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Partnering with Native Communities to Develop a Culturally Grounded Intervention for Substance Use Disorder

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Serious health disparities related to substance use disorders (SUDs) affect American Indian and Alaska Natives (AI/AN) communities, but efforts to develop culturally relevant and sustainable interventions have been slow (Blume, 2016). For AI/ANs who are more than twice as likely to have SUDs than the general population (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016), the lack of significant progress in addressing treatment needs has been devastating. Recent national data have shown increased incidences of mortality markers over the last decade among AI/ANs that are often associated with substance use, such as liver disease, unintentional injuries, drug overdoses, suicides, and homicides (Centers for Disease Control and Prevention [CDC], 2017). Age-adjusted alcohol mortality rates for AI/ANs are approximately five times the rates for the general population, and mortality attributed to other drugs is nearly double the rate for the general population (CDC, 2014). Although evidence showing that Native communities suffer health disparities related to SUD has been demonstrated consistently for years, AI/ANs have the greatest unmet need for treatment among all ethnic groups in the U.S. (Chartier & Caetano, 2010). Futhermore, there are notable disparities in treatment access and other barriers to effective SUD treatment for AI/AN people (Greenfield & Venner, 2012; Rieckmann et al., 2012; Venner et al., 2016). One factor contributing to these outcomes is the paucity of empirically tested and culturally appropriate therapies available for AI/ANs with SUD (Etz, Arroyo, Crump, Rosa, & Scott, 2012; Greenfield & Venner, 2012; Venner et al., 2016).

Effective SUD interventions are critically needed for improving health equity in AI/AN communities (Etz et al., 2012). Although there are effective behavioral and pharmacological treatments for SUD, AI/AN participants were underrepresented in the efficacy trials of these interventions. For example, only 25 AI/ANs (1.4% of the total sample) participated in Project MATCH, still one of the largest randomized controlled trials of SUD treatments with AI/ANs (Villanueva, Tonigan, & Miller, 2007). Insufficient opportunity to participate in

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Conflict of Interest

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clinical trials is compounded by distrust resulting from colonization and a history of research ethics violations in AI/AN communities (e.g., Barrow Alcohol Study; Foulks, 1989). It is unclear whether existing evidence-based treatments are appropriate for AI/ANs, or if implementing them would change substance use or improve public health outcomes. While testing existing treatments with AI/AN participants would help to answer these questions, there are some notable barriers to implementing and evaluating evidence-based treatments in Native communities.

Although communities profess the need for more effective SUD treatments, there is evidence of profound skepticism and resistance to the idea of evidence-based treatments developed by non-Native researchers for non-Native patients being used in AI/AN communities (Calabrese, 2008; Gone, 2007; Greenfield & Venner, 2012; Novins et al., 2011; Skewes & Lewis, 2016; Venner et al., 2016). Respect for culture and tribal sovereignty is perceived to be at odds with mandates to use evidence-based treatments, and some aspects of efficacious treatments are at odds with AI/AN cultures (Gone, 2007, 2008; Larios, Wright, Jernstrom, Lebron, & Sorensen, 2011; Novins et al., 2011; Venner et al., 2016). As a result, most AI/ANs who need SUD treatment never receive evidence-based treatments, and it is unclear whether these interventions would be effective for AI/AN populations even if the barriers of trust and engagement could be overcome (Novins et al., 2011; Venner et al., 2016). Perhaps if evidence-based interventions were modified to meet the needs of tribal communities, there would be greater adoption of these effective techniques. Having the greatest treatment need among all ethnic groups in the nation (Chartier & Caetano, 2010), AI/AN communities are calling for new approaches that respectfully consider Native culture, traditions, knowledge, and values (Calabrese, 2008; Gone & Trimble, 2012; Novins et al., 2011).

Need for Culturally Appropriate Treatments

Discomfort with Western approaches and distrust of mental health care are formidable barriers that impede uptake of evidence-based treatments in Indian Country (Greenfield & Venner, 2012; Novins et al., 2011), and it is unknown whether existing evidence-based treatments would improve health outcomes among AI/ANs. A review of the treatment literature between 1968 and 2011 revealed 24 studies examining treatment outcomes among AI/ANs, with only eight involving elements of AI/AN culture and tradition and merely two randomized controlled trials of evidence-based treatments (Greenfield & Venner, 2012; Venner et al., 2016). Although some treatment outcomes have been shown to be similar across subpopulations (Miller, Villanueva, Tonigan, & Cuzmar, 2007), evidence of efficacy cannot be generalized across cultures (Lau, Chang, & Okazaki, 2010). Moreover, even the best treatments cannot help people who do not receive them, whether that is due to lack of availability, logistical barriers, or lack of social validity/acceptability to the target population (Lau & Angeles, 2006). All of these factors contribute to low use of evidence-based treatments in AI/AN communities and support the case for cultural adaptation (Larios et al., 2011; Legha & Novins, 2012; Novins et al., 2011).

The Case for Cultural Adaptation

Cultural adaptation is defined as the "systematic modification of an evidence-based treatment or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client's cultural patterns, meaning, and values," (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009, p. 362). Adapted interventions aim to retain the active ingredients of an intervention in sufficient dosage to produce the intended treatment effects while altering aspects of these core components (or the way they are framed or delivered) to improve their "fit" in a new population (Burlew, Copeland, Ahuama-Jonas, & Calsyn, 2013). Cultural adaptation has the potential to increase a treatment's social validity (i.e., palatability and acceptability; Lau & Angeles, 2006), resulting in increased utilization of the intervention and increased efficacy and effectiveness. Indeed, a meta-analysis provided evidence that culturally adapted interventions are more effective than standard interventions, and furthermore, the interventions with the greatest effectiveness for ethnic minorities also incorporated more adaptations (Benish, Quintana, & Wampold, 2011). A review and prior meta-analysis similarly concluded that cultural adaptation appears to improve treatment outcomes (Griner & Smith, 2006; Huey, Tilley, Jones, & Smith, 2014). Burlew et al. (2013) argue for adaptation whenever an unadapted intervention would be unacceptable to the community; when adapting an evidence-based treatment would increase participation and retention in an intervention trial; when adaptation would improve an intervention's palatability or acceptability in a certain population; when cultural factors are known to affect the target behavior or concern; or when an adapted intervention would demonstrate respect for a population's cultural knowledge, strengths, values, and worldview. Therefore, the present community-based participatory research (CBPR) project aimed to investigate an AI reservation community's interest in culturally adapting an intervention to facilitate recovery among tribal members with SUD. In this paper we describe efforts toward building a relationship between the community and academic research partners, and report findings from the initial qualitative phase of the project aimed at identifying key ideas and considerations for developing and evaluating a culturally-adapted intervention.

Method

Community Setting

The site of this research is a geographically isolated reservation located in a frontier, high plains prairie environment. The reservation spans approximately 2.1 million acres in a region burdened by high rates of poverty and significant health problems leading to early deaths (University of Wisconsin Population Health Institute, 2018), and is home to approximately 12,000 enrolled members of two tribal Nations. The tribal college on the reservation is the official site of the project, coordinated in partnership with investigators from a public research university in the same state. The reservation has its own functioning tribal IRB that reviews all research in the community (including the present research project and this manuscript), and also has a tribally-funded outpatient substance abuse treatment center. A Community Advisory Board (CAB) is in place to guide the project and includes employees from the treatment center as well as other community members involved in various efforts to address SUD on the reservation.

The Substance Abuse and Resilience Project

This research constituted the first step in a long-term CBPR research project to address health disparities affecting rural AI communities. The aims of the project were to: 1) build a successful academic-community partnership based on mutual trust and respect, 2) understand social and cultural norms and beliefs surrounding substance use, addiction, and recovery, and 3) develop a culturally resonant intervention to facilitate recovery from SUD and reduce associated health disparities. This CBPR approach equitably involves the community in all aspects of the research process, builds upon existing strengths, and requires dissemination of findings to the communities from which data are gathered (Israel et al., 2008; Wallerstein & Duran, 2006; Wallerstein & Duran, 2010). This framework is considered best practice for research with AI communities (Burhansstipanov, Christopher, & Schumacher, 2005; Christopher, Watts, McCormick, & Young, 2008), and the Tribes expect community involvement in all research taking place on the reservation.

Phase I: Relationship Building

Using CBPR to accomplish the project's aims, the investigators have visited the reservation regularly since 2014 to build relationships with community partners. We consulted with key stakeholders including health care professionals, Tribal Council members, the tribal IRB, tribal college faculty and administration, SUD treatment providers, cultural leaders, and community members in recovery from SUD. In addition, we have participated in numerous community events, including a State of the Reservation Summit held in 2014 to mobilize the community to combat the pressing methamphetamine epidemic; a Trauma and Resilience Symposium held in 2015 to address interpersonal violence and develop a trauma-informed community; a Buffalo Summit held in 2016 to share history, traditions, and stories about the role of the buffalo in tribal culture and livelihood; and a Methamphetamine Symposium held in 2017 to bring together affected community members and brainstorm solutions. In addition, project team members have participated in local recovery support group meetings (Medicine Wheel) at the on-reservation treatment center. Through these activities, we identified and hired a local project manager, assembled a CAB, and collaboratively decided to begin data collection in Phase II with a qualitative study aimed at understanding the needs and priorities of the community with regard to SUD treatment.

Phase II: Key Informant Interviews

Qualitative data were gathered from a purposive sample of 25 AI community members from the reservation. Participants were recruited through a process of nomination by the CAB and personal invitation by the local project manager, a respected tribal member with extensive knowledge of the community. The nomination and selection process is described in more detail elsewhere (see Skewes & Blume, 2019). After giving informed consent, key informants completed two interview sessions scheduled a few weeks apart, with each session lasting approximately 1–2 hours. Interview questions were developed collaboratively by the researchers, project mentors, and representatives from the community, and the resulting semi-structured interview guide was revised several times to make sure it was thorough and unbiased. The final protocol included questions about cultural conceptualizations of health and sickness, substance abuse, and recovery from SUD. Interviews included questions about

local language and preferred terminology to describe relevant constructs, as well as process questions about reactions to participating in the interview study. Key informants were compensated for their time with a $50 gift card and all findings were disseminated to the community via an interactive community gathering. Study methods were approved by the CAB, tribal IRB, and university IRB, and this manuscript was approved by the CAB and tribal IRB.

Participants

After consultation with the CAB and project manager, 25 AI community members representing diverse spiritual traditions (i.e., Traditional and Christian) and who resided in various areas of the reservation were recruited for the study. Gender representation in the sample was essentially equal with 13 men and 12 women, and members of both tribes were included. Participants ranged in age from 29 to 79 years, with a mean age of 51.68 (SD = 14.54) and included people with various personal experiences with SUD (e.g., long-term remission from SUD, short-term remission from SUD, never having had a problem with alcohol or drugs, and currently drinking or using). All key informants reported having experience with the SUD treatment resources on the reservation and having relatives who had achieved remission, as well as relatives they had lost to SUD. Household size ranged from 1–15 people (M = 5.24, SD = 4.54), and average annual income per household was $27,910 ($SD$ = $19,980; range $0–60,000). Over half of the sample reported an annual household income that would be classified as below the poverty level for a family of five (US Census Bureau, 2012). Most participants had completed high school (79.2%) and many (37.5%) had completed at least an Associate's degree or greater. Of the 25 key informants, only one did not complete the second interview session due to scheduling conflicts. However, this participant had answered nearly all the interview questions in the first session, which lasted nearly three hours. The high retention rate (96%) can be attributed to the efforts of the project manager and to the importance of the study topic.

Data analysis

We used a modified grounded theory approach to analyze the data. Grounded theory attends to meanings, themes, and patterns in qualitative data and allows a theory to 'emerge' from the data (Charmaz, 2014; Strauss & Corbin, 2008). Using techniques of grounded theory is in alignment with the principles of CBPR in that this approach privileges the voices and perspectives of participants rather than those of the researcher(s). For this study, data analysis began with line-by-line open coding of interview transcripts. Two researchers independently coded the data using Atlas.ti qualitative analytic software and compared codes. Discrepancies were identified and resolved through discussions among the research team and community partners through a series of CAB meetings, and through informal feedback from community members following an interactive findings gathering. After finalizing open codes, related concepts were linked to form broader analytic categories or axial codes. Axial codes were in turn linked and organized to address the overarching questions of the study.

Findings

Key themes emerged with regard to how participants define and view health as a holistic concept that encompasses the individual, the family, and community–all of which are interrelated. This holistic view of health in turn shaped the way participants conceptualized substance abuse within the community–as a response to personal trauma and individual experiences, but also as a response to familial and community challenges that this historically marginalized population has faced. In this sense, the majority of participants viewed substance abuse as related to the community's experience of colonization, displacement, and ongoing racism, which continue to affect the day-to-day health and well-being of tribal members and their families. As such, any potential solutions or interventions must take into account the influence of historical trauma on the community, and focus on the integration of individual, familial, and community wellness. See Table 1 for a summary of key themes and supporting codes.

Defining health at the individual, familial, and community levels.

Participants described a number of factors related to the health of individuals, families, and the broader community. As participants explained, community health and family health are closely linked to the health and well-being of individuals on the reservation, and individual wellness also depends on well-being in the family and community. Moreover, participants noted that across these three 'levels' of health, there are overlapping and integrated components: physical, mental, emotional, and spiritual health. In describing this holistic view of health, participants emphasized the importance of being able to attend to and balance these different components (participant number denoted following each quotation).

> If you want to walk a certain path in life, you have to take care of all of your needs, everything that the Creator gave us. It's not only our mind and our body. It's our spirit. All of those things connect, and they are very very important to make sure that we come here to walk on this earth for a while, and we have a certain amount of time, and it's good to have a connection to keep yourself in a good state of mind.
>
> (P12)

Participants elaborated to explain that someone who is 'well-balanced' and has a healthy body, mind, and spirit is someone that demonstrates care of self and others. Moreover, many participants contended that central to individual, family, and community health is a strong sense and valuation of one's Native identity. As participants explained, having a strong sense of Native history, culture, and language helps to form the basis for individual and community health.

> Well, to be healthy, I think one should know their identity. Being here on [reservation], that includes knowing the language of your people. To be able to pray in that language, to share and transmit that language...When we speak that language, there's no negativity in there. To me, that's healthy. Because what comes out of our mouth has a big impact on the people and the relatives around us. So when we encourage others, then naturally there's a healing process that takes place. That's a form of spiritual health.

(P08)

Substance abuse as a symptom of other problems.

All participants acknowledged that substance abuse is a grave – and growing – concern on the reservation, and described it as not just an individual problem but as one that affects the health of the family and community as well. Participants linked substance abuse with other community problems including poverty, homelessness, domestic violence, and child abuse. However, they also emphasized that these interrelated community concerns are symptoms of larger problems – namely, a history of colonialism and racism – that have affected the community for generations. When asked about causes of substance abuse and barriers to recovery from SUD, one participant responded:

> There's a lot of challenges. I mean poverty is a main challenge. Trauma is probably the largest challenge that our people face. You know, a traumatic event, and [our] identity, who [we] are as Native people is probably the greatest challenge that we face—next to that traumatic event that they suffer.
>
> (P09)

Participants described how a history of violent colonialism created systems of inequality and cycles of abuse that have impacted the community from one generation to the next, leading to the current problems with substance abuse. In particular, the forced assimilation of Native peoples has led to what participants characterized as a loss of culture and identity, which they viewed as a precipitating factor and social determinant of substance use disorders.

Substance abuse as a cause and consequence of intergenerational trauma.

Participants spoke at length about the impact of substance abuse on family and interpersonal relationships, noting that SUD is both a symptom and cause of unhealthy relationships and disease. In particular, participants expressed concern about the effects of substance abuse on children and families, noting the role of alcohol and drugs in the 'vicious cycle' of intergenerational trauma and abuse. When discussing perceived causes and consequences of SUD, participants described the circular relationship between sexual/domestic violence and substance abuse and emphasized the importance of breaking the cycle.

> I know that, for sure, that a lot of our families who have alcohol and substance abuse problems have sexual abuse in their family. And it's their way to… you know, cover, to disguise or help them get through all of that abuse. Because it just continues. It just goes on year after year after year if they don't know how to expose it, then it just continues... We never had that before, but something horrible came to our people, and it was brought by what happened in our history.
>
> (P12)

> Substance abuse perpetuates abuse. A guy is masking the problem because he's been abused or socialized in domestic violence, and a guy who has been beating his spouse for years while the child sees that. They didn't want to use drugs and never would hurt a fly on the wall, [but then] he drinks, and he wants to hurt the next [person] and next and next. That's what I see as one of the effects for our children.

> They’re seeing that, and that’s becoming an acceptable avenue for them. Not only for the alcohol, but the meth, and all the values tend to leave right away. That core value family leaves quickly when alcohol and drugs are introduced.
>
> (P09)

Substance abuse as a spiritual problem.

At an individual level, participants viewed substance abuse as a way of coping with being disconnected from their spiritual and cultural identity, which were seen as key to well-being.

> I think we see that when you have an over-addiction of some substance, that the spirit usually is either incapacitated or is dormant, and you can’t really measure that... Those are all interconnected to mind, spirit, and body. But that’s something that has been a universal, traditional teaching through our people, that those are connected. So if we can heal one, even when one is lacking, maybe we can make [an] effect on that part that is lacking.
>
> (P09)

The majority of participants linked disconnection from spirituality to disconnection from Native culture – a concern expressed particularly with regard to younger generations. This disconnection from one’s cultural identity could lead community members to turn to substances as a way to cope with or fill a cultural void.

A community orientation toward healing.

All participants acknowledged that the root cause of SUD, historical trauma, should be addressed through multi-level community, family, and individual interventions. In particular, participants suggested that community health and educational programs must be strengthened and grounded in Native spirituality and culture to address the sense of disconnection and the identity crisis that precipitates substance abuse. As one participant stated, “Because the only thing that separates us from anybody else is our culture and our spirituality.” (P05)

Participants also noted a need for well-resourced health centers with educational classes on substance abuse for individuals and families; general prevention and awareness campaigns tailored to Native communities; and more broadly, venues and community events intended to promote positive community identity and cultural well-being. For example, when asked about ideas for intervention strategies that could help tribal members recover from SUD, one participant responded:

> There are many American Indian playwrights. There are movies about American Indians that are fictional movies that are absolutely wonderful. There are a lot of science fiction books that have American Indian reservations and themes woven into them—American Indian documentaries about a variety of different activities in the community. I think getting that type of information out there and encouraging them to participate in that is critically important.
>
> (P02)

Participants emphasized the strengths and protective nature of Native spirituality and culture, noting the existing resources available in the community that may facilitate remission from SUD. For example, the reservation has an active community of language learners, cultural leaders, and practitioners of traditional spirituality. As participants explained, linking recovery to Native culture through existing resources and activities would help to promote resilience through addressing the disconnection from Native identity and history.

> The Sundance and the ceremonies that we attend, it's zero tolerance. People can't be under the influence. Even at the powwows we attend, too, there's no drugs or alcohol allowed in the order of the programs. And plus, the things that the dancers use are very sacred...the eagle feathers, you can't be under the influence of anything if you hold the eagle feather or dance with one.
>
> (P22)

Participants also acknowledged the importance of rewarding community members who are taking steps to recover from SUD rather than punishing those who continue to struggle. As they explained, doing so would not only help to educate community members on how to support those who may be suffering, but also help to reduce stigma and the sense of shame that may prevent some tribal members from seeking help.

> They need to be supported by the system. If they're given positive reinforcement, like some type of acknowledgement that they have entered into this recovery process, and if their family is involved with it too—so if you have a feed or something, or some type of, like, giving them, awarding them with a circle or a Pendleton or something, showing them that they're … yeah, 'You're on the good path. You're doing good. Keep it up. We're proud of you.' And we don't—because for the most part, people that are entered into the system, they're stigmatized, and then they become institutionalized, and they end up doing worse crimes. Some go to federal prisons.
>
> (P13)

While participants noted that community healing is essential for reducing SUD-related health disparities on the reservation, they also acknowledged that community healing depends on healing at the family and individual levels as well. Families were seen as central to this healing process. Participants identified positive family support as a primary strength and resilience factor for individual recovery, but also acknowledged that families are often damaged and will need additional support to heal from the trauma that substance abuse has inflicted on them and their relationships. Such support may take the form of family counseling sessions, camps, or other activities for children and families that incorporate Native traditions and ceremonies.

> The main thing is they become less selfish and they think more of their family and the repair they have to make and then you can start seeing those family relationships, especially with their spouse or children, start to grow. When you see that, you know we're getting some progress. That's what we really lack, for us we recognize that we can't just treat the individual. We now need to reach out into that family portion and let them know we can help you as well… So what I'm saying is

> we've got to go beyond an individual to reach out into that family in order for them to sustain sobriety.
>
> (P09)

Finally, participants emphasized the importance of recovery being a lifelong and holistic process – not one that attends solely to the problem of substance abuse itself, but one that attends to the emotional, mental, and spiritual health of the individual, family, and community.

> [Recovery] has to be everything. You have to have family. You have to have government. You have to have spirituality or church or religion. You have to have education. And you have to have work. It has to be a movement. It has to be just a continuous tribal society movement.
>
> (P11)

Discussion

In this paper we described activities of the early phases of a new CBPR project aimed at reducing SUD-related health disparities affecting a rural AI reservation community. Phase I of the project focused on developing a successful academic-community partnership, and included years of relationship building before any data collection took place. Through these efforts, the academic research partners gained familiarity with the reservation community, knowledge of the history of the Tribes, and came to understand the complexities of SUD and the challenges of recovery on the reservation, while the community partners gained familiarity with the goals and processes of academic research and grant funding. We then conducted a qualitative interview study aimed at understanding beliefs about and experiences with substance abuse and recovery among key informants from the community. We aimed to generate ideas about intervention strategies that may be helpful for facilitating recovery on the reservation and to understand barriers to recovery to consider in future intervention research. In this paper, we reported qualitative findings that reflect cultural beliefs about health and substance abuse that informed our decisions about the next steps for this ongoing CBPR project. Next, we summarize what we learned through this research collaboration and describe how discussions about the findings led to our current efforts toward developing a culturally grounded intervention that merges empirically supported treatment strategies with community-identified needs and strengths.

Through the in-depth interviews conducted in this qualitative phase of our mixed-methods Substance Abuse and Resilience Project, we gained a deeper understanding of how members of this AI reservation community understand health and wellness holistically and came to appreciate the importance of this holistic view for designing culturally appropriate SUD interventions. As stated, participants described health as a state of balance and harmony between an individual, the family, and the community as a whole. Thus, an individual's health was seen as dependent on the health of interconnected others and relatives, and community well-being was similarly seen as dependent on the health of the individuals and families in the community. Moreover, balance between body, mind, emotion, and spirit was seen as crucial for health, with harmony best achieved through connection with Native

identity, culture, and spirituality. As substance abuse is disruptive to balance and harmony—and thus a threat to health—on all levels, interventions for SUD should promote healing on multiple levels.

Participants identified several signs of community disease and dysfunction, including poverty, trauma, violence, sexual abuse, loss of cultural and spiritual identity, and increased alcohol and drug use. Substance abuse was seen as resulting from various sources of trauma and also as causing further traumatic events that perpetuate the cycle of abuse and addiction. Participants situated these community problems within the historical context of colonization, which they described as affecting health directly through the intergenerational transmission of trauma and indirectly through its influence on the social determinants of health (racism and discrimination, poverty, inequities in access to services, etc.). Although the participants clearly recognized the harm caused by individuals with SUD, they also conveyed a sense of understanding and compassion for their people who have suffered from historical forces beyond their control. Interventions for SUD, therefore, may be enhanced by acknowledging both personal and historical trauma as drivers of substance abuse and incorporating ways to develop compassion for self and others.

With regard to recommendations for future interventions, participants emphasized the importance of grounding treatment in the cultural values of their people and taking a community orientation to healing. Individual behavior was seen, in part, as a response to an "identity crisis" resulting from colonization, and increased engagement with Native culture, traditions, languages, and spiritual practices was identified as the remedy. Thus, many participants recommended intervention strategies that do not necessarily focus on substance use itself, but that counteract the forces that promote SUD by engaging in healthy, life-affirming, identity-building activities that may strengthen inter- and intra-personal connections and restore balance and harmony. Rather than focusing solely on eliminating substance abuse on the reservation, participants emphasized the importance of increasing competing behaviors and ways of being that are incompatible with addiction, such as traditional ceremonies and rituals. Therefore, SUD interventions should create opportunities for people who are disconnected from healthy people and activities to reengage with healing forces that already exist within the community.

Lessons Learned, Next Steps, and Future Directions

The qualitative study discussed here helped our partnership achieve several aims of the Substance Abuse and Resilience Project. First, it facilitated relationship building between the academic and community partners. The process of spending significant time in the community and listening to participants' stories and ideas had the unforeseen consequence of facilitating trust between the academic partners who conducted the interviews and the community members who participated in them. It gave the research team experience working together to carry out a discrete project and gave the academic partners the opportunity to prove that we would adhere to CBPR principles by involving the community in designing and carrying out the study, interpreting the data, and disseminating the findings in accessible ways preferred by the community (i.e., an interactive community gathering). It also helped to establish a trusting relationship with the tribal IRB, which approved this and

other manuscripts resulting from the project. Moreover, this initial study helped us gain a deeper understanding of the complexities of reservation life, the pervasive influence of historical trauma, and the reasons for the skepticism and distrust surrounding research and evidence-based treatments that have been reported among AI/ANs. Finally, the key informant interviews helped accomplish the aim of understanding local cultural conceptualizations of substance use and recovery and yielded valuable information that we will use to inform future interventions.

Study findings were presented to the community and discussed with the CAB in brainstorming sessions to identify the next steps for this intervention development research. Several possibilities for future directions emerged from these discussions. First, the community reported that formal treatment was helpful for individuals with SUD as long as barriers to receiving treatment (e.g., long waiting lists, inadequate funding) could be overcome. However, gains made during treatment were seen as untenable without the support and healing of one's family and community. Relapse prevention, an evidence-based treatment for SUD (e.g., Witkiewitz & Marlatt, 2004) was discussed as an intervention that may help AI individuals maintain behavioral changes over time if the model were culturally adapted to include ways of coping with culturally-specific risk factors of historical trauma, racial discrimination, and lateral violence. The community-reinforcement approach (e.g., Miller, Meyers, & Hiller-Sturmhöfel, 1999) also was seen as aligning well with the findings from this study and the community's priorities. In particular, aspects of the community-reinforcement approach deemed most desireable by the community included increasing positive reinforcement for recovery efforts and involving relatives in treatment. Other researchers have implemented community-reinforcement in studies with AI participants and preliminary results appear promising (Venner et al., 2016). Finally, research findings on self-compassion (e.g., Neff, 2003) and mindfulness-based treatments (e.g., Witkiewitz & Bowen, 2010) were considered with great interest from the community. Culturally appropriate ways to teach mindfulness and nurture self-compassion among AIs with SUD may be useful adaptations to evidence-based treatments.

Through these discussions and a subsequent review of the literature on SUD treatment for AI people, our team settled on culturally adapting relapse prevention as a starting point toward increasing options for effective, culturally appropriate, and sustainable interventions on the reservation. Relapse prevention is an evidence-based treatment that uses cognitive-behavioral and motivational-enhancement strategies to treat SUD and has strong research support in non-Native populations (Hendershot, Witkiewitz, George, & Marlatt, 2011; Irvin, Bowers, Dunn, & Wang, 1999). In light of the qualitative data gathered from key informants, the research team is working to adapt this intervention for AIs by adding components aimed at addressing cultural variables representing unique sources of risk (e.g., historical trauma, racial discrimination; see Skewes & Blume, 2019) and protection (e.g., spirituality, communal mastery). Our current work is focused on culturally adapting relapse prevention to go beyond the individual by involving families and community organizations, to incorporate mindfulness and self-compassion exercises into traditional relapse prevention skills-building exercises, to enlist the help of supportive friends and relatives who agree to provide positive reinforcement for healthy behaviors, and to increase sustainability by using paraprofessionals from the community to deliver the intervention. In addition, other

adaptations aim to help reintegrate participants into the community by connecting them with protective activities and resources that already exist. For example, the adapted intervention will include extending invitations to participate in language and culture classes, learn traditional spiritual practices and protocols for ceremony, and connect with other support groups and resources that are available on the reservation. The intervention also will provide opportunities for participants to engage in fun family activities with their children and other relatives. Finally, the intervention will aim to help participants navigate systems-level barriers to recovery through a network of peer mentors and recovery advocates.

With input from the community and informed by our empirical data, we envision a theoretically- and empirically-supported intervention that is not only culturally acceptable but culturally appealing and desirable. From our many years of discussions in the community, we have come to understand that an appealing and desirable intervention is one that works. Therefore, we are engaged in this research to develop a desirable and effective intervention that merges evidence-based treatment strategies with cultural elements and community supports. We have secured funding for the intervention development phase of the research; ultimately we aim to seek funding to conduct an efficacy trial of the new intervention and evaluate its effects on individual substance use behavior in addition to markers of family and community health.

Limitations

Limitations of this research include the potential exclusion of alternative voices within the community. As participants were recruited by nomination of the CAB and personal invitation of the project manager, we do not have a good sense of the perspectives of those who were not interviewed. It also is possible that potential intervention recipients themselves may desire different approaches than those advocated by the key informants. The participants in this study included community leaders with many years of sobriety and tended to have higher socioeconomic status than the reservation as a whole. Therefore, we cannot assume these findings will generalize to other members of the community or to other Native communities or cultures. However, as many of the findings from this study (e.g., the importance of spirituality among AI/ANs; Greenfield et al., 2015) have been reported previously in the literature, we are confident that the findings do accurately represent the perspectives of many community members and contend that this research constituted a necessary and valuable first step toward our current intervention development work and future research endeavors.

Despite these limitations, the present study paved the way for future collaborations by strengthening trust within the research team and between the academic partners and the community. The study also allowed us to develop a deeper understanding of the complex, interacting forces that contribute to SUD and recovery, which will inform intervention development and adaptation. Additionally, we gathered useful ideas and recommendations to consider when planning SUD treatment programs and future research studies. Engaging in this research provided a useful springboard to launch additional studies and a starting place for the accumulation of new knowledge in service of health and wellness in the community.

Conclusion

In this manuscript, we described the early phases of our CBPR project aimed at understanding and addressing substance abuse on a rural, underserved AI reservation with high rates of SUD and associated health problems and inadequate access to treatment. We began the project by developing relationships with community partners and conducting a key informant interview study to understand community members' perspectives on health, disease, addiction, and recovery. Through these efforts, we have strengthened our partnership and built trusting relationships that we hope will continue indefinitely. We also generated ideas for evidence-based intervention strategies such as relapse prevention that, if culturally adapted, may be well-received by the community. It is our sincere hope that this research will progress toward our envisioned goal of creating and implementing an effective, sustainable, culturally appealing intervention that will be led by the community partners and improve health on the reservation.

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Highlights

- Our academic-community partnership was formed to address health disparities in rural Montana.
- We conducted in-depth interviews with key informants from a rural American Indian reservation.
- Participants desired a holistic, multi-level intervention that involves culture and spirituality.
- Next we will culturally adapt relapse prevention for American Indians with substance use disorder.

Table 1.

Summary of key themes and supporting axial codes

Key themes	Supporting codes
Defining health at the individual, familial, and community levels	• Linking individual health with family health • Linking family health with community health • Balancing physical, emotional, mental, and spiritual health
Substance abuse as a symptom of community trauma	• Defining poor community health • Linking history of colonialism and assimilation with poor community health • Linking loss of identity to substance abuse • Linking everyday racism to substance abuse
A community orientation toward healing	• Grounding support programs in Native spirituality and culture • Developing communitywide education programs on substance abuse causes and prevention • Reducing community stigma • Placing family at center of recovery