day (DPDD).	CA-AA participants reported an average of 6.49 drinks per drinking day compared to 6.72 for the AA-only participants.

Wendt et al.[90] 2017	Evaluation study	*N* = 52 (AIAN subsample) Urban	Native-specific TCP activities were coded from participants' brief, open-ended responses by a Native coauthor.	Quantity and frequency of substance use by participants.	-AIANs who engaged in TCP reported significantly lower drinking frequency in past 30 days (Mean = 10.00 days vs 24.15 days, p = 0.009) as well as amount consumed in the last 30 days (Mean = 10.34 vs 31.25, p = 0.017). –Marginally significant difference in days of intoxication, with fewer days of intoxication among those who engaged in TCP (Mdn = 5.00 vs. Mdn = 29.50, p = 0.05).
Wright et al.[91] 2011	Evaluation study	*N* = 490 Urban	Integrated mental health and substance abuse system that includes traditional cultural practices: talking circles, sweat lodge, traditional healers, seasonal ceremonies, prayer, smudging, drumming, and herbs.	Frequency of substance use by participants.	An 80.2% decrease in alcohol or other drug use. Of the 490 participants, 116 (23.7%) reported using alcohol or drugs in the prior 30 days at baseline, with a decline to 23 (4.7%) six months later (p < .001).

4.1. TCP Measures

The studies included an array of TCP interventions or activities. The most common were drumming (n = 9), sweat lodge (n = 7), and talking circles (n = 6). Five of the studies included interventions that were delivered or overseen by a traditional practitioner. The structure of the TCP measures varied broadly from a rigorous delivery schedule to cross-sectional surveys asking about participation in TCP during a specific period of time. Several studies also included information about how TCP delivery was tailored depending upon tribal homogeneity or lack thereof, with more heterogeneous communities choosing to adapt TCP based upon wide-ranging regional practices (e.g., the southwest or northern plains). For example, in their 2014 study, Dickerson et al.[84] talk about how the processes of making drums and learning songs were adapted in order to meet the needs of a multi-tribal, urban community. This included drawing on traditional practitioners from different tribes as part of their cultural advisory board (CAB).

4.2. Substance Use Behaviors

Each of the 10 studies reported some level of favorable change in substance use behaviors, although the strength of the findings varied widely. The single RCT study found that participants who completed the TCP intervention reported fewer drinks per day (d = −0.39; 95% CI = −1.04, 0.27) and lower odds of past-30-day marijuana use (OR = 0.50; 95% CI = 0.10, 2.54) compared to those participants who received similar hours of standard care. Five studies[84-87,91] found TCP participation or interventions to be associated with a lower proportion of self-reported substance use behaviors. Three studies[80,89,90] found that TCP participation was associated with either fewer days consuming alcohol or fewer alcoholic drinks consumed. One study[86] reported lower substance use odds associated with TCP participation. And one study[88] found that alcohol cessation was positively associated with participation in traditional spiritual

activities. Given this evidence, the review team is cautiously encouraged, and we believe this topic merits further research and attention, as outlined in our recommendations below.

4.3. Reservation vs Urban

One aim of our review was to identify whether there were differences in the application and/or effectiveness of TCP between reservation-based and urban AIAN communities. A noteworthy finding within our results is that the protective role of TCP was not confined to reservation societies. Studies in urban cities with tribally diverse samples reported reductions in problem substance use that do not appear to differ significantly from those within tribally homogeneous communities. This is especially meaningful given that the majority of AIAN individuals no longer live on tribally-controlled lands but rather in urban settings where substance use programming would need to serve a multi-tribal population.[32] For example, in their 2021 study, Dickerson et al.[13] report that their urban sample included affiliations from 33 different tribes. Yet the program was still able to demonstrate a reduction in number of drinks per day and marijuana use through its TCP-based intervention.

5.0. Discussion

AIAN people continue to experience an epidemic of problem substance use and the need for traditional practices as intervention is critical. Yet, access to TCP-based interventions for AIAN communities is currently constrained by the longstanding gap between Indigenous practice-based evidence and Western science. This could be fueled by a lack of knowledge or direct biases toward cross-cultural forms of problem substance use treatment. To redress these problems requires the promotion of science that incorporates responsible, quantitative research of Indigenous healing methods. TCPs are a culturally congruent strategy to reduce substance abuse.

To our knowledge, this is the first systematic review to highlight quantitative data exploring the relationship between TCPs and problem substance use among AIAN adults.

Most substance abuse research examines the deficits, risks, and challenges within AIAN communities.[92-94] This research currently fuels health policy, research, and funding. Yet, identifying and quantifying the problem has not, in and of itself, provided a solution. Providing access to TCP requires that clinicians and stakeholders are able to find ways to fund traditional forms of healing. But this funding is too often hindered by either ignorance or bias against Indigenous research, despite millennia of practice and, perhaps the most confirmatory evidence, the continued existence and flourishing of AIAN communities in the face of trauma. This review focused on works that explore the inherent strengths and assets that AIAN communities possess that create this environment for individuals to demonstrate resilience, a concept termed as *Reziliency*.[39]

As they gain in popularity, it is essential that TCPs continue to be overseen or directly led by an Indigenous traditional practitioner, as reflected in each of the studies included in this review. It is critical that our results be interpreted to reflect not just on the individual activities, such as drumming, smudging, or sweating, which traditional wisdom dictates are not independent, severable components. Rather, we must look on these as collective practices that are contextual and interwoven with language, geography, and tribal histories. The context of this evidence dictates that programming not be undertaken irreverent of the spiritual and traditional element, or as one qualitative study title directly calls out, "*Please Don't Just Hang a Feather on a Program or Put a Medicine Wheel on Your Logo and Think 'Oh Well, This Will Work.'": Theoretical Perspectives of American Indian and Alaska Native Substance Abuse Prevention Programs*.[95]

It is also important to note that many studies examining TCP do not provide definitions or explanations of how TCP was operationalized or carried out. This was a significant hurdle for our review, as there are likely several studies that could not be included because it wasn't possible from the article narrative to parse out or even determine the use of TCP, but that would have been included if more information were available. An example here are the Venner et al. studies[96,97] examining a culturally adapted Motivational Interviewing and Community Reinforcement Approach (MICRA). Their narrative noted that the "cultural component of the ASI was adapted to assess cultural and ceremonial practices specific to the Tribe in this study," but there was no information about how TCPs were incorporated or applied throughout the intervention. While we would have liked to have amplified our results with studies such as these, we recognize the very sincere and serious reasons why many AIAN communities may not be comfortable with this level of detail being shared. It would be naive and irresponsible for any researcher to expect tribal communities to ignore past events–including the historical criminalization of the very ceremonies being practiced now and the imprisonment or murder of practitioners leading those ceremonies–when reporting on studies today.

5.1. Practical Implications

It is our hope that to the greatest extent possible this review supports and informs the development and delivery of substance use programming for AIAN communities. In addition to particular activities and practices, we have identified and laid out common themes from studies that incorporate TCP aiming to reduce problem substance use:

- The process of designing and evaluating programming and research should either be led or informed by AIAN communities;
- TCPs should be delivered or overseen by a legitimate traditional practitioner; and

- TCPs are not severable components and should be delivered in the context of spiritual and traditional elements.

To assist with future evaluation of the effectiveness of TCP, up to and including meta-analyses, we recommend researchers adopt some standardized measures while still allowing for the adaptation of programming to reflect tribal affiliations among the community. Specifically, some feasible measures to include in future studies appear to be odds ratios for substance use vs. abstinence, cross-tabulations (Chi-square) between TCP and non-TCP subsamples, number of days using a particular substance in the last 30 days, and the number of drinks consumed per day.

5.2. Strengths and Limitations

This review was led by a Native American author with more than two decades of professional experience in AIAN health and whose lived experience includes practicing and participating in TCP. The senior member of the research team is a Native American clinical psychologist whose research has focused on identifying and enhancing culturally based protective factors. The two non-Native researchers both have a background working with tribal and urban AIAN communities and one previously led a similar systematic review focused on TCP and preventing substance abuse among AIAN youth.

A limitation is the rarity of studies in general that report quantitative data regarding TCP. Several systematic or scoping reviews have highlighted qualitative evidence that supports the effectiveness and promise of TCP to reduce problem substance use. While qualitative methodologies allow for a much deeper and contextualized understanding of phenomena, evaluation of the effectiveness of TCP-based interventions must necessarily include quantitative measures as well, and this is largely missing in the published literature. Because of this, it also was not possible to complete a meta-analysis due to the lack of consistent statistical methods

among the few studies that did publish this type of data. Additionally, the scarcity of studies did not enable us to compare the effect based on type of substance use (i.e., alcohol, marijuana, or other drugs). It is possible that more data could be found in gray literature, but this review did not have the necessary resources to perform a comprehensive search beyond available databases.

Finally, the belief of this review team that TCP should be defined by respective communities is both a strength and a limitation. While in line with the tenets of Critical Indigenous Research Methodologies, it limits generalizability. For example, a TCP-based intervention designed and delivered in the Pacific Northwest might not show the same effectiveness, without significant adaptation, if employed in an AIAN community in the Southeast. However, this reinforces the finding and recommendation that TCP-based interventions be community-led and either overseen or delivered by legitimate traditional practitioners.

6.0. Funding

The authors report no funding associated with this systematic review.

CHAPTER FOUR – Manuscript 2: American Indian traditional ceremonial practices and substance use behaviors in an urban multi-tribal setting: Results from a community survey

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American Indian traditional ceremonial practices and substance use behaviors in an urban, multi-tribal setting: Results from a community survey

D'Shane Barnett[1], Julie Cahoon[1], Jeffery Peterson[1], Curtis Noonan[1], Blakely Brown[1]

1. School of Public and Community Health Sciences, University of Montana, Missoula, MT

ABSTRACT

Objectives. We examined the association between American Indian traditional ceremonial practices (TCPs) protective factors and intent to participate in TCPs with self-reported substance use behaviors during the previous 12 months.

Methods. A 107-item survey was developed to assess TCP and substance use behaviors among urban American Indian and Alaska Native (AIAN) adults living in an urban, multi-tribal setting. The survey contained some previously validated items that were adapted as well as some original items. Recruitment materials were sent to 665 eligible AIAN adults by email or U.S. mail to participate in the online or paper and pencil survey. Of the 210 survey responses returned, 194 complete survey responses were included in the final analysis. Binomial multivariate logistic regression analysis was used to assess the relationship between TCP variables, substance use, and demographic covariates in the sample.

Results. More positive TCP protective factors were found in 56.4% of the sample. Greater self-reported intent to participate was found in 36.7% of the sample. After adjusting for age and income, multivariate analysis indicated that individuals with more positive TCP protective factors or greater self-reported intent to participate in TCPs were less likely to report alcohol or other drug use. However, these findings were not significant for marijuana use. Finally, participants with greater self-reported knowledge regarding TCPs significantly less likely to report using alcohol or other drugs besides marijuana.

Conclusions. Our findings highlight the need for greater attention to be placed on substance use interventions for urban American Indian adults that are either grounded in TCPs or that integrate TCPs into existing designs. Including a learning component aimed at increasing participant knowledge regarding TCPs may increase the effectiveness of interventions.

Keywords: American Indians; substance use; traditional practices; ceremony; intervention; treatment; protective factors

1.0. Introduction

American Indian and Alaska Native (AIAN) communities have successfully relied on long-held traditional ceremonial practices (TCPs) to survive and recover from historical traumas, such as forced relocation and boarding schools, for generations.[2,47] Despite millennia of practice-based evidence, however, TCP-based interventions are often deemed as not 'validated' due to a paucity of academic research.[1,75] A national movement toward accepting only Western scientific evidence of effectiveness culminated with the development of the National Registry of Evidence-based Programs and Practices in 2007.[9] Relying on evidence-based programs, whether culturally adapted or not, does not appear to have solved the crisis of problem substance use in AIAN communities.

While the 2020 National Survey on Drug Use and Health found that lifetime alcohol use was lower among AIAN participants than non-Hispanic Whites, AIAN adults (18 years or older) reported the highest prevalence of heavy drinking for any identified race.[6] AIAN adults also reported the highest prevalence of both lifetime and past-year illicit drug use (including marijuana, methamphetamine, and opioids) of any other race. Alarmingly, while the prevalence of past-year illicit drug use either decreased or increased only slightly for other racial categories, the proportion of AIAN adults reporting illicit drug used increased by 37% between 2019 and 2020.[6] The COVID-19 pandemic has only added to the substance use crisis, with AIAN individuals experiencing the greatest drug overdose death rate (drug overdose deaths per 100,000) of any racial or ethnic group in the United States between January and September, 2020, according to the CDC.[7]

As community-informed and community-led research is becoming more common, studies over the last several decades are beginning to highlight the potential for TCP-based interventions

to prevent or decrease problem substance use within AIAN communities.[12,78] Emerging research is finding that this approach may also be effective in urban AIAN communities, which are often heterogeneous in terms of tribal affiliation and acculturation.[13,89,91] However, not enough information is available on the generalizability of TCP-based interventions with urban AIAN populations. There have been no studies, for example, that assess the potential effectiveness for this type of substance abuse programming among urban AIAN communities in Montana.

There are five federally-funded Urban Indian Health Organizations (UIHOs) located in Montana, the second highest concentration within any state, after California.[98] To better understand TCP practices and, more importantly, the potential for a TCP-based problem substance use intervention, a survey was conducted as part of a larger research study with AIAN clients from one Montana UIHO. Here we report on the findings of this survey and present implications for the planning and development of future work to decrease problem substance use within this population.

2.0. Methods

Critical Indigenous Research Methodologies (CIRM) guided the approach of this study.[44] A CIRM framework is based on the belief that Indigenous communities possess traditional knowledge that is not in opposition to science but rather should be used to instruct research within those communities. Crucial to the CIRM process is that Indigenous knowledge dictate what topics or issues need to be studied, how they should be measured, and how that information is interpreted and disseminated. Meetings between the first author and Indigenous staff members at the UIHO—specifically the director of behavioral health and the behavioral health clinical supervisor—over the course of 2019 informed the conceptualization and design of this project.

Study approval was received from the UIHO board of directors in March 2020 and by the IHS National Institutional Review Board, the preferred IRB designated by the UIHO, in July 2020.

2.1. Project Model

Prior to the COVID-19 pandemic, the community survey was intended to measure self-reported rates of participation in TCP activities and substance use behaviors over the previous year. Staff members at the UIHO posited that individuals who participate more actively in TCP would likely demonstrate fewer problem substance use behaviors. However, the COVID-19 pandemic created a situation in which most community-based TCP activities were cancelled to limit the spread of the SARS-CoV-2 virus. Accordingly, the survey measures were adapted to include construct measures, specifically a participant's knowledge, attitudes, beliefs, and self-reported intent to participate in TCP, that could approximate for direct participation in TCP.

In developing our COVID-adapted project model, we drew on two existing theories. Our foundational tenet for this project is *Reziliency*.[39] Adapted from Resilience Theory,[99] *Reziliency* was developed by an Indigenous psychologist for application in both reservation and urban American Indian communities. It is a strengths-based framework that encompasses the positive factors, approaches, and methods used within AIAN communities when faced with experiences of adversity or trauma that create an environment for individuals to demonstrate resiliency. Because we could not measure direct participation in TCPs due to the pandemic, we drew on the theories of Reasoned Action and Planned Behavior.[100] These frameworks have been successfully applied to prior public health work with American Indian participants.[101,102] Based on these theoretical concepts, the research team brought the COVID-responsive project model in Figure 1 to the UIHO staff for review.

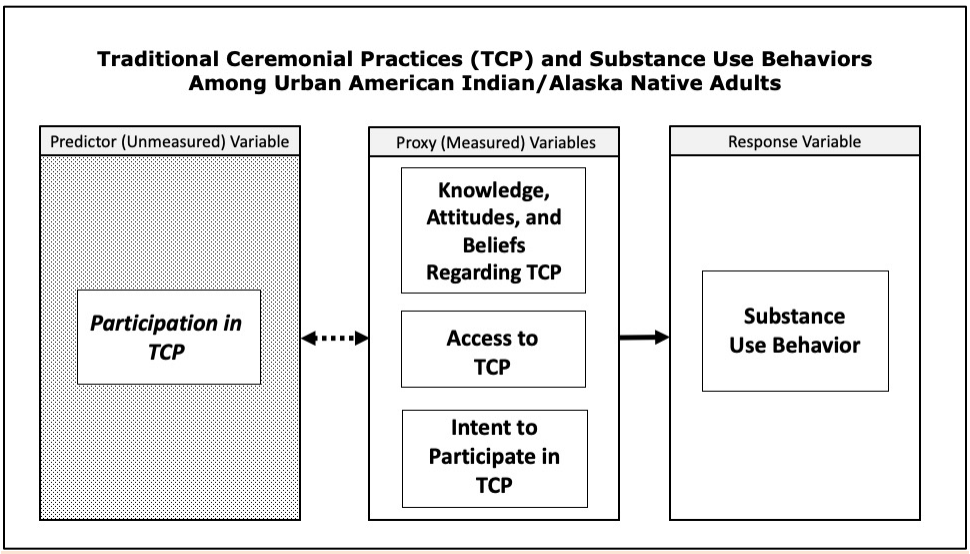

Figure 1. COVID-adapted project model showing the anticipated association between the predictor, proxy, and response variables.

2.2. Survey Development

Substance Use Measures. In consultation with a University of Montana faculty member who specializes in substance use research and with the UIHO behavioral health leadership, select substance use measures were drawn from the National Survey on Drug Use and Health[103] to capture data on needs and concerns as defined by the community. Specifically, respondents were asked about their past-year use of alcohol, marijuana, methamphetamine, inhalants, and prescription medications (in a way not directed by a medical provider).

TCP Measures. To limit the impact of recall bias on the results, the research team decided to not ask about past participation in TCPs. A review of the literature informed the selection of validated instruments for AIAN populations that included scales or items aimed at measuring other TCP-related constructs as well as health indicators and general demographics. The Indigenous Wellness Research Institute out of the University of Washington created a COVID-19 Indigenous Needs Assessment instrument that included a protective factor scale for TCP that was slightly adapted to measure participant attitudes, knowledge, and beliefs (KAB)

regarding TCP.[104] No articles were found by the research team that included scales related to self-reported access or intent to participate in TCP. The research team developed these two scales. Each scale—KAB, Access, and Intent—was then reviewed by two Indigenous psychologists. Feedback from both psychologists was incorporated into modified scales.

Cronbach's alpha. To assess internal validity, we performed a Cronbach's alpha test on each TCP measurement scale (see Appendix B). As expected, the modified KAB scale adapted from a previously validated instrument showed high internal consistency ($\alpha = 0.93$). The Intent scale also showed acceptable internal consistency ($\alpha = 0.85$). The Access scale, however, did not show acceptable internal consistency ($\alpha = 0.44$) and was removed from analyses.

2.3. Pilot Testing

Before deploying the survey to the community, it was pilot tested with ten participants purposively selected to allow for diversity in review based on age, gender, and level of education. The pilot testing sample was comprised of five females, four males, and one Two Spirit individual, and included college students, elders, Indigenous professionals, and a traditional practitioner. Each participant was asked to take the survey on their own and then participate in an interview with a member of the research team to provide feedback on questionnaire items for clarity, perceived relevance, and cultural appropriateness. Additionally, the survey was reviewed by three cultural advisors. Final modifications to the instrument were made by the research team based on this feedback before being distributed to the community. The full questionnaire can be found in Appendix C.

2.4. Sample

Via the electronic health records (EHR) system, UIHO staff identified eligible participants. Inclusion criteria were: (1) AIAN adults (18 years and older); (2) currently living in

either of two counties served by the UIHO; and (3) interacting with the UIHO at least once within the last three years. An interaction included any medical, dental, or behavioral health appointment, along with participation in any health promotion events or activities where contact information was collected. Based on these criteria, EHR records generated 275 email addresses and 504 physical addresses for 779 unduplicated AIAN adults.

Between September and November 2021, an email invitation and four follow-up emails were sent to potential survey participants via Qualtrics®. From the original set of 275 email addresses, 33 email addressed bounced or could not be delivered and one individual opted out of receiving emails, for a total of 241 potential electronic respondents. In October 2021, 504 paper survey packets were sent out with an option to complete the survey questionnaire online, using an included link or QR code, or via mail using a postage-paid return envelope. From this original set, 76 packets were returned as undeliverable and four were returned because the individual was now deceased, for a total of 424 potential paper respondents.

2.5. Statistical Methods

Measures. Outcome measures were binary, in which "0" was used to indicate no reported substance use and "1" indicated substance use. TCP variables were dichotomized based on their Likert scale values. Participants were assigned a "0" for the protective factor scale if their mean score reflected "A Little Important" or "Not At All Important" or a "1" if their mean score reflected "Fairly Important" or "Very Important." Participants were assigned a "0" for the intent scale if their mean score reflected "Extremely Unlikely," "Somewhat Unlikely," or "Neither Likely nor Unlikely" or a "1" if their mean score reflected "Somewhat Likely" or "Extremely Likely." While this approach is common with Likert scale data,[105] to test the validity of our results we investigated cut-point effect comparing against using median and upper quartile

values (see Appendix D). We did not find an indication that the significance of the association increases or decreases in accordance with the cut-point.

Analyses. We conducted all analyses using RStudio software (version 1.3.1093). Percentages of past-year substance use, KAB, access, and intent were estimated using Chi-square tests. Model building for binary logistic regression was accomplished through a purposeful selection process.[55] First, we performed bivariate analyses for each type of substance use outcome with each TCP measure and covariates. Any variables that individually were not significant predictors ($p < 0.05$) or did not influence the odds ratio by 10% or more were removed from the model.

Many, like Tai & Machin, define the objective of the modeling process as an attempt to "find the simplest (most parsimonious) model yet one that still describes the essential features of the data adequately."[106(p.61)] To this end, the models were refined by evaluating the effect of dropping a given variable (ANOVA p-value < 0.05) to find the most parsimonious model for each outcome variable. As a result, the final regression models include age and household income.

3.0. Results

There was a cumulative response rate of 32% for all survey modes. There was a 26% response rate for the 424 individuals contacted via U.S. mail, with 68 respondents mailing a completed survey and 42 respondents completing the survey online using the web link or QR code that was included with the paper survey questionnaire. There was a 42% response rate for the 241 individuals contacted via electronic mail, with 102 surveys completed online. Of the 212 completed surveys, two were excluded because the respondent did not currently live in one of the two target counties and 16 were excluded due to incompleteness, resulting in 194 survey

responses included in the final analysis. The average time to complete the survey online was 17.25 minutes (Range: 5.5 – 65 minutes).

3.1. Demographics

Characteristics of the sample are shown in Table 1. All respondents identified as an American Indian. Tribal heterogeneity was present in the sample. There were 38 different tribal nations reported as part of various tribal affiliations and 62% of respondents reporting affiliation with a Montana tribe. Females comprised 66% of respondents in the sample, males comprised 29%, and 5% identified as Two-Spirit or nonbinary. Young adults (18-29 years) made up 24% of the sample, 47% were adults (30-55 years), and 29% were elders (56 years or older). The study took place in a college town, which may explain why education among the sample is higher than would be expected in other parts of the state. Only 17.5% had a high school diploma or less, 32.5% had completed some college, and 50% had a college degree. Despite the high levels of education, 46% of respondents reported an annual household income below $30,000, 29% between $30,000 and $60,000, and 25% more than $60,000.

Table 1. Select characteristics of survey respondents ($N = 194$), by knowledge, attitudes, and beliefs (KAB) regarding traditional ceremonial practices (TCP) and self-reported intent to participate in TCP.

		KAB Regarding TCP N[a] (%)[b]			Intent to Participate in TCP N[a] (%)[b]		
VARIABLE	**N[a] (%)[b]**	**More Positive n = 107 (54.6)**	**Less Positive n = 89 (45.4)**	***P*[c]**	**Greater n = 72 (36.7)**	**Lesser n = 124 (63.3)**	***P*[c]**
Gender				0.324			0.043
All Female Genders[d]	129 (66.5)	74 (69.8)	55 (62.5)		54 (76.1)	75 (61.0)	
All Male Genders[e]	56 (28.9)	29 (27.4)	27 (30.7)		13 (18.3)	43 (35.0)	
All Nonbinary Genders[f]	9 (4.6)	3 (2.8)	6 (6.8)		4 (5.6)	5 (4.1)	
Age				0.011			0.038
Young Adult (18-29)	47 (24.2)	22 (20.8)	25 (28.4)		14 (19.7)	33 (26.8)	
Adult (30-55)	91 (46.9)	60 (56.6)	31 (35.2)		42 (59.2)	49 (39.8)	
Elder (56+)	56 (28.9)	24 (22.6)	32 (36.4)		15 (21.1)	41 (33.3)	
Health Status				0.113			0.294
Better Health	78 (40.2)	48 (45.3)	30 (34.1)		32 (45.1)	46 (37.4)	
Average to Poorer Health	116 (59.8)	58 (54.7)	58 (65.9)		39 (54.9)	77 (62.6)	
Education				0.052			0.033
HS diploma or less	34 (17.5)	14 (13.2)	20 (22.7)		8 (11.3)	26 (21.1)	
Some college	63 (32.5)	30 (28.3)	33 (37.5)		18 (25.4)	45 (36.6)	
Associate or Bachelor's degree	70 (36.1)	43 (40.6)	27 (30.7)		31 (43.7)	39 (31.7)	
Graduate degree	27 (13.9)	19 (17.9)	8 (9.1)		14 (19.7)	13 (10.6)	
Annual Household Income				0.404			0.004
< $30,000	89 (45.9)	44 (41.5)	45 (51.1)		22 (31.0)	67 (54.5)	
$30,000 - $59,999	57 (29.4)	34 (32.1)	23 (26.1)		29 (40.8)	28 (22.8)	
$60,000 +	48 (24.7)	28 (26.4)	20 (22.7)		20 (28.2)	28 (22.8)	
Native American Identity				< 0.001			< 0.001
Stronger Native Identity	142 (73.2)	98 (92.5)	44 (50.0)		67 (94.4)	75 (61.0)	
Limited Native Identity	52 (26.8)	8 (7.5)	44 (50.0)		4 (5.6)	48 (39.0)	
Positive Childhood Experiences				0.039			0.032
0 – 2 PCEs	32 (16.5)	11 (10.4)	21 (23.9)		6 (8.5)	26 (21.1)	
3 – 5 PCEs	77 (39.7)	44 (41.5)	33 (37.5)		27 (38.0)	50 (40.7)	
6 – 7 PCEs	85 (43.8)	51 (48.1)	34 (38.6)		38 (53.5)	47 (38.2)	

[a]Unweighted frequency from the sample.

[b]Column percentages may not add up to 100% due to rounding.

[c]*P* values were determined by χ^2 test when all cells ≥ 5, else Fischer's Exact test.

[d]Includes "cisgender female" and "transgender female."

[e]Includes "cisgender male" and "transgender male."

[f]Includes "Two-Spirit" and "nonbinary."

3.2. Substance Use Behavior

Past-year alcohol use was reported in 63.4% of the sample, compared to a national prevalence among AIAN adults (18+ years) of 61.0%.[6] Due to low precision, illicit drug use categories (methamphetamine, inhalants, and prescription medications used in a way not directed by a medical provider) were combined for analysis. Illicit drug use (not including marijuana) was reported in 12.4% of the sample, compared to the AIAN adult national prevalence of 11.4%. Interestingly, marijuana use was reported in 52.1% of the sample—almost 2.5 times the 2019 national prevalence for AIAN adults of 20.4%. These results are not unexpected, however, as they are in line with the region of the study which has a longstanding liberal attitude toward marijuana use and legalized the use of recreational marijuana during the study period.

3.3. Relationships between TCP and Substance Use

After adjusting for age and income, the binary logistic regression showed significant associations between the TCP predictor variables and both alcohol and other drugs, but not marijuana. Individuals with more positive KAB regarding TCP were less likely to report alcohol (AOR: 0.49; 95% CI: 0.26, 0.93) or other drug use (AOR: 0.30; 95% CI: 0.11, 0.76) in the past year, although confidence intervals were wide. Individuals who had greater intent of participating in TCP were also less likely to report alcohol (AOR: 0.51; 95% CI: 0.26, 0.98) or other drug use (AOR: 0.31; 95% CI: 0.08, 0.91) in the past year, with accordingly wide confidence intervals.

3.4. Participant Knowledge Regarding TCPs

Although the original survey scale related to participant access to TCPs did not show high internal validity when tested using Cronbach's alpha, we did explore the four individual items from the scale. Of the four statements included in the access scale, the following item had

a significant association with both alcohol and other drug use: *If I am invited to a ceremony or other traditional practice, I am confident that I will know what to do or how to act (e.g., when to talk, songs to sing, what to wear)*. Participants who responded as "Strongly Agree" to this item were significantly less likely to report alcohol or other drug use over the previous 12 months. They were also less likely to report marijuana use, but this association was not statistically significant.

3.5. Positive Childhood Experiences

In attempting to maintain our focus on a strengths-based investigation, the survey instrument included a previously validated scale measuring positive childhood experiences (PCEs).[107,108] While the scale did not contribute significantly to the association between TCP factors and substance use, and was subsequently removed from our final model, it nevertheless contributes important information about our sample. Emerging evidence is providing insight about the protective role that PCEs play in supporting adult positive mental health outcomes.[108] The majority of our sample (83.5%) reported at least three PCEs. In our full model, as the number of PCEs reported by participants increased, their likelihood of reporting any type of substance use decreased. However, these relationships were not statistically significant. Future work in both urban and reservation AIAN communities could explore in greater depth the role that PCEs may play in preventing problem substance use.

Table 2a. Crude and adjusted odds ratios for alcohol, marijuana, or other drug use by respondent *knowledge, attitudes, and beliefs* (KAB) regarding traditional ceremonial practices (TCP).

	SUBSTANCE USE WITHIN THE PREVIOUS 12 MONTHS		
	Alcohol	**Marijuana**	**Other Drugs**[a]
	OR (95% CI)	OR (95% CI)	OR (95% CI)
CRUDE			
Less Positive KAB	Ref	Ref	Ref
More Positive KAB	0.57 (0.31, 1.03)	0.70 (0.40, 1.24)	0.37 (0.14, 0.88)*
ADJUSTED[b]			
More Positive KAB	0.49 (0.26, 0.93)*	0.65 (0.35, 1.18)	0.30 (0.11, 0.76)*
Age			
Young Adult (18-29)	1.98 (0.85, 4.70)	4.44 (1.95, 10.58)**	4.13 (1.07, 20.47)
Adult (30-55)	1.30 (0.61, 2.79)	2.52 (1.21, 5.43)*	7.15 (1.93, 35.71)*
Elder (56+)	Ref	Ref	Ref
Annual Household Income[c]			
< $30,000	Ref	Ref	Ref
$30,000 - $59,999	2.75 (1.31, 6.00)**	0.77 (0.38, 1.57)	0.24 (0.06, 0.74)*
$60,000 +	2.42 (1.09, 5.61)*	0.69 (0.32, 1.50)	0.18 (0.04, 0.65)*

*Significant at the 0.05 level; **Significant at the 0.01 level

[a]Includes methamphetamine, inhalants, and prescription medications not used as directed by a medical provider

[b]Adjusted for age and annual household income

[c]Annual household income for all household members combined

Table 2b. Crude and adjusted odds ratios for alcohol, marijuana, or other drug use by respondent *intent to participate* in traditional ceremonial practices (TCP).

	SUBSTANCE USE WITHIN THE PREVIOUS 12 MONTHS		
	Alcohol	**Marijuana**	**Other Drugs**[a]
	OR (95% CI)	OR (95% CI)	OR (95% CI)
CRUDE			
Less Intent	Ref	Ref	Ref
Greater Intent	0.68 (0.37, 1.25)	0.70 (0.39, 1.26)	0.31 (0.09, 0.86)*
ADJUSTED[b]			
Greater Intent	0.51 (0.26, 0.98)*	0.67 (0.36, 1.26)	0.31 (0.08, 0.91)*
Age			
Young Adult (18-29)	1.96 (0.85, 4.66)	4.38 (1.93, 10.39)**	4.16 (1.09, 20.47)*
Adult (30-55)	1.23 (0.58, 2.58)	2.41 (1.16, 5.14)*	6.26 (1.73, 30.41)**
Elder (56+)	Ref	Ref	Ref
Annual Household Income[c]			
< $30,000	Ref	Ref	Ref
$30,000 - $59,999	3.11 (1.45, 7.00)**	0.83 (0.40, 1.71)	0.29 (0.07, 0.88)*
$60,000 +	2.63 (1.17, 6.15)*	0.73 (0.33, 1.58)	0.20 (0.04, 0.72)*

*Significant at the 0.05 level; **Significant at the 0.01 level

[a]Includes methamphetamine, inhalants, and prescription medications not used as directed by a medical provider

[b]Adjusted for age and annual household income

[c]Annual household income for all household members combined

4.0. Discussion

4.1. Findings

This is the first study to quantitatively explore the association between TCP and substance use behaviors in an urban Montana AIAN community. Our findings that the protective factors of TCP may be associated with lower levels of problem substance use align with those of pre-COVID studies in other urban AIAN communities that were able to examine actual participation in TCPs along with substance use behaviors. For example, in their 2021 randomized control study, Dickerson et al.[13] found that participation in their Drum-Assisted Recovery Therapy for Native Americans in southern California was associated with fewer alcoholic drinks per day and lower odds of marijuana use among participants. Another study of AIAN adults in northern California found that participation in a culturally adapted holistic system of care was associated with a significant decrease in alcohol and other drug use.[91]

Within the target community of our study, we found that 54.6% of our sample reported positive KAB regarding TCP and 36.7% reported high levels of intent to participate in TCP. Participants who reported more positive KAB or greater intent to participate were significantly less likely to report alcohol or other drug use in the past year. Programming like that in the California AIAN studies was not available in the target community during our study. However, our results support the development of TCP-based interventions as an appropriate approach to substance use reduction.

In our sample, adults (30 – 55 years) and younger adults (18 – 29 years) were more likely to report substance use than elders (56 years or older). Households with higher incomes were more likely to report alcohol use and households with lower incomes were more likely to report using marijuana and other drugs. When taken together with other epidemiological data, this

information can help inform future programming. For example, if surveillance shows that drug overdose is occurring at greater rates than alcohol-related death in the target community, a TCP-based intervention could be aimed at younger adults or individuals with lower income.

Marijuana use in our sample was high, in fact roughly double that of the 2020 national AIAN adult use rate.[6] While there is some evidence in the literature that marijuana may be perceived as less harmful than alcohol or other drugs,[109,110] this construct was not measured in the current study. Further investigation could explore the disproportionately high prevalence of marijuana use. It is also important to note that recreational marijuana is currently legal in the state where the study took place. This, along with other factors, may contribute to prevalence being higher among the target community than national trends.

4.2. Implications

Our findings have several important implications. First, efforts to decrease problem substance use, especially for alcohol and other drugs, among AIANs living in urban settings may be more effective if they include a TCP component. In our study, increases in TCP variables were associated with decreases in self-reported substance use behaviors. Indigenous communities draw on generations of practice-based evidence that help guide TCPs and their potential effectiveness. This evidence is reflected in our data, which provide further support for the need to develop problem substance use programming that includes TCP activities at least as a component, if not at its foundation.

To accomplish this, public and private payers need to dedicate funding toward TCP-based interventions. Our study provides preliminary data about KAB and intent, because the UIHO does not have funding to implement broad TCP programming. Once this type of

programming is supported, future research could explore effectiveness and help inform best practices for urban AIAN communities.

Additionally, our data highlight the need for more research to better understand community-wide prevalence of problem substance use, particularly marijuana, within the study and other urban American Indian communities. The potential adverse effects of chronic, non-medical marijuana use include cardiovascular problems, cognitive impairment, and mental illness.[111,112] The high prevalence of marijuana use in our sample may lead to disproportionate disease burden in the future, if not adequately understood or addressed. Future research could explore both the reasons why marijuana use may be so frequent and possible interventions to reduce rates of marijuana use.

4.3. Limitations

American Indians make up a small proportion of the total population of the two counties participating in this study and locating them within the broader community is challenging. Because there is no single sampling frame of all AIAN individuals in the area, the research team took the approach of drawing from the UIHO's EHR system to identify potential participants. Because of this, it is not possible to know how generalizable our results are to the entire AIAN community—however, the sampling frame was the largest available and included about one-fourth of the total AIAN census population for the area.

The cross-sectional survey design also has several limitations. First, it is subject to recall bias, especially because we were asking for information over a 12-month period. However, this same period was applied to both the predictor and outcome variables, which should help limit the impact on findings. Second, response bias could lead to an overestimation of healthy behaviors, as individuals experiencing problem substance use could be less likely to complete and return a

survey. We attempted to limit this by taking steps to make the survey was easily accessible, which included allowing participants to take the survey in their own homes or wherever they were most comfortable and ensuring that participants could complete the questionnaire at their own pace, save results, come back to the survey, and receive appropriate financial compensation upon completion. Finally, those individuals who did return a survey might be reporting answers that they believe to be socially desirable, especially when considering that problem substance use is largely considered an unacceptable disease and is often stigmatized. This was addressed by not only making the survey anonymous but including language throughout the questionnaire reminding participants of their anonymity.

It is also important to note that these data come from a larger survey that included questions related to not only substance use but also intimate partner violence (IPV), which might have caused some respondents distress and/or led to lower completion rates. The survey included a list of both IPV and substance use counseling resources—including some that are AIAN-specific and others that are available 24 hours a day—as well trigger warnings letting respondents know what kind of questions to expect, as well as an option to skip the IPV section altogether if they were uncomfortable. Additionally, the IPV questions were placed after the TCP and substance use questions in an attempt to minimize the impact on data collection.

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CHAPTER FIVE – Manuscript 3: Traditional ceremonial practices as an intervention to reduce problem substance use in an urban multi-tribal Native American community: A qualitative descriptive study

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Traditional ceremonial practices (TCP) as a strategy to reduce problem substance use in an urban Native American community: A qualitative descriptive study

D'Shane Barnett[1], Catherine McKinley[2], Annie Belcourt[1]

1. School of Public and Community Health Sciences, University of Montana, Missoula, MT
2. School of Social Work, Tulane University, New Orleans, LA

ABSTRACT

Objective. American Indian and Alaska Native (AIAN) communities have relied on traditional ceremonial practices (TCP) for generations to survive and recover from historical traumas. The purpose of this research is to qualitatively explore the potential for TCP-based interventions aimed at reducing problem substance use in an urban, multi-tribal setting.

Methods. A qualitative descriptive study was conducted using semi-structured interviews with 11 adult AIAN members of an urban Montana community. The interviews were transcribed, coded, and analyzed using NVivo (release 1.6.1). Theoretical thematic analysis was used to identify themes and subthemes.

Results. Themes for developing a TCP-based intervention include: (a) *"It has to come from the elders" - Design and delivery of TCP interventions guided by elders;* (b) *"They've never really been given the rights" - Vetting of traditional practitioners;* (c) *"You have to educate them first on these things" - The need for a learning component;* and (d) *"It's so much different than the reservation" - A multi-tribal approach*. Themes related to access barriers include: (e) *"I don't really hear as much here in [the city]" – Lack of communication about activities;* (f) *"I do it in secrecy" – The need for a dedicated physical space;* and (g) *"I always went back home…to do our cultural practices" – The practice of "going home" to participate in TCP*.

Conclusions. Interventions that incorporate TCP are a valuable tool in the fight to reduce problem substance use in urban, multi-tribal AIAN communities. Participants spoke about their desire to see this type of programming in their local community, but also provided parameters about how they would want to see that programming be designed. Urban AIAN-serving organizations may work with elders and tribally sanctioned traditional practitioners to develop TCP-based interventions can serve individuals from an array of tribal backgrounds.

1.0. Introduction

American Indian and Alaska Native (AIAN)* communities grapple with the symptoms and effects of historical trauma, discrimination, and poverty, which may contribute to observed high rates of problem substance use.[5] In the 2020 National Survey on Drug Use and Health, for example, AIAN individuals reported the highest rates of heavy alcohol or illicit drug use of any racial or ethnic group.[6] Elevated problem substance use rates drive much of the morbidity and mortality that AIANs disproportionately experience. On average, AIANs die 5-6 years earlier than non-AIANs. Not only is problem substance use a risk for the top causes of death (i.e., cardiovascular disease, cancer, unintentional injuries, motor vehicle accidents, and diabetes), alcohol induced death is the 5th highest cause of death – almost 7 times higher than the rate of non-AIANs–and drug induced death is the 10th top cause of death–a rate that is 1 ½ times that of non-AIANS.[113] While epidemiologic data are important tools for examining population health, interpreting data on Indigenous communities through the context of a mainstream lens can be problematic.[114]

In the past, high rates of problem substance use in AIAN communities was erroneously viewed by outside academics through a lens of biological vulnerability, known as the "Firewater Myth."[115] It was presumed that AIAN individuals were somehow more susceptible to alcoholism and other substance use due to a physiological deficit at the genetic level. Over time, a body of research has been built up showing that structural and social determinants are the more likely

* The authors subscribe to the belief that the most appropriate way to refer to any Indigenous person or tribe is using the term from their specific language or dialect. For consistency, throughout this manuscript we will broadly refer to Indigenous persons and peoples of the United States using the widely accepted term American Indian and Alaska Native (AIAN). However, other terms such as Indigenous, Native American, Native, American Indian, and Indian may be substituted based on context or original quotations.

drivers not just for problem substance use, but conversely for resilience and high rates of abstinence among AIAN individuals.[73,116,117]

Traditionally, AIAN communities and individuals held ecological knowledge that supported holistic wellness for their tribal members through a variety of medicines and ceremonies.[1] However, as the existence and prosperity of tribal nations became a focus of genocide and assimilation to the United States in the 19th century, policies and systems were put in place to eliminate the ability of AIAN people to employ these protective traditional ceremonial practices (TCP).[47,118] Beginning in 1883, laws were established outlawing the practice of TCPs under threat of imprisonment and many of these laws remained in effect until the passage of the American Indian Freedom of Religion Act of 1978.[3] The disproportionate disease burden seen today in AIAN populations is a lasting ramification of this systematic alienation of AIAN communities from TCPs and traditional wisdom over three generations.[47] As is the paucity of academic evidence needed to validate TCPs within Western science.[119]

Today there is a growing movement in AIAN healthcare and academic communities to support AIAN-serving substance use programs in their efforts to revive and incorporate TCPs.[120] Scholars who have worked extensively within AIAN communities (notably including Native scholars) now advocate for more a culturally grounded contextualization of intervention development for a variety of health concerns. Antiquated approaches to Indigenous intervention science have emphasized external approaches to both science and intervention. It is becoming increasingly apparent, however, that public health interventions based upon Indigenous ways of knowing and healing can provide more culturally congruent, and potentially more effective, intervention strategies.[15,75,121]

Kleinman's[46] explanatory model of cross-cultural understanding of health and illness delineated the importance of incorporating an individual client or patient's view of their own lived experience within an effective intervention plan. This includes how individuals or communities view their own beliefs, social connections, culture, and spirituality. More recently, Indigenous authors have effectively advocated for the inclusion of strengths-based or resiliency models of health etiology. Walters et al.[114] describe the importance of an Indigenist-stress coping model to understand the influence of cultural factors within health outcomes. In Montana, research has begun to shift toward a resiliency approach. Research findings have helped to identify the importance of cultural factors in adaptive coping following trauma.[39]

This project is aimed at elucidating the empirical potential for TCP-based interventions in an urban, multi-tribal setting using exploratory, structured interviews with a cross-section of adult AIAN community members. Part of a larger sequential mixed-methods study, this research expounds upon the meaning or broader understanding of the associations between TCP and substance use behaviors found to be protective in a quantitative survey study of the same domains.[122] Interviews for this study aimed to explore the perceptions of community members related to how TCP-based interventions could be implemented successfully to reduce problem substance use. Additionally, interviews were directed to describe the difference between levels of KAB and intent that were identified in survey results among the target community, through actual lived experience interview data from key informants.

1.1. Examples of TCP

The purpose of this study was to explore the potential for interventions that incorporate TCP as an approach, rather than test a particular practice or activity. With that goal in mind, the researchers did not define TCP ahead of time. Instead, we took a culturally and community-

informed approach by letting participants define TCP based on their respective tribal backgrounds. Below are some of the most common examples of TCP that were identified by the participants during the interviews.

- **Sweat lodge:** Variations of the sweat lodge ceremony are ubiquitous throughout many Indigenous traditions worldwide.[123] However, each tribal nation is unique in its protocols for how the ceremony takes place, how the lodge is built, who should or should not participate, etc.
- **Talking circle:** Rooted in ceremonial practices within many different tribes, talking circles are applied in various formats in contemporary AIAN societies–ranging from highly protocoled ceremonial practices to more informal, though no less structured, group communication tools.[124,125]
- **Pipe ceremony:** Another practice common to many tribes in the United States is the ceremonial use of tobacco.[126] Popularized in Western culture, the practice of using a pipe to smoke tobacco or other Indigenous plants remains a very sacred practice. Usually, only certain individuals within a tribe–often known as *pipe carriers*–are allowed to lead these ceremonies.
- **Smudging:** This is the practice of burning Indigenous medicines (leaves, roots, resin, etc.) but not for inhalation.[127] Rather, the purposes of smudging can include purification of a person's body, physical artifacts, or the space around someone. Also popularized in Western culture, different tribes have historically relied on various medicines for smudging, including sage, sweet grass, cedar, copal, and tobacco, among others.

- **Sun Dance:** A religious ceremony common to many Plains tribes, the Sun Dance is an annual rite.[128] The history behind the ceremony, protocols such as when it takes place and for how long, and other factors will often vary by tribe.

2.0. Methods

2.1. Reflexivity

As an administrator at several AIAN-serving healthcare organizations, the first author spent many years overseeing programs and services aimed at reducing problem substance use for AIAN adults. A constant source of frustration was the ability to receive financial compensation when patients would see a medical or behavioral health clinician–a service deemed as evidence-based by public and private payers and policymakers–and a concurrent inability to receive compensation when patients would work with a traditional practitioner–a service with long-standing practice-based evidence which was disregarded by payers and policymakers. With the guidance and mentorship of faculty co-authors who have extensive experience in qualitative methods with AIAN communities, the research questions for this article were explored in an attempt to address this gap between evidence-based practice and practice-based evidence.

2.2. Design

The research team selected qualitative descriptive methods for this study because of their ability to produce rich data while also remaining close to participant voice.[62] This approach facilitates moving from a data-based premise to practical conclusions that can be employed by programs serving AIAN individuals, which the research team found to be of value since the intent of this study is to inform practice.[65] Qualitative descriptive methods have been applied to culturally sensitive research with AIAN populations[64,129,130] as well as broader health science research.[131-133]

This project was part of a larger mixed-methods study exploring TCPs as a potential strategy to reduce problem substance use in an urban, multi-tribal community. The first phase of the study was a cross-sectional survey delivered to adult members of the target AIAN community ($N = 194$). Findings from the survey informed the design of this qualitative study, specifically around identifying barriers to TCP. In the survey results, several respondents reported very positive knowledge, attitudes, and beliefs (KAB) regarding the protective nature of TCPs, but lower rates of self-reported intent to participate in TCP. This qualitative study explored that pattern further and identified community- and individual-level barriers to accessing TCP which are crucial for future programs to address.

2.3. Participants

Qualitative descriptive studies employ a range of sample sizes. As Patton[66(p.244)] states, "There are no rules for sample size in qualitative inquiry." Certain qualitative approaches, such as the constant comparative method, draw on theoretical saturation. Other approaches argue that what is important is that sampling strategies reflect the purpose for the inquiry and include cases deemed rich in information that make sense as far as credibility and available resources.[134,135] To provide an in-depth exploration of community thoughts and perceptions regarding TCP as an intervention, we used purposive sampling with the intent of being as representative as possible of the target community while also allowing for maximum variety. Participants were selected based on their representation of different demographics and varying levels of enculturation—as a reflection of similar diversity found in the target population.

2.4. Data Collection

Prior to data collection, approval was obtained from the Indian Health Service (IHS) National Institutional Review Board (No. N20-N-03). The interview moderator's guide was

developed by the research team and informed by the preceding phase of the study. We pilot tested the questions with five AIAN adults from the target community, identified by staff members of the local AIAN health center, to ensure clarity and cultural appropriateness. The participants answered questions about their background living in an urban, multi-tribal setting, their experience with TCP, and their thoughts about if and how TCP should be incorporated into an intervention aimed at reducing problem substance use within their community.

Data were collected through semi-structured interviews between December 2021 and January 2022. Due to the ongoing COVID-19 pandemic, all participants were offered the option to complete the interview via Zoom platform, over the telephone, or in person, according to their comfort level. The interviews were audio recorded, with the interviewees' consent, on two devices to ensure quality of the recordings. The interviews lasted an average of 60 minutes (range: 37-104 minutes) and participants received a $50 gift card in exchange for their time.

2.5. Data Analysis

Interviews were transcribed verbatim with identifiers removed. NVivo (release 1.6.1), a qualitative data analysis software program, was used to code and analyze the interviews. Theoretical thematic analysis[136] was undertaken as a deductive approach that is guided by existing theory and knowledge and allows for focus on a specific research question. An initial coding scheme was informed by both *Reziliency*[39] and the theories of Reasoned Action and Planned Behavior,[100] results from the preceding phase of the research project, and field notes from the interview moderator. Although more structured and directed in its approach, this method retains the emergent qualitative design, as text that cannot be categorized under the initial coding scheme is given a new code and either incorporated into existing themes where appropriate or reexamined as a separate theme.[69]

The analysis process involved: (a) the first author coded 20% of the transcripts line by line using the approach described above; (b) the second and third authors reviewed the first author's coding, and provided initial feedback and affirmed consensus across interpretations of results; (c) the first author then coded the remaining transcripts line by line to identify key concepts and themes; (d) over 50 preliminary codes were organized into initial themes and subthemes; (e) emergent themes and subthemes were identified and organized; (f) all participants who could be reached performed member checking of themes and assigned quotes by providing feedback and clarification or amendments; and (g) the research team, three cultural advisors, and the board of directors of the local AIAN health center reviewed themes and assigned quotes to provide feedback and recommendations.

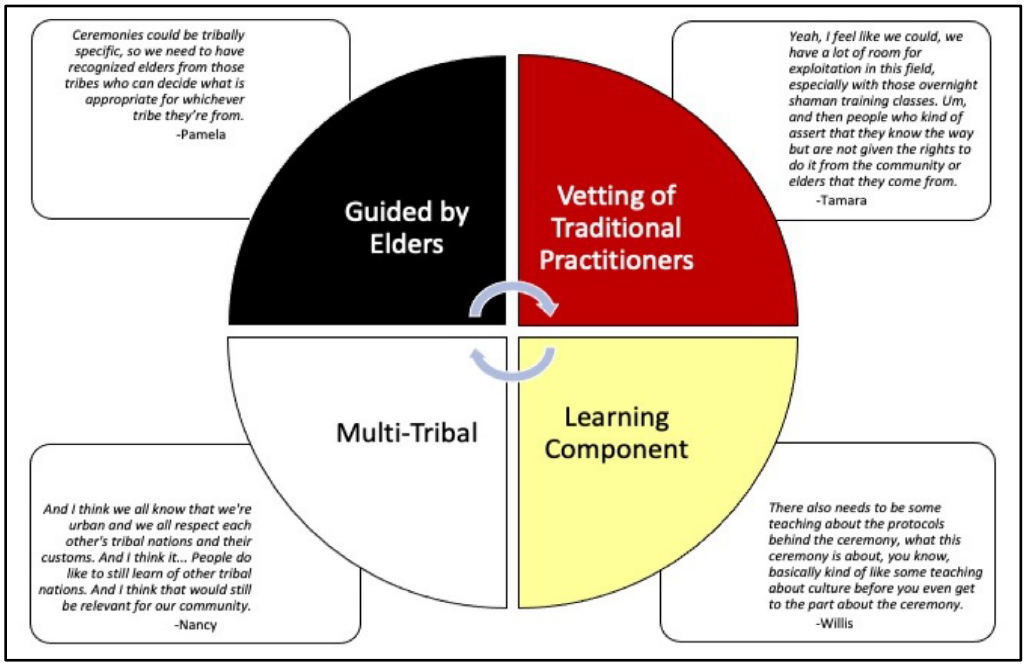
3.0. Results

Participants were assigned pseudonyms, and individually identifiable information was excluded for reporting purposes. From the interview data, the following four primary themes were identified as foundational ways to help guide the design and development of a TCP-based program aimed at reducing problem substance use among AIAN adults in an urban, multi-tribal setting: *"It has to come from the elders" - Design and delivery of TCP interventions guided by elders; "They've never really been given the rights" - Vetting of traditional practitioners; "You have to educate them first on these things" - The need for a learning component; "It's so much different than the reservation" - A multi-tribal approach*. Additionally, three broad themes were identified related to potential barriers to accessing TCP that should also be addressed in future programming: *"I don't really hear as much here in [the city]" – Lack of communication about activities; "I do it in secrecy" – The need for a dedicated physical space; "I always went back home…to do our cultural practices" – The practice of "going home" to participate in TCP*.

3.1. Study Participants

Our final sample of 11 AIAN adult participants included a cross section of adults from a wide diversity of tribal backgrounds. Gender and age varied across the sample, with female adults (n = 5), male adults (n = 2), female elders (n = 2), and male elders (n = 2), for a total of seven females and four males. One participant is a traditional practitioner, and another is a cultural staff member at an urban AIAN health center. Seven of the participants grew up on a reservation and moved to the city, three grew up in an urban setting, and one grew up in a rural, off-reservation setting. Five of the participants had a median annual household income of $40,000 or less, with the remaining six greater than $40,000. All four elders moved to the city to retire, five of the participants moved to the city to attend the university, and two participants moved to the city to be closer to family members who had relocated. Participant tribal affiliations reflected the multi-tribal community setting, with seven different tribal nations represented–four Montana tribes, one Great Basin tribe, one Plateau tribe, and one Southeastern tribe.

3.2. Recommendations for TCP-based program design



"It has to come from the elders" - Design and delivery of TCP interventions guided by elders

A majority of participants (n = 9) reported that they would expect elders to be involved in the design and/or delivery of a TCP-based intervention. For many, this was related to the concept of a multi-tribal environment in which no one individual could be an expert on appropriate practices from each tribe, how they should be carried out, and the history and protocol of each TCP.

> Ceremonies could be tribally specific…so we need to have recognized elders from those tribes who can decide what is appropriate for whichever tribe they're from. I think any and all ceremonies that can be a benefit and the elders are willing to share those…I think whatever the elders are willing to share.

Other times the role of elders was mentioned in broad terms, largely relating to understanding the meaning behind ceremonies from a particular tribal perspective,

> So that learning process can bring in elders…leaders from different tribal backgrounds to really…first do the education. And then that education can also include: this is how we smudge, this is how we build a tipi, this is how we do sweat [lodge] from our tribe.

An important role of bringing elders is building community trust that the programming is legitimate, credible, and trustworthy,

> It has to come from elders…'cause they have that respect from, from my personal view. If [someone speaking] is not someone that I know, that I respect…I'm not really listening and paying attention…to me, that's where we utilize our elders, elders play this part.

It was also noted by participants that elders can help shape how programming might be different in an urban area versus the reservation. There are many reasons that TCPs might not be able to

look exactly the same, but elders can ensure that adaptations are culturally appropriate. This helps ensure access to TCPs while protecting them from the misappropriation that is often seen in non-AIAN programs.

"They've never really been given the rights" - Vetting of traditional practitioners

Across the participants, just over half (n = 7) reported a desire to see traditional practitioners be vetted before being allowed to lead ceremonies. Most tribes require that a person leading a TCP has received instruction or been properly transferred the rights to perform those ceremonies following traditional methods.

> Like you're given different rights, especially when it comes to…singing certain songs…you know there's rights that you have to be given or earned. And I think that's really important when it comes to cultural stuff, because not everybody can do different things.

Participants expressed a fear that individuals who are not tribal members and/or who have not received the training, rights, and permissions to perform certain ceremonies will falsely portray themselves as having done so. These individuals are often referred to as "plastic shamans" or "plastic medicine men."[Aldred 2000]

> Yeah, I feel like we could, we have a lot of room for exploitation in this field, especially with those overnight shaman training classes…and then people…kind of assert that they know the way, but are not given the rights to do it from the community or elders that they come from.

Many of the participants noted that being in an urban setting, versus a tribally controlled reservation, may heighten the potential for this type of deception, since individuals can reference communities and ceremonies that may be unfamiliar to others.

> Sometimes you hear about people self-appointing themselves. Like, they'll be from somewhere and they move to an urban area and maybe they know a lot but they've never really been given the rights, but they move to an urban area and those people don't know that.

While the most common reference to vetting practitioners was about rights and legitimacy, it is also important that the person leading whatever activity is taking place is appropriate in general, or as one participant stated,

> I wouldn't want to be an organization that just picks a Northern Cheyenne to teach a Blackfeet class.

To combat the potential of an individual leading TCP without the appropriate rights or training to do so, participants suggested that the program rely on recognized elders from the respective tribes to both identify potential practitioners, either in the urban area or from their home reservation, as well vet anyone who shows up in an urban setting claiming to have the authority to lead TCP. If the program does not know of any elders from a particular tribe, there is also the option to contact the tribe directly for consultation.

"You have to educate them first on these things" - The need for a learning component

Among the participants, roughly 80% (n = 9) reported the need for a teaching component to be included in any TCP-based programming. Ceremonies have protocols and histories, and not every person has had the opportunity to learn about these things throughout their life. Not only might this serve as a barrier, as some people might not feel comfortable participating if they are unfamiliar with any particular TCP, but it also lends to the integrity of the program by ensuring fidelity to tribal history and practices.

> There also needs to be some teaching about the protocols behind the ceremony, what this ceremony is about, you know, basically…some teaching about culture before you even get to the part about the ceremony…It's a whole teaching process…And one of the things I've learned throughout the years is just the basics. The basic protocols, the basic way when we're at [a] ceremony or we're at a sweat lodge.

The learning component was also seen as a way to re-connect people to traditional wisdom, regardless of whether they grew up on a reservation or in an urban environment.

> I would reach out to like every direction or whatever, bring something in that way. And just, as a teaching, because not just as individuals, not just as specific tribes, but as Native people, they're lost. People are lost. Not just, you know, each individual tribe has suffered so much loss, and probably even so much more since we started with [the COVID pandemic], you know.

While many of the participants reflected on the learning component as listening to elders teach about the histories and protocols of TCP, one participant took it a step further and recommended a more formal approach:

> You would almost have to create a handbook…there is protocol…just being with the tribal elder…to create those protocols, it'd almost be like a handbook. Here's…what this elder's saying how they practice and protocols.

Clearly, the extent of the learning component will need to be a reflection of the resources available to the program. As mentioned above, one important source of information is elders who live in the community.

> That learning process can bring in elders…And then once there's kind of like that…learning then maybe it's the right time to actually say, "Okay, so now who wants to smudge? Do you want to…come participate in the sweat? We're gonna…have a naming ceremony for any of the kids who…didn't get names.

For programs with greater resources, however, participants also reported interest in developing a pool of traditional practitioners from different reservations and bringing them into the urban area to teach and provide TCP to community members on a rotating basis. This was seen as a way to ensure both diversity in teaching and that individuals are bringing legitimate and trustworthy knowledge that reflects the particular tribes they are representing.

"It's so much different than the reservation" - A multi-tribal approach

What makes the urban setting unique is that AIAN healthcare programs need to serve individuals from many different tribal backgrounds, in contrast to the tribal homogeneity that might be found on reservations.[Urban Indian Health Commission 2007] This presents both a challenge, in that programming based on one specific tribe might not be appropriate or attractive to a large proportion of the community, and an opportunity to design robust programming that is informed by different tribal ceremonies and customs.

> In the city it's so much different than the reservation…on the reservation, it's specific to your tribe. But when you're in the city, someone might teach you, but it might be Lakota. I always remember my sister going to a Head Start program in the city and she learned these songs and they were little Lakota children songs, and I always remember her singing them and I would sing them too, because that was so cool. You know, 'cause it was just…Indian, period.

Although the participants noted that TCP varies from tribe to tribe, there was a willingness to incorporate and learn about other tribes and the potential benefit that comes from TCP regardless of the tribe of origin.

> And to me, learning from different people and bringing them in, that teaches respect for the different cultures. Like every, every reservation has a different way. Not everything is just the same. And that's okay.

This was also reflected in the variety of elders and traditional practitioners that participants would like to see included in the programming.

> I would definitely reach out…if there was somebody [from a particular tribe] that you could bring in to help…with any kind of ceremony, I would reach out to people and I would say, hey, do you guys want to come out here? And…invite these people who come from across the state or across the United States or wherever, to come help us do [the] ceremony or come teach us their ways. Because we're not just the seven tribal nations in Montana. There's a whole, there's over 550 now, I believe, recognized tribes in the United States and I'm sure we…in an urban area like [the city of the study], I'm sure we represent a good 20, maybe 30 of 'em, minimum.

It was noted by the participants that not every AIAN individual in an urban setting will be comfortable participating in TCPs that come from or are led by practitioners from a tribe different than their own. For these individuals, the benefit to a multi-tribal approach is that they could opt to participate only when they are comfortable with the activity or the practitioner. For others who might be comfortable, or even enjoy, the experience of learning about and participating in TCP from another tribe, however, this approach would expand their access and opportunities to draw on TCP when trying to heal.

3.3. Barriers to accessing TCP

Although the focus of the study was to identify factors to potentially enhance the success of a TCP-based intervention aimed at reducing problem substance use, many of the participants also noted barriers that might need to be addressed. Sometimes these barriers were mentioned in direct relation to the programming–e.g., if this issue isn't addressed, then the program might not be successful–other times these barriers emerged as part of general responses about their thoughts on efforts to develop this type of programming.

"I don't really hear as much here in [the city]" – Lack of communication about activities

The local AIAN health center currently offers certain ceremonies that are made available to everyone who would like to attend, but community members cannot participate in activities that they don't know about. Whether it's generally not knowing these activities are taking place, or specifics like when and where they are occurring, a need for communication and getting the word out was reported by almost half of the participants (n = 5).

> I don't hear as much [about ceremony] here in [the city], but if I hear anything it's from my family [on a neighboring reservation]...the different things going on up there…So they do all that stuff there and I'm- I'm not [from that tribe], so I don't really partake in any of that, but I know they do stuff there…but I don't really hear as much here in [the city].

Even for those participants who reported having some kind of knowledge or contact with the local AIAN health center, there wasn't a sense that TCP activities were broadly communicated.

> It's maybe somewhat easy [to access ceremonies]. I know there's a couple of things offered through the [local AIAN health center] and such, but, I guess in [the city] I

> don't know a whole lot of people…or organizations…organizing people to have ceremonies.

This appears to highlight a need for a more robust communication strategy on the part of organizations about what types of TCP are available, when and where they will take place, who is invited to participate, etc.

"I do it in secrecy" – The need for a dedicated physical space

Although only mentioned in a few of the interviews (n = 3), there does appear to be at least some desire for TCP programming to take place in a space that is dedicated for that purpose, rather than relying on finding available space on an ad hoc basis.

> It requires space…to have activities each day of the week…I feel like once you get the space and the staff, you could do any number of things that are already being done. The sewing classes, beading, dancing... you know, teaching dancing, drumming, teaching how to make a drum, all those things.

The concept of dedicated space went beyond just for organized programming. The importance of having a place where TCPs could occur, either as a group or even just as an individual, that was safe and that supported participants' ability to carry out traditional activities without needing to worry about interacting with others who either aren't AIAN or who may not understand TCP was also expressed.

> I think a lot of times when I'm out, I call it out in the woods doing my [tribal] woman stuff, I…(laughs)...I run into a lot of people who are kind of surprised at what I'm doing or what I'm picking or looking for. And I do it in secrecy and a lot of fear in that where I'm picking or gathering, um, or praying is, it's not allowed, right? It's not allowed in those places. And then when we are praying, it's kind of

like a spectacle almost and some people do stop and some people are respectful and just, you know, walk by.

While there are many practical barriers to establishing a dedicated space for TCPs, such as the associated costs, it appears that doing so might have the effect of increasing access and participation.

"I always went back home…to do our cultural practices" – The practice of "going home" to participate in TCP

A final theme was the concept of "going home" for ceremonies, reported by just over 60% of participants (n = 7). We asked participants why someone in an urban area might report very positive KAB regarding TCP but at the same time report low intent to participate in TCP if given the option.

> So here we have...in [the city] we have a lot of people that...they're here for school, but then they go home for ceremony…So it's like, "Well, no, I won't do that because…I can go home and I can go sweat at home and I'll...we have the naming ceremony, [but] we'll do that at home."

A noteworthy finding is that this was not only reported by participants who had grown up on the reservation but also by participants who never lived on the reservation. One respondent who grew up in an urban area tells us:

> So I think in [the city] you kind of get a chance to…figure things out here. And then when you go home…you can see the protocols.

Even though participants mentioned the desire to "go home" for ceremony, there was a recognition of the importance of offering TCP in urban areas,

> So when I moved to [the city], I always went back home. I always went to [the reservation] to do our cultural practices. But when we couldn't make it back and you know, like yearly…we have to do certain stuff, I turned to the [local AIAN health center]. I find that's really beneficial here. I really like 'cause they offered…the sweats–we sweated with the Crows their way, we sweated with the Blackfeet their way.

4.0. Discussion

The aim of this qualitative descriptive study was to identify and describe themes and methods that can help inform the development of interventions aimed at reducing problem substance use among AIAN adults that incorporate TCP as part of their design, specifically in an urban, multi-tribal setting. AIAN communities possess valuable traditional wisdom and ecological knowledge that could be used to support healing. However, this knowledge has largely remained practice-based, and this study provides an opportunity to build a foundation for interventions that are not only culturally congruent, but also directly informed by the community in which they are meant to be used.

Participants largely noted a desire to see TCP-based programming in their community. A foremost concern, however, is that the programming be safe for the participants and adhere to tribally sanctioned practices. Currently, there are examples of this type of programming taking place in urban AIAN communities throughout the United States.[13,14,74] However, there is little guidance as to how this programming should be developed. Specifically, what considerations are helpful in designing programs to ensure that they are attractive, respond appropriately to community needs, and are based on legitimate traditional ecological knowledge? The findings from this study provide tangible factors that can help guide that process.

In AIAN communities, elders are broadly considered to be the keepers of tradition, knowledge, and culture.[137-139] This makes them an essential asset in the design and delivery of TCP-based interventions. A common example in the literature of how AIAN substance use programs have successfully engaged elders in the development of their services is via a community or cultural advisory board.[13,140,141] From our study, it appears that this approach should not merely be considered a "best practice" but rather an essential component that administrators should incorporate from the most nascent stage of program development.

Program administrators have a duty to protect participants from predators and spiritual abuse. Unfortunately, there is a long history of misappropriation of AIAN knowledge of TCPs–legitimate or not–to prey on others.[142] Because of this, any individual who is going to lead a TCP as part of an intervention must be vetted to ensure that (1) they have the training and rights to do so, and (2) they will not use their position of power, especially in situations where participants may be vulnerable, to commit acts of physical, mental, emotional, or spiritual abuse. As noted above, one way to accomplish this is to ensure that recognized elders play an active role in deciding what TCPs should be incorporated and who can lead them. Researchers and practitioners may approach this development with community-based participatory research methods with the support of a community advisory board (CAB) to guide and share power in decision-making. This CAB may be selected carefully to include trusted cultural insiders, elders, and community members with appropriate knowledge and commitments to TCPs. Practitioners should be able to provide references for where they have led TCPs in the past, and program staff can speak with individuals from those communities to verify the ability of the practitioner to appropriately lead activities. Most tribal nations also have an organized body representing the interests of their members (most often a tribal government or Alaska Native corporation) who

can be contacted to verify legitimacy. If for any reason a program is not able to carry out vetting, participants should be notified of this fact so that they can decide for themselves whether they are comfortable participating.

There are very legitimate and compelling reasons why protocols around TCP are not widely published. AIAN communities have faced serious traumas associated with the criminalization of TCPs in the past and the desire to protect from further danger is logical. That younger AIAN adults are not trained in protocols related to TCPs may be an unintended consequence of this safeguarding, however. Across the United States, we see communities bringing TCPs back into their service delivery approach and using this as an opportunity to include teaching about these protocols.[36,78] While much of this effort is focused on youth, our results show both a need and a desire for a learning component to be included as often as possible and for all participants, to fully reap the benefits of TCPs in a therapeutic environment.

The multi-tribal nature of urban settings presents both a challenge and an opportunity for TCP-based interventions. The Indian Health Service has been providing funding to urban health programs since the 1970s and several of these have developed very successful substance use programming that incorporates TCPs into their services.[91] While it may not be practical to include activities from every tribe represented among their patient population, programs can develop interventions that draw on TCPs from several of their larger tribal populations. By developing a robust array of TCP-based interventions, individuals can have the option of participating in those activities in which they are most comfortable. This is a valuable method of broadening access while also ensuring appropriate adherence to tribal protocols and traditions.

Because the focus of the interviews was on developing an intervention within an urban, multi-tribal environment, the concept of "going home" was not followed up on during the

interviews. However, we believe it is crucial that future research explore this concept further. What draws participants home for TCP, and could it inform the potential development of TCP-based programming in an urban setting? Is there a possibility that the place-based nature of tribal people and their respective ceremonies would make an urban TCP less feasible? Is this simply related to the issue of communication and not knowing where/when ceremonies are taking place in the city? Are there certain aspects of reservation environments that need to be replicated in order to enhance the potential for success of an urban TCP-based intervention? These are important questions for researchers and practitioners to ask, and our knowledge and understanding of TCP would benefit greatly from the answers those questions provide.

4.1. Limitations

This study focused on a topic that historically has been very sensitive, American Indian ceremonies. Most AIAN communities have spent generations guarding knowledge related to ceremonies out of fear, stemming from the outlawing of these practices, imprisonment or disappearance of individuals practicing these ceremonies, and the stigma that has been associated with these practices by mainstream American communities.[1,47] Although the interviews were conducted by an AIAN researcher, it is plausible that there is still reticence on the part of community members to fully and openly discuss all aspects related to TCP. This may especially be true of older participants who were alive before the passage of the American Indian Freedom of Religion Act in 1978, which was about 60% of our sample.

Participants for this study were purposively sampled and recruited through outreach associated with the local AIAN health center and other AIAN-serving organizations. It is unclear if the experiences of these individuals would be similar to AIAN adults who do not access these organizations. But, as the intent is to inform the development of programs and services, we

selected a sample that might be most likely to use those services. Additionally, participants were allowed to self-identify as AIAN. While there are national debates about the definition of AIAN, the AIAN health center that we partnered with for this study allows individuals to self-identify and that was the most appropriate criteria for this study as we hope to see TCP-based interventions take place in this community.

5.0. Public Health Implications

AIAN and non-AIAN health intervention researchers can all agree upon the need for improved public health prevention, early intervention, and treatment options for AIAN populations. The severity of the COVID-19 pandemic health impacts alone stands as testament to the critical public health crises facing indigenous communities. Between January and September, 2020, AIAN individuals experienced the greatest drug overdose death rate of any racial or ethnic group according to the CDC.[7] This figure highlights the urgency with which AIAN communities need access to effective substance use prevention and treatment programming. This study provides a unique exploration of the ways in which traditional knowledge and practices can be implemented in contemporary public health to elevate the efficacy of future policy and practice.

AIAN approaches to health and wellness tend to center the interconnections across spiritual, mental, emotional, physical, social, and environmental health.[143] Extant approaches to problem substance use in urban contexts have conventionally been approached from a non-AIAN worldview, that have left out the centrality of TCP and their interrelationships with mental, physical, social, and spiritual health.[143] Although the development of these programs must carefully honor existing tribal protocols and practices, and pose complexities, particularly in urban contexts, culturally relevant interventions tend to be appreciated and more effective to address problem substance use among AIANs.[11,144] Among our study participants, there was a

strong belief that TCP-based interventions can be effective both for prevention and treatment of problem substance use. Often, communities are faced with deciding whether to allocate precious limited resources toward either prevention or intervention. From our data, TCPs emerge as an option that can be leveraged for both functions, due to their protective ability to support healing from trauma and promote resilience. Effective and culturally grounded programs often incorporate both TCP, such as talking circles and sweat lodges, while also include psychoeducational teaching modalities.[145,146]

AIAN health administrators have known for years that TCP-based interventions are effective approaches to reducing problem substance use but encounter the dilemma that these services are rarely funded by public or private payers. Not only does our study lend weight to the millennia of practice-based evidence supporting the role of TCPs, but we provide administrators with recommendations for how to design programming from a community-informed perspective. As one of the elders we interviewed so eloquently states, “we know what the hell we’re doing, if they’d just give us the money and let us do it our damn selves.”

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CHAPTER SIX – CONCLUSION

This section provides a summary of the research findings across all three studies and discusses these findings within the context of the existing literature. It also relates the findings back to public health practice and makes recommendations for the direction of future exploration and examination. An overall conclusion of the research project is also presented.

Summary of Research Findings

As a sequential, mixed-methods study, this dissertation achieved three goals: (1) a thorough and systematic review of the evidence regarding the effectiveness of TCP-based interventions to reduce problem substance use in AIAN communities; (2) a quantitative survey measuring TCPs and substance use variables among adult members of an urban AIAN community; and (3) a qualitative exploration of the potential for TCP-based interventions to be used effectively in a local urban, multi-tribal setting.

The systematic review focused on analysis of quantitative data and identified 10 study articles that provided evidence of effectiveness. Noteworthy findings included the different types of TCPs used by programs, that study settings were both urban and reservation-based, and the need for standardized measures among future research to support meta-analyses. The community survey found that more than half of respondents reported positive knowledge, attitudes, and beliefs (KAB) regarding TCPs and one out of every three respondents reported high levels of intent to participate in TCPs. Individuals with more positive KAB or greater levels of intent to participate in TCPs were less likely to report substance use. Finally, the qualitative exploration found several themes that can help guide the development of TCP-based interventions in an urban, multi-tribal setting.

Public Health Relevance

This research moves the investigation of problem substance use in AIAN communities toward a strengths-based perspective. While epidemiological data are important tools in understanding problems, they do not, in and of themselves, provide solutions. *Reziliency* tells us that AIAN communities have the protective factors, approaches, and methods to create an environment that supports resiliency. Public health efforts within AIAN communities would benefit from a deeper understanding of those protective factors and how they can be leveraged to improve health outcomes and eliminate disparities.

Reducing problem substance use in AIAN communities is a national public health priority. The Indian Health Service currently has four programs and initiatives aimed at reducing alcohol, opioid, and other substance use among AIAN communities nationally.[147] The Substance Abuse and Mental Health Services Administration identified community-based treatment and recovery services as a priority in its report on AIAN results from the 2019 National Survey on Drug Use and Health.[148] And the Native American Research Centers for Health at the National Institutes of Health aims to support health research projects that are identified by AIAN communities across the country.[149]

This research project has provided a platform for future studies that is in line with national priorities. It is also aligned with community-identified priorities, not only for which needs to address but also how to address them. A primary goal of this project is to bring attention to AIAN practice-based evidence in an attempt to promote policies and funding that recognize its value. There are five urban health centers funded by the Indian Health Service in Montana. Future research could use methods similar to those of this study and identify similarities or

differences around TCP factors, substance use behaviors, and the potential for a TCP-based intervention to reduce problem substance use in their respective communities.

Overall Limitations and Future Directions

An original aim of this project was to identify a relationship between participation in TCPs and substance use behaviors. Due to the COVID-19 pandemic that wasn't possible, and a key limitation was the need to rely on proxy TCP variables to estimate this association. As communities begin to hold ceremonies again, it would be of value to examine if this relationship indeed exists and explore how it could inform interventions aimed at reducing problem substance use.

Several factors limit generalizability of our results. First, we were not able to randomly sample from the entire urban AIAN population of our study location for our survey. Instead, we relied on a sampling frame of those individuals who had some type of interaction with the local AIAN health center. Because not all members of the target population had an equal opportunity to be included in the survey, our results are subject to a certain level of bias. However, the sampling frame included not just those individuals who received primary care at the health center, but also those who had participated in community-wide events and activities. We also saw a range of ages, incomes, and other sociodemographic variables represented in our sample. So, while not generalizable, our findings do contribute valuable knowledge and have been shared with that community.

Additionally, due to time and resource constraints our qualitative exploration was directed rather than inferential in design. Although this approach is not as exhaustive, it is still capable of producing rich data that brings the voice of the participants into consideration when making practical decisions about programming.[65] Future work could not only expand on our

research question, but through an emergent design process could also explore aspects of TCPs that were not considered as part of this present study.

Conclusion

As a research community, we have much work to do to repair and strengthen the relationship between academia and AIAN communities. Policies and resources should be dedicated in a way that supports the exploration and validation of practice-based evidence but does so in a way that is guided by AIAN traditional knowledge and wisdom. Working together, we can more effectively craft powerful tools for AIAN communities to wield in their efforts to heal from trauma and reduce problem substance use.

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APPENDICES

APPENDIX A. Systematic Review Protocol

Systematic review

1. * Review title.

Give the title of the review in English

Ceremony and traditional spiritual practices (CTSP) as a culturally tailored strategy against problem substance use in urban American Indian communities: A systematic review

2. Original language title.

For reviews in languages other than English, give the title in the original language. This will be displayed with the English language title.

3. * Anticipated or actual start date.

Give the date the systematic review started or is expected to start.

01/09/2021

4. * Anticipated completion date.

Give the date by which the review is expected to be completed.

31/12/2021

5. * Stage of review at time of this submission.

Tick the boxes to show which review tasks have been started and which have been completed. Update this field each time any amendments are made to a published record.

Reviews that have started data extraction (at the time of initial submission) are not eligible for inclusion in PROSPERO. If there is later evidence that incorrect status and/or completion date has been supplied, the published PROSPERO record will be marked as retracted.

This field uses answers to initial screening questions. It cannot be edited until after registration.

The review has not yet started: Yes

Review stage	Started	Completed
Preliminary searches	No	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Provide any other relevant information about the stage of the review here.

6. * Named contact.

The named contact is the guarantor for the accuracy of the information in the register record. This may be any member of the review team.

D'Shane Barnett

Email salutation (e.g. "Dr Smith" or "Joanne") for correspondence:

D'Shane

7. * Named contact email.

Give the electronic email address of the named contact.

dshane.barnett@umontana.edu

8. Named contact address

Give the full institutional/organisational postal address for the named contact.

32 Campus Drive

Skaggs 177

9. Named contact phone number.

Give the telephone number for the named contact, including international dialling code.

4063049494

10. * Organisational affiliation of the review.

Full title of the organisational affiliations for this review and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

University of Montana

Organisation web address:

https://health.umt.edu/publichealth/

11. * Review team members and their organisational affiliations.

Give the personal details and the organisational affiliations of each member of the review team. Affiliation refers to groups or organisations to which review team members belong. **NOTE: email and country now MUST be entered for each person, unless you are amending a published record.**

Mr D'Shane Barnett. University of Montana
Jeffery Peterson. University of Montana
Jessica Liddell. University of Montana
Annie Belcourt. University of Montana

12. * Funding sources/sponsors.

Details of the individuals, organizations, groups, companies or other legal entities who have funded or sponsored the review.

None

Grant number(s)

State the funder, grant or award number and the date of award

13. * Conflicts of interest.

List actual or perceived conflicts of interest (financial or academic).

None

14. Collaborators.

Give the name and affiliation of any individuals or organisations who are working on the review but who are not listed as review team members. **NOTE: email and country must be completed for each person, unless you are amending a published record.**

15. * Review question.

State the review question(s) clearly and precisely. It may be appropriate to break very broad questions down into a series of related more specific questions. Questions may be framed or refined using PI(E)COS or similar where relevant.

Is there an association between prevention or treatment interventions that incorporate ceremony and traditional spiritual practices (CTSP) for American Indians who live on tribal lands and problem substance use?

Is there an association between prevention or treatment interventions that incorporate ceremony and traditional spiritual practices (CTSP) for American Indians who live in non-tribal, urban settings and problem substance use?

16. * Searches.

State the sources that will be searched (e.g. Medline). Give the search dates, and any restrictions (e.g. language or publication date). Do NOT enter the full search strategy (it may be provided as a link or attachment below.)

The following databases will be searched: (1) PubMed, (2) Global Health, (3) Global Health Archive, (4)

CINAHL, (5) PsycINFO, (6) Web of Science, (7) Health and Wellness (Gale), (8) SAGE, (9) ScienceDirect, and (10) Google Scholar. Studies are eligible for review if they are published in English and the full text is available.

17. URL to search strategy.

Upload a file with your search strategy, or an example of a search strategy for a specific database, (including the keywords) in pdf or word format. In doing so you are consenting to the file being made publicly accessible. Or provide a URL or link to the strategy. Do NOT provide links to your search **results**.

https://www.crd.york.ac.uk/PROSPEROFILES/269710_STRATEGY_20210828.pdf

Alternatively, upload your search strategy to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

Do not make this file publicly available until the review is complete

18. * Condition or domain being studied.

Give a short description of the disease, condition or healthcare domain being studied in your systematic review.

The outcome of interest in this review is substance use disorder (SUD), including alcohol, methamphetamine, and opioids.

19. * Participants/population.

Specify the participants or populations being studied in the review. The preferred format includes details of both inclusion and exclusion criteria.

The population of interest is Indigenous (American Indian/Native American) adults (age 18 and over) within the United States, including Alaska and Hawaii.

20. * Intervention(s), exposure(s).

Give full and clear descriptions or definitions of the interventions or the exposures to be reviewed. The preferred format includes details of both inclusion and exclusion criteria.

Interventions aimed at preventing, treating, or reducing substance use in American Indian adults that incorporate ceremony or other traditional spiritual practices.

21. * Comparator(s)/control.

Where relevant, give details of the alternatives against which the intervention/exposure will be compared (e.g. another intervention or a non-exposed control group). The preferred format includes details of both inclusion and exclusion criteria.

No intervention or interventions aimed at preventing, treating, or reducing substance use in American Indian adults that do not incorporate ceremony or other traditional spiritual practices.

22. * Types of study to be included.

Give details of the study designs (e.g. RCT) that are eligible for inclusion in the review. The preferred format includes both inclusion and exclusion criteria. If there are no restrictions on the types of study, this should be stated.

Included in the review: Quantitative studies, including clinical trials, comparative studies, evaluation studies, and observational studies. Excluded from the review: Qualitative studies.

23. Context.

Give summary details of the setting or other relevant characteristics, which help define the inclusion or exclusion criteria.

Prevention programming, treatment services, or community-based practices that report on substance use outcomes for Indigenous participants.

24. * Main outcome(s).

Give the pre-specified main (most important) outcomes of the review, including details of how the outcome is defined and measured and when these measurement are made, if these are part of the review inclusion criteria.

Impacts on substance use, including number of times or days when a substance is used, amount of substance(s) consumed, age of initiation of use, or changes in other objective scale measurements.

Measures of effect

Please specify the effect measure(s) for you main outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

25. * Additional outcome(s).

List the pre-specified additional outcomes of the review, with a similar level of detail to that required for main outcomes. Where there are no additional outcomes please state ‘None’ or ‘Not applicable’ as appropriate to the review

Is there a difference in effect between American Indians who live on tribal lands vs those who live in non-tribal, urban settings.

Measures of effect

Please specify the effect measure(s) for you additional outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

26. * Data extraction (selection and coding).

Describe how studies will be selected for inclusion. State what data will be extracted or obtained. State how this will be done and recorded.

EndNote 20 will be used to manage all references for this review. The databases will be searched independently by two of the reviewers (DSB, JP) using the established search strategy. Initial citations will be combined and duplicates will be removed. DSB and JP will then independently screen all citations first by title, then by abstract, for inclusion in the review. For any citation without an abstract, full text will be retrieved and reviewed by DSB and JP. Any citation not eliminated by both reviewers based on title or abstract will move to full text review.

Full text review will take place by DSB and JP. A fillable form will be used by both reviewers to track the following data: (a) year of study; (b) study design; (c) study population; (d) intervention/exposure measures; and (e) outcome measures.

Any disagreement on inclusion during the full text stage of review will be reconciled by the full review team through consensus or lead author final say, if necessary. A PRISMA flow chart will be used to document exclusion throughout the process.

27. * Risk of bias (quality) assessment.

State which characteristics of the studies will be assessed and/or any formal risk of bias/quality assessment tools that will be used.

Cohort studies, quasi-randomized trials, case-control studies, cross-sectional studies, interrupted time series and controlled before-after studies will all be assessed using the Risk Of Bias In Non-randomized Studies of Interventions (ROBINS-I) [1]. Any randomized control trials will be assessed using the Revised Cochrane risk-of-bias tool for randomized trials (RoB 2) [2]. Any observational studies that cannot be assessed using ROBINS-I or RoB 2 will be assessed using the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) checklist [3].

In addition to Western quality assessment protocols, Indigenous members of the research team will provide a review of cultural competency within studies as it relates to potential risk of bias.

[1] Sterne JAC, Hernán MA, Reeves BC, et al. ROBINS-I: a tool for assessing risk of bias in non-randomized studies of interventions. BMJ 2016; 355; i4919.
[2] Revised Cochrane risk-of-bias tool for randomized trials (RoB 2). Edited by Julian PT Higgins, Jelena Savovi?, Matthew J Page, Jonathan AC Sterne on behalf of the RoB2 Development Group. 22 August 2019.
[3] Cuschieri S. The STROBE guidelines. Saudi J Anaesth. 2019 Apr;13(Suppl 1):S31-S34. doi: 10.4103/sja.SJA_543_18. PMID: 30930717; PMCID: PMC6398292.

28. * Strategy for data synthesis.

Describe the methods you plan to use to synthesise data. This **must not be generic text** but should be **specific to your review** and describe how the proposed approach will be applied to your data. If meta-analysis is planned, describe the models to be used, methods to explore statistical heterogeneity, and software package to be used.

Quantitative data synthesis: Our greatest hope is to find quantitative data that can be synthesized via a meta-analysis. We expect many, if not most, of the studies to include cross-sectional design. Using the Review Management (RevMan) software, we will calculate pooled odds ratios for those studies with sufficient similarity. Clinical heterogeneity will be assessed by two authors (DSB, JP) and statistical heterogeneity will be assessed via the I^2 statistic. Studies will be individually excluded from analysis to determine their impact on the results. A funnel plot will be used to assess potential publication bias.

Qualitative data analysis: For those studies that cannot be meta-analyzed for overall effect due to excessive heterogeneity, we will use NVivo software to employ a qualitative descriptive analysis [1]. Themes and

subthemes will be identified and coded, and quotes or other relevant text will be used to report on findings.

[1] Colorafi KJ, Evans B. Qualitative Descriptive Methods in Health Science

Research.HERD.2016;9(4):16-25.

29. * Analysis of subgroups or subsets.

State any planned investigation of 'subgroups'. Be clear and specific about which type of study or participant will be included in each group or covariate investigated. State the planned analytic approach.

Participants in the analytical data, the following subgroups will be investigated:

-Type of substance use: alcohol, marijuana, methamphetamine, inhalant, opioid

-Multiple substance user vs single substance user

-Higher enculturation vs higher acculturation

30. * Type and method of review.

Select the type of review, review method and health area from the lists below.

Type of review

Cost effectiveness
No

Diagnostic
No

Epidemiologic
No

Individual patient data (IPD) meta-analysis
No

Intervention
No

Living systematic review
No

Meta-analysis
Yes

Methodology
No

Narrative synthesis
Yes

Network meta-analysis
No

Pre-clinical
No

Prevention
No

Prognostic
No

Prospective meta-analysis (PMA)
No

Review of reviews
No

Service delivery
No

Synthesis of qualitative studies
No

Systematic review
Yes

Other
No

Health area of the review

Alcohol/substance misuse/abuse
Yes

Blood and immune system
No

Cancer
No

Cardiovascular
No

Care of the elderly
No

Child health
No

Complementary therapies
No

COVID-19
No

Crime and justice
No

Dental
No

Digestive system
No

Ear, nose and throat
No

Education
No

Endocrine and metabolic disorders

No

Eye disorders
No

General interest
No

Genetics
No

Health inequalities/health equity
No

Infections and infestations
No

International development
No

Mental health and behavioural conditions
No

Musculoskeletal
No

Neurological
No

Nursing
No

Obstetrics and gynaecology
No

Oral health
No

Palliative care
No

Perioperative care
No

Physiotherapy
No

Pregnancy and childbirth
No

Public health (including social determinants of health)
No

Rehabilitation
No

Respiratory disorders
No

Service delivery
No

Skin disorders
No

Social care
No

Surgery
No

Tropical Medicine
No

Urological
No

Wounds, injuries and accidents
No

Violence and abuse
No

31. Language.

Select each language individually to add it to the list below, use the bin icon to remove any added in error.
English

There is not an English language summary

32. * Country.

Select the country in which the review is being carried out. For multi-national collaborations select all the countries involved.

United States of America

33. Other registration details.

Name any other organisation where the systematic review title or protocol is registered (e.g. Campbell, or The Joanna Briggs Institute) together with any unique identification number assigned by them. If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here. If none, leave blank.

34. Reference and/or URL for published protocol.

If the protocol for this review is published provide details (authors, title and journal details, preferably in Vancouver format)

Add web link to the published protocol.

Or, upload your published protocol here in pdf format. Note that the upload will be publicly accessible.

No I do not make this file publicly available until the review is complete

Please note that the information required in the PROSPERO registration form must be completed in full even if access to a protocol is given.

35. Dissemination plans.

Do you intend to publish the review on completion?

Yes

Give brief details of plans for communicating review findings.?

We expect to publish in a peer-related journal within the public health, substance use, American Indian health, or other applicable field.

36. Keywords.

Give words or phrases that best describe the review. Separate keywords with a semicolon or new line. Keywords help PROSPERO users find your review (keywords do not appear in the public record but are included in searches). Be as specific and precise as possible. Avoid acronyms and abbreviations unless these are in wide use.

Native American

Substance Use

Ceremony

Traditional Practices

37. Details of any existing review of the same topic by the same authors.

If you are registering an update of an existing review give details of the earlier versions and include a full bibliographic reference, if available.

38. * Current review status.

Update review status when the review is completed and when it is published.New registrations must be ongoing so this field is not editable for initial submission.
Please provide anticipated publication date

Review_Ongoing

39. Any additional information.

Provide any other information relevant to the registration of this review.

40. Details of final report/publication(s) or preprints if available.

Leave empty until publication details are available OR you have a link to a preprint (NOTE: this field is not editable for initial submission). List authors, title and journal details preferably in Vancouver format.

Give the link to the published review or preprint.

APPENDIX B. Abstract and Article Screening Guidelines

Citation, Title, and Abstract Screening

1. Does the **title or abstract** use English?
    a. Yes: continue screening
    b. No: stop screening

2. Does the **title or abstract** NOT indicate that a TCP systematic review or meta-analysis was conducted?
    a. Yes: continue screening
    b. No: stop screening

3. Does the **title or abstract** indicate that this is NOT a correction or erratum?
    a. Yes: continue screening
    b. No: stop screening

Abstract Screening

4. Does the **abstract** indicate that an AIAN adult sample was studied?
    a. Yes or Unsure/Unclear: continue screening
    b. No: stop screening
        -For example: the study only samples youth under age 18 or adults who are not AIAN

5. Does the **abstract** indicate that this study was quantitative?
    a. Yes or Unsure/Unclear: continue screening
        -Key words: Quantitative, clinical trial, randomize, pilot study, comparative, evaluation, and observational
    b. No: stop screening
        -For example: the study only used qualitative methods
        -Key point: some studies may employ both qualitative and quantitative methods and these should be kept in the screening process

6. Does the **abstract** indicate that AIAN TCP was studied?
    a. Yes or Unsure/Unclear: continue screening
        -Key words: ceremony, traditional practice(s), cultural practice(s), spirituality, ritual(s), rite(s), American Indian, Native American, Indigenous, and tribal practice(s)
    b. No: stop screening
        -Other constructs, in the absence of TCP measures above, **not** eligible: Western religious practices or evidence-based and best practices that do not include a measurable TCP component (e.g., AA, cognitive behavioral therapy, medication-assisted treatment)

7. Does the **abstract** indicate that substance use prevention or treatment was studied?
    a. Yes: continue screening

-Key words: alcohol, marijuana, methamphetamines, opioids, heroin, cocaine, inhalants, drug(s), illicit substance(s), substance (ab)use, alcoholism, and abstinence

-Key point: If the study clearly mentions any type of substance use as either a direct or indirect measure, then assume substance use was studied

b. No: stop screening

-Key point: mental illness, physical health conditions, and tobacco use (smoking, vaping, and smokeless products) are NOT eligible

Decision: **Should full text of the article be screened?**

a. **Yes**, all 7 screening questions answered either "Yes" or "Unclear"
b. **No**, at least one screening question answer is definitely "No"

<u>Full Article Review (all answers must be "Yes" to be included in the review)</u>

8. Does the **article** provide information about an AIAN adult sample?
9. Does the **article** include at least one quantitative measure regarding TCP interventions or activities?
10. Does the **article** include at least one quantitative measure regarding use of eligible substances?
11. Does the **article** indicate that the research study was either Indigenous-led or Indigenous-informed?
12. Does the **article** indicate that TCP interventions or activities were provided or overseen by a traditional practitioner?
13. Does the **article** provide a justification that the implementation and/or evaluation procedures were culturally appropriate for the target population?

Decision: **Should the article be included in the review?**

a. **Yes**, questions 8-13 answered with all "Yes"
b. **No**, at least one answer to questions 8-13 is definitely "No"
c. **Potentially,** questions 8-13 answered with at least one "Unclear" but without any definite "No" – bring to full team for discussion and consensus

APPENDIX C. Cronbach's Alpha Results

Measure: TCP Protective Factors (Knowledge, Attitudes, and Beliefs)

Cronbach Alpha and Related Statistics

Items	Cronbach Alpha	Std. Alpha	G6(smc)	Average R
All itmes	0.9299	0.9303	0.9422	0.5067
Q1 excluded	0.9215	0.9219	0.9343	0.4958
Q2 excluded	0.9457	0.9456	0.9501	0.5917
Q3 excluded	0.926	0.9263	0.9383	0.5117
Q4 excluded	0.9213	0.922	0.933	0.4962
Q5 excluded	0.9205	0.9212	0.9345	0.4935
Q6 excluded	0.9227	0.9231	0.9353	0.5001
Q7 excluded	0.9212	0.9221	0.9336	0.4965
Q8 excluded	0.9198	0.9207	0.9341	0.4918
Q9 excluded	0.9236	0.9239	0.9366	0.5029
Q10 excluded	0.9197	0.9204	0.9337	0.4908
Q11 excluded	0.9197	0.9205	0.9338	0.4911
Q12 excluded	0.9268	0.9271	0.9386	0.5143
Q13 excluded	0.9264	0.9262	0.9377	0.5111

Measure: Self-reported Access to TCPs

Cronbach Alpha and Related Statistics

Items	Cronbach Alpha	Std. Alpha	G6(smc)	Average R
All itmes	0.4416	0.4128	0.4353	0.1495
Q1 excluded	0.1625	0.1744	0.1266	0.0658
Q2 excluded	0.1759	0.1796	0.1283	0.068
Q3 excluded	0.4782	0.4475	0.4617	0.2126
Q4 excluded	0.5275	0.5022	0.4917	0.2517

Measure: Self-reported Intent to Participate in TCPs

Cronbach Alpha and Related Statistics

Items	Cronbach Alpha	Std. Alpha	G6(smc)	Average R
All itmes	0.8485	0.8495	0.844	0.5303
Q1 excluded	0.8016	0.8006	0.788	0.501
Q2 excluded	0.8625	0.8611	0.8477	0.6079
Q3 excluded	0.7806	0.7845	0.7537	0.4764
Q4 excluded	0.785	0.7884	0.7578	0.4822
Q5 excluded	0.8468	0.8488	0.8315	0.5839

APPENDIX D. Community Survey Instrument

[Place label here]

Hello!

In partnership with the University of Montana College of Health, All Nations is conducting a community survey that explores certain health trends and needs within the local Native American community. This survey should take about 30 minutes to complete.

The first 200 people to complete the survey will be given a **$30.00 Amazon gift card!**

Included in this packet is a copy of the survey, response form (for requesting your gift card and/or an interview), and a postage-paid return envelope.

IF YOU WOULD PREFER TO TAKE THE SURVEY ONLINE

You can do so by either visiting this web address:
https://bit.ly/AllNationsSurvey

Or by using the QR code below:

All Nations Health Center – Community Survey

You are invited to participate in a research study that explores certain health trends and needs within the local Native American community. This survey should take about 30 minutes to complete. The first 200 people to complete the survey will be given a $30.00 Amazon gift card.

Participation is voluntary, and responses are anonymous to the degree permitted by the technology being used. This survey will cover broad questions about your health as well as some more detailed questions about your experience with Native American ceremonies and traditional practices. Other topics include childhood experiences, personal substance use habits, and personal/romantic relationships. By answering questions on this anonymous survey as honestly as possible, you are helping to inform how behavioral health services are designed for Native Americans living in and around Missoula.

As you fill out the survey, you have the option to not respond to any question. Participation or nonparticipation will not impact your relationship with All Nations Health Center or the University of Montana. Submission of the survey will be accepted as your informed consent to participate and that you affirm: **(1)** You are at least 18 years of age, **(2)** You are Native American or an Indigenous person from the Americas (North, Central, or South) or Pacific Islands, and **(3)** You currently live in either Missoula County or Ravalli County.

If you have any questions about the research: Please contact D'Shane Barnett via email at dshane.barnett@umontana.edu or by telephone at (406) 258-3882. If you have any questions regarding your rights as a research subject, you may contact Rachael Tracy at the Indian Health Service (IHS) National Institutional Review Board at (301) 443-2029.

By continuing with the survey:

- I affirm that I am at least 18 years of age;
- I affirm that I am Native American or an Indigenous person from the Americas (North, Central, or South) or Pacific Islands; and,
- I affirm that I currently live in either Missoula or Ravalli County

Please continue to the next page to begin the survey.

I. Health Status

The first set of questions asks about your current health. Answer each question by choosing just one answer. If you are unsure how to answer a question, please give the best answer you can.

A1. In general, would you say your health is:

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

The following two questions ask about activities you might do during a typical day. Does your health currently limit you in these activities? If so, how much?

A2. Moderate activities such as moving a table, pushing a vacuum cleaner, bowling, or playing golf:

- ○ Yes, limited a lot
- ○ Yes, limited a little
- ○ No, not limited at all

A3. Climbing several flights of stairs:

- ○ Yes, limited a lot
- ○ Yes, limited a little
- ○ No, not limited at all

During the past month, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

A4. Accomplished less than you would like:

- ○ Yes
- ○ No

A5. Were limited in the kind of work or other activities:

- ○ Yes
- ○ No

Please continue to the next page

During the past month, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

A6. Accomplished less than you would like:

- ○ Yes
- ○ No

A7. Did work or activities less carefully than us

- ○ Yes
- ○ No

A8. During the past month, how much did pain interfere with your normal work (including work outside the home and housework)?

- ○ Extremely
- ○ Quite a bit
- ○ Moderately
- ○ A little bit
- ○ Not at all

These next questions ask about how you have been feeling during the past month. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past month:

A9. Have you felt calm and peaceful?

- ○ All of the time
- ○ Most of the time
- ○ A good bit of the time
- ○ Some of the time
- ○ A little of the time
- ○ None of the time

A10. Did you have a lot of energy?

- ○ All of the time
- ○ Most of the time
- ○ A good bit of the time
- ○ Some of the time
- ○ A little of the time
- ○ None of the time

A11. Have you felt down-hearted and blue?

- ○ All of the time
- ○ Most of the time
- ○ A good bit of the time
- ○ Some of the time
- ○ A little of the time
- ○ None of the time

A12. During the past month, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

- ○ All of the time
- ○ Most of the time
- ○ A good bit of the time
- ○ Some of the time
- ○ A little of the time
- ○ None of the time

The next two questions are about situations that may have impacted your general health. For each question, please give the one answer that comes closest to the way a situation has impacted your general health.

A13. Has COVID-19 impacted your answers to the health questions above?

- ○ Yes (if so, how?) _____
- ○ No

A14. Are there other issues or circumstances, besides COVID-19, that have affected your answers to the health questions above?

- ○ Yes (if so, what are they?) _____
- ○ No

II. Childhood Experiences

The following questions deal with your childhood experiences. Think back to the earliest times you can remember up until you turned 18 years old. Then answer the next set of questions as best you can based upon your own personal childhood experience.

As a child:

B1. I felt like I could talk to my family about my feelings:

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

B2. I felt that my family stood by me during difficult times:

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

B3. I enjoyed participating in community traditions:

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

B4. I felt a sense of belonging in high school (not including those who did not attend school or were home schooled):

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

B5. I felt supported by friends:

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

B6. I had at least 2 non-parent adults (family members, teachers, etc.) who took genuine interest in me:

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

B7. I felt safe and protected by at least one adult in my home:

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

III. Knowledge, Attitudes and Beliefs (KAB) About Traditional Ceremony
Next, we will ask about your own personal feelings and experiences related to ceremony and other traditional practices. For this section, when we say "ceremony" we broadly refer to Native American traditional spiritual rites and practices. Examples include sweat lodge, pipe ceremony, naming ceremony, coming of age ceremonies, etc., but will vary according to tribe.

A note about terms used in this survey: We realize that within our community some individuals prefer different terms, such as Native American, American Indian, Tribal, or indigenous. We use the term "Native American" for consistency but do realize you might have a different preferred term.

How important to you, personally, are the following:

C1. Attending Native American tribal ceremonies

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C2. Attending church (Baptist, Lutheran, non-denominational, etc.):

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C3. Socializing with Native Americans or having Native American friends

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C4. Using Native American traditional medicines:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C5. Seeking help from Native American tribal elders:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C6. Attending powwows or Native American social dances (e.g., round dances):

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C7. Participating in Native American singing/drumming/dancing:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C8. Participating in Native American prayers:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C9. Eating or cooking Native American food(s):

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C10. Doing Native American traditional arts and crafts:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C11. Using or learning my Native American tribal language or dialect:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C12. Knowing or participating in Native American/tribal politics and activities:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

C13. Knowing or sharing Native American history:

- ○ Very Important
- ○ Fairly Important
- ○ A Little Important
- ○ Not at all important

The following statements are about your personal ability to access ceremony or other traditional practices. Please select how much you agree or disagree with each statement.

C14. If I want to participate in ceremonies or traditional practices, I have people who will support me in doing so (family, friends, elders, etc.):

- ○ Strongly agree
- ○ Agree a little
- ○ Neither agree nor disagree
- ○ Disagree a little
- ○ Strongly disagree

C15. If I am invited to a ceremony or other traditional practice, I am confident that I will know what to do or how to act (e.g., when to talk, songs to sing, what to wear):

- ○ Strongly agree
- ○ Agree a little
- ○ Neither agree nor disagree
- ○ Disagree a little
- ○ Strongly disagree

C16. In my community, access to ceremony is largely based on who you are connected to:

- ○ Strongly agree
- ○ Agree a little
- ○ Neither agree nor disagree
- ○ Disagree a little
- ○ Strongly disagree

C17. I would like to attend ceremonies in my community, but don't feel like I can because they don't reflect my own tribal practices:

- ○ Strongly agree
- ○ Agree a little
- ○ Neither agree nor disagree
- ○ Disagree a little
- ○ Strongly disagree

Please select how likely or unlikely your intent is to participate in ceremonies and other traditional practices.

C18. Once COVID is no longer an issue or I feel it is safe again, I will participate in ceremonies or other traditional practices:

- ○ Extremely likely
- ○ Somewhat likely
- ○ Neither likely nor unlikely
- ○ Somewhat unlikely
- ○ Extremely unlikely

C19. I will participate in ceremonies or other traditional practices, regardless of COVID:

- ○ Extremely likely
- ○ Somewhat likely
- ○ Neither likely nor unlikely
- ○ Somewhat unlikely
- ○ Extremely unlikely

C20. If I am dealing with a physical illness, I will include ceremony or other traditional practices in my treatment:

- ○ Extremely likely
- ○ Somewhat likely
- ○ Neither likely nor unlikely
- ○ Somewhat unlikely
- ○ Extremely unlikely

C21. If I am dealing with mental or emotional problems (e.g., depression, anxiety, stress), I will include ceremony or other traditional practices in my treatment:

- ○ Extremely likely
- ○ Somewhat likely
- ○ Neither likely nor unlikely
- ○ Somewhat unlikely
- ○ Extremely unlikely

C22. If a ceremony is taking place but is not part of my own tribal practices, I will still attend:

- ○ Extremely likely
- ○ Somewhat likely
- ○ Neither likely nor unlikely
- ○ Somewhat unlikely
- ○ Extremely unlikely

Please continue to the next page

III. Your Experience During Covid

Thinking about the COVID pandemic, please answer the questions below for the time period of March 2020 through today. Your task will be to answer five questions about how the COVID pandemic has impacted you.

D1. During COVID, I have had to find new ways to maintain my spiritual health and well-being:

- ○ Strongly agree
- ○ Agree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Strongly disagree

D2. Due to COVID, my ability to participate in ceremonies and traditional practices that involve other people:

- ○ Went down a lot
- ○ Went down a little
- ○ Stayed mostly the same
- ○ Went up a little
- ○ Went up a lot

D3. Due to COVID, my comfort around participating in ceremonies and traditional practices that involve other people:

- ○ Went down a lot
- ○ Went down a little
- ○ Stayed mostly the same
- ○ Went up a little
- ○ Went up a lot

D4. COVID has caused me to increase my alcohol intake or substance use:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

Please continue to the next page

D5. I have made positive changes in my behavior due to the COVID pandemic:

- o Strongly disagree
- o Disagree
- o Neither agree nor disagree
- o Agree
- o Strongly agree

Please continue to the next page

IV. Substance Use Behaviors

These next questions are about alcoholic beverages, such as beer, wine, brandy, and mixed drinks. Throughout these questions, by a "drink," we mean a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it. We are not asking about times when you only had a sip or two from a drink.

Please remember that this survey is anonymous, and your answers cannot be linked back to you. By answering these questions honestly, you are helping us better understand trends and needs within our community.

F. Alcohol Use

F1. In the last year, have you had a drink of any type of alcoholic beverage? Please do not include times when you only had a sip or two from a drink:

- ○ Yes
- ○ No **(Skip to G1)**

F2. Now thinking just about the last 30 days, have you had a drink of any type of alcoholic beverage? Please do not include times when you only had a sip or two from a drink:

- ○ Yes
- ○ No **(Skip to G1)**

F3. What is your best estimate of the number of days you drank alcohol during the past 30 days?

- ○ 1 or 2 days
- ○ 3 to 5 days
- ○ 6 to 9 days
- ○ 10 to 19 days
- ○ 20 to 29 days
- ○ All 30 days
- ○ I'm not sure

F4. On the days that you drank during the past 30 days, how many drinks did you usually have each day? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail:

- ○ Number of drinks: _____
- ○ I'm not sure

F5. During the past 30 days, on how many days did you have 5 or more drinks for males or 4 or more drinks for females on the same occasion? By 'occasion,' we mean at the same time or within a couple of hours of each other:

- ○ Number of days: _____
- ○ I'm not sure

F6. How old were you the first time you had a drink of an alcoholic beverage? Please do not include any time when you only had a sip or two from a drink:

- ○ Age: _____
- ○ I'm not sure

G. Marijuana Use

The next questions are about marijuana. Marijuana is also called pot, weed, grass, hashish, or cannabis. Examples of marijuana products include flower, edibles, oils, tinctures, waxes, dabs, and shatter. Marijuana can be smoked, ingested, or vaped. These questions are intended to ask about any form of marijuana you have used, whether it was for medicinal or recreational purposes. This does not include Cannabidiol or CDB products.

Please remember that this survey is anonymous, and your answers cannot be linked back to you. By answering these questions honestly, you are helping us better understand trends and needs within our community.

G1. In the last year, have you used (even once) marijuana or marijuana products:

- ○ Yes
- ○ No **(Skip to H1)**

G2. Thinking just about the last 30 days, have you used (even once) marijuana or marijuana products:

- ○ Yes
- ○ No **(Skip to H1)**

G3. What is your best estimate of the number of days you used marijuana or marijuana products during the past 30 days?

- ○ 1 or 2 days
- ○ 3 to 5 days
- ○ 6 to 9 days
- ○ 10 to 19 days
- ○ 20 to 29 days
- ○ All 30 days
- ○ I'm not sure

G4. How old were you the first time you used marijuana or a marijuana product:

- ○ Age: _____
- ○ I'm not sure

H. Methamphetamine Use

The following questions are about methamphetamine or "meth." Meth, which is also known as crank, ice, crystal meth, chalk, glass, and many other names, is a stimulant that usually comes in crystal or powder forms. It can be smoked, "snorted," swallowed or injected.

Please remember that this survey is anonymous, and your answers cannot be linked back to you. By answering these questions honestly, you are helping us better understand trends and needs within our community.

H1. In the last year, have you used (even once) methamphetamine:

- ○ Yes
- ○ No **(Skip to J1)**

H2. Thinking just about the last 30 days, have you used (even once) methamphetamine:

- ○ Yes
- ○ No **(Skip to J1)**

H3. What is your best estimate of the number of days you used methamphetamine during the past 30 days?

- ○ 1 or 2 days
- ○ 3 to 5 days
- ○ 6 to 9 days
- ○ 10 to 19 days
- ○ 20 to 29 days
- ○ All 30 days
- ○ I'm not sure

H4. How old were you the first time you used methamphetamine:

- ○ Age: _____
- ○ I'm not sure

J. Inhalants

These next questions are about liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good. We are not interested in times when you inhaled a substance accidentally — such as when painting, cleaning an oven, or filling a car with gasoline. The questions use the word 'inhalant' to include all the things that people sniff or inhale for kicks or to get high. These may include things like gasoline, aerosol sprays, nitrous oxide or other substances.

Please remember that this survey is anonymous, and your answers cannot be linked back to you. By answering these questions honestly, you are helping us better understand trends and needs within our community.

J1. In the last year, have you inhaled any substance for the purpose of getting high or feeling good:

- ○ Yes
- ○ No **(Skip to K1)**

J2. Thinking just about the last 30 days, have you inhaled any substance for the purpose of getting high or feeling good:

- ○ Yes
- ○ No **(Skip to K1)**

J3. Please type in the name of the inhalant or inhalants you have used in the last 30 days. If you're not sure how to spell the name of the inhalant you used, just make your best guess:

- ○ Name of inhalant _____
- ○ I'm not sure

J4. How old were you the first time you used an inhalant of any kind for kicks or to get high:

- ○ Age: _____
- ○ I'm not sure

K. Prescription Medication

These next questions are about prescription medications. When answering the following questions, please do not include any "over the counter" medicines that are available without a prescription. When you answer these questions, please think only about your use of these medications in any way a doctor did not direct you to use them.

Please remember that this survey is anonymous, and your answers cannot be linked back to you. By answering these questions honestly, you are helping us better understand trends and needs within our community.

Prescription medications include several different types of drugs, such as **(1)** pain relievers, **(2)** tranquilizers, **(3)** stimulants, and **(4)** sedatives -- all of which must be prescribed a doctor.

K1. In the past year, have you ever (even once) used a **prescription medication** in any way a doctor did not direct you to use it?

- ○ Yes
- ○ No **(Skip to L1)**

K2. Thinking just about the past 30 days, have you ever (even once) used a **prescription medication** in any way a doctor did not direct you to use it?

- ○ Yes
- ○ No **(Skip to L1)**

K3. Please type in the name of the prescription medication(s) you have used in the last 30 days in any way a doctor did not direct you to use it. If you're not sure how to spell the name of the prescription medication you used, just make your best guess:

- ○ Name of prescription medication(s) _____
- ○ I'm not sure

K4. To the best of your knowledge, what type of prescription medication did you use in the last 30 days in any way a doctor did not direct you to use it?

- ○ Pain Reliever (Vicodin, Hydrocodone, OxyContin, Percocet, Tramadol, Codeine, etc.)
- ○ Tranquilizer (Xanax, Ativan, Lorazepam, Clonazepam, etc.
- ○ Stimulant (Adderall, Dexedrine, Ritalin, etc.)
- ○ Sedative (Ambien, Phenobarbital, Lunesta, Sonata, Restoril, etc.)
- ○ Other (please specify): _____

K5. What is your best estimate of the number of days during the past 30 days you used a prescription medication in any way a doctor did not direct you to use it?

- ○ 1 or 2 days
- ○ 3 to 5 days
- ○ 6 to 9 days
- ○ 10 to 19 days
- ○ 20 to 29 days
- ○ All 30 days
- ○ I'm not sure

K6. Which of the following statements describe your use in the past 30 days of a prescription medication in any way a doctor did not direct you to use it:
(select all that apply)

- ○ I used a prescription pain reliever without a prescription of my own.
- ○ I used a prescription pain reliever in greater amounts than a doctor or healthcare provider prescribed.
- ○ I used a prescription pain reliever more often than a doctor or healthcare provider prescribed.
- ○ I used a prescription pain reliever for longer than a doctor or healthcare provider prescribed.
- ○ I used a prescription pain reliever in some other way a doctor or healthcare provider did not direct me to use. (5)

If you or someone you know may be experiencing substance use challenges, you can access these national and local resources for help or support:

All Nations Health Center
830 West Central Avenue
Missoula, MT 59801
(406) 829-9515 main
www.allnations.health

Western Montana Addiction Services
1325 Wyoming Street
Missoula, MT 59801

(406) 532-9800 office
https://www.wmmhc.org/

National Crisis Text Line
Text: HOME to 741741

National Drug Helpline
(844) 289-0879

SAMHSA National Helpline
(800) 662-HELP (4357)

Recovery Center Missoula
1201 Wyoming Street
Missoula, MT 59802
Main (406) 532-9900 (office)
https://www.wmmhc.org/recoverycenter

Community Medical Services
2415 South Caitlin Street
Missoula, MT 59812
Main (406)-243-4429
24-Hr (406)-243-6559
https://communitymedicalservices.org/locations/mt-missoula/

Please continue to the next page

V. Intimate Partner Violence

The following questions ask about experiences related to intimate partner violence, including sexual violence, stalking, expressive aggression, coercive control, control of sexual health, and physical violence.

Disclaimer: This section of questions includes graphic language referring to sexual behaviors. If you find this topic offensive or prefer not to answer questions about this subject, you can skip to the following section. Some participants may find questions in this section about intimate partner and sexual violence triggering. If you need support at any time, please call the National Domestic Violence Hotline at 800-799-SAFE (7233). A list of additional resources is included at the end of this section.

Please remember that this survey is anonymous, and your answers cannot be linked back to you. By answering these questions honestly, you are helping us better understand trends and needs within our community.

L1. Have any of your romantic or sexual partners ever: (Select all that apply)

- ○ Tried to keep you from seeing or talking to your family or friends?
- ○ Made decisions for you that should have been yours to make, such as the clothes you wear, things you eat, or the friends you have?
- ○ Kept track of you by demanding to know where you were and what you were doing?
- ○ Made threats to physically harm you?
- ○ Threatened to hurt him or herself or commit suicide when he or she was upset with you?
- ○ Threatened to hurt a pet or threatened to take a pet away?
- ○ Threatened to hurt someone you love?
- ○ Hurt someone you love?
- ○ Threatened to take your children away? (If applicable)
- ○ Kept you from leaving the house when you wanted to go?
- ○ Kept you from having money for your own use?
- ○ Destroyed something that was important to you?
- ○ Said things like, “If I can’t have you then no one can”?
- ○ No, I have not experienced any of the above situations

L2. Have any of your romantic or sexual partners ever: (Select all that apply)

- ○ Acted very angry toward you in a way that seemed dangerous?
- ○ Told you that you were a loser, a failure, or not good enough?
- ○ Called you names like ugly, fat, crazy, or stupid?
- ○ Insulted, humiliated, or made fun of you in front of others?
- ○ Told you that no one else would want you?
- ○ No, I have not experienced any of the above situations

L3. Have any of your romantic or sexual partners ever: (Select all that apply)

- ○ If female: tried to get you pregnant when you did not want to become pregnant or tried to stop you from using birth control?
- ○ If male: tried to get pregnant when you did not want them to get pregnant or tried to stop you from using birth control?
- ○ Refused to use a condom when you wanted them to use one?
- ○ No, I have not experienced any of the above situations

L4. Has anyone ever: (Select all that apply)

- ○ Exposed their sexual body parts to you, flashed you, or masturbated in front of you?
- ○ Made you show your sexual body parts to them? Remember, we are only asking about things that you didn't want to happen.
- ○ Made you look at or participate in sexual photos or movies?
- ○ No, I have not experienced any of the above situations

L5. Has anyone ever: (Select all that apply)

- ○ Harassed you while you were in a public place in a way that made you feel unsafe?
- ○ Kissed you in a sexual way? Remember, we are only asking about things that you didn't want to happen.
- ○ Fondled or grabbed your sexual body parts?
- ○ No, I have not experienced any of the above situations

Again, thank you for taking the time to answer these questions. You are helping us better understand trends and needs within our community and your responses will help inform programming and services.

L6. When you were drunk, high, drugged, passed out, or otherwise unable to consent, has anyone ever: (Select all that apply)

- ○ Had vaginal sex with you? By vaginal sex, we mean that [if biologically female: a man or boy put his penis in your vagina] [if biologically male: a woman or girl made you put your penis in her vagina]?
- ○ (if biologically male) Made you perform anal sex, meaning that they made you put your penis into their anus?
- ○ Made you receive anal sex, meaning they put their penis into your anus?
- ○ Made you perform oral sex, meaning that they put their penis in your mouth or made you penetrate their vagina or anus with your mouth?
- ○ Made you receive oral sex, meaning that they put their mouth on your [if biologically male: penis] [if biologically female: vagina] or anus?
- ○ No, I have not experienced any of the above situations

L7. Has anyone ever used physical force or threats to physically harm you to make you: (Select all that apply)

- ○ Have vaginal sex?
- ○ Receive anal sex?
- ○ (if biologically male) Perform anal sex?
- ○ Make you perform oral sex?
- ○ Make you receive oral sex?
- ○ Put their fingers or an object in your vagina (if biologically female) or anus?
- ○ No, I have not experienced any of the above situations

L8. Has anyone ever used physical force or threats of physical harm to: (Select all that apply)

- ○ (if biologically female) Try to have vaginal or anal sex with you, but sex did not happen?
- ○ (if biologically male) Try to make you perform vaginal sex, but sex did not happen?
- ○ (if biologically male) Try to make you perform anal sex, but sex did not happen?
- ○ (if biologically male) Try to make you receive anal sex, but sex did not happen?
- ○ No, I have not experienced any of the above situations

L9. Have you had vaginal, oral, or anal sex with anyone after they pressured you by: (Select all that apply)

- ○ Doing things like telling you lies, making promises about the future they knew were untrue, threatening to end your relationship, or threatening to spread rumors about you?
- ○ Wearing you down by repeatedly asking for sex or showing they were unhappy?
- ○ Using their authority over you, for example, your boss or your teacher?
- ○ No, I have not experienced any of the above situations

L10. Have any of your romantic or sexual partners ever… (Select all that apply)

- ○ Slapped you
- ○ Pushed or shoved you
- ○ Hit you with a fist or something hard
- ○ Kicked you
- ○ Hurt you by pulling your hair
- ○ Slammed you against something
- ○ Tried to hurt you by choking or suffocating you
- ○ Beaten you
- ○ Burned you on purpose
- ○ Used a knife or gun on you
- ○ No, I have not experienced any of the above situations

L11. Has anyone ever: (Select all that apply)

- ○ Watched or followed you from a distance, or spied on you with a listening device, camera, or GPS (global positioning system)?
- ○ Approached you or showed up in places, such as your home, workplace, or school when you didn't want them to be there?
- ○ Left strange or potentially threatening items for you to find?
- ○ Snuck into your home or car and did things to scare you by letting you know they had been there?
- ○ Made unwanted phone calls to you or left you messages? This includes hang-ups, text, or voice messages.
- ○ Sent you unwanted emails, instant messages, or sent messages through websites or applications like TikTok, SnapChat, Tumblr, dating apps, or Facebook?
- ○ Left you cards, letters, flowers, or presents when they knew you didn't want them to?
- ○ No, I have not experienced any of the above situations

Thank you for taking the time to answer these questions. You are helping us better understand trends and needs within our community and your responses will help inform programming and services.

If you or someone you know may be experiencing intimate partner violence, you can access these national and local resources for help or support:

All Nations Health Center
830 West Central Avenue
Missoula, MT 59801
(406) 829-9515 main
www.allnations.health

YWCA Missoula
1130 W. Broadway
Missoula, MT 59802
(406) 543-6691 office
(406) 542-1944 crisis line
(800) 483-7858 crisis line
ywca@ywcaofmissoula.org

Crisis Hotline
(406) 363-4600 (Ravalli County)
(406) 542-1944 (Missoula County)
(800) 799-SAFE (7233) (National)

Strong Hearts Native Helpline
(844) 762 – 8483
Strongheartshelpline.org

Crime Victim Advocate Program
317 Woody Street
Missoula, MT 59802
Main (406) 258-3830
Toll-free (866) 921-6995
https://www.missoulacounty.us/government/civil-criminal-justice/crime-victim-advocate-program

Student Advocacy Resource Center
University of Montana
634 Eddy Ave.
Missoula, MT 59812
Main (406)-243-4429
24-Hr (406)-243-6559
http://www.umt.edu/student-advocacy-resource-center/

Please continue to the next page

VI. Native American Identity

In this section, we will ask about your personal experiences as a Native American person. As a reminder, we use the term "Native American" as a placeholder to represent American Indian/Alaska Native, Native Hawaiian or other Indigenous populations with whom you identify and belong to in the Americas (North, Central, South).

How strongly do you agree or disagree with the following statements?

M1. I experience discrimination because I am Native American:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M2. In and around Missoula, Native Americans in general experience discrimination:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M3. Being a member of my particular Native American tribe/People is an important part of my identity:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M4. Being Native American in general is an important part of my identity:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M5. When I talk about Native Americans, I usually say "we" rather than "they":

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M6. As a Native American person, I have a responsibility to give back to my community:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M7. My ancestors held a vision of health and wellness for me and my children:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

M8. I have a responsibility to be healthy for future generations of my tribe/people:

- ○ Strongly disagree
- ○ Disagree
- ○ Neither agree nor disagree
- ○ Agree
- ○ Strongly agree

VII. Demographics

The following questions are important but are for informational purposes only. As a reminder, **your responses are completely anonymous** and cannot be linked to you.

N. Tribal Affiliation

N1. Are you American Indian, Native American, or Alaska Native (do not include here Native Hawaiian, Pacific Islander, First Nations/Métis or Indigenous peoples from other parts of the Americas):

- ○ Yes
- ○ No

N2. What is your current tribal enrollment status:

- ○ I am enrolled in a federally recognized tribe. (Specify tribe) _____
- ○ I am enrolled in a state-recognized tribe. (Specify tribe) _____
- ○ I am eligible for enrollment, but not enrolled in my tribe. (Specify tribe) _____
- ○ I was formerly enrolled but am disenrolled, either by the tribe or by choice. (Specify tribe) _____
- ○ I am not enrolled in any tribe, but I am 25% (¼) or more Native American based on all tribes I descend from or my CDIB card. (Specify tribes) _____
- ○ I am not enrolled, but I am a descendant of a Native American tribe. (Specify tribe) _____
- ○ I am not affiliated with a state or federally recognized tribe, but am an Indigenous person from the Americas or Pacific Islands.

N3. Do you descend from and identify as Native Hawaiian (Kanaka Maoli):

- ○ Yes
- ○ No

N4. Do you descend from and identify as First Nations, Inuit, or Métis from Canada?

- ○ Yes
- ○ No

N5. Do you descend from and identify as an Indigenous person from Mexico, Central, or South America (for example, Mixtec, Mayan, Kuna, Ayamara)?

- ○ Yes
- ○ No

P. General Demographics

P1. What other racial or ethnic ancestry do you have? (select all that apply):

- ○ Asian/Asian American
- ○ Black/African American
- ○ Hispanic/Latino/a/x
- ○ White/Euro American
- ○ Other (Please specify:) _____
- ○ I do not have other ancestry

P2. What is the zip code for where you are currently living: _____

P3. In which Montana county are you currently living:

- ○ Missoula County
- ○ Ravalli County
- ○ Other _____

P4. What is your age in years? _____

P5. What term best describes your gender:

- ○ Cisgender Female (sex at birth was female and identify as female)
- ○ Cisgender Male (sex at birth was male and identify as male)
- ○ Two-Spirit
- ○ Trans Female (sex at birth was male and identify as female)
- ○ Trans Male (sex at birth was female and identify as male)
- ○ Nonbinary
- ○ Other (Please specify:) _____

P6. Do you have a primary partner (spouse, domestic partner, romantic partner) who currently lives with you:

- ○ Yes
- ○ No

P7. Do one or more children under the age of 18 currently live in your household at least 50% of the time (children, nieces/nephews, grandchildren, etc.):

o Yes
o No

P8a. What is the highest degree or level of school you have completed:

- ○ Less than 9th grade
- ○ Some high school
- ○ High school graduate or equivalent (GED)
- ○ Vocational, trade, or technical degree
- ○ Some college, but degree not received or is in progress
- ○ Associate's Degree (AA, AS)
- ○ Bachelor's Degree (BA, BS, AB)
- ○ Some graduate school, but did not finish
- ○ Graduate degree (Masters, Professional, Doctorate)

P8b. Are you currently a student?

- ○ Yes, enrolled full time
- ○ Yes, enrolled part time
- ○ No

P9. Which statement best describes your current employment status today?

- ○ Employed Full Time (36 or more hours per week)
- ○ Employed Part Time (less than 36 hours per week)
- ○ Self-employed
- ○ Stay at home parent
- ○ Disabled or unable to work for health reasons
- ○ Retired
- ○ Other employment status (Please specify:) _____

P10. What is your current household income:

- ○ Less than $15,000 per year
- ○ At least $15,000, but less than $30,000 per year
- ○ At least $30,000, but less than $45,000 per year
- ○ At least $45,000, but less than $60,000 per year
- ○ At least $60,000, but less than $75,000 per year
- ○ At least $75,000, but less than $100,000 per year
- ○ $100,000 or more per year (125)

P11. What is your current living situation?

- ○ Own a single-unit home or live with someone who owns the home
- ○ Rent a single-unit house or live with someone who rents a house
- ○ Rent an apartment, condo, duplex, townhouse, etc.
- ○ Live in a dormitory or other campus housing
- ○ A group living facility (treatment house, halfway house, etc.)
- ○ An assisted living facility (senior living center, skilled nursing home, etc.)
- ○ Currently staying with someone but do not permanently live there (“crashing” or “couch surfing” for example)
- ○ Homeless (living in a shelter, in a vehicle, in a tent, or on the streets)
- ○ Other (Please specify:) _____

You have now finished the survey! The first 200 participants who complete the survey are eligible for **a $30.00 Amazon gift card.**

If you would like to enter your information for a gift card, please fill out the separate "Survey Response Form" included with this packet. If you would like your gift card delivered electronically, please be sure to include an email address.

For the next phase of this project, we are conducting 1-on-1 interviews with some of the survey participants. Interviews will take 30 – 45 minutes and will be conducted in person, phone or over the internet using Zoom. If you are interested in participating in an interview, please indicate so on the "Survey Response Form" included with this packet. For a quicker response, please include either your email or phone number. One of our project team members will contact you in the future about setting up a day and time for the interview.

We are very appreciative of the time you have taken to complete this community health needs assessment. The results of this assessment will be used to develop worthwhile improvements to the supports and services available to the American Indian/Alaska Native communities across Missoula and Ravalli counties.

Once again, we are extremely grateful for your contributing your valuable time, your honest information, and your thoughtful suggestions.

Thank you!

You have completed the survey.

Please continue to the next page

Survey Response Form

[Place label here]

Q1: Would you like to volunteer to be interviewed about your experiences with Native American ceremonies or other traditional practices and their relationship with health and wellness?

- ○ Yes
- ○ No **(Skip to Q2)**

1B: What is your name? (**Reminder:** Your information here cannot be linked back to your survey responses.)

_____

1C: How would you like us to contact you about participating?

- ○ Email (Enter your email below)

  _____

- ○ Phone (Enter your number below)

  _____

- ○ Postcard (Enter your address below)

  _____
  _____
  _____

Q2: If you are one of the first 200 people to complete the survey, would you like to receive a **$30 Amazon gift card** as a thank you?

- ○ Yes
- ○ No

2A: How would you like to receive your $30 Amazon gift card?

- ○ Email (Enter your email below)

  _____

- ○ Mail (Enter your mailing address below)

  _____
  _____
  _____

Thank you!

If you have any questions about the survey you just took, upcoming interviews, or anything related to this study, please contact:

D'Shane Barnett (dshane.barnett@umontana.edu)

APPENDIX E. Cut-point Effect Analysis

UOR MEDIAN (2.0, 3.0)					
	OR	2.5%	97.5%	OR Delta %	P
Alc~KAB	0.70	0.27	1.63	22%	0.420
Pot~KAB	0.60	0.25	1.36	-16%	0.225
Drugs~KAB	0.42	0.16	1.27	15%	0.102
Alc~Intent	0.79	0.39	1.58	16%	0.521
Pot~Intent	1.25	0.64	2.43	78%	0.511
Drugs~Intent	0.92	0.36	2.69	200%	0.874
Bolded = Adjusted OR (AOR) CI does not include 1.0					

UOR TOP QUARTILE (3.5, 4.5)					
	OR	2.5%	97.5%	OR Delta %	P
Alc~KAB	0.63	0.33	1.20	11%	0.160
Pot~KAB	1.50	0.80	2.85	112%	0.214
Drugs~KAB	0.85	0.29	2.16	131%	0.741
Alc~Intent	0.57	0.25	1.31	-16%	0.183
Pot~Intent	0.99	0.44	2.26	41%	0.981
Drugs~Intent	0.24	0.01	1.22	-22%	0.172
Bolded = Adjusted OR (AOR) CI does not include 1.0					

UOR USED (3.0, 4.0)				
	OR	2.5%	97.5%	P
Alc~KAB	0.57	0.31	1.03	0.064
Pot~KAB	0.70	0.40	1.24	0.228
Drugs~KAB	0.37	0.14	0.88	0.030
Alc~Intent	0.68	0.37	1.25	0.215
Pot~Intent	0.70	0.39	1.26	0.238
Drugs~Intent	0.31	0.09	0.86	0.039
Bolded = Adjusted OR (AOR) CI does not include 1.0				

AOR MEDIAN (2.0, 3.0)					
	OR	2.5%	97.5%	OR Delta %	P
Alc~KAB	0.67	0.25	1.65	36%	0.399
Pot~KAB	0.44	0.17	1.08	-32%	0.080
Drugs~KAB	0.26	0.08	0.86	-13%	0.022
Alc~Intent	0.70	0.33	1.45	37%	0.344
Pot~Intent	1.08	0.53	2.20	60%	0.832
Drugs~Intent	0.77	0.28	2.38	150%	0.630
Bolded = Adjusted OR (AOR) CI does not include 1.0					

AOR TOP QUARTILE (3.5, 4.5)					
	OR	2.5%	97.5%	OR Delta %	P
Alc~KAB	0.58	0.30	1.15	18%	0.118
Pot~KAB	1.61	0.83	3.18	150%	0.163
Drugs~KAB	0.77	0.25	2.07	158%	0.617
Alc~Intent	0.57	0.24	1.34	12%	0.193
Pot~Intent	0.96	0.41	2.27	43%	0.934
Drugs~Intent	0.18	0.01	0.96	-43%	0.105
Bolded = Adjusted OR (AOR) CI does not include 1.0					

AOR USED (3.0, 4.0)				
	OR	2.5%	97.5%	P
Alc~KAB	0.49	0.26	0.93	0.031
Pot~KAB	0.65	0.35	1.18	0.095
Drugs~KAB	0.30	0.11	0.76	0.015
Alc~Intent	0.51	0.26	0.98	0.046
Pot~Intent	0.67	0.36	1.26	0.220
Drugs~Intent	0.31	0.08	0.91	0.048
Bolded = Adjusted OR (AOR) CI does not include 1.0				

APPENDIX F. Interview Moderator's Guide

Informed Consent

Thank you for agreeing to talk with me today. As mentioned earlier, I am interested in understanding your thoughts and opinions on ceremony and other traditional practices and substance misuse. Specifically, we are hoping to understand how ceremony and other traditional practices could be incorporated into substance use prevention efforts for our local Native American community. I will be asking you some questions, which you are free to answer in any way you wish. Please feel free to elaborate on any of your points. If a question is unclear to you, please feel free to ask me to explain it. I would like to tape record the interview so I don't miss anything you say, but I will not include your name on any documents or in the tape recording. Your answers will be kept confidential.
The session will be recorded.

Demographic Questions

1. Are you American Indian or Alaska Native? Yes ☐ No ☐
2. What is your tribal affiliation? [Enter tribal affiliation here]
3. What other race or ethnicity do you identify with? [Enter other race/ethnicity here]
4. What is your identified gender? [Enter gender identity here]
5. What is your current age in years? [Enter age in years]
6. What county are you currently living? Missoula ☐ Ravalli ☐ Other [Enter County here]
7. What is the highest degree or level of school you have completed?
    - ☐ Less than 9th grade
    - ☐ Some high school
    - ☐ High school graduate or equivalent (GED)
    - ☐ Vocational, trade, or technical degree
    - ☐ Some college, but degree not received or is in progress
    - ☐ Associate's Degree (AA, AS)
    - ☐ Bachelor's Degree (BA, BS, AB)
    - ☐ Some graduate school, but did not finish
    - ☐ Graduate degree (Masters, Professional, Doctorate)
8. Which statement best describes your current employment status today? Employed Full Time (36 or more hours per week)
    - ☐ Employed Part Time (less than 36 hours per week)
    - ☐ Self-employed
    - ☐ Stay at home parent
    - ☐ Disabled or unable to work for health reasons
    - ☐ Retired
    - ☐ Other [Enter other employment status here]
9. What is your current annual household income?
    - ☐ Less than $19,000
    - ☐ $20,000 - $40,000
    - ☐ $41,000 - $74,000
    - ☐ More than $75,000

The interview guide begins on the next page.

1) **To start off, could you please tell me about your experience living in the Missoula/Ravalli County area?**
    a) Probe: how long have you lived in the area?
        i) Follow-up: [if only lived in Missoula/Ravalli County] How has growing-up in an urban area shaped your identity?
        ii) Follow-up: [if moved to Missoula/Ravalli County] How would you compare life in an urban area to life on the reservation?

2) **In general, what are your thoughts and experiences with ceremony and traditional practices?**
    a) Probe: Do you participate in CTP? If so, why? If not, why not?
    b) Probe: How common do you think it is here in Missoula? How about on your reservation?
    c) Probe: How important *in your community* is CTP? (Both in Missoula and on your reservation)
    d) Probe: How easy do you think it is to access?
    e) Probe: How necessary or useful is it?
    f) Probe: [if never participated in CTP] have you ever known anyone who has participated in ceremony or traditional practices?
        i) If yes, how did they access those practices?
        ii) If no, what are your thoughts in general about ceremony or traditional practices?

3) **Some people participate in ceremonies or other traditional practices because they believe it provides a positive benefit to their physical, mental, emotional, and spiritual health. What are your thoughts on the role of ceremony or other traditional practices and health or wellness?**
    a) Probe: Are there ways that CTP can be used to enhance a person's health or wellness? If so, what are some examples?
    b) Probe: What do you think about the role of CTP in your own health or wellness?
    c) Probe: Can you think of some examples of appropriate, or inappropriate, ways to incorporate CTP in addressing health or wellness?
    d) Probe: How comfortable are you with the idea of a healthcare provider, such as All Nations, incorporating CTP into health or wellness services?

4) **All Nations Health Center is exploring ways to incorporate CTP into some of its programs and services that are aimed at preventing substance use problems. Because we are in an urban area, program like this would have to accommodate many tribal perspectives, cultures, and backgrounds. What would you think about such a program?**
    a) Probe: How could a program like this be successful?
    b) Probe: What are some reasons a program like this could fail?
    c) Probe: Have you ever seen or participated in something multi-tribal like this and what did it look like?
    d) Probe: Could you see this type of program being successful for certain problem substances and not others? [provide list of problem substances: alcohol, methamphetamine, prescriptions drugs]
    e) Probe: Can you think of ceremonies or traditional practices that would be more useful or appropriate than others? Please elaborate.
    f) Probe: Can you think of ceremonies or traditional practices that might be inappropriate to use for this purpose, trying to prevent substance use problems? Please elaborate.
    g) Follow up: Would the approach look any different if it were a treatment program, rather than a prevention program.

5) **If All Nations had all the money and resources in the world to create a prevention program for substance use problems that uses ceremony and traditional practices, what would this program look like in Missoula?**
    a) Probe: Could you take me through what you think it would look like?
        i) What CTP would be most appropriate/effective for a multi-tribal community like Missoula?
        ii) What time during the week do you think would be best for you to try to participate?
        iii) Should childcare be made available, or do you think there are other things that might make it easier or harder to participate?
        iv) Who should be participating together during these activities at the same time and who should not be participating at the same time (for example, men and women or elders and youth)?
        v) Are there cultural protocols we would need to be aware of when we do this kind of programming?
            (1) Follow-up: If so, what are they?
            (2) Follow-up: Are there activities or topics that should be off limits? If so, what are they and why do you think they should be off limits?
        vi) Who would lead the program and who would be involved?
        vii) Where would it take place?

viii) What about length of the program? For example, could it be effective as a one shot, or does it need to be over a period of time?

ix) How do you think this would look different if it were a treatment program instead of a prevention program?

x) Why would this be an attractive approach for this program to take? Why would someone want to participate in a program like this?

6) **If we changed the subject matter, and developed services or a program to address intimate partner violence, how would that change your answers to the previous questions?**

7) **Why might there be a difference between someone's personal beliefs or attitudes about CTP and whether or not they say they will participate in CTP?** (Example: they have positive beliefs about CTP but say they don't intend to participate.)
    a) Follow up: Please tell me more about barriers/challenges/differences between knowledge, attitudes and beliefs regarding culture and intention to participate in ceremony.

8) **NEW PROMPT -** So far in this interview we have talked about difficulties incorporating different CTPs. Is there some way that we could create a program that would seem familiar and comfortable to people from a vast difference of Urban AI backgrounds?
    a) or more specifically (if they have trouble answering), how would you feel comfortable in a program that incorporates CTPs from different backgrounds?

9) **Given everything that we have discussed, is there anything that we missed or anything else that you would like to share?**