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ABSTRACT

Substance abuse is especially undesirable among pregnant or parenting women (PPW). As such, there is a need to examine the factors impacting positive treatment outcomes, particularly among American Indian/Alaska Native (AI/AN) PPW, as they are seeking substance abuse treatment at rates considerably higher than the national average. This study aimed to identify the social and cultural mechanisms that support their recovery. Qualitative analyses were used to identify mechanisms used by AI and non-AI PPW in their recovery. Several differences between AI and non-AI PPW emerged. AI participants mentioned their families more often as the reason why they wanted to become or stay sober. In addition to familial support, AI participants relied on a variety of other sources for assistance in their recovery. Many of the women had difficulty defining specific aspects of their culture, especially in relation to their recovery. However, for AI PPW, many aspects of AI culture were identified as they described their recovery, suggesting the often subtle ways culture can impact everyday life. Our findings indicated that women utilized cultural supports in different ways; therefore, it is necessary to help them define their culture in ways that are meaningful in their recovery.

While substance abuse is undesirable for all individuals, this is especially true for women who are pregnant and/or parenting, given the unique constellation of risk factors impacting the health and recovery of both mother and child (Greenfield 2002; Niccols et al. 2012). Women in substance abuse treatment, for example, often report a greater prevalence of mental health complexities (Swendsen and Merikangas 2000; Whitaker, Orzol, and Kahn 2006), presenting a potential barrier to stable and nurturing environments (Conners-Burrow et al. 2013). Emotionally, substance abusing mothers may struggle with feelings of guilt and shame surrounding their substance abuse in relation to their ability to care for their children. Taken together, the societal stigmas and potential barriers facing these women are often not addressed in treatment programs specific to pregnant or parenting women (PPW).

These complexities can be exacerbated among minority women. Specifically, 39% of American Indian/Alaskan Native (AI/AN) women begin child rearing before the age of 20, compared to 21% of the overall U.S. population ("Trends in Indian Health: 2014 Edition" 2014). This trend is further associated with increased risky behaviors such as substance abuse (The TEDS Report 2010), as well

as a myriad of risk factors, including low socioeconomic status (Berry et al. 2000), a history of physical/sexual abuse (Greenfield et al. 2007), and depression (Suchman et al. 2005). While substance abuse treatment admissions of pregnant women ages 15–44 increased only slightly for all women in the U.S. from 2000–2010, rates among young AI/AN pregnant women increased nearly two-fold over a similar time span (The TEDS Report 2013). These rates demonstrate the importance of examining the recovery needs of AI/AN PPW.

The context surrounding substance abuse and recovery among AI/AN PPW is complex. The impact of historical trauma, the psychological and social responses to traumatic events a community/population experiences over generations, has been found to be particularly prominent among AI/AN populations (Evans-Campbell 2008). Even more, findings have suggested a link between historical trauma and substance abuse specifically among AI/ANs, indicating the potential generational influences of historical trauma among AI/AN people (Ehlers et al. 2013; Myhra 2011; Whitesell et al. 2012).

Culture-specific programming meant to address the complexities of historical trauma is an important aspect

of substance abuse treatment and recovery for AI/AN people. Treatment lacking cultural competency, therefore, can be a significant barrier for AI/AN people (Duran et al. 2005), while treatment that is culturally congruent has been found to overall lead to better outcomes (Dickerson et al. 2014; Villanueva, Tonigan, and Miller 2007). Even so, the overall mechanisms of recovery, which predict positive treatment outcomes for AI/AN adults, remain largely unknown. The current study addresses this research need by using qualitative interviews, with both AI and non-AI PPW post-substance-abuse treatment, to identify potential differences unique to AI PPW in their recovery from substance abuse.

The study leverages the Social Control Theory (SCT) as a guiding framework, assisting to explain the process behind engagement or lack of engagement in deviant behavior such as substance abuse. SCT posits that strong social bonds impede an individual's desire to engage in deviant behaviors (Hirschi 1969; Moos 2010) and often take the form of attachment, commitment, and involvement with non-deviant activities or institutions, and belief in the validity of societal norms. SCT has been applied to substance abuse (Hirschi 1986), framing youth (Cooper et al. 2009; Ngo and Davis 2014) and adult (Buchanan and Latkin 2008; Lapham and Todd 2012) substance abuse cessation research. While prior research has often failed to operationalize SCT concepts to AI/AN cultures (Heavyrunner-Rioux and Hollist 2010), there are elements of SCT that can be applied. Family (blood and non-blood networks) plays a prominent role in AI/AN cultures (Walters, Simoni, and Evans-Campbell 2002); the absence of such connections, therefore, may be a factor in driving deviant behaviors. Additionally, when working with AI/AN populations in substance abuse treatment programs, community and family involvement are brought up frequently with providers as an important core cultural construct (Legha and Novins 2012). Findings have shown that one of the strongest treatment motivators is the participants' desire to keep or regain custody of their children and to prove their worth, not only to themselves, but to their peers and family (Peterson et al. 2002).

To date, there remains a significant gap in the literature surrounding factors fostering (or inhibiting) positive treatment outcomes for AI adults (Boyd-Ball 2003; Dickerson et al. 2014; Villanueva, Tonigan, and Miller 2007). SCT framework suggests the vital role of social and cultural supports on deviant behaviors; however, it has not been examined specifically within the AI PPW population. The present study uncovers social and cultural mechanisms uniquely supporting treatment and post-treatment recovery for these women. To achieve this goal, we partnered with a community-based residential treatment program serving PPW, primarily AI women. Among the AI women, we hypothesized that cultural aspects both within and outside of the program would positively support their recovery process. Given SCT, we hypothesized that relying on family support would be another important aspect for their recovery. By identifying the factors supporting the successful recovery of PPW and, even more, AI PPW, we look to inform specific intervention efforts within treatment programs serving these women. Because the program did serve both AI and non-AIs, we further sought to identify potential differences in the variables associated with successful recovery processes for these women.

Methods

Participants and procedure

Participants were recruited following discharge from a PPW residential substance abuse treatment program. Women in the treatment program were primarily AI (over 60%), between the ages of 16 and 31, and from a background of poverty (99%). The treatment program was set in the Northern Plains; however, a majority of the participants in the program were from rural and/or reservation-based communities and were court mandated to attend the facility. The program allowed participants to have their children reside with them throughout treatment.

Criteria to participate in the study included: (1) completion of the program; (2) women 18 years and older with at least one child between the ages of 0–7 years. A total of 18 women completed the maternal interview. Participants included 10 (55.6%) AI PPW and 8 (44.4%) non-AI PPW. The age range of maternal participants was 20–36 (mean age = 26.82) years at the time of interview. The level of education completed ranged between less than high school to some college, with women most likely to have earned a high school diploma/GED. Around 70% of the women reported working at least part-time, with 30% indicating they were unemployed at the time of the interview. Annual household income ranged from $2,400 to $32,760 (mean = $16,015).

The research study engaged a community-based participatory research (CBPR) framework. Researchers worked closely with the treatment program leadership and staff who identified the need to follow-up with women post-treatment. Program staff were integral in identifying and contacting participants, who were often highly transient as they transitioned out of treatment. Case managers would ask women, as they prepared for discharge, if they were interested in taking part in a research study,

and if they indicated interest, a research staff member was provided contact information and followed up with the mother. The research protocol was approved by the Sanford IRB and participants provided informed consent at the time of the interview. Participants were given a $40 gift card incentive for their time. The majority of women took part in the study after having been out of the program between three months and one year. Study visits, which lasted approximately one hour, took place in the participant's home and included the maternal interview (see Table 1 for questions) and a HOME assessment (data not included here).

Analysis

Maternal interviews were recorded and transcribed. Transcripts were stored and analyzed using NVivo 10 software and data were analyzed using content analysis where themes were uncovered by letting the codes emerge directly from the text (Hsieh and Shannon 2005). The codebook was developed by operationalizing coding definitions and coding decision rules through multiple coding manual revisions (MacQueen et al. 1998). Specifically, coders first read the interview transcripts while looking for themes. Researchers discussed the themes that emerged and negotiated how best to conceptualize and operationalize them. Themes were systematically reviewed by two researchers, who independently coded transcripts, and inconsistencies were discussed by the coders until a consensus was reached. In order to assess inter-coder reliability, two coders independently coded lines of the transcripts selected at random and compared results.

Results

Common overarching themes focused on culture, the recovery process, and the treatment program. Within each theme, specific subthemes provide further context, with attention given to differences between AI and non-AI participants (see Table 2 for further quotes). All names used in the quotes were changed to protect the privacy of participants and program staff.

Culture

Cultural beliefs and practices

This included mention of traditional cultural beliefs, as well as specific ways women participated in their culture. When speaking of their cultural beliefs and practices, three subthemes emerged: religion, traditional American Indian, and family.

Table 1. Maternal interview questions.

Interview Questions
(1) First, I am interested in hearing more about you, where you come from, and where you are today.
(2) Tell me a little bit about your background, starting with where you grew up and what brought you to the region.
(3) Next, I would like to ask you a few questions about your culture. When I say culture, I am talking about your way of life. It is made up of the things that are important to you, both in your beliefs and your behaviors. For example, your culture may be closely related to your racial or ethnic identity. It can also be tied to your spirituality or faith, where you live, or who you surround yourself with. Thinking of culture in this way, how would you describe your culture?
(4) In what ways are you involved in your culture?
(5) Still considering your culture, what has been important to you in your recovery?
(6) Can you tell me about a time when you talked with someone about your recovery?
(7) Now, I want to talk with you specifically about your time in the program and your relationships with the program staff. First, can you tell me a little bit about your experience in the program?
(8) Tell me about your relationships with the program staff.
(9) Did the staff seem accepting of you and your culture? OR Did the staff seem accepting of you and those things that are important to you?
(10) There are various cultural backgrounds represented among the women who participate in the program. In what ways did the program staff recognize these differences among participants?
(11) In going through the program, in what ways have you become more connected with your culture, traditions, or values? OR In going through the program, in what ways have your views of yourself and what's important to you changed?
(12) What could be added to the program to better meet your needs?

Religion included references to church, baptism, Christianity, Catholicism, Bible study, and God. Religion was most commonly cited as a way to take part in culture by both AI and non-AI participants; however, AI participants mentioned religion more often than non-AIs (seven AI to four non-AI responses).

AI PPW more often than non-AI (6–3) included aspects of traditional AI culture when describing their beliefs and practices. Some aspects of traditional AI culture included smudging, dancing, and attending pow wows and sweats. One AI mother explained, "I went to sweats, sun dances, ceremonies, pow wows, I kind of know my language. Like our native language I can sing our songs." Non-AI PPW mentioned family when describing their culture more often than AI PPW did (2–4). One non-AI mother described her participation in her culture, saying:

> I just do the same thing my parents did. I tell [my kids] good night, and I love them, and I make sure I kiss them and [say] good morning. I tell them I love them probably a billion times a day. I've taught them to give kisses. It's hard to teach them trust right now. I mean,

Table 2. Comparison of AI and non-AI PPW.

Theme	American Indian	Non-American Indian
Culture:		
Cultural Beliefs & Practices	We smudge ourselves with sage; it just like removes any bad energy that's around you. Just praying, praying whenever. My mom's always big on praying, she's always telling me to pray. And before I would just be like, "Whatever, that doesn't help," but it makes a big difference now.	I was raised Catholic, but a very, very traditional family, like we have a lot of traditions that are, that we keep with us.
Cultural Values	Just working for my family to support them and coming home to him, spending time with him.	My family is very important.
Recovery:		
Recovery Resources	I see a counselor at Urban Indian Health, I see her once a week, and she actually gives me homework, which is I think really good for me, so.	I go to aftercare…. We just talk about highs and lows for the week and if you've had any thoughts of using or anything like that…. Yeah, it's just hearing their stories and knowing and knowing I can relate to them.
Sobriety Decision Making	It's kind of like a motivator for me, to keep myself motivated and stay on track with what I'm doing, and so I could stay sober and be a better person for my family, a good mother. Drinkin' wasn't doing anything for me but putting me in jail. And I was just losing time with my family. And I didn't like who I was whenever I was drinkin'…. I wanted to put myself in it to change for my family.	…I was there 'cause I wanted to be there. I didn't go there so I could get my kids back or do something. I went there so I could learn how to be sober, learn how to cope. And that was the main thing, I didn't know how to cope with stuff.
Recovery Support	Now the girls at [the program], the girls that were there when I left [said], "I look up to you. You're my role model. I want to be just like you." And even now, they tell me that. 'Cause[sic] I've been out of [the program] this long, and I'm still sober on my own.	I guess my sister-in-law…. But lately we have actually, been sitting down and talking about, things in our recovery…. And anything I say to her about recovery, she has something to say back, 'cause she's a sponsor herself, and she has sponsors. So she's really wise when it comes to resources, and stuff like that too. Advice.
Program:		
Cultural Competence	No. They, I mean they had like Andy that did the talking circle, you know, and then they had Nate that did, Andy did the talking circle in the evening time and then Nate did one every Tuesday, you know, with the Native American girls or even the White girls that came in there they would come in, you know. So it was, you know, and if you wanted a smudge, that were into the Indian culture, if you wanted to smudge your room or needed to smudge for some reason then they allowed you to do that there.	'Cause sometimes they push a little bit of the Native American stuff, even on White people. I mean, I don't have anything against it, but I was forced to go to, you know, spiritual group in the morning…. It would be like smudging and stuff like that. Which I don't mind, but I think that they push it too much on people that aren't Native.
Program Staff	So it was pretty good, it was pretty helpful, you know, like the staff there was very… comforting and… I guess, yeah. They were… just on my part, like how I, I don't know how to say it, like me being there, and like asking for help, I got it, especially from my councilors, Anita, I got it like, like she made it, like she's a good councilor 'cause she was open…. Well, like, Anita I can call her and stuff like that, like I talk to her, my case worker there, I still talk to her. She keeps in contact, if I needed help.	You know, I quit connecting with them at one point because I watched probably 10 staff come and go through there while I was there, in less than a six-month period. And when I first got there, there was a few staff that I really clicked with right away, and then they were gone a few weeks after that, and so it was just like, "Oh well…."
Program Impacts	I have learned to help myself. I didn't really depend on anybody. Dealing with [the program] I have learned to do a lot for myself because there's a lot that they quit doing for you to help you better yourself. Like, I feel, myself, I'm a lot stronger than what I was before.	It was a really, it was a challenge at times, but it ended up being a really great opportunity for me to stabilize my life before I went out into the unknown with my son. Gave me a lot of resources and help, so.

they're trusting you that you're not gonna [sic] give them a lemon when they think it's an apple, you know, things like that. But I don't know. They've taught me a lot about myself. You know, it's pretty awesome to have them. It's pretty cool.

Cultural values

Cultural values focused on what women indicated their culture deemed to be good, bad, or important, and could be split into family and traditional AI values. Family was mentioned by both AI and non-AI participants (6–4). One mother explained, "My family is very important to me. Not just my children, but my sisters and my nieces and nephews, you know. They're important to me."

AI mothers also frequently mentioned traditional American Indian values (6–1). For example, one AI mother said, "but that's the biggest thing is just praying and being a good person is what my culture is about. Being close with nature…. Like in the Lakota culture, children are sacred, women are sacred."

Recovery process

Recovery resources

Recovery resources were identified as group or individual and/or AI-specific or non-AI-specific resources. Group resources were utilized more often than individual resources by a majority of participants, with non-

AI participants using group resources with more frequency than AI participants (8–11). Group resources included aftercare, Alcoholics Anonymous, and Bible study. Many participants who took part in group recovery resources mentioned how interacting with people who have had similar experiences was helpful to their recovery. One participant elaborated, "Just a feeling of everybody there. And it's just, I don't know, just staying connected to everyone and knowing that people are going through the same struggle."

Individual resources, such as counseling, were mentioned more often by AI participants than by their non-AI counterparts (6–2). Mothers who used individual resources stated that talking about their experiences was helpful in their recovery: "I pretty much just let it all out. … . Talking about it really makes things better for me."

AI recovery resources are resources incorporating specific aspects of AI culture, such as Wellbriety or sweats. Not surprisingly, AI participants mentioned these resources as being a part of their recovery more often than non-AI participants did (5–1). One mother explained, "No, but there's actually a Native AA group. It's called Wellbriety. It has a lot to do with like the four directions that's big in the Native American cultures and then we smudge. Everybody goes around the room and we smudge and they'll sing and then they'll have the drums and it's really nice. …."

Sobriety decision making

For AI mothers, the most frequently cited reason for continuing recovery was their families, or specifically their children (10–2). One AI mother said of her motivation to get sober, "They took my kid away, 'cause [sic] I was drinking and there was no one watching them but me. And that's when I was like, I have to change my life. Because they're like, 'If this happens again, we're gonna [sic] take your rights away.' So I just knew I had to stop drinking."

Non-AI PPW indicated more intrinsic motivations for sobriety. When asked what had been important for her recovery, one non-AI PPW replied, "I guess, just relationship [sic] with yourself. You have to be happy and content with yourself."

Recovery support systems

Both AI and non-AI PPW relied on family support in their recovery (10–7). Beyond family, AI participants mentioned the support they received from those outside of their families far more than non-AI participants (11–4). AI participants used a variety of outside support systems, including service providers, friends, program participants, their child(ren)'s father, grandparents, and significant others. One AI mother described the support she received from her child's adoptive parents, saying, "And then I have both my daughters' parents who check on me every day. If I don't answer or text them within a day or two, because I'm too busy with work, coming back, going to bed, get up, going to work, come back, go to bed, and I don't really answer my phone, they get worried. They'll come check on me." While AI PPW relied on a variety of support systems outside their familial network, non-AI PPW had far fewer supports outside their family and exclusively mentioned friends and significant others.

Both AI and non-AI participants touched on the emotional support they received more often than practical support. Many mothers who reported receiving emotional support talked about someone in their life who had been through the same situations. However, AI PPW mentioned emotional support far more often than non-AI PPW did (13–6). One mother said of the emotional support she received from her family, "They just never gave up; especially 'cause[sic] we've been doing this for so long. So about 10 years, I was addicted to drugs pretty bad. And then I got clean a few years ago, and it, they just always stuck by me. It's not easy to do. And it's not easy to do, to stick by someone who deceives you."

Many mothers who reported receiving emotional support talked about someone in their life who had been through the same situations: "It's mainly my sister. …. If I'm stressed about something, or I'm, you know, just ready to give up, or whatever, then she's, you know. 'Cause she's been down the same road I've been down, you know. She's sober for like 10 years, so she's just there too, you know."

Practical support, such as financial assistance or child care, was mentioned equally by AI and non-AI participants (2–2). A lack of recovery support was commented on far more frequently by AI participants than by non-AIs (8–0). Many AI participants who cited specific people as being unsupportive mentioned that it was because they were using drugs or alcohol, such as one participant who said, "My mom is a good support person, my sister's aren't. …. They still drink. … One of my sisters is really into meth, real bad. So I kind of stay away from her sometimes."

Treatment program

Cultural competency

Cultural competence was coded as the program and its staff's ability to effectively interact with people of different cultures and backgrounds. AI participants overwhelmingly agreed that the program was culturally competent (13–4), indicating that the program appropriately incorporated their culture and was accepting of the different beliefs and backgrounds. In contrast, non-

AI PPW disagreed that the program was culturally competent (3–8, 1–4 mixed). Most non-AI PPW felt that the program was geared too much toward AI culture. One non-AI mother elaborates, "They do a lot of Native American stuff, and I'm not a Native American. So I'm not comfortable going to Wellbriety and doing that stuff. I just feel, you just don't feel as welcome there, because I'm not Native American."

Program staff

How participants utilized staff members was categorized into practical support or emotional support. Both AI and non-AI PPW reported nearly equal (7–5) accounts of staff supporting them practically by watching children, ensuring timeliness for appointments, and providing transportation. AI participants more frequently discussed emotional support from staff (8–3); as one participant explained, "In treatment, whenever I was talkin' [sic] to my counselor, it was a motivator. Because seeing her every week, I'd be able to talk about how my week was going and able to open up. And if I needed to, let go of some of the things that I never did in the past, holding it all inside and just letting it stay built up."

The relationship between the participants and the program staff can be characterized by (1) positive/negative and (2) if the participant was still in contact with the staff. Overall, both AI and non-AI participants expressed having a positive relationship with the staff more often than a negative one. AI PPW described having a positive relationship with the staff (16–10) more often than non-AI PPW did. One mother described her relationship with the staff by saying, "It was easy. Most of them were really nice, and they went out of their way to try to help you in some way." Both AI and non-AI participants equally described a bad relationship with the staff (5–4).

AI women reported still being in contact with at least one member of the program staff more often than non-AI women (5–2). One mother explained, "After I left, and I ended up in the hospital in March, Brooklyn was there sitting next to me at the hospital, even though I wasn't in [the program] anymore, you know…. Oh, Brooklyn and Nancy. I can call either one of them any time, and they'll call right back…."

Program impacts

Overwhelmingly, participants said the program positively impacted them. One mother explained, "There's a lot of things that I found out about myself there that I probably wouldn't of if I didn't go…. And I, with me, now that I can admit that I have an anger problem, and that I'm pretty hardheaded." One AI mother explained how the program allowed her to connect with her culture, saying, "Yeah, going to sweats at [the program], that. Everything at [the program] was wonderful. They let us go to sweats. They let us smudge and pray in the morning. They let us burn sage there, that was definitely a big help. Just talking about our beliefs, I don't really know how to explain it…. When they let you practice your culture, that's a good thing."

Participants reported that the program motivated them. One AI mother explained a conversation she had while in the program: "You have to be, something, be the one that shows people that, or be the one that makes it. You can't relapse. You can't. You know, You can't fall back. You can't give up. You have to make it this time."

Participants also noted independence as a program impact. One participant describes her new-found independence by saying, "They showed me that I can live my life happy, and I didn't have to depend on somebody else to help my emotions be happy."

Discussion

Given the high rate of PPW AI women seeking substance abuse treatment, there is clearly a need to better understand this population. While findings suggest the importance of culturally relevant programming, few studies focus on the mechanisms of recovery for AI PPW.

We looked to examine the impact of culture on the recovery of PPW, hypothesizing that AI women would identify cultural aspects supporting their recovery. We found, however, that many of the women, both AI and non-AI, had difficulty defining aspects of their culture, especially in its relation to their recovery. For many of the women, the description of their culture included aspects of their community, though the emphasis or importance placed on community differed. Given SCT and the collectivist nature of AI culture, we hypothesized that, for AI women, familial support systems would be especially important in recovery. We found that AI women, following with AI cultural values, relied on community and people around them, including non-familial relations, much more than the non-AI women in the program.

While most AI women were reluctant to directly associate culture with recovery, many aspects of AI culture were identified as they described their recovery, suggesting the often subtle ways culture impacts everyday life. Aspects of collectivism (Hobfoll et al. 2002) and family as extending beyond blood relations (Walters, Simoni, and Evans-Campbell 2002), both components of AI culture, were evident in their recovery processes. We also postulated SCT as a framework for substance abuse cessation among AI PPW. Findings supported this, as AI women had primarily external reasons motivating them toward sobriety, relying

heavily on both blood and non-blood networks for support, including program staff, and they described a lack of support in relation to failed attempts at sobriety.

When describing cultural beliefs and practices, AI women mentioned frequently both mainstream religion and AI traditions. In fact, many AI women described their culture as a hybrid of traditional AI spirituality and Christianity. This finding is consistent with prior work suggesting that many AI individuals endorse both traditional practices and Christianity (Garroutte et al. 2009; McNally 2000; Neylan 2011), and points to the high levels of integration for many AI/AN (Yun Kim, Lujan, and Dixon 1998). In relation to values, AI women in particular rarely mentioned religion, instead focusing on family and traditional AI values. This discrepancy between beliefs/practices and values may be indicative of the similar overarching values shared by both traditional AI spirituality and mainstream religion.

Many participants found it helpful in their recovery to be involved with a community of people who shared similar experiences. This was evident in the prominent use of group recovery resources by both AI and non-AI PPW. Both found it helpful to interact with others who shared their experience of struggling to maintain sobriety, a theme consistent with prior research indicating the importance of recovery-oriented social support (Chong and Lopez 2008; Spear et al. 2013). Beyond this need, our findings indicate the importance of positive role models who are successful at maintaining sobriety. Findings indicate how vital relationships with program staff, sponsors, and family members who have overcome substance abuse were to recovery. Specifically, many AI women relied on culture-specific groups, including Wellbriety (Dickerson et al. 2014). While most AI women did not directly relate aspects of traditional AI culture as being helpful in their recovery, many did utilize these resources and overwhelmingly agreed that the program was culturally competent. These findings highlight the importance of providing AI individuals with the ability to participate in their culture during recovery (Dickerson et al. 2014; Villanueva, Tonigan, and Miller 2007).

The frequent use of individual recovery resources alongside group resources may be a reflection of traditional spiritual practices. Among Northern Plains AI tribes, traditional spirituality is highly personal and is often related to individual vision experiences (Garroutte et al. 2009). This finding reveals a possible gap in the resources available to Northern Plains AI PPW. While the importance of culturally congruent treatment is evident, much of the culture-specific programming takes place in a group setting. Findings suggest that AI women seek out individual, as well as group resources, demonstrating a need for individual resources that are also culture specific.

AI PPW often acknowledged external reasons (i.e., family, children) as being their primary motivation for sobriety, supporting the notion of AI culture as collectivist (Hobfoll et al. 2002; LaFromboise 2003). This finding further supports a SCT framework for AI substance abuse and cessation. Given AI PPW's reliance on blood and non-blood networks for support, they may have larger support systems and feel stronger attachment to conventional society. As a result of their extended support network, AI women likely had more people with whom they had bonded and more people whose expectations and wishes they did not want to violate. Even more, the lack of support in AI PPW recovery was much more frequent than for non-AI participants, suggesting—in alignment with SCT—that deviance occurs in the absence of social bonds (Hirschi 1977, 1969; Moos 2010). This concept is evident throughout the women's narratives.

Both AI and non-AI women identified receiving equal amounts of practical support in their recovery, but AI women indicated emotional support more frequently and with greater importance. Much of this support focused on sharing experiences with someone else. This may be due to the prominence of storytelling in AI cultures where learning is done through oral tradition in a non-hierarchical and relational way. Talking Circles are traditionally used to impart knowledge through storytelling and sharing personal experiences (Garwick et al. 2008). This finding highlights the importance of discussing experiences with others to the successful recovery of AI PPW.

Both AI and non-AI participants utilized the program's staff equally for practical support. However, AI PPW were more likely to mention emotional support, suggesting that they felt more comfortable sharing with the program's staff than non-AI women did. Additionally, AI PPW were more likely to describe their relationship with the staff positively and to still be in contact with them post-treatment. This supports SCT as a framework for AI substance abuse cessation, as AI PPW seemed to have a stronger attachment to the program's staff than non-AI PPW.

Interestingly, while AI participants thought the program was culturally competent, most of the non-AI women did not. The positive perception of the program's cultural competency among AI women is likely due to its incorporation of values to which they related (Wellbriety, smudging, and talking circles), aligning with past research (Boyd-Ball 2003; Dickerson et al. 2014; Villanueva, Tonigan, and Miller 2007). Non-AI women, however, felt as if they did not fit in or were uncomfortable participating in the activities which catered to AI culture and that their beliefs and values were not incorporated into the program.

The program met the cultural competency needs of the AI PPW; however, there is a need to ensure that culture-specific treatment is translatable to all backgrounds. The study was limited in that the sample was highly transient, making it difficult to recruit a larger, more diverse sample in terms of location and experiences. Further, the sample is not representative of all AI PPW. Last, the sample included only women who had completed the treatment program.

In the context of study limitations, our findings reinforce the importance of culturally adapted programming, while also highlighting the importance of taking the needs of each individual into consideration. Our findings indicate that women utilize cultural supports in different ways; therefore, it is necessary to help them define meaningful cultural supports unique to them that can be incorporated within their recovery. Our findings also suggest that programming for AI PPW should include individualized recovery resources that are culture specific, connect PPW with others who have successfully maintained sobriety, use the mother's bond with her children and/or family to motivate her to maintain sobriety, emphasize both blood and non-blood support networks, and provide emotional support and the opportunity to discuss their experiences with others. Findings from this study were provided to the treatment program with which we partnered. They have since hired an AI cultural liaison to assist in translating cultural practices and values for all women in the program.

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