*Original Article*

CHRONIC STRESS

Chronic Stress
Volume 7: 1–9

DOI: 10.1177/24705470221149479
journals.sagepub.com/home/css
SAGE

# Dementia, Substance Misuse, and Social Determinants of Health: American Indian and Alaska Native Peoples' Prevention, Service, and Care

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## Abstract

**Background:** American Indian and Alaska Native (AI/AN) peoples are disproportionately impacted by substance use disorders (SUDs) and health consequences in contrast to all racial/ethnic groups in the United States. This is alarming that AI/AN peoples experience significant health disparities and disease burden that are exacerbated by settler-colonial traumas expressed through prejudice, stigma, discrimination, and systemic and structural inequities. One such compounding disease for AI/AN peoples that is expected to increase but little is known is Alzheimer's disease and related dementias (ADRD). AI/AN approaches for understanding and treating disease have long been rooted in culture, context, and worldview. Thus, culturally based prevention, service, and caregiving are critical to optimal outcomes, and investigating cultural beliefs regarding ADRD can provide insights into linkages of chronic stressors, disease, prevention and treatment, and the role of substance misuse.

**Method:** To understand the cultural practices and values that compose AI/AN Elder beliefs and perceptions of ADRD, a grounded theory, qualitative study was conducted. Twelve semistructured interviews with AI/AN Elders (M age = 73; female = 8, male = 4) assessed the etiology, course, treatment, caregiving, and the culturally derived meanings of ADRD, which provides a frame of understanding social determinants of health (SDH; eg, healthcare equity, community context) and impacts (eg, historical trauma, substance misuse) across the lifespan.

**Results:** Qualitative analyses specific to disease etiology, barriers to treatment, and SDH revealed 6 interrelated and nested subthemes elucidating both the resilience and the chronic stressors and barriers faced by AI/AN peoples that directly impact prevention, disease progression, and related services: (1) postcolonial distress; (2) substance misuse; (3) distrust of Western medicine; (4) structural inequities; (5) walking in two worlds; and (6) decolonizing and indigenizing medicine.

**Conclusion:** Barriers to optimal wellbeing and SDH for AI/AN peoples are understood through SUDs, ADRD, and compounding symptoms upheld by colonial traumas and postcolonial distress. En masse historical and contemporary discrimination and stress, particularly within Western medicine, both contextualizes the present and points to the ways in which the strengths, wisdom, and balance inherent in AI/AN culture are imperative to the holistic health and healing of AI/AN peoples, families, and communities.

## Keywords

American Indian/Alaska Native, dementia, social determinants of health, substance use, historical trauma

Received 31 August 2022; accepted 6 December 2022

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## Introduction

Alzheimer's disease and related dementias (ADRD) are increasingly becoming a significant health concern for American Indian and Alaska Native (AI/AN) communities.[1] The AI/AN population aged 65 and over was 301,418 in 2019, and by 2060, it is expected to reach more than 648,000.[2] Currently, 1 in 5 AI/AN people aged 45 and older report experiencing subjective or mild cognitive decline, which is now recognized as the first clinical manifestation of ADRD.[3–5] Importantly, the environment has a profound impact on our development and disease onset and course. Social environments establish social norms, create social control patterns, regulate stress (positively or negatively), and shape environmental opportunities, thereby influencing behaviors that may be favorable or detrimental to health.[6] Consequently, prior research[7,8] has indicated that many aspects of health, including neurocognitive, are affected by environmental factors throughout the lifespan. Namely, social determinants of health (SDH), defined as "the non-medical factors that influence health outcomes… the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life."[9,10] Research[11–13] highlights the effects that SDH have on neurocognitive health and ADRD, particularly for minoritized groups who are disproportionately impacted, underdiagnosed, and undertreated.[13–19] Risks for ADRD include low socioeconomic status[12,13]; early childhood food insecurity[14–16]; exposure to potentially traumatic events (eg, assault, domestic violence)[6,13,18]; and a longitudinal study[17] of cognitively unimpaired adults (N = 601) found that living in the most disadvantaged neighborhoods was associated with cognitive decline and cortical thinning in Alzheimer's disease (AD) signature regions. It is undeniable that daily, environmental, sociocultural, and chronic stressors are major contributors toward and compounding factors in disease etiology and progression. However, the interactions between chronic stressors and SDH are complex and intricately interwoven across one's life.[19–21]

### *Alcohol and Other Drugs*

Frequent and excessive use of alcohol and other drugs (eg, cannabis, benzodiazepines, and opioids) have been correlated with increased risk of ADRD.[22–26] Notably, AI/AN peoples experience higher rates of substance use disorders (SUDs) than other racial/ethnic groups in the United States.[27,28] SUDs are exacerbated by chronic stress and racism, which directly impact wellbeing and SDH for AI/AN peoples. Prevention, treatment, and caregiving for disease is challenging when racism and discrimination are structural barriers embedded in the systems designed to help. For example, older AI/AN adults have shown distrust of the institution of Western medicine, and their distrust is stronger when their AI/AN cultural identity is stronger.[29] Despite cultural diversity and dispersion across the United States, AI/AN peoples are still disproportionately impacted by SUDs,[27,28] and this may also leave them with a higher risk for developing ADRD, which is heavily influenced by settler-colonial traumas across all SDH indicators.

### *Health Inequalities, Historical Trauma, and Postcolonial Distress*

When considering SDH compounded by health inequities, it is imperative to examine the ecological impacts of colonization across the lifespan. For time immemorial AI/AN peoples have sustained traditional ways of knowing and belief systems that inform identity in the context of community, culture, language, and environment.[30–32] However, learning and transmitting traditional knowledge have been convoluted by generations of enduring the sociocultural impacts and psychological traumas of colonization; it is posited that health problems are the direct result of disconnection to traditional ways of life and ceremony.[33,34] This cultural isolation is detrimental to individual and community wellbeing and is posited to contribute to problematic behaviors, SUDs, domestic violence, and high rates of suicide among AI/AN peoples.[35,36] The settler-colonial traumas inflicted during colonization have not ended but are functional aspects of all modern systems (eg, hospitals, SUD treatment, politics) that steal culture and undermine SDH for AI/AN peoples. Postcolonial distress (ie, contemporary trauma embedded in Western culture and systems[37]) and chronic stressors (eg, poverty, food insecurity) affect SDH across the lifespan and can be understood by the most salient culprits (ie, racism, discrimination) and symptom (ie, SUDs).[38] Moreover, systemic racism has been linked to health disparities, barriers to SDH (eg, medical care, education, food, clean water), SUDs, and diseases (eg, ADRD).[39,40]

### *Ecological Systems and Alaska Native Worldview*

Bronfenbrenner's[41] ecological systems theory is an appropriate framework for understanding how historical traumas, postcolonial distress, and symptomatology (eg, SUDs) are interrelated, cumulative, and compounding across the lifespan. Ecological systems theory posits that people exist within systems and structures that can both support and disadvantage them. An adapted and reconceptualized ecological systems model[42] for AI/AN peoples posits that environmental changes that occur across the lifespan reflect the historical factors that have shaped lived experiences of AI/AN peoples. Moving toward the person and considering culture emphasizes AI/AN ways of being as a priority in identity development in a social environment. By positioning one's culture in the context of historical and contemporary stressors and inequities, a culturally relevant strength-based approach is needed to understand disease. Thus, the current research aims to

**Table 1.** Disease etiology, barriers to treatment, and social determinants of health themes.

| Theme | Example |
|---|---|
| Disease etiology | |
| Postcolonial distress | "There's a brutal side to this too…but I think her [non-Native] husband used to get mean to her when I wasn't there. Because sometimes I'd see bruises on her arms and stuff. They did find out later on after I wasn't caring for her anymore, they moved her out of there. So, I don't know I think he would get frustrated with her and hit her sometimes." |
| Substance misuse | "I personally know people who've taken drugs and caused memory problems to their brain and stuff. They remember some things, but you can tell. You can see it's affected them…like is eventually dementia." |
| Barriers to treatment | |
| Distrust of Western medicine | "A lot of these kids that grew up in the villages, they went deaf because of that because they'd get these really bad ear infections, and nobody ever did anything about it and didn't know how. I think a lot of the Native people from the villages are deaf and it's because of those reasons." |
| Structural inequities | "I don't think he's a person that went to the doctor unless he was really, really sick 'cause in the [village] your teeth got rotten. There was no dentist or nothin'…The parents, whoever, just pulled your teeth." |
| Social determinants of health | |
| Walking in two worlds | "Well, stay away from drinking, stay away from drugs, stay away from smoking, try to eat things that are better for you, but again, these are newer things that they didn't know back in the olden days." |
| Decolonizing and indigenizing medicine | "You want justice and for you and your people and it hasn't come about yet. But all the word I read says it's going to be coming and I'm not supposed to give up." |

understand AI/AN Elders' (ie, older adults identified as cultural knowledge holders) perceptions about ADRD related to disease etiology, barriers to treatment, and SDH. This research could help inform culturally specific views of disease to potentially inform prevention, treatment, and caregiving and furthermore can provide insights into the role of substance misuse in the development of neurological disorders (ie, ADRD) across the lifespan.

## Method

### Design and Approach

This research is a grounded theory, qualitative subanalysis of disease etiology, barriers to treatment, and SDH related to ADRD. The primary research study was conducted between 2015 and 2022 and is explained in-depth elsewhere.[43] A participatory action (PAR) approach was used to include AN Elders across predevelopment, development, interpretations, and dissemination. PAR is a research strategy that aligns with AI/AN worldviews that are inherently inclusive and iterative and is integral to research aimed at including diverse voices from communities that have been historically misrepresented, marginalized, and excluded from dominant narratives.[44,45]

### Participants and Recruitment

Inclusion criteria were (1) be identified as an AN Elder; (2) self-identify as AN; (3) speak in English; and (4) be able to meet for an interview in-person or over the phone. Institutional review was obtained through the University of Alaska, and informed consent was obtained through signature on printed documents in-person or via postal mail. Recruitment used a snowball sampling method, and participants were identified as AN Elders (eg, community culture bearers) through referral by community members, other AN Elders, academic partners, and primarily participants. This was done by phone, word of mouth, and a flyer.

### Procedure

Participants received a demographic questionnaire that included questions about age, race/ethnicity, Tribe, education, Elder status, and spirituality. They also received the Orthogonal Cultural Identification Scale-Adult (OCIS-A[46]). The OCIS is composed of 6 questions related to White American/Anglo culture and AN culture, with responses on a 4-point Likert scale ranging from "A lot" to "None at all." An adaptation was made by reducing all racial/ethnic categories (eg, Black, Latinx) to 2: White and AI/AN. Interviews began with traditional introductions, where the researcher(s) provided their degree, position, place of origin, and tribal heritage if applicable. Interviews consisted of 16 questions and 14 probes. Questions covered the following domains: conceptualization, prevalence, assessment and management, caregiving, and cohort experience. Questionnaire data were stored in a locked file cabinet, as well as on a password-protected computer, and stored separate from audio recordings.

### Data Analysis

A deductive analysis of 12 interview transcripts in Nvivo 12, qualitative software, was conducted to answer the research

question: What are AN Elders' perceptions of disease etiology, treatment barriers, and SDH related to ADRD? Interviews were audio recorded and transcribed verbatim. Themes were developed from an existing codebook and stratified by their hierarchy, relevance to the question, and relatedness (ie, re-labeled, merged, split). Data immersion (eg, read, reread), saturation matrices (ie, frequency, coverage), and a collective review of themes by coders was conducted to validate the coding strategy.

## Results

Twelve AN Elders were interviewed. Age ranged from 62 to 89, with a mean of 73. The sample was predominantly women ($n = 8$; 66.7%), Athabascan Tribal heritage ($n = 7$; 58.3%), and retired ($n = 8$; 66.7%). All participants reported having a family member with an ADRD diagnosis but stated that they themselves did not have any diagnosed memory decline or disease. Each was designated as a cultural and tribal Elder by their community, which is signified as a person being a culture bearer, wisdom holder, and example upheld as living an exemplary life.

The OCIS-A demonstrated that participants predominantly identify with AI/AN culture (modal responding = A lot) than White culture (modal responding = Some).

Qualitative analyses generated 6 overarching and explanatory themes of disease etiology, barriers to treatment, and SDH: (1) postcolonial distress; (2) substance misuse; (3) distrust of Western medicine; (4) structural inequities; (5) walking in two worlds; and (6) decolonizing and indigenizing medicine (see Table 1). These 6 themes highlight thematic, culturally specific elements of ADRD disease etiology, treatment barriers, and SDH.

### Disease Etiology

*Postcolonial Distress.* Both historical traumas and present experiences of racism and discrimination were cited as the cause of not only compounding traumas that create disease, but also social inequities that limit access to tribal resources and culture. One participant stated:

> "There're so many things that cause [ADRD]…It can be a chemical. I had a friend that had a chemical imbalance, B12. She acted like she was totally nuts and she was totally okay, all they had to do was give her a B12 shot. So, we can't pass a quick judgment if we see somebody. And sometimes shock and trauma does that to you or long-term stress. You can blank out from stress."

In another instance, a participant discussed how colonization, removal from family, and boarding schools (eg, forced orphanages) degraded the family unit, sense of connection, and ultimately, took their cultural practices and replaced them with traumas that reverberate through the family system:

> "In our family we didn't hug…when I asked mom about [that] when I was taking her to the doctors before she passed on, I said, "Mom, how come you never told us you loved us or hugged us or give us words of encouragement when we did something good?" She said, "I love you guys, but I couldn't do that." I said, "Why?" She said…her mom was full Athabascan and she was raised in the orphanage, and she didn't have anybody loving on her. Then when she married my grandpa, he was [White] and came up for [a] mining [job]. She was only 13 and he was 20 years older than her. She had [her first child] before she was 14."

*Substance Misuse.* All participants talked about issues of substance misuse in the AN community and how determinate it was to holistic health and stigmatizing it was to the culture. One participant shared how AN people experiencing homelessness and substance misuse were being portrayed in the news:

> "[On the news they were] interviewing these Native people on the streets…one guy was coming by and asking, "Anybody got any spice?" Finally, he walked away and then later they see him when they were working down to interview others, he was smoking on something. It showed him just going bananas there. He was spitting and stuff was coming out of his mouth, and he couldn't stand-up straight. Finally, he just collapsed and fell down. They say that that spice is really harmful and it's killing a lot of our people and they're having all kinds of emergency."

All participants shared that substance misuse was a direct result of colonization, discrimination, racism, and related traumas. Over half of the participants who mentioned substance misuse stated that it was a primary cause for developing ADRD in addition to poor nutrition and chronic stressors. One participant discussed substance misuse within their family:

> "I've got a cousin that she does meth and she's always getting stuff and packin' her car and then she's out there and she moves it all over… soon you're lookin' at her like what's wrong with her. She just keeps doing it. It's just like it doesn't stop. So, you can tell through the drug she's affected her brain. I would say that involves memory also. I've said it before it could be chemical imbalance, it could be stress, it could be you know not getting enough rest, it could be separation or loss, everything affects your mind."

### Barriers to Treatment

*Distrust of Western Medicine.* The primary barrier to treatment endorsed by participants was a distrust of Western medicine.

One participant shared about being stigmatized by Western medicine and AN peoples' reluctance to seek treatment and diagnosis:

> "Because they don't want to be diagnosed…because people diagnose you very quickly. My friend in [a city in Alaska] everybody in town thought she was dementia, and they still point at her sometimes when she's going downtown in a wheelchair. She's got Parkinson's, but she's not – she's just as sharp as you or me, but that label got put on her in that little community and some people still treat her like… she can't think straight. I call that diabolical."

Another participant shared about her own experience of feeling marginalized in the Western medical setting and how she was unable to get basic care that could have improved the lives of her family system:

> "It falls on family…From there you must branch out. Doctors try to help you, but I don't know how much help they are. With my brother-in-law when he got hard to handle [with ADRD], we tried to just get sleeping pills for him because he'd wander all night long. I was disappointed in the medical community, because I took him to [a large urban hospital] and the doctor interviewed us and talked with us for a while and next he just launched into a tirade on me. "You mean you want to give him sleeping pills?" "He's sitting here, he's doing just fine." I said, "It's not nighttime yet and he's not home." Didn't matter. That doctor had made-up his opinion and there was no way he was going to help us, not even with sleeping pills."

*Structural Inequities.* Participant shared that the distrust of Western medicine was upheld and perpetuated by structural inequities. One participant shared how lack of resources and colonial policy are impacting SDH for AN people in rural Alaska:

> "They say that the psychological problems out there are a big impact on the Natives right now. One of the things I've found in my research was that our people living in the rural areas are having a heck of a time because of the high price of food and energy and gas and oil and stuff like that. Then to keep warm, to keep their home warm, the houses they build up there was substandard when they were built and if they don't have money to buy gas and stuff for the [house] and the boats to hunt and fish that's creating a problem. Then they opened up the state where trophy hunters and stuff are coming in and taking the fish and game and so they have a great lot of problems [to] worry about how they're going to live."

One participant said, "I think of the adverse things that's happened to me in the last 25, 30 years and how the system is so corrupt out there and it really bugs me after a while." Another participant discussed how she was unable to receive help for taking care of her brother with ADRD:

> "[When he] starting to throw things…we knew that he needed more help than what I was giving him. So, when we went to the police department and told them…they wouldn't help us, not at [a psychiatric hospital] either. They just ushered us out the door. Because…if there was something I'm not doing or if there's something I could do more for him I want to know. Or if you guys can find a place for him here or whatever you know? And they offered us nothing."

## *Social Determinants of Health*

*Walking in Two Worlds.* The balance of Western and AN culture was understood and discussed as connection, reciprocity, and caregiving. One participant shared how caregiving is inherently cultural:

> "That's how we were raised. Your elders, they took care of you when you were young. Now you take care of them when they're older. My grandma woulda' never put her in a home or something, but she only lived a block and a half away so they could walk back and forth or whenever they went to Bingo they always went down and picked up great grandma and her and grandma would go to bingo and then would take them to the grocery store on the way home".

*Decolonizing and Indigenizing Medicine.* Participants made a distinction between Western medicine and AN culture, calling for less of Western conceptualizations and practices and more inclusion of AN worldviews and approaches to treatment. One participant gave an example of how disparate the Western worldview of disease can contrast with an AN worldview:

> "When you talk about memory to traditional people, you're not talking about a function of the mind. You're talking about a specific function of the Tribe like going to a [a local Native hospital] and saying…"This is a hospital", it could mean anything. To the traditional people it would mean you had to be sick…There would be no healthy people working…Just sick people…That's the problem with the Western way of looking at things like memory. Our memory cycles are directly related to the cultural identity of the Tribe. It's nothing to do with health and wellness and so it just drives me nuts when I listen to White people start to talk about things like Alzheimer's and memory…because it's like they're on Jupiter. I'm on Mars. And they're going to tell me all about Jupiter's issues and bring it over to me and say, "Now what do you think about that?" My first response is go back to Jupiter and stay there. [Laughs]"

According to participants, culture, spirituality, and worldview are the most critically overlooked and excluded aspects of medical diagnoses, decision making, and treatment. One participant made the distinction between the Western disease model and the AN worldview of disease:

> "I don't like the word "Alzheimer's." My dad had it and it had a totally different, meaning than what my aunts were telling me and teaching me and elders when I was taking care of my dad and they're two different things. One is an illness totally and the other one is…a spiritual life journey for them. They were returning to our Creator and it's a preparation time for them to move onto the next world."

## Discussion

Ecological systems theory[41] adapted and conceptualized through AI/AN worldview[42] guided this research and the theoretical underpinnings framed the inquiry of AI/AN disease etiology, barriers to treatment, and SDH. Elders are the point of reference for this inquiry and the cultural holders of the AN scientific oral tradition. Reflective of AI/AN ecological systems model, AN knowledge systems are developed through observation over extended periods of time, recognizing patterns and relationships in nature to understand irregularities that may occur.[31] While any member in the AN community can produce and hold knowledge, Elders in the community take on the role of curators of traditional knowledge as they have observed and learned across the lifespan and are tasked with teaching younger generations about their culture, ways of knowing, and other observed-learned skills to thrive in their environments.[32,33] However, adversity (eg, chronic stressors, postcolonial distress, historical trauma)[37,38,47–51] uniquely experienced by AI/AN peoples (particularly during development) may predispose them to compounding and correlated diseases such as SUDs and ADRD at a disproportionate rate.[52–54] This research identified 6 themes explained across the 3 levels of inquiry (ie, disease etiology, barriers to treatment, SDH): (1) postcolonial distress; (2) substance misuse; (3) distrust of Western medicine; (4) structural inequities; (5) walking in two worlds; and (6) decolonizing and indigenizing medicine.

### *Disease Etiology*

Childhood and adolescence are critical periods for successful neurodevelopment. Unfortunately, early neurodevelopmental stages are particularly vulnerable to environmental stressors such as abuse, substance misuse, mother separation, food insecurity, and neuroinflammation.[51,54,55] Early stressful events like poverty and racial discrimination, can cause the release of cortisol, cytokines, and other chemicals that can harm the nervous system.[50,54–56] A meta-analysis[49] proposed that early life stress may influence Late-Onset Alzheimer's Disease (LOAD) by interfering with the expression of tau protein (a major pathogenic factor of AD) in early ontogeny, which may, in turn, increase susceptibility to LOAD. Considering that 1 in 3 AI/AN children live in poverty and that AI/AN people frequently experience geographic isolation, low income, low educational achievement, prejudice, stigma, and discrimination,[48,57] these accumulating neural "insults" from adversity may predispose AI/AN individuals to develop ADRD and dramatically increase risk for SUDs. Importantly, the most salient themes to emerge for disease etiology included postcolonial distress, and the outcome of historical traumas and postcolonial distress were purported by participants as substance misuse.

### *Barriers to Treatment*

In the face of health disparities, disproportionately higher rates of SUDs, and higher disease burden for AI/AN peoples, understanding and reducing the barriers to medical care, treatment, and caregiving are important.[21,27,28] As demonstrated in prior research,[29] participants expressed a distrust of the Western medical system that was maintained and bolstered by structural inequities often realized in medical settings. However, the eminence of Western medicine embedded in urban contexts does not account for rurality (eg, travel, transportation), limited outside resources (eg, skilled nursing, specialty care), and changing socioeconomic structures (eg, aging-in-place, community, familial caregiving). Many participants endorsed feeling disillusioned, disempowered, and even angry due to the inequality, inequity, and racism within systems. Culture and traditional knowledge were acknolweldged as requisite to addressing these barriers.

### *Social Determinants of Health*

Familial and community dynamics were highlighted as a significant influence of health, wellbeing, and SDH. While obtaining and increasing resources and opportunities in the environment are systemic, structural, and sociopolitical processes, the participants also acknowledged that the function and quality were contingent on their cultural relevance and applicability. These were understood as finding a healthy balance between Western and AI/AN culture (ie, walking in two worlds) and decolonizing and indigenizing the Western context as key to holistic health.

Caregiving was the most salient aspect of walking in two worlds, as participants discussed the practice of taking care of one another as family and community and how that has been greatly impacted and reduced by Western pressures (eg, inability to age in place, employment, reliance on Western goods and services). However, research notes[47] that when caregiving is done among the culture, it can be an expression of values, empowerment, and improve wellbeing. Further, decolonizing and indigenizing the Western medical setting

and care for AI/AN peoples is an ongoing and multilevel process that must consider the holistic (ie, ecological systems[41,42]). Decolonize is defined as "a long-term process involving the bureaucratic, cultural, linguistic and psychological divesting of colonial power"; and indigenize means "to make Indigenous; subject to Native influence."[58] Thus, culture is medicine; and the recognition, inclusion, and action on this hypothesis is decolonizing and indigenizing.

### Limitations

While this research uniquely represents a critical participant voice often marginalized or excluded, there are several limitations within this research. First, 12 AN Elders were interviewed, many of which were female Elders of Athabascan heritage. Future research would benefit from achieving a larger sample with even distribution of men and women reflecting a more diverse tribal heritage. Additionally, while all the participants were English speaking, all also indicated speaking an AN language. However, non-English speakers were excluded because of the language limitations of the researchers as well as the diversity of the 20 distinct AN languages recognized in Alaska: many of these have few fluent speakers. Thus, the research would also benefit from inclusion of AN language speakers. Lastly, it is an aspirational goal that more culturally relevant ADRD Indigenous research be conducted to not only further the knowledge about etiology, treatment, and caregiving of AI/AN peoples but also for comparisons of Indigenous peoples the world over.

## Conclusion

As the above thematic narratives (ie, disease etiology, barriers to treatment, SDH) indicate, AN Elders' views of ADRD and the causal factors underpinning disease development and manifestation are multifaceted. Importantly, these themes remain steadfast in honoring cultural and contextual realities and are paramount to cultivating respectful relationships, adopting a holistic view of the person, and understanding historical and contemporary factors that impede and facilitate holistic health. However, when the social environment, in the guise of the majority culture, imposes social norms, social control patterns, and attempts to regulate stress (positively or negatively) in hopes of shaping environmental opportunities, it can influence AI/AN peoples' behavior. The overall impact of Western imposition has been detrimental to AI/AN health and have led to prejudice, stigma, discrimination, and systematic and structural inequities (ie, SDH). Substance misuse is an insidious and continuing behavioral response to traumas. However, the outcomes have cumulative impacts across the lifespan and may predispose AI/AN communities to a higher risk for ADRD. As previously stated, "…present day experiences of Native Americans must be grounded in the past to acknowledge historical trauma, the loss of culture, and traditional ways of life pre-colonization."[42] Moving toward the person and considering culture emphasizes AI/AN ways of being as a priority in identity development in a social environment.[41,42] By positioning one's culture in the context of historical and contemporary stressors and inequities, a culturally relevant strength-based approach is important to understanding disease, whether it be ADRD or SUDs. Recognizing the perplexities of developing an identity within systems that have been and continue to be used to oppress AI/AN peoples must be acknowledged, for only then can AI/AN communities begin to decolonize and indigenize the social environmental constraints that have impacted their ability to obtain culturally based prevention, services, and caregiving.

### Acknowledgments

The authors would like to offer a heartfelt dogidinh (thank you) to Elizabeth "Liz" Sunnyboy (Yup'ik); Patrick "Pat" Frank (Deg Hit'an); the AN Elders and ancestors whose words and wisdom reverberate through generations; and the participants who provided their subject matter expertise and lived experiences.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse (grant numbers F32AA029627, R25DA035163).

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