



# HHS Public Access

Author manuscript

*Addict Behav.* Author manuscript; available in PMC 2016 February 01.

Published in final edited form as:

*Addict Behav.* 2015 February ; 41: 232–237. doi:10.1016/j.addbeh.2014.10.015.

## Alcohol use among reserve-dwelling adult First Nation members: Use, Problems, and Intention to Change Drinking Behavior

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### Abstract

Although alcohol use was not part of traditional First Nations (FN) life, alcohol misuse currently poses a significant public health problem. There is a dearth of research efforts to understand both alcohol misuse and efforts to resolve these problems. The primary aims of this study were to 1) present descriptive data on alcohol use in FN adults living on one reserve in Eastern Canada; and 2) explore correlates of help seeking intentions and past behaviors. We administered questionnaires to 211 FN people (96 men; 113 women; 2 unknown). Nearly two-thirds of our sample were current drinkers (N=150). Of those, 29% endorsed they needed help with their drinking, and half reported that they would probably try to cut down or stop drinking in the next year. Multiple regression analyses suggested that drinking was positively associated with a greater perceived need for help with drinking ( $\beta = .40, p = <.001$ ). Lower scores on a measure of cultural identity (i.e., stronger FN identity) was associated with a greater perceived need for help with drinking ( $\beta = -.18, p = .04$ ). Greater endorsement of past year attempts to stop drinking ( $\beta = .33, p <.001$ ) and higher alcohol reduction expectancies ( $\beta = .43, p <.00$ ) were positively associated and lower scores on cultural identity (i.e., stronger FN identity) ( $\beta = -.19, p = .03$ ) was associated with trying to cut down or stop drinking in the next year. Future research should explore the nature of cultural identity as a protective factor.

### Keywords

First Nation; Alcohol use; Cultural identity; help-seeking

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The authors have no conflicts of interest.

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Members of First Nations (FNs) are the Indigenous people who are living in Canada. Approximately, 4% of the Canadian population identify themselves as a member of a FN group which is approximately 1.4 million people (Health Canada, 2011). There are over 800 FN communities across Canada. Included in the FN category are the Metis, Inuit, and North American Indian (Health Canada, 2011). The North American Indian group represents the largest FN group, with approximately 60% in this category (Health Canada, 2011). Similar to the diversity that exists within and among American Indians (AIs) residing in the United States, there is tremendous diversity in FN communities. Although historically alcohol use was not a part of FN life, it has been identified as a major public health concern for members of FN groups (FNs) living in Canada (Compton, Thomas, Stinson, & Grant, 2007; Hasin, Stinson, Ogburn, & Grant, 2007; N. S. Spillane & Smith, 2007; Whitesell, Beals, Crow, Mitchell, & Novins, 2012; Young & Joe, 2009) there remains a significant need to increase our understanding of alcohol use within local tribal groups. Doing so can benefit the tribes themselves, but also provides researchers as well as policy makers with a more complete picture of health disparities that exist at a more proximal level and can guide community-led efforts for change. Therefore, one goal of the current paper is to present descriptive information on alcohol use behaviors in one FN group located in the Eastern part of Canada.

National data show that FN people report lower alcohol consumption rates in the past twelve months (65.6%) as compared to the general Canadian population (79.3%) (Health Canada, 2009). Much like AIs living in the United States, the proportion of FN members who reported heavy drinking on a weekly basis (16%) is double that of those in the general Canadian population (8%) (Health Canada, 2009). Binge drinking or heavy drinking poses serious concerns for the health and well-being of the individual who is consuming alcohol, but also can pose significant problems for the communities where alcohol consumption takes place. National data provides us with a broad overview of the problem. However, because regional or group differences are likely, we cannot and should not assume that they generalize to all other groups. Notably, differences in drinking levels and problems have been found in AIs living in the United States, with members from Northern Plains tribal groups having much higher rates of problematic drinking than those found in the Southwest (Beals et al., 2005). There may be regional differences in FN communities as well. We know far less about FN alcohol use in specific parts of Canada, especially communities located in the eastern part of Canada.

While alcohol-related health disparities have been well-documented among Indigenous people, there is much less research attention devoted to the topic of treatment and self-initiated attempts to reduce or quit drinking (Greenfield & Venner, 2012). The identification of factors that are associated with whether an individual perceives the need for help with their drinking behavior or their intentions toward cutting down or stopping alcohol use can help guide the development of treatment programs. However, there has been limited research on perceived need for help and intentions to change drinking in FN communities. Therefore, a second aim of this paper is to explore factors that may be related to perceived need for help with drinking and those associated with intentions to change (i.e., either stop or cut down) drinking.

In the general population, most people with alcohol use disorders (AUD) never seek formal help (Oleski, Mota, Cox, & Sareen, 2010). Results from the National Epidemiological Study on Alcohol Related Conditions (NESARC) study found that approximately 15% of those with a lifetime alcohol use disorder had ever received treatment of any type, including mutual help groups (Cohen, Feinn, Arias, & Kranzler, 2007). Other studies using the NESARC data found that most individuals with an alcohol use disorder do not report seeking care or perceiving a need for help (Oleski et al., 2010). In general, those who were younger, were married, had higher income, had higher education, and did not have an adverse general medical condition were significantly less likely to perceive a need for help for an alcohol use disorder. Similar estimates have been obtained from a large population-based survey (N = 2,825) of AI tribal members which reported that 13% of the participants in this study sought help for substance use and of those with a substance use disorder, 38% sought help in the past year (Beals et al., 2006). Correlates of help seeking included presence of substance use disorders, tobacco use, depression and anxiety disorders, being separated, widowed or divorced, and spirituality (Beals et al., 2006). Help seekers were also more likely than those who did not seek help to place an importance on their culture-specific traditions or the Native American church and endorse a stronger Indian identity (Beals et al., 2006). Therefore, cultural identity may play an important role in help-seeking and intentions to reduce alcohol use in FN members. We hypothesize that a stronger FN identity will be associated with a higher perceived need for help and greater intentions to change their drinking behavior in the next year.

A final factor likely to be central to help-seeking and intentions to change drinking are alcohol outcome expectancies, which are cognitive schemas that represent the reinforcement value of consumption (Rather, Goldman, Roehrich, & Brannick, 1992; Smith, Goldman, Greenbaum, & Christiansen, 1995). Positive alcohol expectancies have been related to alcohol use in both AI and FN groups (Garcia-Andrade, Wall, & Ehlers, 1996; N. S. Spillane & Smith, 2010). While positive alcohol expectancies are useful in predicting drinking behavior, individuals also develop and maintain expectations about the sequelae of cessation or reducing their drinking (Metrik, McCarthy, Frissell, MacPherson, & Brown, 2004). Alcohol reduction/cessation expectancies have not been studied in either Indigenous group. For our third aim, we will examine whether alcohol reduction/cessation expectancies are associated with perceived need for help with drinking behavior and intentions of changing drinking behavior in the next year. We hypothesize that alcohol reduction/cessation expectancies will be positively associated with both perceived need for help and intentions of changing their drinking in the next year. (N. S. Spillane & Smith, 2007; N.S. Spillane, Smith, & Kahler, 2013).

## **METHODS**

### **Sampling**

Participants represent a convenience sample that is a fairly representative sample of households in this FN group of Indigenous people living on this reserve in Canada. There are currently about 650 members living on the reserve so the current study represents

approximately a third of the population that resides on the reservation (Government of Canada, 2012).

## Participants

Participants were reservation-dwelling FN members who belonged to a tribe in Eastern Canada. A total of 211 FN people (96 men, 113 women, 2 unknown) completed the study measures. The sample ranged in age from 18 to 70-years-old ( $M = 35$ ,  $SD = 13.1$ ), and 71% of the sample's income was below \$20,000. Measures

**Cultural Identity**—Cultural identity was measured with the Native American Acculturation Scale (NAAS; (Garrett & Pichette, 2000). The NAAS is a 20-item self-report measure that assesses language, identity, friendships, behaviors, generational/geographic background, and attitudes (Garrett & Pichette, 2000). Responses are made on a scale of 1 to 5, with 1 = (only FN), 2 = (mostly FN), 3 = (equal FN and non-FN), 4 = (mostly non-FN), 5 = (only non-FN). For the current sample, the coefficient alpha was acceptable at .76. Lower scores represent a FN identity.

**Alcohol Reduction and Cessation Expectancies**—We created a measure of alcohol reduction and cessation expectancies by administering six questions that assessed participant's beliefs regarding how things would change if someone their age cut down or stopped drinking alcohol that was based on a previous measure administered to adolescents (Metrik et al., 2004). The questions asked about the likelihood of finding a job, having good relationships with friends, family, spouse, and children, and being financially secure. Range of response options include (1) unlikely to (5) very likely. The cronbach's alpha for the sample was .85.

**Past Year Quit Attempts**—Past year quit attempts was measured with a single item that asked respondents how often over the past year they have tried to stop drinking alcohol. Response options for the item were a scale from Never (1) to Over 10 times (6). Higher scores indicated a greater number of past year quit attempts.

**Perceived Need for Help with Drinking Behavior**—Perceived need for help with drinking behavior was measured using a single item that asked respondents to rate the following item, "I feel I may need help for my drinking behavior." Response options were from Never (0) to Frequently (4). Higher scores indicate a greater perceived need for help with drinking behavior.

**Intentions to Cut Down/Quit In Next Year**—Respondents were also asked how likely is it that they would try to cut down or stop drinking in the next year. Response options ranged from definitely won't try (1) to definitely will try (5).

**Covariate:** Demographic factors included, age, gender, and income. Drinking behavior was measured by the Drinking Style Questionnaire (DSQ; (Smith, McCarthy, & Goldman, 1995) drinking factor which measures indices of consumption (i.e., quantity and frequency). The problem factor includes items measuring lifetime negative consequences of consumption (e.g. legal difficulties, trouble with family). There is evidence that the scales have the same

factor structure in an Indigenous population as in a Caucasian population (N. S. Spillane & Smith, 2010). The coefficient alpha for this sample was .77. Individual items from the problem drinking inventory were used to describe lifetime problems experienced by participants in the sample.

## Procedures

The project was approved by and conducted in compliance with the reserve's chief and council and the Institutional Review Board at the University of Kentucky.

Two weeks prior to data collection, a flyer was sent out to each tribal member describing the research project as a study of drinking behaviors; fliers were also posted around the reservation. The fliers provided information about the study, purpose, investigator, and that the research team would approach people door to door, and that they would be compensated for their time. The researcher then went door-to-door to recruit potential participants. The investigator asked the person who answered the door for a moment of their time to describe a research study that was being conducted. Interested individuals provided informed consent and the investigator left a packet of questionnaires with him or her and scheduled a return visit to pick up the completed materials. When the investigator returned at the scheduled pick-up time, the participant was paid and thanked for their participation.

## Data Analysis

Of the 211 FN adults, 150 (73.1%) were identified as current drinkers. We calculated frequencies for all demographic/covariates. All variables were normally distributed. We present data on drinking experiences of current drinkers, perceived need for help with drinking behavior, and intention to make changes to their drinking in the future (i.e., stop or cut down). Because of differences in national trends for alcohol use for males and females we present data on male and female combined and separately (Health Canada, 2009). We obtained bi-variate correlations among the covariates, study variables, and readiness to change indicators.

**Concurrent Prediction of Perceived Need for Help with Drinking Behavior**—To test whether perceived need for help with drinking was associated with age, gender, and income as covariates and cultural identity, and alcohol reduction expectancies, we ran a multiple regression model testing the effects of cultural identity and alcohol reduction expectancies including age, gender, (dummy coded with females as the reference group) and income (dummy coded with less than \$15,000/year as the reference group).

**Concurrent Prediction of Likelihood of Future Change Attempt**—To test whether the likelihood of stopping drinking was associated with age, gender, and income as covariates and cultural identity, and alcohol reduction expectancies, we ran a multiple regression model testing the effects of cultural identity and alcohol reduction expectancies including age, gender (dummy coded with females as the reference group) and income (dummy coded with less than \$15,000/year as the reference group).

## RESULTS

### Sample Characteristics

Table 1 presents sample descriptive data on demographics. Females were slightly overrepresented in the sample (females = 53% of total sample). Mean age of the whole was 34.7 years ( $SD = 13.1$ ). Nearly two-thirds had completed high school or above. Despite 78% of the sample being employed, over half of the sample reported a yearly income of less than \$15,000. More than half the sample reported identifying equally well with both their Native heritage and non-Native culture and a quarter of the sample reported identifying more with their FN identity suggesting that this was a bicultural and traditional sample.

### Alcohol use patterns, Prior Treatment, Past Change Attempts, and Future Change Attempts

Table 2 presents data on experiences with alcohol and focuses on the descriptive analyses of alcohol use, problems, past treatment experiences, and readiness to change among current drinkers. We present descriptive data for the whole sample and separately by gender, but we did not test for significant differences by gender given the large amount of comparisons that would be made. Over 90% of our sample endorsed having had an alcoholic drink in their lifetime. The most frequent problem experienced was hangover followed by feeling nauseous.

Our sample was a fairly heavy drinking sample, as indicated by the high number of participants who endorsed that when they consume alcohol they typically drink four or more drinks and many reported drinking at least once a week. Moreover, 11% reported drinking daily with more than half the sample endorsing that they have been drunk for two or more consecutive days in their lifetime.

Among the current drinkers (see Table 2), about a fifth endorsed that they had received treatment for alcohol use. Nearly one third of the current drinker sample expressed needing help for their drinking. Two-thirds of the participants reported having tried to cut down their alcohol use and over half reported trying to stop in the past year. Almost half of the participants endorsed that they will probably try to cut down or stop their drinking in the next year.

### Correlations between demographic, binge drinking, and past and future change attempts

Table 3 presents the bivariate correlations among the demographic characteristics and study variables. Drinking behavior (i.e., indices of quantity and frequency) was strongly and positively correlated with greater likelihood of cutting down or stopping drinking in the future and less strongly, though still significantly related to perceived need for help with drinking. Consistent with our hypothesis, cultural identity was negatively related to the likelihood of trying to cut down or stop in the next year, with those identifying as mostly having a FN identity more willing to try to cut down or stop. Previous attempt to stop drinking was positively associated with both perceived need for help and likelihood of cutting down or stopping in the next year. Surprisingly, there was no association between perceiving a need for help and likelihood of cutting down or stopping.

### Concurrent Prediction of Perceived Need for Help with Drinking Behavior

Table 4 presents the results from the multiple regression examining the relationship between cultural identity and alcohol reduction cessation expectancies and perceived need for help with drinking behavior controlling for drinking (DSQ: quantity and frequency), age, gender, and income. Consistent with our hypotheses, lower scores on the cultural identity scale, indicating a stronger FN identity, were more likely to perceive the need for treatment even when controlling for their level of drinking. As expected, there was a strong positive association between drinking and perceived need for help with drinking. However, the belief that things would improve did not have a significant association with perceived need for help with drinking.

### Concurrent Prediction of Likelihood of Future Change Attempt

Table 5 presents the results of the multiple regression analyses examining the association between cultural identity and alcohol reduction cessation expectancies and likelihood of making a change attempt in the next year, controlling for past attempts to stop drinking, drinking quantity and frequency, age, gender, and income. Cultural identity was negatively associated with the likelihood of making a change attempt in the next year. Those individuals who scored low on cultural identity, indicating a stronger FN identity were more likely to report that they will make a change to their drinking in the next year. Further, individuals who reported that they could see positive benefits to reducing or stopping their drinking (i.e., alcohol reduction\cessation expectancies) were more likely to report a greater likelihood of making a change attempt in the next year. Past attempts to stop were also positively related to likelihood of future change attempt.

## DISCUSSION

The first goal of this study was to provide descriptive information on the alcohol use behaviors in a convenience sample of FN adults living in one FN community. Our rate of current drinkers (73%) is slightly higher than what has been reported in a national dataset of FNs (65.5%) and still lower than the general Canadian population (79.3%) (Health Canada, 2009). Very little has been published on alcohol use in this population of FN members (N. S. Spillane, Cyders, & Maurelli, 2012; N. S. Spillane & Smith, 2010; N.S. Spillane et al., 2013). Our data provides a similar age of first use for alcohol to those found in other studies (Clark, Doyle, & Clincy, 2013). Further, our data are also consistent with other studies showing a pattern of heavy, episodic drinking among Indigenous adults (Beals et al., 2003; O'Connell, Novins, Beals, & Spicer, 2005; Spicer et al., 2003).

In the general population, most people with alcohol use disorders (AUD) never seek formal help (Oleski et al., 2010) with only 15% reporting receiving help (Cohen et al., 2007). Our rates were similar with 12.2% in our sample having received past treatment. However, 29% of current drinkers felt they needed help with their drinking and almost 50% said that they would probably try to cut down or stop drinking alcohol in the next year. This suggests that there are more people reporting needing help than those who report getting treatment.

The findings that a stronger FN identity is related to both a greater perceived need for help with drinking and greater intentions to stop or reduce drinking suggest that perhaps these individuals are more open to change and should be targeted for intervention. Having a stronger sense of FN identity may be a protective factor and it may be these individuals who would benefit the greatest from a culturally informed treatment or traditional healing. While this study cannot address if there are certain types of help that are more preferred by those with a stronger FN identity, others have found that Christian AIs prefer a 12-step treatment approach while more traditional AIs preferred a more traditional approach to treatment (Beals et al., 2006).

Similarly, tailoring treatment to include culture may be more appealing to individuals with a stronger FN identity and therefore may have better results. One way to accomplish this is through incorporating traditional elements into the treatment approach as others have done (e.g., Dickerson, Robichaud, Tenya, Nagaran, & Hser, 2012). Another treatment approach that has been adapted to use with AIs is a motivational interviewing (Venner et al., 2012). This may be especially helpful among those individuals who are not yet ready to quit.

Finally, our findings regarding the positive association between beliefs about the positive benefits from quitting or reducing drinking (i.e., alcohol reduction/cessation expectancies) and future likelihood of making a change attempt suggest encouraging and increasing awareness of the positive benefits to stopping or reducing alcohol use in this population.

### Limitations

The results of this study should be understood in the context of the limitations of this research. First, we acknowledge that this is not a randomly selected group of FNs members; however, this sample represents a substantial number of those living on this reserve, approximately one-third of the population of tribal members (Government of Canada, 2012). Therefore, these data are likely representative of this group. Second, this was a cross-sectional study of factors associated with perceived need for help with drinking behavior (i.e., quantity and frequency) and likelihood of making a future change attempt in drinking. Future research will want to investigate these factors using longitudinal research designs. Research demonstrates that behavioral intentions or beliefs are related with actual behavior (Webb & Sheeran, 2006), which is the central premise of the theory of planned behavior (Ajzen, 1991), it will be important to demonstrate that is consistent with FN groups. Finally, we did not measure alcohol dependence per se, so we can only talk about indices of quantity and frequency, and lifetime problems. However, increasing quantity and frequency of drinking is associated with increasing number of alcohol dependence symptoms (Gilder, Gizer, & Ehlers, 2011; O'Connell et al., 2005).

### Conclusion

Our results highlight the importance of incorporating cultural identity into prevention and treatment efforts and highlight the importance of taking an individual's cultural identity into consideration when treatment planning. This may lead to more positive treatment outcomes.



## Acknowledgments

Funding for this study was provided by NIAAA Grant F31 AA 014467 awarded to Nichea S. Spillane and by NIDA K08 DA029094-01. NIAAA or NIDA had no role in the study design, collection, analysis or interpretation of the data, writing the manuscript, or the decision to submit the paper for publication.

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### Highlights

- Alcohol use among First Nation members is a problem.
- Cultural identity is associated with perceived need for help with alcohol use.
- Cultural identity is associated with intentions to change alcohol use.

**Table 1**

Descriptive statistics for demographic variables, covariates, and drinking among First Nation members (N=211).

Variable	First Nation		
	Whole sample <i>n</i> = 211	Male* <i>n</i> = 96	Female* <i>n</i> = 113
Age ( <i>n</i> , %)			
Mean (SD)	34.50 (12.58)		
18–24	64 (30.8)	28 (29.8)	36 (31.9)
25–34	45 (21.6)	23 (24.5)	22 (19.5)
35–44	45 (21.6)	20 (21.3)	25 (22.1)
45+	54 (26.0)	23 (24.5)	30 (26.5)
Educational attainment			
< 12 years	77 (37.6)	42 (45.2)	35 (31.5)
H.S grad	67 (32.7)	26 (28.0)	41 (36.9)
At least some college	61 (29.8)	25 (26.9)	35 (31.5)
Yearly Income			
<15k	115 (57.2)	50 (53.8)	64 (59.8)
15–29,999	86 (42.8)	26 (28.0)	28 (26.2)
30–49,999	23 (11.4)	10 (10.8)	13 (12.1)
>50k	9 (4.5)	7 (7.5)	2 (1.9)
Employment			
Student	19 (9.4)	5 (5.2)	14 (13.0)
Employed	159 (78.3)	81 (86.2)	78 (72.2)
Unemployed	25 (12.3)	8 (8.5)	16 (14.8)
Cultural Identity			
Mostly Native	53 (26.5)	30 (34.5)	23 (20.7)
Equal Native and non-Native	132 (66.0)	52 (59.8)	78 (70.3)
Mostly non-Native	15 (7.5)	5 (5.7)	10 (9.0)

Note:

\*The number of males and females adds to 209 and not 211 because two of the participants did not answer the gender question.

**Table 2**

Experiences with Alcohol: Lifetime and current drinking descriptives, past treatment, past attempts to stop or cut down, and the likelihood of future attempts.

Variable	First Nation		
	Whole sample <i>n</i> =211	Male <i>n</i> = 96	Female <i>n</i> =113
<b>Lifetime alcohol use (<i>n</i>, %)</b>	187 (91.2)	82 (91.1)	104 (92.0)
Age first drink			
<i>n</i> =	180	79	101
Range	2–25	5–25	2–25
Mean ( <i>SD</i> )	14.1 (3.6)	13.9 (4.0)	14.2 (3.3)
<b>Lifetime drinking problems (<i>n</i>, %)</b>			
<i>Nauseous/vomited</i>	138 (75.0)	58 (73.4)	79 (76.0)
<i>Hangover</i>	163 (89.6)	68 (88.3)	94 (90.4)
<i>Blackout</i>	102 (56.0)	40 (51.3)	61 (59.2)
<i>Gotten into trouble with friends</i>	70 (37.8)	38 (47.5)	31 (29.8)
<i>Gotten into fights</i>	113 (61.4)	47 (58.8)	65 (63.1)
<i>Stopped for drunk driving</i>	50 (27.2)	31 (39.2)	18 (17.3)
<i>Committed other illegal acts</i>	43 (23.1)	29 (35.8)	13 (12.5)
<i>Couldn't recall what one did while drinking</i>	116 (63.0)	50 (63.3)	65 (62.5)
# of lifetime problems			
Mean ( <i>SD</i> )	4.4 (2.2)	4.7 (2.4)	4.1 (1.9)
<b>Lifetime past treatment (<i>n</i>, %)</b>			
% received treatment	17 (12.2)	10 (17.2)	6 (7.6)
% counseled by a doctor about alcohol related problems	24 (17.2)	8 (15.5)	13 (17.6)
% felt needed help with drinking behavior	30 (26.6)	16 (27.6)	14 (17.6)
<b>Current drinkers</b>	<i>n</i> = 150	<i>n</i> = 65	<i>n</i> = 84
% current drinkers	73.1	67.7	74.3
<b>Drinking behavior for current drinkers (<i>n</i>, %)</b>			
<i>Typically drink 4 or more drinks during one day</i>	119(79.3)	50 (76.9)	68 (81.0)
<i>Intoxicated at least once/week</i>	61 (41.2)	32 (50.0)	28 (33.8)
<i>Drank at least weekly</i>	81 (54)	40 (61.5)	41 (48.8)
<i>Drank daily</i>	17 (11.3)	9 (13.8)	8 (9.5)
<i>Been continually drunk for 2 or more days</i>	90 (60.8)	43(66.1)	46(54.7)
<i>Loss of control over drinking – get drunk more than half the time</i>	62 (41.6)	31 (48.4)	31 (36.9)
<b>Lifetime past treatment, (<i>n</i>, %)</b>			
% received treatment	31 (21.6)	17* (26.2)	13* (15.5)
% counseled by a doctor about alcohol related problems	24 (16.0)	9* (13.8)	14* (16.7)
% felt needed help with drinking behavior	29 (43)	24 (28.7)	19 (22.6)
<b>Intentions to Change among current drinkers</b>			
<i>Over the past year did you...</i>			

<b>First Nation</b>			
<b>Variable</b>	<b>Whole sample <i>n</i>=211</b>	<b>Male <i>n</i> = 96</b>	<b>Female <i>n</i>=113</b>
<i>Try to cut down your alcohol use (%yes)</i>	97 (66.4)	41 (65.1)	56 (68.3)
<i>Try to stop drinking altogether (%yes)</i>	91 (62.8)	40 (64.5)	51 (61.4)
<i>In the next year will you...</i>			
<i>Probably will try to cut down or stop drinking (%yes)</i>	66 (45.5)	27 (43.5)	39 (47.6)

\* Note: Males and females do not add up because of two missing gender.

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Correlations among age, gender, binge drinking, cultural identity, past year attempts to cut down or stop, and likelihood of attempting to cut down or stop in the next year among current drinkers (N=150).

**Table 3**

	1	2	3	4	5	6	7	8	9
1.Age	-	-.09	.31**	-.13	.04	-.38**	-.00	-.16 (p=.052)	.20*
2.Female			.10	-.09	.01	.09	.16*	-.15 (p=.07)	.12
3.Income			--	.32**	.17*	-.20*	.02	-.24**	.01
4.DSQ symptoms				--	-.16 (p=.056)	.02	.07	.47**	.14 (p=.10)
5.Cultural Identity						--	-.07	-.07	-.20*
6.Past year tried to stop drinking							-.03	.22	.40**
7.ARCE							--	-.02	.35**
8.Perceived need for help with drinking								--	.04
9. Likelihood of cutting down or stopping in future									--

\* p<.05,

\*\* p<.01

**Table 4**

Multiple regression with cultural identity, and alcohol reduction expectancies entered together predicting perceived need for help with drinking behavior controlling for age, gender, drinking behavior, among current drinkers (N = 150).

	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>
Age	-.01	.01	-.12
Female	-.27	.18	-.12
Income	-.30	.19	-.13
DSQ – drinking quantity and frequency	.10	.02	.40**
Cultural Identity	-.46	.21	-.18*
Alcohol reduction expectancies	-.02	.10	-.02

Note:  $R^2 = .27, p = .000$

Note:

\*  
p < .05,

\*\*  
p < .01



**Table 5**

Multiple regression with life satisfaction, cultural identity, and alcohol reduction expectancies entered together predicting intentions to change drinking behavior (i.e., stop or cut down) in the next year controlling for age, gender, drinking quantity and frequency, and past year attempts to stop drinking, among current drinkers (N = 150).

	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>
Age	.01	.01	.11
Female	.28	.22	.10
Income	.10	.23	.04
DSQ – drinking quantity and frequency	.03	.02	.10
Past year attempts to stop drinking	.26	.06	.34**
Cultural identity	-.58	.26	-.19*
Alcohol reduction expectancies	.45	.12	.29**

*Note:  $R^2 = .31, p = .000$*

Note:

\*  $p < .05$ ,

\*\*  $p < .01$