

AN EXAMINATION OF THE
PSYCHOLOGICAL AND CULTURAL
FACTORS RELATED TO ALCOHOL USE IN
AMERICAN INDIAN PEOPLE

By

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CHAPTER ONE

INTRODUCTION

Alcohol Use among American Indian People

Alcohol use is a widely acceptable behavior in American society. Despite this attitude of acceptance, alcohol has become a source of numerous social problems, most notable among American Indian people. American Indians have suffered the consequences of abusive alcohol use for centuries, beginning with the early introduction of alcohol by White settlers.

During the times of colonization, many American Indians became addicted to alcohol. This addiction resulted in difficulty fulfilling tribal and familial responsibilities. As the effects of alcohol on American Indian people became apparent to the White settlers, alcohol stereotypes and other exploitative practices developed. For example, the stereotype, “Drunken Indian” developed around that time and is now described as: “a once noble warrior who has turned to drink because of cultural decimation, who became addicted to firewater through exploitive interactions with traders and frontiersman, or who perhaps was genetically predisposed to alcoholism, (Weaver, 2001, p.77).” During trade agreements alcohol was often used as a tool for unfair negotiating practices. American Indians were often given alcohol during negotiations or given alcohol for their valued resources. This intentional distribution of alcohol for early settler gain has been described as an early form of chemical warfare (Mail & Johnson, 1993).

Although alcohol was introduced centuries ago, it continues to affect the lives of many American Indians. Today, Indian people have the highest rates of alcohol abuse

and dependence in comparison to other ethnic groups (Grant, Dawson, Stinson, Chou, Dufour, and Pickering, 2006). American Indian people are seven times more likely to die from alcohol related deaths in comparison to non-Indians (NIAAA; 2002, IHS, 1997). Early deaths generally occur among American Indian males, age 45-54. On the other hand, Indian women are more likely to be victims of physical assault (domestic violence and rape) while under the influence of alcohol (Huan, Koss, Polacca, & Goldman, 2006). Women also suffer from higher rates of death due to liver disease (i.e. cirrhosis) (NIAAA, 2002). Despite these grim statistics, less than 7% of Indian Health Service funding is allocated for the treatment of mental health and substance abuse related issues (National American Indian Health Board, 2002).

Prevalence of Alcohol Use

Alcohol use may begin during early adolescence in some Indian communities. Some children as early as five or six years of age may begin experimenting with alcohol (Okwumabua & Duryea, 1987). Early alcohol use is often associated with drug experimentation and often occurs with older family members who may demonstrate a permissive attitude towards alcohol experimentation. Initially, alcohol use may begin as a thrill seeking behavior. However, as substance use increases it is likely that other stressors may increase as well. Eventually, some young Indian people become addicted to alcohol.

Alcohol use varies by gender and age. Men have a tendency to engage in more binge drinking behaviors (five or more drinks on one occasion) in comparison to women. However, males and females under the age of 30 are the most likely to have problems with alcohol use (Beals et al., 2005; May and Gossage, 2001). Another common

alcohol use practice among Indian people is quitting alcohol use later in life once familial or tribal responsibilities take precedence. This has been defined as “aging out” of alcohol use (Mail & Johnson, 1993).

While there are a significant portion of American Indian people who do drink, there are still those who do not drink. More research is needed to explore the factors that motivate Indian people not to drink and the factors which influence alcohol use for this population. In the next section, theories and models of alcohol use among American Indian people will be presented.

Theories and Models of Alcohol Use Among American Indian People

Many theoretical explanations have been provided for alcohol use problems among American Indian communities, including genetic theories and the medical model, psychological theories, and sociocultural theories.

Genetic Theories/Medical Model

The medical model emphasizes that alcohol abuse and dependence are diseases which require medical treatment. This medical model theorizes that American Indian people have a genetic component which makes it difficult for them to physiologically process alcohol (NIAAA, 2002). While this is an interesting perspective, not many studies have been conducted to either prove or disprove this theory. One study found that among Mission Indians, those with a diagnosis of alcohol dependence were likely to display a different genetic structure than the non-alcohol dependent participants in the study (Wall, Carr, & Ehlers, 2003). This means that physiologically their genetic structure differed from those who did not drink alcohol heavily. Specifically, those who

demonstrated the ADH2*3 allele had lower rates of heavy drinking and alcohol dependence.

There is a dearth of genetic research with American Indian alcohol users. However, among the genetic studies which have been conducted the results may be non-generalizable to all American Indian people (Long, Mail, & Thomasson, 2002). Some American Indian theorists believe that a genetic explanation for American Indian alcohol use supports the “Drunken Indian” stereotype, which asserts that American Indian people are unable to process alcohol in the same manner as non-Indian people, because of genetic make-up. This difficulty with alcohol processing is theorized to be a primary factor for quick alcohol intoxication among Indian people. However, there are other socio-psychological theories which attempt to explain reasons for alcohol use problems and quick intoxication among Indian people.

Psychological Theories

Psychological models discussed in this paper will first focus on the different types of alcohol users within American Indian communities, will second focus on alcohol use as a form of self-medication, and will third focus on alcohol expectancies which enhance alcohol use.

Types of Indian Alcohol Users

Psychological theories attempt to categorize American Indian alcohol users and American Indian drinking patterns. American Indian alcohol users have been described as recreation and anxiety drinkers, Ferguson (1968) and May (1995). Recreational drinkers are more likely to binge drink and have been theorized to have the most alcohol related problems than anxiety drinkers. Anxiety drinkers are more likely to have a diagnosis of

alcohol dependence and/or other health related issues. Anxiety drinkers are also more likely to be older than recreational drinkers.

A bi-modal drinking pattern (Gray & Nye, 2001) refers to the majority of American Indian who may fall into either an alcohol abstainer category or an alcohol abuser category. This implies that there are not many moderate or responsible drinkers, within American Indian communities. However, not much research has been conducted to determine alcohol use prevalence and patterns among Indian people. Some research studies identify a large percentage of American Indian who do not have problems with alcohol (Gill et al., 1997; Gray & Nye, 2001; Weibel-Orlando, 1986, 1987; Weisner et al., 1984).

Gill et al. (1997) found that among an urban American Indian sample in Denver, 50.5% of the participants were abstinent or irregular drinkers. In other studies, Weisner et al. (1984) and Weibel-Orlando (1986, 1987) found that one-third of a American Indian sample were abstainers, another third were moderate drinkers. Gray and Nye (2001) found that most American Indian people practiced abstinence on most days during the month. These findings indicate that while a substantial amount of American Indian people drink alcohol, there are a significant proportion of who are abstinent or choose to drink responsibly.

Alcohol as Coping

Psychological models of American Indian drinking propose that alcohol use is a form of self-medication for emotional distress. There have been several relationships demonstrated between a diagnosis of alcohol abuse or dependence and the likelihood of having an Axis I diagnosis, specifically either a depressive or anxiety disorder (Whitbeck

et al., 2006; Beals, Manson, Whitesell, Spicer, Novins, & Mitchell, 2005; Gilder, Wall, & Ehlers, 2004). Alcohol use has also been described as an unproductive coping practice which is likely the result of feelings of unresolved grief and the legacy of historical trauma (Brave Heart & DeBruyn, 1998).

Cooper and Frone (1995) found that drinking to cope with negative emotions was a significant predictor of heavy alcohol use among a non-American Indian sample. This indicates that it is likely that American Indian people may have the same type of coping behaviors found among other groups who use alcohol as a coping strategy. Other more traditional practices have been encouraged as a means for coping with stress, such as talking with others and community activities (Quantz, 2005).

Alcohol Expectancies

American Indians who have been exposed either directly or indirectly to alcohol may develop expectancies for alcohol to provide relief from psychological and psychosocial stressors. This is one way alcohol expectancies can develop. Alcohol expectancies refer to the beliefs people hold about alcohol's expected influence on thoughts, feelings, and behaviors (Leigh & Stacy, 1991; Goldman, Brown, & Christiansen, 1987; Brown, Goldman, Inn & Anderson, 1980). These alcohol expectancies are memory structures hypothesized to guide behaviors. Alcohol expectancies are based on social learning theory and are established early in life based on observation, modeling, and cultural norms (Bandura, 1966). Understanding alcohol expectancies allow for interested parties (mental health professionals, educators, alcohol users who want to change) to understand motivations and reasons for alcohol use among

American Indian samples. This understanding can provide insight into why American Indian people drink alcohol when negative consequences often result.

Alcohol expectancies generally precede early alcohol use and are further strengthened with the continued use of alcohol. Alcohol expectancies are divided into both positive and negative expectancies. Positive expectancies refer to the general positive feelings people expect to obtain from alcohol use. These can include feelings of sociability, decreased tension, increased sexual feelings, and feelings of power and aggression. Negative alcohol expectancies refer to the negative effects people expect to receive from alcohol use, such as impairment and a lack of concern for self and others. Alcohol expectancies have been related to alcohol use. For instance, Rosenhow (1983) found that lighter drinkers expected more of a general positive feeling from alcohol use, whereas heavy drinkers, expected more impairment from alcohol.

Several studies have explored the relationship between alcohol expectancies and alcohol use among American Indian people. Negative alcohol expectancies have been associated with heavy alcohol use (Lysne, 2003). Daisy (1990) found that American Indian people were more likely to endorse more positive alcohol expectancies for global positive change, social and physical pleasure, and social assertiveness, when compared to other ethnic groups. Garcia-Andrade, Wall, & Ehlers (1996) found that alcohol expectancies were strongly related to alcohol use among a Mission Indian sample. Specifically, the expectancy for an overall positive feeling from alcohol use was a significant predictor of alcohol use among a Mission American Indian sample of men. One purpose of this study was to investigate the relationship of both positive and negative alcohol expectancies with alcohol use among American Indian people.

Sociocultural theories

While medical and psychological theories have received attention in the literature, socio-cultural explanations for American Indian alcohol use are a newly emerging area within the field of American Indian psychology. Sociocultural perspectives emphasize the influence and relationship of colonization and current social influences on alcohol use among American Indian people (Walters, 2002; Walters, Simoni, & Evans-Campbell, 2002). Specifically, an emphasis is placed on the effects of personal and historical trauma on physical health, emotional health, and substance use. Cultural and social involvement is theorized to mediate the relationship between trauma history and physical health, emotional health, and substance use.

Johnson (2006) describes a model which may be used to understand the current context of American Indian psychosocial issues. Johnson's model is broken down into community, family, and individual influences on social and psychological problems. The model is divided into four quadrants within the community healing cycle which are divided into nurturance, treatment, relationships with elders, and involvement in traditional activities. Johnson indicates that substance abuse is a result of the negative emotional responses to the colonization process; specifically the history of colonization and boarding school policies. This study will follow the sociocultural perspective and explore how thoughts and feelings of historical loss relate to alcohol use with an American Indian sample. Based on a sociocultural perspective, these factors are likely to influence alcohol use and what American Indian people expect to obtain from alcohol.

Correlates of Alcohol Use Among American Indian People

Alcohol use among American Indian people has been associated with a number of variables including acculturation level, alcohol expectancies, and historical loss thoughts and feelings (Whitbeck, 2004; Braveheart, 2003; Brave Heart & LeBruyn, 1998; Duran, 1995) early deaths by accident or alcohol-related illnesses (NIAAA; 2002); physiological and psychosocial stressors (Mail, 1989).

Of interest in this study is the relationship of historical loss, acculturation, and alcohol expectancies with alcohol use among American Indian people. Historical loss and acculturation represent cultural factors which may influence alcohol use. Alcohol expectancies represent a personal factor (grounded in social learning) which has been correlated with alcohol use in both Indian and non-Indian samples.

Historical loss

Historical loss) refers to the thoughts and feelings associated with the history of traumatic experience and loss among American Indian people (Braveheart, 2003; Brave Heart & LeBruyn, 1998; Whitbeck, 2004). American Indian people have experienced significant traumatic events and losses during the colonization of North America which continues in one form or another today. American Indians are theorized to have suffered from intergenerational unresolved grief known as “the soul wound” (Duran & Duran, 1995). While many of these traumatic events occurred centuries ago, it has been theorized that the immeasurable amount of unresolved grief continues to be transmitted across generations today (Duran, 1995; Brave Heart, 2003; Brave Heart & DeBruyn, 1998; Walker, 2005). For example, dysfunctional coping strategies may have been adopted by American Indian people to deal with this unresolved grief, such as alcohol use

and violence, which continue to perpetuate the cycle of trauma among American Indian people.

Research on historical loss is an emerging area in the field of American Indian psychology. To date, historical loss has been associated with thoughts of perceived discrimination and alcohol abuse (Whitbeck, 2004). Post-colonial stress, a construct similar to historical loss, has been associated with chronic anger among American Indian people (Winterrowd, Miville, Schultz, Warner, Sheader-Wood, and Willmon, 2001). In addition, personal trauma has been associated with alcohol dependence (Koss, Yuan, Dightman, Prince, Polacca, Sanderson, & Goldman, 2003) and HIV risk behaviors (Walters & Simoni, 1999) among American Indian. These studies provide some evidence that a history and legacy of trauma can influence present day functioning in many ways.

In summary, there is some preliminary evidence that historical loss is related to alcohol use (Whitbeck et al., 2004). More research is needed to better understand the relationship of alcohol use and thoughts and feelings of historical trauma among American Indian people.

Acculturation

Another cultural factor which may be related to alcohol use among American Indian people is acculturation. Acculturation is defined as, “the degree to which the individual accepts and adheres to both majority and tribal cultural values” (Choney, Berryhill-Paapke, & Robbins, 1995, p. 76). Higher levels of acculturation represent one’s adoption of more mainstream Western world views, values, and behaviors whereas lower levels of acculturation represent one’s adoption of more traditional American

Indian world views, values, and behaviors. Acculturation has been associated with a number of variables including chronic anger (Winterowd et al., 2005), alcohol consumption, smoking, and increased risk-taking behaviors (Abraido-Lanza, Chao, & Florez, 2005; Lysne, 2003; Hawkins, 2002; & Herring 1994). Generally, acculturation is measured by assessing behaviors which are thought to be indicative of a particular culture or group.

Research findings on the relationship between acculturation and substance use are mixed. Some researchers have found that acculturation is not related to alcohol use among American Indian people (Bates et al., 1997; Oetting & Beauvais, 1990-1991; Weisner, Weibel-Orlando, & Long, 1984;). Other researchers have found a significant relationship between acculturation and alcohol. Of those researchers, who found a significant relationship, the nature of that relationship has varied from study to study. Some researchers have found that more acculturated into mainstream society (i.e., less traditional) American Indian people are more at risk for alcohol problems than more traditional American Indian people. In fact, a few researchers have found that identification and involvement with White culture serves as a protective factor against substance abuse, primarily among adolescents (Hawkins, 2002; Mail, 1996).

On the other hand, other researchers indicate that a more traditional American Indian orientation is a protective factor against alcohol use problems. Cultural involvement or enculturation, has been viewed as a strengths-based approach to alcohol cessation (Quantz, 2005; Whitbeck, 2006). It is theorized that the loss of traditional culture has created an emptiness for Indian people which may contribute to alcohol use problems. While non-traditional and traditional theories have attempted to explain

alcohol use, other theorists propose that the healthiest form of identity or cultural involvement for American Indian people is a bicultural orientation (Herring, 1994; LaFromboise, Coleman, & Gerton, 1993). However, Herman-Stahl, Spencer, & Duncan (2002) found that among a reservation American Indian population, those who identified as bicultural were more likely to have alcohol abuse problems.

Based on early research studies the relationship between acculturation and alcohol use among Indian people remains unclear. Due to the discrepancies in acculturation research, acculturation will be explored in relation to alcohol use and alcohol expectancies.

Statement of the Problem

Little is known about cultural factors associated with alcohol use among American Indian people. A few studies which have explored the relationship between acculturation and substance use have produced mixed findings. Furthermore, only one study thus far has been conducted on the relationship between historical loss and alcohol use. In addition, only a few researchers have explored the correlates of alcohol expectancies among Native individuals. More research is needed to understand the personal and sociocultural factors that influence alcohol use and alcohol expectancies among Indian people. In this study, alcohol use was explored from a psychosociocultural perspective. More specifically, personal (i.e., alcohol expectancies) and cultural factors (i.e., acculturation, thoughts and feelings of historical loss) were examined in relation to alcohol use. In addition, acculturation and historical loss were explored in relation to alcohol expectancies.

Purposes of the Study

The primary purposes of this study were to 1) explore the relationships between and among historical loss, acculturation, alcohol expectancies, and alcohol use in this American Indian sample, 2) to identify significant predictors of alcohol use, 3) to identify significant predictors of alcohol expectancies, 4) and to explore acculturation group differences in alcohol use and alcohol expectancies in this American Indian sample.

Significance of the Study

This study is of critical importance because it addresses potential personal and cultural factors associated with alcohol use and alcohol expectancies among American Indian people. Little is known regarding how alcohol expectancies influence drinking among this population. Furthermore, cultural components such as level of acculturation, and thoughts and feelings regarding historical loss are not frequently explored in relation to alcohol use. Considering that Native people have a unique history, the influences of culture on current functioning warrant further knowledge and understanding.

The results of this study may assist mental health professionals and educators to provide culturally appropriate mental health care and substance abuse services to American Indian people. Identifying the factors associated with alcohol use and alcohol expectancies among American Indian people will guide counselors, psychologists, educators, and/or traditional healers towards appropriate interventions with American Indian people who have alcohol use problems. If we can understand what purpose alcohol serves, than maybe it will be possible to help American Indian people find alternative coping styles. In addition, this information can prove valuable in educating American Indian people about the ways in which alcohol use is carried on across generations and as a way to motivate change.

Research Questions

1. What are the relationships between and among historical loss, acculturation, alcohol expectancies, and alcohol use for this American Indian sample?
2. Which of these variables (historical loss, acculturation, and alcohol expectancies) are significant predictors of alcohol use among American Indian people?
3. Which of these variables (historical loss and acculturation) are significant predictors of alcohol expectancies among American Indian people?
4. Are there significant acculturation group differences (more traditional versus more acculturated) in alcohol expectancies?
5. Are there significant acculturation group differences (more traditional versus more acculturated) in alcohol use?

Research Hypotheses

The following null hypotheses will be tested:

- 1) There will be no statistically significant bivariate relationships among the main study variables.
- 2) Historical loss, acculturation, and/or alcohol expectancies will not be significantly and linearly related to (i.e., will not be significant predictors of) alcohol use among American Indian people.
- 3) Historical loss and acculturation will not be significantly and linearly related to (i.e., will not be significant predictors of) alcohol expectancies among American Indian people.
- 4) The acculturation groups (more traditional versus more acculturated) will not significantly differ in their alcohol expectancies.

- 5) The acculturation groups (more traditional versus more acculturated) will not significantly differ in their alcohol use levels.

Assumptions

1. It was assumed that participants who self-identified as American Indian/American Indian were associated with this ethnic group.
2. It was assumed that participants provided honest answers on all questionnaires.
3. It was assumed that participants had the capacity to estimate and measure their alcohol use behaviors, alcohol expectancies, thoughts/feelings of historical loss, and level of acculturation.
4. It was assumed that participants had the required educational experience which enabled them to fully understand the content of the items in each questionnaire.
5. It was assumed that participants fully understood the on-line survey Internet procedures.
6. It was assumed the assessment instruments adequately assessed the variables of interest.
7. It was assumed that participants did not endure any psychological harm as a result of participation in this study.

Definitions of Terms

Alcohol Abuse: Continued use of alcohol despite evidence that alcohol use is posing significant interpersonal problems, such as: poor school/work performance, family disruption, using while in physically hazardous circumstances (driving an automobile while intoxicated), and legal difficulties. Alcohol use was measured using the Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 1989).

Lower scores indicated less problematic drinking; higher scores (8 and above for men, 7 and above for women) indicated more hazardous or harmful alcohol consumption.

American Indian/Alaska Native: Any individual, indigenous to the continental United States. An indigenous person may be federally defined by blood quantum or tribal enrollment. Congress has proposed a legal definition stating that an individual must have an American Indian blood quantum of at least $\frac{1}{4}$ to be considered American Indian (Sue & Sue, 2001). However, tribal groups are at liberty to set blood quantum criteria as enrollment requirements. There are over 562 federally recognized tribal nations and Alaska Native villages (Bureau of American Indian Affairs, 2002). Currently, American Indians make up 1.5% of the United States population (Ogunwole, 2002).

Alcohol Expectancies: Reinforcing beliefs/schemas held by individuals about effects of alcohol use on their behavior, moods, and emotions (Jones & McMahon, 1998; Leigh & Stacy, 1991; Brown & Goldman, 1980). Alcohol expectancies were measured using the Alcohol Effects Questionnaire (AEQ; Brown et al., 1980). Scores were derived for each of the eight subscales on the AEQ. Lower scores on a subscale indicated less expectancy for that particular alcohol related effect, while higher scores on a subscale indicated more expectancy for that particular alcohol related effect. The subscales were defined as follows:

Global Positive: The expectation that alcohol will provide positive global changes in a variety of experiences.

Social and Physical Pleasure: The expectation of enhanced social and physical pleasures from alcohol use.

Power and Aggression: The expectation for feelings of arousal and aggression from alcohol use.

Sexual Enhancement: The expectation for improved sexual experiences and enhanced sexual arousal while under the influence of alcohol.

Social Expressiveness: The expectation of positive and social assertive personality changes while under the influence of alcohol.

Relaxation and Tension Reduction: The expectation for alcohol to provide a sense of relaxation and tension reduction.

Cognitive and Motor Impairment: The expectation that alcohol will affect thought and motor difficulties while under the influence of alcohol.

Careless Unconcern: The expectation for decreased inhibitions while under the influence of alcohol.

Acculturation: The individual and social adjustments that occur when minority people or those not in the majority adapt to the dominant society and culture. Acculturation was assessed using the 20-item American Indian Acculturation Scale (NAAS; Garrett & Pichette, 2000). Acculturation levels are assessed according to language, identity, friendships, behaviors, generational/geographic background, and attitudes. Higher scores indicated more acculturation into the dominant, mainstream culture and lower scores indicated more traditional American Indian enculturation.

Historical loss: The feelings of loss or unresolved grief related to the legacy of chronic trauma endured for many generations among American Indian people (Brave Heart & DeBruyn, 1998). Historical loss was measured by the Historical Loss Scale and Historical Loss Associated Symptoms Scale (Whitbeck, 2001). The Historical Loss scale

measures the frequency of thoughts about historical losses and traumas of American Indian people. The Historical Loss Associated Symptoms Scales measure the frequency of depression, anger, stress, and grief associated with the historical losses of American Indian people. Higher scores indicated more thoughts of historical loss or affective symptoms associated with historical loss. Lower scores indicated fewer thoughts about historical loss or affective symptoms associated with historical loss. Whitbeck (2001) theorizes that more thoughts of historical loss will predict more affective symptoms associated with historical loss.

Tribe or nation: Refers to groups of Native people that share a common ancestry, language, and culture; however, use of the word “nation” communicates a stronger belief in the inherent sovereignty of indigenous people (Weaver, 2001). The 4.1 million American Indian/American Indian people in the United States (U.S. Census Bureau, 2000) are a highly heterogeneous group, representing over 500 federally recognized tribes and over 200 non-federally recognized tribes. These culturally distinct groups speak over 300 languages.

CHAPTER TWO

REVIEW OF THE LITERATURE

History of Alcohol Use

White arrival resulted in major social changes, much to the detriment of American Indian people. One of these social changes was the introduction of alcohol which was imported by European explorers, traders, and settlers. Contrary to popular belief many American Indian tribes, primarily in the Southwestern region, consumed alcohol prior to White arrival. However, many traditional beverages were made of fermented fruits and used during tribal ceremonies or gatherings in structured social settings (Abbot, 1996; Duran & Duran, 1995).

The distilled beverages brought by the Europeans had a higher amount of alcohol than the fermented beverages tribes were accustomed to drinking. This new alcohol provided a quicker state of intoxication (Mail, 2002). Many American Indian people did not know how to physically or mentally handle the feeling of drunkenness, nor were they familiar with moderate drinking practices. Rather, Native people mimicked the “frontier drinking” behaviors of the early settlers. This style of alcohol use was associated with loud, obnoxious behaviors and physical fights which often frightened the colonizers (Westermeyer, 1996).

When the settlers became aware of the American Indian’s response to alcohol, liquor was served as a means to intoxicate American Indian people during the process of negotiation as a means of taking advantage. Many tribes are said to have relinquished land and other traditional artifacts because they were not aware of their drunken

behaviors. In addition, at this time many American Indian people were struggling to find a way to cope with the frequent traumatic events and losses that came along with European arrival. Many Native people were often not allowed to grieve in traditional ways nor were they prepared to emotionally process these unimaginable events.

With the abundance of alcohol many American Indian people turned to drinking as a means of emotional numbing. Some American Indian people became addicted to alcohol and spent the majority of their time and energy acquiring alcohol while neglecting familial and tribal responsibilities. For these reasons, the early introduction of alcohol to native societies has been described as an early form of chemical warfare (Mail & Johnson, 1993).

After the government became aware of the manner in which American Indian responded to alcohol, e.g. engaging in violent behaviors and frightening early settlers, the government established laws designed to outlaw drinking behaviors. American Indian Alcohol Prohibition was initiated in 1832 and was in place until 1953. The Alcohol Prohibition Act made it illegal to possess alcohol on tribal lands (Duran & Duran, 1995; Westermeyer, 1996). However, this new law did not prevent American Indian people from drinking alcohol. Rather it encouraged bootlegging and the rapid consumption of alcohol as a way to avoid arrest; this fast drinking may have been an early form of binge drinking (NIAAA, 2002).

Many tribal reservations and nations continue to ban alcohol on tribal lands. However, many American Indian people continue to drink and must often travel long distances sometimes by foot and in treacherous conditions to obtain alcohol (Tietz, 2003). Several authors critique prohibition stating that the policy does not allow for constructive

socialization regarding alcohol use and encourages irresponsible drinking norms (Brody, 1971; Heath, 1987; Peele, 1987); prohibition encourages risky behaviors in the pursuit of alcohol (May, 1989); and prohibition does not address other pro-social interventions such as psycho-education and alcohol rehabilitation (Heath, 1992). It is apparent that banning alcohol on reservations and other tribal lands has not made much of an impact on changing the grim reality of alcohol abuse taking place among American Indian people.

Prevalence of Alcohol Use

A recent publication by Grant, Dawson, Stinson, Chou, Dufour, and Pickering (2006) provides current rates of abuse and dependence among American Indian in comparison to other racial/ethnic groups. In comparison to other racial/ethnic groups American Indians (5.75%) had the highest rates of alcohol abuse when compared to Hispanics (3.97%) and Asians (2.13%). American Indians (6.35%) had higher rates of alcohol dependence in comparison with Hispanics (3.95%), Whites (3.83%), and Asians (2.41%). However, between 1991-1992 and 2001-2002, rates of alcohol abuse increased among other racial/ethnic groups but not for American Indian people. On the other hand, rates of dependence decreased among other racial/ethnic groups rates yet stayed the same for American Indians.

It has been noted that many Indian people begin drinking early in life. Often early alcohol use is experimental in nature. However, as alcohol use becomes familiar many Indian people continue to drink often to the detriment of their own health. There are also differences in the way men and women drink. Men are known to have higher rates of alcohol abuse and dependence than women. However, these differences aren't as great as they were once estimated to be. Furthermore, there are tribal variations among alcohol

users. Some tribes use more often than others, while some tribes choose to avoid alcohol. For example, the Hopi people are known to shun the use of alcohol among tribal members.

Age

Alcohol use in American Indian communities begins early in life, between the ages of 10 and 13, in some cases alcohol use has been recorded in children as early as 5 or 6 years of age (Okwumabua & Duryea, 1987). Alcohol use behavior in adolescents appears to be equally common among both boys and girls (Beauvais et al., 1989). It is not uncommon for American Indian youth (50% - 90%) to have experimented with alcohol (May, 1986). The use of alcohol at young ages is often associated with the use of drugs (May, 1982).

Early drinking behaviors usually occur with older family members, this interaction may serve as an introduction to irresponsible alcohol use and as an example of a way to cope with daily stress or as a recreational activity. In fact, in a nationwide survey 7 out of 8 American Indian students reported that an important adult figure in their lives had suffered problems with alcohol or drugs, in the past or at the time of survey (O'Neil & Mitchell, 1996).

The most recent study examining age and gender differences among American Indians was conducted by May & Gossage (2001). Among 1,436 Plains and Plateau American Indians, May and Gossage (2001) reported that substance use and abuse is heavily concentrated in American Indian youth and adults under the age of 30. For males ages 20-29, more than 82% drink alcohol vs. 73% of women in this same population (May & Gossage, 2001). However, one study conducted by Beals et al. (2005) indicated

that among Southwest and Northern Plains American Indians, participants ages 15-24 were at the highest risk for substance use disorders. These studies demonstrate that younger people have a stronger tendency to abuse alcohol.

It has been stated that middle age and older individuals tend to decrease their drinking behaviors or “age out,” usually when domestic or tribal responsibilities take precedence or when trying to set a positive example for younger generations (Mail & Johnson, 1993). While alcohol abuse occurs most often among young American Indian males, recent research suggests that an increased rate of alcohol abuse was found among Native men aged 45-64 years old (Grant et al., 2006). Lowe, Long, Wallace, & Welty (1997) previously support this fact and acknowledge that alcohol use among older adults aged 45-76 is more prominent among men. These behaviors are similar for women. Mail (1996) reports that alcohol use rates increased for women ages 55-64 to (54%) and age 65 and over (65%).

Gender

American Indian men generally have higher rates of alcohol use in comparison to women. However, recent reports indicate that the gap between male and female drinking among American Indian is decreasing (NIAAA, 2002). Men generally begin alcohol use at earlier ages and consume more alcohol on one drinking occasion. Several researchers have conducted survey research studies analyzing drinking rates among males and females with various American Indian populations, (May & Gossage 2001; Mail, 1966).

May & Gossage (2001) found that among one American Indian sample, males begin drinking at earlier ages in comparison to women (17 vs. 18 years of age), the males who drank alcohol were more likely to consume more than 5 drinks per occasion vs. 3 or

more drinks for women. Men were likely to drink 4.7 days out of the month vs. 2.1 days for women. While these rates of alcohol use were found among this group, on most days this sample did not consume any alcohol.

A previous survey study conducted by Mail (1966) with Athabascan American Indians in the Arizona area found that age and gender dictated different drinking patterns. Peak alcohol use occurred earlier for men, with 85% of men reporting some alcohol use at ages 25-34, with a decrease in use as these men grew older. On the contrary, 57% of women ages 25-34 reported alcohol use with increasing rates to almost 60% for women ages 35-44, then decreasing among women ages 45-54.

Behaviors of those under the influence of alcohol also differ for men and women. Denny, Holtzman, & Clark, (2003) report that males are also more likely to binge drink and drive while under the influence of alcohol. Men are also more likely to engage in physically confrontational behavior with one another resulting in frequent fights while drunk. As mentioned earlier, males are also likely to die of alcohol related deaths, either through illness or accident.

Weaver (2001) points out that research examining American Indian women's substance abuse behaviors is rare so that the true extent of their alcohol use may be unclear. What has been identified is that women's alcohol use is often associated with depression, younger age, non-married status, low-level income, and living on the reservation (Lowe et al., 1997). Furthermore, alcohol abuse and dependence place women at risk for other negative life events. For instance, lifetime alcohol dependence has been shown to be a predictor of physical and sexual assault for women (Yuan, Koss, Polacca, & Goldman, 2006).

Health problems are a major issue among women as well. Due to slower rates of metabolism, American Indian females have a higher death rate from cirrhosis than the U.S. All-Races and White populations (NIAAA, 2002). Women who are alcohol dependent are also more likely to drink during pregnancy increasing the chances of delivering a baby with Fetal Alcohol Syndrome (FAS). Some FAS cases occur in 1 out of 4 American Indian births (NIAAA, 2002). Fetal alcohol effect and fetal alcohol syndrome present a multitude of physical and psychological problems increasing the susceptibility for later substance abuse in life (French, 2004).

Tribe

Alcohol use, beliefs, and behaviors are not uniform across native people and vary according to tribal affiliation (Young, 1998). For instance, Kunitz & Levy (1974) found that among the Navajo American Indians only 30% to 52% of the adults, primarily men, engage in alcohol drinking behaviors. Henderson (2001) points out that among Navajo American Indians there are differences in drinking style based on residence yet it is difficult to distinguish a specific Navajo drinking pattern. Furthermore, it has been said that while some tribes are tolerant of alcohol use the Hopi American Indians have a no tolerance policy on their reservation.

Several research studies have been conducted using survey distribution and face-to-face interviews to obtain prevalence rates among tribes. In one study, Koss et al. (2003) collected data through face-to-face interviews with 1660 tribal members from seven different tribes. Koss et al. (2003) found significant tribal variations in alcohol use, after accounting for tribe-specific cultural factors (language knowledge, language value,

and tribal identity) and geographic region (living in close proximity to tribal lands). However, to maintain confidentiality the specific names of tribes were not identified.

Gilder, Wall, and Ehlers (2004) found that among 483 Southwest California American Indians, 66% of men and 53% of women had a lifetime diagnosis of alcohol dependence. However, Beals et al. (2005) found that American Indian women from the Southwestern United States were at the lowest risk for substance disorders. While these previously discussed studies found tribal differences, May (2001) reported no significant differences in drinking pattern among four different tribes (Plateau and Plains tribes). Therefore, results are varied. Furthermore, not much research has been conducted analyzing the differences between tribal drinking rates. It is also important to consider the variation in tribes and nations within the continental United States, Alaska Natives, and Canadian First Nations peoples, which makes it difficult to specify drinking rates and patterns with these populations.

Consequences of Alcohol Use

Once alcohol use becomes a habit for American Indian youth it can lead to difficulties later in life. Adolescent alcohol use has been associated with driving while intoxicated, delinquency, running away, unprotected sexual activity, psychiatric illness (primarily depression, conduct disorder, and suicide), poor school performance, lower levels of cultural involvement (Streit & Nicolich, 1977), and an increased risk for substance abuse later in life (Hawkins & Cummins, 2004). American Indian youth between the ages of 15 and 24 are more likely to die of accidents and suicide in comparison to U.S. all races (American Indian Health Service, 1995); both causes are associated with alcohol use. According to the National Institute on Alcohol Abuse and

Addiction (NIAAA; 2002, IHS, 1997), deaths from alcohol are nearly 7 times greater for American Indian than for non-American Indians.

Four of the leading causes of death among American Indians are alcohol related, with injuries accounting for 18% of deaths, chronic liver disease and cirrhosis accounting for 5% of deaths, suicide accounting for 3% of deaths, and homicide accounting for 3% of deaths. These deaths occur more frequently among American Indian males age 45-54 than American Indian females. However, females are more likely to be victims of physical assault (domestic violence and in some cases rape) (Huan, Koss, Polacca, & Goldman, 2006). It has been estimated that 80 percent of suicides and 90 percent of homicides among American Indian people are associated with the use of alcohol (NIAAA, 2002). Despite this evidence, less than 7% of American Indian Health Service funding is allocated for treatment of mental health and substance abuse related issues (National Indian Health Board, 2002).

Although not all alcohol users are victims of violence, heavy drinkers are more likely to place themselves in risky situations. This is especially true in terms of engaging in other forms of drug use and sexual activity. Baldwin, Maxwell, Fenaughty, Trotter, & Stevens (2000) report that high alcohol use was often associated with black-outs and “wild” promiscuity leading to sexually transmitted diseases among American Indian intravenous drug users. This is a dangerous practice as many new reports indicate that new cases of HIV are increasing amongst American Indian populations. Not only does alcohol affect the user, but irresponsible use has the potential to create further trauma for native communities across generations, (e.g., physical illness; mental illness; social problems) (Gray and Nye, 2001).

Theories of Alcohol Use

Despite the societal devastation and loss of life often due to alcohol use, many American Indian continue to drink alcohol at alarming rates. While a number of individual psychological and socio-cultural factors associated with alcohol use have been introduced in the literature, no one theory provides a clear cut explanation. The truth of the matter is that American Indian people drink alcohol for a variety of reasons and there is not one specific explanation for drug or alcohol abuse in these communities (Trimble & Padilla, 1987).

Many theories have been posited to explain the phenomenon of American Indian alcohol problems. Medical theories focus on a disease model explanation for alcohol problems and propose a genetic component which creates alcohol tolerance among this group. Psychological theories suggest that substance abuse may be a type of self medication for other mental illness. In addition to theories which explain specific medical and psychological perspectives, there are theories which describe the various types of Indian alcohol users.

While medical and psychological theories contribute greatly to the understanding of American Indian alcohol use, they do not account for socio-cultural influences. Socio-cultural perspectives take into account the specifics of Native culture and how it has the potential to influence alcohol use. Cultural theories assert that difficulty coping with historical trauma and cultural losses have influenced people to drink alcohol to manage painful emotions associated with these losses. Social learning theories posit that alcohol use is a learned behavior and alcohol expectancies are a manifestation of this learning.

These alcohol expectancies have the potential to influence future behavior and are further strengthened with continued use of alcohol.

Medical Model

Medical models emphasize alcohol problems as a disease within American Indian people and fail to account for cultural variables while often ignoring contextual variables that contribute to alcohol's use (Duran & Duran, 1995). Physiological theories propose that American Indian people may have a genetic susceptibility to alcohol intolerance, however, this is difficult to determine as there is much genetic variation among full blooded American Indians and those of mixed heritage. Furthermore, there aren't many studies to confirm or disconfirm this theory. Within genetic studies that have been conducted, several flaws were found including small sample sizes, failure to account for tribal differences, unclear definition of symptoms, and use of a clinical population which creates difficulty generalizing results to most American Indian (Long, Mail, & Thomasson, 2002).

Ray & Hutchison, (2004) propose that a genetic difference at the opiate receptor gene may affect a person's response to alcohol. However, this study did not implicate cultural or ethnic variation within their sample. Long et al. (1998) found that alcoholism increases if a first-degree relative is an alcoholic. However, these results do not solely account for biological factors but leave room for environmental explanations as well. One recent study, conducted by Wall, Carr, & Ehlers (2003) found that among Mission Indians those who were alcohol dependent were likely to display a different genetic structure (allele) than those who were not alcohol dependent. However, this study has only been conducted with one population and can not be generalized to other tribal

groups. Furthermore, there is much variation among blood quantum and many people of mixed heritage which creates further difficulty specifying that American Indian heritage contributes to the alcohol intolerance.

Furthermore, alcohol treatment methods based on a medical model do not always encompass culturally appropriate interventions. Those treatment programs described as the most beneficial provide a cultural component which works to reconnect individuals with an aspect of American Indian culture which may be missing from their lives. These treatment approaches also utilize an American Indian wellness perspective (Lowery, 1998). Thomason (2000) acknowledges the importance of culture in treatment but argues for more of a skills based approach to treatment with the intention of teaching American Indian how to deal with the difficult emotions that contribute to alcohol use. Thomason (2000) further states while some traditional healing methods are effective with American Indian alcohol users they are best practiced by trained healers who are likely to have a non-empirical approach to intervention. Unfortunately, this non-empirical approach is not always acceptable or compatible with a Western healing model. Generally, a Western healing approach to alcohol treatment is used in many substance use treatment facilities.

Psychological Theories

There are many psychological components of alcohol abuse and it is clear that substance abuse and mental illness often coincide with one another. It is unclear whether mental illness precedes alcohol abuse or if alcohol abuse increases the likelihood of mental illness. Approximately 70% of those seeking mental health care within Indian Health Service agencies report problems with substance abuse (Walker, Lambert,

Walker, & Kivlahan, 1993.) Alcohol may serve as a means of self-medication for feelings of fear, insomnia, depression, anxiety, or other psychiatric symptoms (Westermeyer, 1983).

When providing psychological treatment, Westermeyer (1983) argues for the clinician to provide appropriate treatment for Native individuals by conducting a thorough assessment to determine whether substance abuse is a result of mental illness or vice versa. Although treatment may be difficult, several attempts have been made to establish an understanding of comorbidity of mental illness and substance abuse among American Indian people (Whitbeck, Hoyt, Johnson, & Chen, 2006; Beals, Manson, Whitesell, Spicer, Novins, & Mitchell, 2005; Gilder, Wall, & Ehlers, 2004).

Whitbeck et al. (2006) found that among a sample of 861 tribally enrolled caretakers/parents of children 10-12 years old, from the Northern Midwest United States to Canada, approximately 50% of this population (males and females) met criteria for a lifetime diagnosis of alcohol abuse. Twenty-two percent met criteria for a lifetime diagnosis of drug abuse and alcohol abuse. Those who met a lifetime criteria for major depressive disorder and generalized anxiety disorder also met criteria for alcohol abuse. Finally, most participants who met criteria for major depressive disorder also met criteria for generalized anxiety disorder. This study indicates that high rates of mental illness and substance abuse coincide with one another within one American Indian population.

Beals et al. (2005) conducted a study as part of The American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factor Project (AI-SUPERPFP). Beals et al. (2005) distributed surveys to American Indian participants in the Southwest and Northern Plains areas of the United States. Findings indicated that

those participants who reported a depressive or anxiety disorder were at an increased risk for substance abuse disorders and vice versa. Within this sample, posttraumatic stress disorder and alcohol disorders were the most common diagnoses and higher in comparison to non-Indian populations.

Gilder, Wall, & Ehlers, (2004) found that among 483 Southwest California Indians 66% of men and 53% of women had a lifetime diagnosis of alcohol dependence. Among this same sample, 8% had a co-morbid major depressive disorder and 1.1% had co-morbid anxiety and affective disorders. These rates were no higher than the general population sampled in the National Comorbidity Survey (Gilder, Wall, & Ehlers, 2004). This study indicated that this sample did not have higher rates of anxiety or affective disorders in comparison to non-native populations.

These results indicate that there are high rates of co-morbid mental illness with substance use for American Indian people. However, little research has been conducted to compare American Indian populations with other non-American Indian population rates of co-morbidity to determine if these rates are significantly higher than the general population.

Sub-types of American Indian Alcohol Users

Among those American Indian people who drink, there are various subcategories of drinkers. Gray & Nye, (2001) report a bimodal drinking pattern, while Ferguson (1968) and May (1995) propose the categorical definitions of “recreational drinker” and “anxiety drinker.” While different types of drinkers exist, it is important to remember that some Indian people choose to remain abstinent, some use alcohol responsibly, and others may be classified as alcohol abusers or alcohol dependent.

A bimodal pattern of drinking refers to the dispersion of drinking among native people (Gray & Nye, 2001). This bimodal pattern suggests that there are larger amounts of abstainers and heavy drinkers compared to moderate drinkers in native communities. Those who currently define themselves as abstainers may have, at one time, been considered heavy drinkers. Those who do drink alcohol are likely to binge drink. Among those who do abuse alcohol they may best be described as, "anxiety drinkers" and "recreational drinkers" (Ferguson, 1968; May, 1995).

Anxiety drinkers are theorized to be older individuals who engage in chronic, heavy use of alcohol while coping with numerous medical, social, and psychological issues. This group may have weak traditional ties with American Indian culture in addition to a magnitude of personal challenges functioning in the majority culture. Anxiety drinkers are more likely to die alcohol-related deaths or suffer from long-term consequences, such as liver disease.

Recreational drinkers are more likely to participate in sporadic episodes of binge-drinking. Although recreational drinkers may function well in various aspects of their lives this group is more likely to experience alcohol-related consequences, such as motor vehicle accidents. It is estimated that the majority of American Indian who drink engage in the recreational binge-style of drinking. This behavior is especially common in the younger generations as, over twenty percent (20.8%) of underage American Indian and Alaska Natives (aged 12-20 years) engage in binge alcohol use, the highest in comparison to Caucasians, Blacks, Latinos, and Asians in the United States (SAMHSA, 2003).

Socio-Cultural Perspective

While there are many theories which attempt to explain American Indian alcohol use, proponents of the “Determinants of Health” approach (Frank, Moore, & Ames, 2000) argue for a holistic understanding of the physical and socio-cultural environmental influences on Indian alcohol use. This socio-cultural perspective suggests that loss of culture and acculturative stress have caused Native people to lose touch with their cultural roots. This loss has resulted in a type of unresolved inter-generational grief in which, alcohol has been used as a means of coping.

The most recent socio-cultural explanation is designed from an ‘Indigenist’ stress-coping paradigm (Walters, 2002; Walters, Simoni, & Evans-Campbell, 2002). The ‘Indigenist’ stress-coping paradigm provides a comprehensive model which explores the effects of personal and historical trauma on substance use, physical health, and mental wellness. Culture is seen as a strengthening or weakening factor in health outcomes. Specific cultural elements within this model include, family/community involvement; spiritual coping; traditional health practices; identity attitudes; and enculturation (cultural involvement). This model provides a comprehensive perspective on the numerous factors which influence American Indian alcohol use.

Culture can be defined as the guide people utilize to make meaning of their lives and guide their behaviors (O’Neill & Mitchell, 1996). Many American Indian people identify themselves by tribal affiliation which sometimes takes precedence over individual identity. Culture provides a frame of reference for what is normal. When culture is lost behavioral regulation can become difficult. In addition to the unresolved grief which results from the loss of traditional culture, Mail, (1989) highlights that American Indian people have unique acculturative stressors. There are the normal

acculturative stresses which occur when an individual attempts to integrate into and identify with another more dominant culture, there are also deculturative stressors which result from the loss and devaluation of historical American Indian traditions. These acculturative stressors add another layer of emotional distress above and beyond the unresolved grief some American Indian people may experience.

An additional component from a socio-cultural perspective is the manner in which diagnostic criteria is established. Diagnostic and intervention guidelines do not always reflect an accurate depiction of American Indian life. Walle (2004) argues for the culturally sensitive construction of the Diagnostic and Statistical Manual. Walle (2004) cites that a culturally appropriate framework should include the bereavement American Indians have historically and currently endure related to the loss of individuals within a community/family, the loss of a group, the loss of a way of life, or the loss of a person's place in society. Walle (2004) argues that the emotional consequence of these losses may lead to substance abuse.

In order to understand American Indian alcohol use, it is important to understand how cultural factors influence drinking behaviors within a social context. This study explored alcohol use from a socio-cultural perspective by assessing the relationship between acculturation and both alcohol use and thoughts and feelings of American Indian historical loss. The next section of this paper will explain historical loss and acculturation and the specific roles these socio-cultural influences have played in Native alcohol use.

Historical and Current Traumas of American Indian People

In addition to an explanation of the emotional effects of historical loss, a brief summary of American Indian historical losses and traumas will be presented here. Initial destruction began with the time of first European contact in which land and loved ones were lost. The connection that native people may have had with the land was lost, as natural resources were frequently exploited and destroyed. During the Invasion War Period the main goal was genocide, or annihilation of American Indian people. Governmental policies mandated that American Indian people be destroyed so that their resources could be salvaged by non-Native colonizers.

After the many losses that were endured, native people were again subjected to relocation to unfamiliar areas, known as reservations. These reservations were not their traditional homelands nor were they always sanitary or safe for the well-being of American Indian people. Following the forced movement to reservations many young children were stripped of their families and cultural ways during the boarding school period which sought to destroy the family unit and forcibly assimilate American Indian children into the dominant White culture. This was known as the Boarding School Period, beginning in 1878 until most boarding schools were closed in the 1930s. Many American Indian children were exposed to emotional, physical, and sexual abuse. In addition, they were forced to readjust and forget about their traditional ways of life. This traumatic experience dramatically influenced the social attachment and parenting styles of many American Indian who were subjected to the boarding school experience (Brave Heart, 2003; BraveHeart and DeBruyn, 1998; Duran, 1995).

As recent as the 1950s American Indian people were again subjected to governmental trauma during the Forced Relocation and Termination Period. At this time

many American Indian people were forcibly relocated to many urban areas around the country with tales of housing and employment. However, at the time of arrival many American Indian people found that there were no jobs waiting for them. Some people chose to stay in their new city environments while others returned to their reservations. Those who chose to stay often lived in slum like areas of the city.

Today, many American Indian communities face continued traumas associated with alcohol abuse (i.e. domestic violence, physical abuse and neglect of children, sexual abuse/rape, physical assault, automobile crashes, unemployment, premature deaths due to alcohol abuse, fetal alcohol syndrome, and feelings of hopelessness and helplessness). Unfortunately, with continued alcohol abuse this cycle of trauma will persist in some American Indian communities. In addition, to the negative aspects associated with alcohol abuse many American Indian men and women enlist in the military. While this is a noble cause, there is a strong likelihood that many service members will serve in a combat environment. This can add to the pre-existing feelings of historical loss and unresolved grief that some American Indian people experience.

Historical Loss and Alcohol Use

This history of trauma has influenced some of the most significant American Indian theories on alcohol use. The psychological effects of historical trauma and loss have only recently been recognized in the literature, synonymous terms include: historical loss (Whitbeck, 2004), historical trauma (Braveheart & LeBruyn, 1998; Braveheart, 2003), and the “soul wound” (Duran & Duran, 1995). These theories acknowledge the way historical losses and traumas currently influence the psychological well-being of

American Indian people. The losses American Indian people have faced have been compared to cultural genocide (Brave Heart & DeBruyn, 1998).

Historical loss has been defined as the cumulative and generational effect of traumatic events, along with the unresolved grief that continues to haunt Indian people today. This unresolved grief is a result of the historical and current traumatic experiences within American Indian communities. This unresolved grief is a very real, yet complex, issue facing many American Indian people today. It has been suggested that substance abuse has served as a means to numb the emotional pain associated with this unresolved grief (Brave Heart, 2003).

It is theorized that this unresolved grief may be passed down through generations, likely through emotional symptomology and dysfunctional coping patterns, sometimes alcohol use and violence. Coping with the frequent losses associated with current alcohol misuse may add further to the notion of historical loss, historical grief, and historical trauma (Brave Heart, 1998). In order to deal with the grief of loss many people drink or choose not to think about historical losses, this helps in avoiding painful emotions associated with these losses. This avoidance further delays the process of a healthy grief cycle.

Brave Heart (2003) has conceptualized historical trauma in terms of a Historical Trauma Response (HTR). Historical Trauma Response best explains the way in which many Indian people have emotionally and behaviorally responded to the historical trauma legacy. Brave Heart (2003) describes the historic trauma response as:

“Cumulative emotional and psychological wounding over the lifespan and across generations, emanating from massive group trauma experiences; the historical trauma response (HTR) is the constellation of features in reaction to this trauma. The HTR often includes depression, self-destructive behavior, suicidal thoughts

and gestures, anxiety, low self-esteem, anger, and difficulty recognizing and expressing emotions. It may include substance abuse, often an attempt to avoid painful feelings through self-medication. Historical unresolved grief is the associated affect that accompanies HTR; this grief may be considered fixated, impaired, delayed, and/or disenfranchised” (p. 7).

This theory of historical trauma response evolved out of early research with Post Traumatic Stress Disorder and the experience of the Jewish Holocaust, it was adopted for American Indians because of their legacy of historical trauma.

Duran and Duran’s (1995) newly developed area of post-colonial psychology, provides a culturally specific framework for understanding how the unique history of American Indian people has influenced their mental health and general well-being. One of the main facets of this approach recognizes that American Indian people are still subject to experiencing unresolved, intergenerational grief which has been identified as the “soul wound,” this refers to the intergenerational sorrow that may be transmitted across generations (Duran & Duran, 1995; p. 24). A post-colonial explanation of alcohol use among indigenous people accounts for the strategic introduction of alcohol during colonization as well as the contradiction of both modern economic and cultural traditions (Duran & Duran, 1995).

From a post-colonial perspective alcohol provides a means of emotional relief (Duran & Duran, 1995; Brave Heart 2003; 1998). Historically, alcohol may have provided a way to express rage many American Indian people were never allowed to safely experience or release. Alcohol facilitates the loss of impulse control which may allow for the cathartic, often, inappropriate expression of rage (Duran & Duran, 1995). Alcohol may now be seen as part of traditional American Indian culture (Mail, 1996).

Nonetheless, there are traditional American Indians who shun the use of alcohol and view the drink as representative of the White Man's evil (Duran & Duran, 1995).

Research on Historical Loss/Post-Colonial Stress

The research studies examining historical loss have been categorized into two distinct but inter-related areas. Some researchers have focused primarily on thoughts of historical loss or thoughts of post-colonial stress. Other researchers have focused on how a personal trauma history may influence unhealthy and self-destructive behaviors among American Indian people. Both areas are important to explore, in order to understand how a personal history of trauma and unresolved grief may contribute to self- alcohol abuse among American Indian people. This study focused on thoughts and feelings about the historical losses of American Indian people.

Trauma in American Indian psychological literature focuses on the relationships between historical trauma and a personal history of trauma on alcohol use, emotion, and risky behaviors. However, the construct of historical loss has only been explored in two American Indian research studies and has been associated with perceived discrimination and alcohol use (Whitbeck, 2001) and anger (Winterowd et al., 2001). Other American Indian trauma research studies focus on how a personal history of trauma influences substance use and risky behaviors. The relationship between historical loss and a personal history of trauma has been provided as an explanation for high-risk sexual behaviors (Walters & Simoni, 1999). Other researchers have found that a childhood history of trauma strongly influences a lifetime diagnosis of alcohol dependence (Koss, Yuan, Dightman, Prince, Polacca, Sanderson, & Goldman, 2003).

Winterowd et al. (2001) explored the relationship of acculturation, post-colonial stress, and hope among American Indian people. Results indicated that those participants who experienced consistent anger exhibited higher levels of post-colonial stress and greater distrust of Whites. On the other hand, those who demonstrated a lesser degree of post-colonial stress and distrust of Whites had a tendency to experience less generalized anger. Additionally, post-colonial stress was significantly related to acculturation. Those participants who indicated more traditional orientations toward affective, spiritual, behavioral, social, and environmental constructs experienced more general post-colonial stress in comparison to less culturally traditional oriented American Indian people. In summary, post-colonial distress and acculturation were significant predictors of anger among American Indian people.

Whitbeck et al. (2004) examined the relationship between historical loss, perceived discrimination, enculturation, and alcohol use among 351 American Indian adult parents/caretakers. Among this sample, alcohol abuse was negatively associated with age, positively associated with historical loss, and negatively associated with enculturation. This means that as participants got older they drank less. Participants who reported thoughts and feelings of historical loss drank more alcohol, while those who were more active in American Indian traditions reported less alcohol use. Whitbeck et al. further reported that historical loss was related to perceived experiences of discrimination and alcohol abuse in American-American Indian women. Older people were also more likely to report thoughts of historical loss.

A personal history of trauma has also been defined as a predictor of substance use (Walter & Simoni,1999). Walters & Simoni (1999) explored the relationship of trauma,

substance use, and HIV risk among 68 urban American Indian women. Results indicated that a personal history of trauma (domestic violence, physical or sexual assault associated by a family member or stranger) increased the likelihood of HIV risk behaviors in comparison to social cognitive variables (HIV knowledge, self-efficacy to perform safe behaviors, and levels of perceived risk). The authors explain this history of personal trauma by making a comparison to the unresolved grief experienced by American Indian. However, the authors do not explain how actual thoughts or feelings about personal trauma or historical loss contribute to risky behaviors, nor is there a comparison among other ethnic groups. The results of a personal trauma history might be similar across other ethnicities as well.

Koss et al. (2003) investigated the relationship of negative childhood exposures (parental alcoholism, childhood maltreatment, and out of home placement) on the risk of adult lifetime DSM-IV diagnosis of alcohol dependence. Face to face interviews were conducted with 1660 American Indian from seven different tribes. A lifetime diagnosis of alcohol dependence was high for six of the tribes with rates ranging from 21-56% for men and 17-30% for women. One tribe had low rates of alcohol dependence, 1% for men and 2% for women. Findings further indicated that 75% of both men and women reported experiencing some type of childhood trauma.

However, traumatic influence on alcohol dependence diagnosis differed for both men and women. Men who had a history of both physical and sexual abuse were at increased risk for a diagnosis of lifetime alcohol dependence. Women, on the other hand, were more likely to have a diagnosis of lifetime alcohol dependence if they experienced sexual abuse or attended boarding school.

In summary, alcohol use as a coping mechanism has been a result of historical loss, unresolved grief, and a personal history of trauma. Therefore, in this study, the constructs of historical loss and emotions associated with perceptions of historical loss were explored in relation to alcohol use, using the Historical Loss Scale & Historical Loss Associated Symptoms Scale (Whitbeck, 2004).

Acculturation and Alcohol Use

Acculturation will be explored because the history of American Indian people has greatly influenced how much American Indian people identify with their traditional cultures. Being that many Native people were displaced and relocated, many have adapted to mainstream culture and have ceased to live a purely traditional life.

Acculturation has been defined several different ways. This study will focus on the definition of acculturation as: “the degree to which the individual accepts and adheres to both majority and tribal cultural values” (Choney, Berryhill-Paapke, & Robbins, 1995, p. 76). Acculturation refers to the individual and social assimilation that occurs when minority people or those not in the majority adapt to the dominant society or culture by adopting dominant views or behaviors (Aponte & Barnes, 1995).

While there may be shared values and beliefs among American Indian people, it is important to remember that these values and beliefs may vary by tribe, nation, or environmental context. The manner in which American Indian have adjusted to the dominant culture has not necessarily been voluntary, considering the history of colonization. For this reason, acculturation remains a valid area of study especially in conjunction with alcohol use.

Today, cultural orientation is further compounded by the residential variation that exists among American Indian people. A large proportion of American Indians reside in both urban areas, Los Angeles has been said to have the highest American Indian population (NIAAA, 2002). On the other hand, many Indian people live on reservations or tribal areas isolated from the majority culture. Those who live in urban areas may or may not regularly maintain contact with other American Indian. On the other hand, an individual may be raised primarily by traditional relatives in traditional ways. With today's technology, the Internet, and television it is difficult and probably unrealistic to find an American Indian person who lives an exclusively traditional American Indian lifestyle. Despite the inundation of modern technology, there are several practices, beliefs, and values that are unique to American Indian as a whole. These practices, beliefs, and values are likely rooted in traditional American Indian culture.

Levels of acculturation (more traditional vs. more assimilated) among American Indian were explored in this study and are based on theoretical guidelines described by Garrette & Pichette, (2000). A Traditional cultural orientation (or enculturation) entails speaking and thinking in a native language with rare use of the English language, while adhering to traditional values and belief systems, and practicing traditional tribal customs and means of worship. Marginal individuals may have lost touch with their cultural heritage yet may not feel entirely accepted by the dominant society.

A Bicultural orientation indicates that an individual is generally accepted in both dominant and traditional native society, while knowing, accepting, and practicing both traditional and mainstream values, behaviors, and beliefs. An Assimilated (or acculturated) orientation suggests that an individual is accepted by the mainstream

society and only accepts and practices mainstream values, beliefs, and behaviors.

Someone with a pan-traditional orientation has made a conscious choice to return to traditional Native ways after full acceptance and practice of dominant worldviews and behaviors. Because these degrees of cultural affiliation are not permanent they do exist on a continuum and may change with life experience.

Another concept related to the process of acculturation is that of psychocultural marginality (Erikson, 1950). Psychocultural marginality results when native people are not able to participate in traditionally cultural activities yet are subjected to life in the larger dominant society without full acceptance into either the traditional or dominant society. Oetting and Beauvais (1991) claim that substance abuse is related to acculturation issues such as cultural transition, cultural marginality, and identity conflicts. Little Soldier (1985) expounds on the notion of marginality and its relation to internal conflict possibly resulting in an identity crisis, which could lead to substance abuse. Internal conflict is said to arise because on the inside an individual may not feel completely American Indian yet not feel or look completely White making it difficult to find group acceptance. Nofz (1988) acknowledges that those who experience internal cultural marginalization, that is not feeling fully accepted in either a traditional American Indian community or modern Anglo society, are prone to alcohol use as a temporary coping strategy.

Although the relationship of acculturation with alcohol use is an important area of research, the relationship between these two variables is still unclear. The literature presents conflicting views on how cultural orientation relates to alcohol use. Some theorists and researchers propose that high involvement with American Indian culture

serves as a protective factor against alcohol use (Herman-Stahl, Spencer, & Duncan, 2002). Other theorists and researchers propose that more involvement or identification with the dominant White society protects against alcohol problems (Mail, 1996;). While others propose that those with no ties to either traditional or White society are those at highest risk for alcohol related problems (Hawkins, 2002; Herring, 1994; May, 1982).

Winterowd et al. (2005) explored factors related to anger among American Indian people, including acculturation. Acculturation with the dominant culture was associated with chronic anger. Herring (1994) expands on the idea that substance abuse occurs most often in those who are more acculturated to White society, while neglecting their American Indian traditions or values. On the other hand, Mail (1996) concluded that among 3,313 American Indian adolescents a non-traditional cultural orientation was a protective factor for problem behaviors (substance use, sex, and arrests). Hawkins (2002) found that with 201 American Indian adolescents, those at highest risk for alcohol problems reported more positive alcohol expectancies and a stronger American Indian identification. May (1982) claims that tribes with high levels of acculturative stress and minimal involvement with cultural traditions are likely to experience more difficulties with substance-related issues. Brody (1980) suggests that the conflict between Native cultural norms and the dominant society may be at the root of substance abuse.

Given inconsistent findings in the literature, Herman-Stahl, Spencer, & Duncan (2002) explored the relationship between cultural orientation and alcohol misuse (heavy drinking, extended drinking, poly drug use, alcohol abuse/dependence); and the role of cultural orientation in both alcohol and illicit drug use among 2,449 reservation American Indians in South Dakota. Findings indicated that substance abuse was highest among

those who identified as bicultural or less oriented toward American Indian culture. Bicultural individuals were younger and had higher levels of education than their older, more traditional counterpart. Bicultural participants in this study were at the age which has been pre-defined as having the highest rates of substance use among American Indian populations. Furthermore, results did not clarify if current abstainers were at one time heavy drinkers themselves.

Other researchers find that cultural involvement is one way that many American Indian people have been able to drink responsibly or stop drinking completely. A qualitative interview with Aboriginal women indicated that cultural involvement was a protective factor for stopping alcohol use (Quantz, 2005). Whitbeck (2004) also found that enculturation (close involvement with traditional culture) was linked to a lower rate of an alcohol abuse diagnosis among American Indian people. Lysne (2003) reported that those American Indian who were actively involved with American Indian culture and explored their ethnic identity, the less likely they were to use alcohol. Venner (2001) found that among 389 Mission American Indians, higher Native identification was associated with a lower quantity of alcohol use. A longitudinal study conducted by Westermeyer and Neider (1985) indicated that cultural connection was associated with alcohol use at baseline, however, did not prove to be an influence at follow-up. May (1982) theorizes that tribes with high traditional values/practices and low levels of acculturative stress experienced less substance abuse among their tribal members.

Other theorists propose that a bicultural orientation is the healthiest form of ethnic identity (Herring, 1994; LaFromboise, Coleman, & Gerton, 1993). Herring (1994) asserts that those who are bicultural are better able to exist and adapt to both the

American Indian and White society and have lower rates of substance abuse. This is supported by LaFromboise, Coleman, & Gerton (1993) who view biculturalism as a form of cultural competence. Bicultural individuals are able to maintain their own sense of identity while maintaining a positive attitude toward their culture of origin and a new or different culture.

On the contrary, Herman-Stahl, Spencer, & Duncan, (2002) found that Reservations American Indians who reported a bicultural orientation (defined in this study as lower levels of traditional orientation towards American Indian culture) had higher rates of alcohol use problems. Bicultural individuals were more likely to have an alcohol use disorder in comparison to individuals with a high American Indian orientation. Those participants with a low American Indian orientation were not at risk for an alcohol use disorder but were likely to be heavy drinkers. Possibly in a more isolated, reservation environment a traditional orientation is the most protective.

A study conducted by Weisner, Weibel-Orlando, & Long (1984) found that after controlling for a family history of alcohol use, psychological distress, and gender, traditionalism was not a significant predictor of alcohol use in an American Indian sample. Bates et al., (1997) found that cultural association did not influence substance use either directly or indirectly in an adolescent population. On the other hand, youth with strong ties to either White or Indian culture were reported to have less difficulties with socio-emotional adjustment (Oetting & Beauvais, 1990-1991).

Kulis, Napoli, & Marsiglia (1999) found that among 434 American Indian adolescent students attending school in an urban environment those who identified solely as American Indian were less confident they could refuse offers for drugs or alcohol.

Those with a stronger sense of ethnic pride were more likely to maintain anti-drug beliefs and the confidence to refuse drugs.

Torres Stone, Whitbeck, Chen, Johnson, & Olson, (2006) explored the relationship of specific aspects of enculturation, involvement with traditional American Indian practices, traditional American Indian spirituality, and American Indian cultural identity, with alcohol cessation among 732 American Indian adult parents/caretakers of children 10-12 years old. Results suggest that older adults with a history of alcohol related problems were more likely to stop using alcohol if they had more children and strong connections with American Indian culture. Involvement with traditional activities and traditional spirituality were the most significant predictors of alcohol cessation. American Indian cultural identity did not significantly predict alcohol cessation for this sample. The average age of this sample was 39 years old, which makes it difficult to generalize these findings to younger alcohol users.

Due to the inconsistency in the research findings, the relationship between acculturation and alcohol use was explored in this study. Acculturation was measured utilizing the 20-item American Indian Acculturation Scale (NAAS; Garrette & Pichette, 2000).

Social Learning Theory and Alcohol Use

While the socio-cultural perspective helps to identify the cultural context of American Indian alcohol use, it does not explain reasons for current alcohol use. Social Learning Theory (SLT; Bandura, 1969, 1977, & 1986) emphasizes the direct (personal experience with alcohol) and indirect (modeling others' behavior) learning and cognition

(thoughts about personal behavior and consequences of actions) which occur within an individual, learned within a cultural context.

Modeling is one way people learn about alcohol use. This occurs either through direct observation or oral communication. Modeling can influence and/or deter the adoption of future alcohol behaviors. Modeling can provide an individual with negative perceptions of alcohol use consequences, possibly decreasing future alcohol use. For example, a young child may decide never to use alcohol based on early interactions with parents. On the other hand, observing any kind of reinforcement from alcohol use can strengthen alcohol expectancies.

Reinforcement from alcohol can lead to the cognitive development of alcohol expectancies, which influence continued alcohol use. If alcohol use becomes a reinforcing method of inducing positive feelings and reducing emotional distress this behavior is likely to continue, especially if healthier stress reduction techniques are unknown. Bandura (1969) describes this as a coping deficit model. It is likely that American Indians who lack some type of emotional connection, either through family or tribal relationships may be acting from a coping deficit model. That is, if they feel alone and disconnected, they are likely to fill that void with the use of alcohol. Furthermore, the self-efficacy that one can produce a desired result through alcohol use when one feels hopeless and helpless is likely to be reinforcing in itself. This sense of self-efficacy reinforces drinking behaviors, especially if someone believes alcohol can provide the desired effect.

Bach (1981) provides a good example of how social learning theory accounts for American Indian alcohol use patterns and behaviors. Bach (1981) explains that many

current alcohol use behaviors among Indian people were first learned by early colonial settlers. Because there were no responsible drinkers, this style of drinking was permanently adopted by American Indians. The author first acknowledges that the rapid consumption of alcohol has become the normative style of alcohol use. Initially, this behavior may have started because of early alcohol prohibition on reservations which created the “need” for rapid consumption as a method of avoiding incarceration. Today, rapid consumption results in alcohol related arrests for public intoxication and drunk driving.

Bach (1981) further suggests that extended alcohol binges (drinking for 2 days or more in a row) are said to be based on an early frontier model of drinking. This early frontier style drinking was said to take place for a period of several days. The idea of non-responsibility for intoxicated behaviors may best be explained by early accounts of drunkenness when people believed an alcohol user was possessed with evil spirits and consequently not responsible for personal actions.

Several studies have been conducted examining other elements of social learning theory, primarily self efficacy (Taylor, 2000) and locus of control (Mariano, Donovan, Walker, Mariano, & Walker, 1989). Both studies report that a perceived sense of control was lower among those that drank heavily, this was especially true among male alcohol users.

Social learning constructs of alcohol use have included self efficacy (Taylor, 2000), locus of control (Mariano et al., 1989), and alcohol expectancies (Lysne, 2003; Garcia-Andrade, 1996). One study examined the relationship of general self-efficacy (perceived ability to incite meaningful change into one’s world or life) with substance use

self-efficacy (perceived ability to control substance use in varied settings) on substance use (Taylor, 2000). Taylor (2000) found that among 114 American Indians and Alaska Natives higher alcohol use was associated with a lower sense of general self-efficacy for males, but not for women. A higher level of substance use self-efficacy was associated with heavier drinking behaviors. The substance use self-efficacy appeared to be an actual measure of alcohol use as a coping mechanism. This indicates that those who drank more used alcohol as a way to deal with difficult emotions.

Mariano et al., (1989) explored the relationship between drinking locus of control orientation (internal or external) and gender among 151 American Indians from the Seattle area. Participants were divided into three categories of alcohol users: problem drinkers, non-problem drinkers, and recovered alcoholics. More men were found to be problem drinkers than non-problem drinkers, women were equally likely to be problem or non-problem drinkers. Men perceived less control over their alcohol use. Furthermore, problem drinkers had more of an external locus of control than non-problem drinkers and recovering alcoholics.

The next section will provide an explanation of the influence of alcohol expectancies on American Indian alcohol use.

Alcohol Expectancies and Alcohol Use

Alcohol expectancies refer to the beliefs people hold about alcohol's expected influence on behavior, moods, and emotions (Leigh & Stacy, 1991; Goldman, Brown, & Christiansen, 1987; Brown, Goldman, Inn & Anderson, 1980). Personality, affect, and emotion may influence these alcohol expectancies (Tolman, 1932). Alcohol expectancies have been associated with abusive and non-abusive drinking patterns, alcohol related

problems (Wood, Vinson, & Sher, 2001) and as mediators in alcohol consumption decisions (Brown, Christiansen, & Goldman, 1987) in non-Indian samples. With American Indians alcohol expectancies have been associated with future drinking (Garcia-Andrade, 1996) and ethnic identity (Lysne, 2003). Acculturation has not been found to be significantly related to alcohol expectancies or alcohol use (Garcia-Andrade, 1996; Lysne, 2003).

The alcohol expectancy explanation of alcohol use focuses on the information-processing systems within individual drinkers (Goldman, Del Boca, & Darkes, 1999). Information-processing systems may be described as previously stored information or memories which create expectancies/beliefs related to future alcohol use. These anticipated beliefs about alcohol are acquired from cultural messages and individual experiences with alcohol use (MacAndrew & Edgerton, 1969; Rohsenow, 1983; George, Frone, & Cooper, 1995).

The examination of alcohol expectations with American Indian people is a relatively new area of focus within psychology. Wood, Vinson, & Sher (2001) point out that few studies have been conducted exploring the relationship between alcohol expectancies and alcohol use/misuse with the general population. This is especially true for American Indians, as, there have been only five studies in which researchers have investigated alcohol expectancies associated with alcohol use among this population (Lysne, 2003; Hawkins, 2002; Novins & Mitchell, 1998; Garcia-Andrade, Wall, & Ehlers, 1996; & Daisy, 1989).

Some of these studies demonstrate that either positive (Hawkins, 2002; Daisy, 1990; Novins & Mitchell, 1998; Garcia-Andrade, Wall, & Ehlers, 1996) or negative

(Lysne, 2003) alcohol expectancies predict alcohol use. Further studies have revealed the relationships between level of acculturation/ethnic identity and alcohol expectancies (Hawkins, 2002; Garcia-Andrade, Wall, & Ehlers, 1996)

Lysne (2003) found that among Plains Indians, negative alcohol expectancies were the only significant predictor of alcohol use when demographic variables and both positive and negative expectancy variables were entered into a regression equation. The more people in this sample drank alcohol the more they expected negative consequences from alcohol use.

Hawkins (2002) found that among 201 American Indian adolescents, youth were at the highest risk for alcohol problems if they reported more positive alcohol expectancies along with a strong American Indian identification. Hawkins (2002) further reports that a longitudinal analysis with the same adolescent population indicated that life stress and positive alcohol expectancies predicted more alcohol problems later in life.

Daisy (1990) found that American Indian people demonstrated significantly stronger positive alcohol expectancies for global positive change, social and physical pleasure, and social assertiveness in comparison to Asians and African Americans. Additionally, American Indians had stronger positive alcohol expectancies for arousal and feelings of power in comparison to the African American participants.

Garcia-Andrade, Wall, & Ehlers (1996) explored the relationship of alcohol expectancies, positive family history of alcohol use, and American Indian heritage on alcohol use among healthy, nonalcoholic Mission American Indian men between ages 18-25. Results indicated a significant relationship between the frequency of alcohol consumption and the alcohol expectancies for global positive changes and feelings of

arousal and power. Regarding level of acculturation/cultural identity, Garcia et al. found that a participant's degree of American Indian heritage and family history of alcoholism did not have a strong influence on alcohol expectancies.

Novins & Mitchell (1998) found that among 1464 American Indian adolescents, males were more likely to use marijuana 1-3 times per month if they endorsed more positive alcohol expectancies, had lower grades in school, and actively used alcohol. In a longitudinal analysis with this same population, life stress and positive alcohol expectancies were predictors of greater alcohol problems.

The results of the alcohol expectancy research can further strengthen the social-learning explanation for Native alcohol use. Alcohol expectancy research provides a clearer understanding of what American Indians expect to achieve from drinking alcohol. Therefore, these expectancies will be explored in relation to alcohol use, acculturation, and historical loss. Alcohol expectancies were measured by utilizing the 40-item Alcohol Effects Questionnaire (Rosenhow, 1983).

Conclusion

In summary, alcohol use among American Indian people is a very complex issue. Several contributing factors are theorized to influence current alcohol use problems. These factors include a personal history of trauma, thoughts and feelings of historical loss, level of acculturation, and alcohol expectancies. While these factors are numerous they follow a linear time line. The initial destruction of American Indian society began several centuries ago beginning with colonization. During this time alcohol was introduced to American Indian people. Alcohol was used as a means to control and subjugate American Indians, unfortunately many American Indian people became

addicted to alcohol. Furthermore, despite negative consequences alcohol use was adopted as a way to cope with the numerous traumas and losses that were inflicted upon Native people. Alcohol use continued primarily because of its addictive properties and it served as negative reinforcement for painful emotions.

After many years of trauma and loss many American Indian people were relocated and separated from their traditional homelands and family members. This distance created a need to learn how to survive in the mainstream culture. This served challenging to Indian people because mainstream culture was not readily accepting of them. Many faced prejudice, racism, and discrimination which further contributed to loss of positive self-identity as an American Indian person. This negative self perception compounded the loss of tradition and familial kinship.

Alcohol use was then learned and displayed as a behavior common among Indian people. Many families suffered because of the continued traumas and losses that took place as a result of alcohol use. The loss of self-esteem associated with problematic alcohol use further contributed to feelings of hopelessness and loss. This poor self-image created further difficulty in achieving personal success in terms of education or career. Therefore, alcohol use was seen as a way of life if one was not employed or pursuing an education. This is how social learning accounts for the continual use of alcohol among American Indian people. One aspect of social learning is the development and adherence of alcohol expectancies. These alcohol expectancies are theorized to develop in early childhood and remain positive during experimental stages of drinking. However, as one becomes addicted and more acquainted with the negative aspects of alcohol use, negative alcohol expectancies develop and are reinforced.

While this explanation focuses on alcohol use problems among Native communities, it is important to remember that not every American Indian person uses alcohol in an abusive fashion. Some American Indian people do not drink alcohol. Some American Indian people may have used alcohol at one time, but quit as life responsibilities become more important. The purpose of this study is to understand how socio-cultural factors influence alcohol use among American Indian people. This research study was conducted and written primarily with the hopes that an accurate description of alcohol use will be identified with one American Indian participant sample. This can further illustrate the realities of American Indian alcohol use, whether viewed as positive or negative.

CHAPTER THREE

METHODOLOGY

Participants

The participants in this study included 192 self-identified American Indian people. Most of the participants were women (n = 133; 69%); males comprised approximately one-third of the sample (n = 55; 29%). One participant identified as two-spirited. The ages of the participants ranged from 18 to 72 years of age, with an average age of 40.7 years of age (sd = 12.18). (See Table 1 for demographic information for this sample).

In terms of blood quantum, the majority of this sample identified themselves as half- to full-blood American Indian (full = 28%; $\frac{3}{4}$ =18%; $\frac{1}{2}$; 27%; $\frac{1}{4}$ = 14%; $\frac{1}{8}$ = 5%; $\frac{1}{16}$ = 4%; less than $\frac{1}{16}$ = 3%). Participants resided in a variety of places throughout their lives, 77% lived in a predominantly urban area, 63% lived on a reservation or tribal area, and 57% lived in a rural area.

Education level among participants also varied greatly. The majority (approximately $\frac{2}{3}$) of the participant sample was college educated. Approximately one-third (37%) of this sample had completed a minimum of a Bachelor's Degree or attended some type of vocational training, 28% attended or had completed graduate school. Approximately 8% of this sample served in the Armed Forces at some time in their lives. A small percentage of this sub-group had served in a combat zone.

This study was not limited to a particular socio-economic status or education level. However, as indicated above the majority of this sample had a minimum of a bachelor's degree. Therefore, while this researcher hoped to collect data from both

traditional and non-traditional native individuals, it is likely that the majority of this sample was more bicultural. Furthermore, because the Internet is a modern means of communication it appears as though this sample did not consist of older, American Indian who may be considered traditional in their beliefs.

The mean age of this participant sample was 40 years old. This is a further area of concern, because the current literature indicates the majority of heavy alcohol users are under the age of 30. While, this study demonstrates that there are a high number of American Indian who are college educated it does not seem to directly address those individuals with dominant alcohol problems.

The participants were members of a variety of different tribes/nations within the United States. Participants were encouraged to list all of their tribal/national affiliations. In most cases, people identified with more than one nation or tribe. There were a total of 99 tribes represented in this study. The tribes with the most participants were: Cherokee (n = 21); Dine' (Navajo) (n = 19); Mississippi Band of Choctaw American Indians (n = 14); Choctaw (n = 10); Creek/Sioux/Santa Clara Pueblo (n = 8). (See Table 2 for tribal affiliations of participants).

It should be noted some people were excluded from some of the analyses if there was significant missing data. Several participants failed to complete the AUDIT (n = 4) and the AEQ (n =4), however, they completed the NAAS and the Historical Loss questionnaires. If a participant was missing less than 10% of the items on a particular measure, the mean score of that item for the total sample was entered for that missing data point.

Procedure

The following procedures were used for participant recruitment. Self-identified, American Indian participants were recruited to participate in this on-line study via personal contacts using a snowball technique. Potential participants were contacted personally via phone or e-mail to see if they were interested in being involved with the study. Personal acquaintances of the primary researcher were contacted either by telephone or email, this included friends and other individuals known through the Society of American Indian Psychologists (SIP); the Oklahoma State University American Indian Student Association (NASA); and other American Indian contacts at various American Indian colleges. If a potential participant was contacted via telephone the primary research explained the purpose of the study, those who agreed to participate were forwarded the on-line script. If a potential participant was contacted which the primary researcher did not know personally, a personal email introducing myself and this research study were sent along with the on-line script. This allowed for some personal contact to be established with potential participants.

If individuals were interested in participating, they were encouraged to forward the email containing the on-line script to other potential participants. Several email recipients responded regarding their inability to participate in the survey for various reasons. However, no potential participant denied forwarding this on-line script to other potential participants. Some of the personal contacts who agreed to participate volunteered to forward the on-line recruitment script to other listservs which they were affiliated with. Other participants completed the survey themselves. The on-line script explained the nature of the study and solicited research participation. Everyone was e-mailed the same letter explaining the nature of the study and participant procedures (See

Appendix F, On-line Script). This dissemination occurred throughout various regions of the United States and allowed for a number of tribal members to participate.

After reviewing the on-line script, any person who agreed to participate in this study was instructed to click on a link directing them to an on-line informed consent page. The on-line informed consent page included an explanation of the purposes of the study, what participation would involve, the benefits and risks of the study, the voluntary nature of participation in this study, and estimated time for questionnaire completion. The following instructions regarding on-line participation were outlined: “If you agree to participate, please click on the “Accept” icon. If you do not wish to participate, please click on the “Decline” icon. By clicking the “Accept” icon, this will serve as informed consent and your electronic signature for participation in this study.” (See Appendix G, Informed Consent).

Those who chose to participate (thus providing their informed consent) were then directed to another webpage for the on-line survey. If people chose not to participate, they were encouraged to forward the e-mail with the survey link to other American Indian who may have been interested in participation.

After survey completion, participants clicked the “Submit” icon and were directed to a web page which explained that, due to the nature of the study, it is possible some uncomfortable feelings may have arisen during participation. If they had any questions about the study, they were encouraged to contact the primary investigator. If for any reason, participants felt that they would like to talk with a mental health professional they were advised to e-mail the primary researcher and include, “Counseling Resources” in the email subject line. Once an e-mail was received, they would have been directed to

the appropriate mental health services within their area. No participants sent e-mails regarding their desire for counseling services.

On the “Counseling Resources” web page, participants were invited to participate in a drawing to win a Pendleton Blanket (See Appendix: H: Resources-Contact Sheet). Any participant who chose to enter the drawing was instructed to click on a link which directed them to a separate page. On this page, personal contact information was entered (name, address, telephone number, email address) for drawing purposes only. Once this information was entered, participants were instructed to click the “Submit” icon which submitted their contact information for drawing purposes. This contact information was kept separately from survey responses.

Participants were informed that their contact information was kept separately from their questionnaire responses. Participants were further informed that their name and contact information was collected solely for the purposes of contacting the winner of the Pendleton Blanket drawing. The drawing winner was contacted in the middle of April 2007 via email to inform the winner and verify correct address. After confirmation was received the blanket was mailed via U.S. Postal Service. The blanket was insured and signature confirmation was required. The participant was notified after the blanket was mailed of the postal procedures via email.

Measures

This on-line survey was established using Frontpage software. If an individual was interested in participating they clicked on a link directing them to the on-line informed consent page. Participants who agreed to participate were then directed to the survey web page. This page consisted of all of the five on-line questionnaires, which

included: 1) a demographic section, 2) the Alcohol Effects Questionnaire (AEQ; Rosenhow, 1983) which measured both positive and negative expectancies anticipated with alcohol use, 3) the Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) which measured an individual's amount and frequency of drinking, possible alcohol dependence, and problems caused by alcohol, 4) , the American Indian Acculturation Scale (NAAS; Garrett & Pichette, 2000) which assessed acculturation level, and the 5) Historical Loss Scale and the Historical Loss Associated Symptoms Scale (Whitbeck, Adams, Hoyt, & Chen, 2004) which measured American Indian's perceived experience with historical loss and emotional symptoms associated with the losses.

All measures were used with the authors' permission. It was agreed upon prior to data collection that the primary researcher would submit a summary of results to the authors of the Alcohol Effects Questionnaire (AEQ; Rosenhow, 1983); the American Indian Acculturation Scale (NAAS; Garrett & Pichette, 2000); and the Historical Loss Scale and Historical Loss Associated Symptoms Scale (Whitbeck, Adams, Hoyt, & Chen, 2004). Furthermore, some of the participants who agreed to complete the on-line surveys requested a summary of findings be forwarded to them. The primary researcher agreed to forward a summary of findings to any contact or participant who was interested in this information. This information will primarily be disseminated to major organizations contacted, (i.e., Society of American Indian Psychologists; American Indian Student Organization at Oklahoma State University).

Demographic Section

The demographic section included items that have been used in previous research studies with American Indian participants in the Oklahoma area. Participants were asked about their age, sex, tribal affiliation, blood quantum, educational history, current and previous place of residence, and relationship status. An additional item, asking about prior military experience was added.

Alcohol Effects Questionnaire (AEQ-S; Rosenhow, 1983)

The Alcohol Effects Questionnaire (AEQ-S, Rosenhow, 1983) is a 40-item questionnaire designed to assess personal beliefs about both positive (i.e., reinforcing effects of alcohol) and negative expectations (i.e., undesirable effects of alcohol including impairment and irresponsibility) from alcohol use. The AEQ-S is a revision and extension of the Alcohol Expectancy Questionnaire (Brown, Goldman, Inn, & Anderson, 1980). Individual items for this scale were derived from the five items loading most highly on each of the six factors demonstrated for the Alcohol Expectancy Questionnaire, with the addition of two verbal aggression items to the aggression scale. Five additional items were developed for a cognitive/motor impairment subscale and four additional items were developed for a carelessness/lack of concern scale which totals eight subscales for this instrument.

Items were listed in a true/false format. Individuals answered true or false based on personal experience with the statement. If an individual believed an experience was always or sometimes true, that person was instructed to circle true. If a person believed the experience was rarely or never true the item would be circled false. Participants were instructed to answer every item without skipping any items.

The eight subscales were as follows: the Global Positive (GOS) subscale measured the expectation that alcohol would provide positive global changes in a variety of experiences, (i.e., “Drinking makes the future seem brighter to me”). The Social and Physical Pleasure (SPP) subscale assessed the expectation of enhanced social and physical pleasures, (i.e., “Drinking makes me feel good”). The Sexual Enhancement (SEX) subscale measured a person’s expectation for improved sexual experiences and enhanced sexual arousal, (i.e., “I’m more romantic when I drink”). The Power and Aggression (AGG) subscale assessed feelings of arousal and aggression, (i.e., “I feel powerful when I drink, as if I can really influence others to do what I want”). The Social Expressiveness (SOC) subscale assessed the expectation of positive and social assertive personality changes, (i.e., “A few drinks make me feel less shy”). The Relaxation and Tension Reduction (REL) subscale assessed the expectation for alcohol to provide a sense of relaxation and tension reduction (i.e., “Alcohol decreases muscular tension in my body”). The Cognitive and Physical Impairment (IMP) subscale measured the expectation that alcohol would effect thought and motor difficulties associated with alcohol use (i.e., “I’m more clumsy after a few drinks”). The Careless Unconcern (CU) subscale measured the expectancy for decreased inhibitions which may place individuals in risky settings (i.e., “Alcohol makes me careless about my actions”).

Each scale score was the total of the following items marked “true.” For the POS subscale the items were (8, 17, 22, 29, 40). The SPP subscale items were (13, 15, 21, 24, 27). The SEX subscale items were (7, 12, 19, 28, 31). The AGG subscale items were (1, 5, 9, 16, 32, 37). The SOC subscale items were (3, 20, 35, 38, 39). The REL subscale

items were (2, 4, 11, 25, 34). The IMP subscale items were (6, 10, 18, 23, 26). The CU subscale items were (14, 30, 33, 36).

The AEQ has been developed and normed with both college students and those seeking treatment in an alcohol rehabilitation center. Both groups endorsed the Social Expressiveness, Relaxation and Tension Reduction, Cognitive and Physical Impairment, and Careless Unconcern subscales at a rate of more than 60% than the other subscales. In a sample with 85 male and 65 female college students who exhibited all styles of drinking, the mean percentage of items endorsed for each scale were: POS – 22%, SPP – 82%, SEX – 42%, AGG – 51%, SOC – 74%, REL – 66%, IMP – 72% and CU – 67%, (Rosenhow, 1983). In a sample with 87 alcohol-dependent individuals in a treatment setting, the mean percentage of items endorsed for each scale were: POS – 44%, SPP – 76%, SEX – 40%, AGG – 59%, SOC – 79%, REL – 83%, IMP – 69%, and CU – 75%.

Furthermore, psychometric properties were obtained with the same sample of college students and those receiving alcohol treatment. Reliability coefficients for each scale were as follows: POS with college students – .49 and with alcoholics – .63; SPP with college students – .66 and with alcoholics – .51; SEX with college students – .74 and with alcoholics – .85; AGG with college students – .66 and with alcoholics .65; SOC with college students – .73 and .64 with alcoholics; REL with college students – .58 and with alcoholics – .37; IMP with college students – .58 and .37 with alcoholics; and CU with college students – .64 and with alcoholics – .72.

This is the first study in which this instrument was used with a American Indian sample. Internal consistency reliability coefficients for the AEQ were obtained for this sample. All of the subscales except Global Positive (POS) and Relaxation and Tension

Reduction (REL) had adequate internal consistency reliability (.70 or higher). The reliability coefficients (Cronbach alphas) for each of the subscales for this sample were as follows: POS - .58; SPP-.74; SEX-.79; AGG-.77; SOC-.77; REL-.63; IMP-.73; CU-.77. Therefore, all AEQ subscales except POS and REL were used for the analyses of this study. (See Table 3 for reliability coefficients).

Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993).

The AUDIT was developed by the World Health Organization and is appropriate for various cultural groups as a screening tool for use in primary care, the judicial system, the military, and with university students. The AUDIT is a 10-item instrument which is divided into 3 separate subscales to assess amount and frequency of drinking, alcohol dependence, and problems caused by alcohol. This category division is only applicable during scoring procedures. Research participants were not aware of the various categories on the AUDIT.

Questions 1-3 assessed alcohol consumption, (i.e., “How often do you have six or more drinks on one occasion?”). Questions 4-6 assessed drinking behavior, (i.e., “How often have you failed to do what was normally expected of you because of drinking?”). Questions 7-8 assessed adverse reactions to alcohol use, (i.e., “How often during the last year have you had a feeling of guilt or remorse after drinking?”). Questions 9-10 assessed alcohol-related problems, (i.e., “In the last year or ever, has a relative or friend, or a doctor or other health worker, been concerned about your drinking or suggested you cut down?”).

The response format was based on the following frequency criteria, 0 = never, 1 = monthly or less than monthly, 2 = 2-4 times a month , 3 = 2-3 times a week, and 4 = 4 or more times a week. A total score within the range of 0-40 was possible. The total score of the AUDIT has been used in several studies and was used in the majority of the analyses of this study.

Participants in this sample were also coded into one of two groups: hazardous drinkers and non-hazardous drinkers. These groupings were calculated as follows: a total score of 8 or more for men and 7 or more for women suggests hazardous or harmful alcohol use, in accordance with possible alcohol dependence (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001).

During instrument development, internal consistencies for “drinking behavior” and “adverse psychological reactions” were found to be the highest, with Cronbach’s alpha levels of 0.93 and 0.81 respectively. For these two domains, there was not a lot of variation between the countries (Australia, Bulgaria, Kenya, Mexico, Norway, and the United States) involved in the scale development. However, the intrascale reliability for the two domains “alcohol problems in the last year” and “alcohol problems ever” were .69 and .65 respectively, with variation among the six samples of .35 to .83. In addition, there was a moderately strong correlation between dependence and average daily alcohol consumption of .53 and between adverse psychological reactions, alcohol problems in the previous year and alcohol problems ever scales and intake ($r = .50, .50, \text{ and } .51$ respectively).

During scale development the validity of the AUDIT was obtained with external reference groups of self-identified alcoholics and non-drinkers (Saunders, Aasland,

Babor, de la Fuente, & Grant, 1993). Ninety-nine percent of those who identified as alcoholics had a score of 8 or more, 98% had a score of 10 or more. Only three of the total 678 non-drinkers had a total score of 8 or more. Furthermore, the AUDIT domains grouped participants accurately into either hazardous or non-hazardous alcohol consumers. More research is needed to explore the predictive validity of this instrument.

The AUDIT has been indicated as a non-biased screening tool for at risk drinking with Caucasians, African-Americans, and Mexican Americans (Volk, Steinbauer, Cantor, & Helzer, (1997). However, research using the AUDIT as an alcohol screener is rare with American Indian populations. Two studies have assessed the feasibility of use of this instrument in medical settings with American Indian (Schermer, Bloomfield, Lu, and Demarest ,2003; Leonardson, 2005).

Schermer, Bloomfield, Lu, and Demarest (2003) assessed openness to alcohol screening and intervention by medical personnel in an emergency room setting, with a sample of American Indian (26%). AUDIT scores did not predict whether patients would be offended by screening or intervention procedures. Leonardson (2005) found the AUDIT to be a reliable and valid measure of alcohol use among 50 Northern Plains American Indians with a diagnosis of diabetes in a primary care setting. The reliability coefficient among this sample was determined to be .89 for detecting hazardous alcohol users. Concurrent validity was evident given the statistically significant relationship between scores on the AUDIT and CAGE-AID, another alcohol use measure ($r = .76$).

Despite the rare research use with American Indian populations, Westermeyer (2001) endorses the use of AUDIT with American Indian populations as a screening tool for frequency of alcohol use. Although this instrument does not provide direct

categorical criteria to classify alcohol abuse behaviors, it is noted that addictive behaviors such as alcohol use occur on a continua of quantity and frequency of occurrence (Maisto, Carey, & Bradizza, 1999).

Reliability coefficients for the AUDIT were obtained for this sample. The internal consistency reliability estimate for the AUDIT total score was .83. The three subscale portions of the AUDIT were not as reliable for this sample. The internal consistency reliability coefficients were as follows: Hazardous Drinking = .68; Alcohol Dependence = .34; and Alcohol Problems = .67. The total AUDIT score was used in the data analyses for this study based on the total score and **was** based on what has been used in previous research.

Native American Acculturation Scale (NAAS; Garrette & Pichette, 2000)

Acculturation in this study was assessed using the Native American Acculturation Scale (NAAS; Garrette & Pichette, 2000). The NAAS was developed based on the Acculturation Rating Scale for Mexican Americans (ARSMA; Cuellar, Harris, & Jasso, 1980) and the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987; Atkinson, Lowe, & Matthews, 1995). The NAAS was created to assess areas of cognitive, behavioral, and attitudinal bicultural development along a continuum, ranging from traditional Native American to assimilated mainstream cultural orientations. Furthermore, the NAAS was created by altering items on the ARSMA and SL-ASIA to reflect specific aspects of native culture.

The NAAS may be administered individually and is designed at a ninth-grade reading level. The instrument has a total of 20 multiple-choice items that assess language (5 items), identity (2 items), friendships (3 items), behaviors (4 items),

generational/geographical background (5 items), and attitudes (1 item). A total score for each participant is obtained by obtaining a total of all 20 items. An acculturation score (average) is calculated by dividing this total score by 20. Average acculturation scores can range from 1 indicating a low level of acculturation into the White culture (or high enculturation into the Native American culture) to a maximum of 5 indicating a high level of acculturation into the mainstream American culture, with a score of 3 which indicates a bicultural orientation. A mean score of 3.08 serves as a differentiation point for those who identify as Native American (traditional) and those who are not culturally identified as Native American (assimilated) (Garrett, 1996). In other words those scores above 3.08 indicated those more closely identified with White society, whereas scores below 3.08 indicated those more closely identified with American Indian culture.

Based on a sample of 139 high school students the reliability coefficient for the NAAS is 0.91. Furthermore, the cut-off scores for this instrument were determined by a panel of 10 expert judges with various tribal affiliations and professions within the following organizations: American Indian Health Service, The American Indian Research and Training Center, Parent Connection, and the University of North Carolina at Pembroke.

Because the NAAS is a newly developed instrument, research with this item is scarce. However, the NAAS was utilized in a study examining the factor structure of a newly developed scale assessing core beliefs of American Indians. The Core-Belief Scale for American Indians (CBS-AI; Miville, Williams, Cain, Bland, Beach, De La Rosa, & Winterowd, 2003) was administered in conjunction with the NAAS to determine whether or not American Indian participants' core beliefs were related to acculturation

levels. Results indicated that those who held more traditional ties with American Indian culture experienced more betrayal and mistrust and had higher levels of traditional spiritual beliefs. It is hoped that this study will provide further reliability and validity information for the NAAS instrument.

The NAAS demonstrated a good internal consistency reliability for this American Indian sample (Cronbach alpha = .84). The NAAS total score and NAAS categories (more traditional vs. more acculturated) were used for data analyses. Categories were split according to the predefined value of 3.08 (Garrett, 1996).

Historical Loss Scale/Historical Loss Associated Symptoms Scale (Whitbeck, Adams, Hoyt, & Chen, 2004).

Thoughts of historical loss and associated symptoms with historical loss were measured utilizing The Historical Loss Scale and The Historical Loss Associated Symptoms Scale respectively. Both the Historical Loss Scale and the Historical Loss Associated Symptoms consisted of 12 items each. These scales were developed based on consultation with a group of elders from two American Indian reservations in the upper Midwest who participated in a focus group designed to learn more about their ideas, experiences, and feelings associated with historical loss and trauma.. Based on the information gathered from these groups, Whitbeck et al. (2004) developed the Historical Loss Scale & Historical Loss Associated Symptoms Scale.

For the Historical Loss Scale, participants responded to each item in terms of the frequency with which they thought about that specific American Indian historical loss (1 = several times a day, 2 = daily, 3 = weekly, 4 = monthly, 5 = yearly or at special times, and 6 = never). The purpose of this scale is to determine the occurrence and immediacy

of thoughts pertaining to historical loss. Higher scores indicated a higher frequency of thoughts associated with historical loss; lower scores indicated less frequent thoughts about historical loss. The Historical Loss Scale yielded high internal reliability with a Chronbach's alpha of .92 (Whitbeck et al., 2004). Evidence of convergent validity is apparent between the two scales as Perceived Loss is correlated with Anxiety/Depression and Anger/Avoidance (from the Historical Loss Associated Symptoms Scale; see below). Thus, the greater the sensitivity to historical loss the more an individual will feel depressed or angry.

The Historical Loss Associated Symptoms Scale immediately follows and refers to the first scale by asking, "Now I would like to ask you about how you feel when you think about these losses." This scale consisted of 12 items each indicating a potential affective symptom associated with thoughts of historical loss. Participants rated the extent to which they have felt certain emotions when they thought of the historical losses of American Indian people (1 = never, 2 = seldom, 3 = sometimes, 4 = often, and 5 = always). The Historical Loss Associated Symptoms Scale is designed to concentrate on feelings associated with historical loss. This portion of the instrument yielded good internal reliability with a Cronbach alpha of .89 (Whitbeck, 2004).

Some examples of the historical losses included on this instrument include: loss of land, loss of language, loss of culture & traditional spiritual ways, loss of family/family ties, loss of self-respect, loss of trust, loss of people through early death, loss of children's respect for elders & traditional ways. Some of the affective symptoms frequently endorsed with the second portion of the scale include: feelings of sadness or depression, feelings of anxiety, feelings of anger, feelings of shame, a loss of

concentration, feelings of isolation/distance from others, loss of sleep, feelings of rage, feelings of being uncomfortable around Whites, and fear or sense of distrust of the intentions of White people.

Exploratory factor analysis results indicated that, for the Historical Loss Scale, one factor accounted for 58% of the variance with all 12 items loading significantly on the factor (item loadings ranged from .62 to .86). Two factors emerged for the second scale the Emotional Response to Loss scale. These factors were Anxiety/Depression and Anger/Avoidance which accounted for 56% of the variance. (Whitbeck, 2004).

Following the exploratory factor analysis, a confirmatory factor analysis was conducted and demonstrated that the historical loss indicators had loadings that ranged from .61 to .86, the anxiety/depression .57 to .76, anger/avoidance .59 to .80. The Perceived Loss Scale reflects various losses American Indian report experiencing, with item loadings of .60 to .86. The following items loaded within these ranges: Family ties =.61, Families =.63, Respect by children =.63, Early death =.66, Land =.70, Self-respect =.73, Alcoholism =.74, Trust =.78, Language =.81, Respect by children for traditional ways =.81, Spiritual ways =.83, and culture =.86. The Historical Loss Associated Symptoms Scale reflects general anxiety/depressed affect (i.e., feeling anxiety/nervous, loss of concentration, feeling isolated, and loss of sleep), with item loadings ranging from .57 to .76. The following items loaded significantly on this factor: depression =.57, loss of concentration,.63, loss of sleep.72, isolation =.73, and anxiety =.76. The second factor reflected anger/avoidance (i.e., anger, rage, shame, avoiding people/places that remind you of losses, with item loadings ranging from .59 to .80. The following items loaded significantly on this factor: shame =.59, anger =.62, like happening again =.62, avoiding

place =.63, rage =.69, uncomfortable around White people =.70, and fearful and distrust =.80.

Internal consistency reliability coefficients for both the Historical Loss Scale and the Historical Loss Associated Symptoms Scale were calculated for this sample. The reliability coefficients were .95 and .93 for the Historical Loss Scale and the Historical Loss Associated Symptoms Scale respectively. Subscale total scores for both the Historical Loss Thoughts and Historical Loss Associated Symptoms Scale were used in data analyses for this study.

Summary

In summary, all of the measures of this study were reliable for this sample, with one exception. Six of the 8 subscales of the AEQ were reliable, but 2 were not. Therefore, the following variables were used in the analyses of this study: the total score of the AUDIT, the average score of the NAAS, the two subscales of the Historical Loss scale, and 6 of the 8 scales of the AEQ (Social and Physical Pleasure, Power and Aggression, Sexual Enhancement, Social Expressiveness, Cognitive and Motor Impairment, and Careless Unconcern). In this next chapter, the results of this study will be presented.

CHAPTER FOUR

RESULTS

This survey research study is based on a quasi-experimental design. Data was analyzed using SPSS version 15.0. Descriptive statistics, e.g. means and standard deviations, were calculated for the main variables in this study (i.e., Alcohol Expectancy Questionnaire subscales (AEQ); American Indian Acculturation Scale Average (NAAS); Historical Loss Thoughts (HL Thoughts); Historical Loss Feelings (HL Feelings); Alcohol Use Disorders Identification Test Total Score (AUDIT). (See Table 4). Internal consistency reliability estimates were calculated for the variables prior to conducting the statistical analyses to answer each of the research questions. As mentioned in Chapter three, only six of the eight alcohol expectancy subscales were internally consistent (i.e. SPP - Social and Physical Pleasure; SEX - Sexual Enhancement; AGG - Power and Aggression; SOC - Social Expressiveness; IMP – Cognitive and Physical Impairment; CU – Careless Unconcern). Therefore, only these AEQ subscales were used in the analyses of this study.

Preliminary analyses

Preliminary t-test analyses were conducted to explore potential demographic (i.e.; sex and education level) group differences on the main study variables. Sex differences were found on the AUDIT Total Score and all of the alcohol expectancies subscale scores, including Social and Physical Pleasure, Sexual Enhancement, Power and Aggression, Social Expressiveness, Cognitive and Physical Impairment, and Careless Unconcern. There were no significant sex differences found for either Historical Loss Thoughts or Historical Loss Feelings (See Table 5 - 7 for the t-test results).

Several sex differences were detected between men and women for the following subscales: social and physical pleasure, $t(181) = -2.47, p < .05$; power and aggression, $t(182) = -2.98, p < .05$; and careless unconcern, $t(181) = -2.12, p < .05$. There were also sex differences on alcohol use, $t(180) = -4.33, p < .01$. There were no significant sex differences detected for Historical Loss Thoughts, $t(186) = 1.34, p > .05$ or Historical Loss Feelings, $t(186) = -1.34, p > .05$. (See Table 8 for the means and standard deviations for alcohol expectancy scores, alcohol use, and historical loss scores, for men and women).

To control for the effects of sex on alcohol use and alcohol expectancies, I considered running separate regression analyses for women and men. However, there were not enough men in this sample to conduct separate regression analyses, given the number of predictor variables in each regression equation. Therefore, the original planned regression analyses were conducted to answer the research questions.

Follow-up analyses were conducted to control for the effects of sex on alcohol use and alcohol expectancies. More specifically, a series of 2 (Sex: Male and Female) X 2 (Drinking Group: Hazardous and Non-Hazardous Drinkers) MANOVA analyses were conducted for the alcohol expectancies subscales (6 subscales) and the historical loss subscales. An additional 2 (Sex: Male and Female) X 2 (Drinking Group: Hazardous and Non-Hazardous Drinkers) ANOVA analysis was conducted for acculturation levels. The results of these analyses will be provided following the primary analyses of this study.

Primary Analyses

Pearson correlations, multiple regressions, forward regressions, ANOVAs, and MANOVAs were conducted to answer the original research questions.

Research Question 1:

What are the relationships between and among historical loss, post-colonial stress, acculturation, alcohol expectancies, and alcohol use among American Indian people? The null hypothesis was that there would be no statistically significant bi-variate relationships between and among these variables of interest. To answer this research question, Pearson correlational analyses were conducted to explore the bivariate relationships among the main study variables. (See Table 9 for the correlation matrix).

Correlates of alcohol use

There were several statistically significant and positive correlations between alcohol use and both positive and negative alcohol expectancies. Alcohol use was significantly and positively related to positive alcohol expectancies including social and physical pleasure ($r = .37, p < .05$), sexual enhancement ($r = .23, p < .05$), power and aggression ($r = .36, p < .05$), and social expressiveness ($r = .24, p < .05$). Alcohol use was significantly and positively related to the negative alcohol expectancy for careless unconcern ($r = .28, p < .05$). Alcohol use was also significantly and positively correlated with Historical Loss Feelings ($r = .28, p < .05$).

In summary, American Indian people who used alcohol more often reported more benefits from alcohol use, more feelings of historical loss, and more negative consequences of using alcohol use (i.e., carelessness and unconcern). American Indian people who did not frequently use alcohol reported fewer benefits and consequences of alcohol use and reported fewer feelings of historical loss.

Correlates of alcohol expectancies

There were a number of statistically significant and positive correlations between and among the alcohol expectancy subscales. The alcohol expectancy for social and physical pleasure was significantly and positively correlated with the alcohol expectancies for sexual enhancement ($r = .36, p < .05$), power and aggression ($r = .23, p < .05$), social expressiveness ($r = .42, p < .05$), and cognitive impairment ($r = .21, p < .05$). The alcohol expectancy for sexual enhancement was positively and significantly correlated with the alcohol expectancies for power and aggression ($r = .36, p < .05$), social expressiveness ($r = .50, p < .05$), cognitive impairment ($r = .23, p < .05$), and careless unconcern ($r = .32, p < .05$). The alcohol expectancy for power and aggression was significantly and positively correlated with the alcohol expectancies for social expressiveness ($r = .51, p < .05$), cognitive impairment ($r = .42, p < .05$), and careless unconcern ($r = .60, p < .05$). The alcohol expectancy for social expressiveness was positively and significantly correlated with both the negative alcohol expectancies for cognitive impairment ($r = .34, p < .05$) and careless unconcern ($r = .46, p < .05$). The negative alcohol expectancy for cognitive impairment was significantly and positively correlated with the negative alcohol expectancy for careless unconcern ($r = .60, p < .05$). In summary, American Indian people who drank alcohol expected benefits as well as consequences of using alcohol.

Alcohol expectancies were significantly related to Historical Loss Thoughts and Feelings. Historical Loss Feelings were significantly and positively correlated with five positive and two negative alcohol expectancy subscales including sexual enhancement ($r = .33, p < .05$), power and aggression ($r = .32, p < .05$), social expressiveness ($r = .33, p <$

.05), cognitive impairment ($r = .15, p < .05$), and careless unconcern ($r = .25, p < .05$).

The more American Indian people experience feelings of historical loss, the more likely they were to expect positive and negative aspects of using alcohol; American Indian people with fewer feelings of historical loss were less likely to expect positive and negative aspects of using alcohol.

Historical Loss Thoughts were significantly and negatively related to only one of the positive alcohol expectancy subscales: sexual enhancement ($r = -.21, p < .005$). The more American Indian people thought about the historical losses of American Indian people, the less likely they were to expect positive benefits of sexual enhancement from alcohol use.

In summary, the alcohol expectancy subscales were positively related to one another, as well as, to thoughts and feelings of historical loss.

Correlates of Historical Loss Thoughts and Feelings

Historical Loss Thoughts were significantly and negatively related to Historical Loss Feelings ($r = -.44, p < .01$). American Indian people who frequently thought about historical losses of American Indian people tended to experience less of an emotionally stressful reaction to those historical losses; American Indian people who didn't think as often about historical losses of American Indian people tended to experience more of an emotionally stressful reaction to those historical losses. (See Table 8 for historical loss subscale means).

Correlates of Acculturation

Acculturation levels (NAAS Average) were significantly and positively related to Historical Loss Thoughts ($r = .24, p < .05$). American Indian people who were more

acculturated into the dominant culture reported more thoughts about the historical losses of American Indian people, than those who were more enculturated into traditional American Indian culture.

Research Question 2

Which of these variables (i.e., historical loss, acculturation, and alcohol expectancies) are significant predictors of alcohol use among American Indian people? To answer this question, two regression analyses were conducted: a multiple regression analysis and a forward regression analysis. A multiple regression analysis (enter method) was conducted with Historical Loss Feelings, Historical Loss Thoughts, American Indian acculturation levels, and alcohol expectancy subscale scores as predictor variables (i.e., all six reliable subscales) with alcohol use (AUDIT total score) as the criterion variable. The equation was statistically significant, $F(9, 168) = 6.77, p < .01$. Historical loss thoughts and feelings, alcohol expectancies, and acculturation level together accounted for 26.6% of the variance in alcohol use levels for the American Indian people in this sample. (See Table 10 for the multiple regression findings).

Next, a forward regression analysis was conducted to identify which of these variables (i.e., alcohol expectancies, historical loss, and/or acculturation) were significant predictors of alcohol use levels. Results indicated that the alcohol expectancy for social and physical pleasure, the alcohol expectancy for power and aggression, and Historical Loss Feelings were the three variables which significantly entered into the equation, $F(3, 174) = 17.87, p < .05$. Alcohol expectancies for social and physical pleasure entered the equation first and accounted for 13.7% of the unique variance in alcohol use scores. Alcohol expectancies of power and aggression entered the equation second and

accounted for an additional 7.5% of the variance in alcohol use scores. Historical Loss Feelings entered the equation last and accounted for an additional 2.4% of the variance in alcohol use scores. All together, these three predictors accounted for 23.6% of the total variance in alcohol use scores. (See Table 10 for the forward regression findings).

Research Question 3:

Which of these variables (historical loss and acculturation) are significant predictors of alcohol expectancies among American Indian people? To answer this question, a series of forward regression analyses were conducted with Historical Loss Feelings, Historical Loss Thoughts, and acculturation average score as the predictor variables and each of the six alcohol expectancy scores as the criterion variables. Historical Loss Feelings was the only significant predictor for each of the alcohol expectancy subscale scores, with the exception of alcohol expectancies related to sexual enhancement. Historical Loss Feelings and Acculturation were the significant predictors of alcohol expectancies related to sexual enhancement.

For the alcohol expectancy for social and physical pleasure, feelings about historical loss (i.e., Historical Loss Feelings) was the only predictor variable that significantly entered the equation, $F(1, 185) = 6.53, p < .01$, accounting for 3.4% of the variance in this alcohol expectancy. For the alcohol expectancy for sexual enhancement, Historical Loss Feelings significantly entered the equation first, $F(1, 186) = 22.66, p < .01$ and accounted for 10.9% of the variance in this alcohol expectancy score. Acculturation significantly entered the equation second, $F(1, 185) = 7.28, p < .01$ and accounted for an additional 3.4% of the variance in this alcohol expectancy score. For the alcohol expectancy for power and aggression, Historical Loss Feelings was the only

predictor variable which entered into the equation as a significant predictor, $F(1, 185) = 20.92, p < .01$ accounting for 10.2% of the unique variance in this alcohol expectancy score. For the alcohol expectancy for social expressiveness, Historical Loss Feelings was the only predictor variable which entered into the equation as a significant predictor, $F(1, 186) = 22.58, p < .01$ and accounted for 10.8% of the unique variance in this alcohol expectancy.

For the alcohol expectancy for cognitive impairment, Historical Loss Feelings was the only predictor variable which entered into the equation as a significant predictor, $F(1, 184) = 4.10, p < .05$ and accounted for 2.2% of the variance in this alcohol expectancy. For the alcohol expectancy for careless unconcern, Historical Loss Feelings was the only predictor variable which entered into the equation as a significant predictor, $F(1, 185) = 12.32, p < .01$ and accounted for 6.2% of the variance in this alcohol expectancy. (See Tables 11 to 17 for these forward regression findings).

Research Question 4:

Are there significant acculturation group differences (more traditional vs. more assimilated) in alcohol use? The acculturation mean cut-off score of 3.08 was used to identify acculturation group differences. This cut-off score was determined by a group of ten judges, deemed expert on American Indian culture (Garrett, 1996). A mean score of 3.07 and below indicates that an individual is more identified with their traditional American Indian culture, whereas, a mean score of 3.08 to 5 indicates more acculturation into mainstream, non-American Indian culture. To determine if acculturation group differences existed, a one-way ANOVA was conducted to explore potential acculturation group differences (more traditional versus less traditional) in alcohol use. There were no

statistically significant acculturation group differences in alcohol use levels, $F(1, 186) = .07, p > .05$. (See Table 18 for these results).

Research Question 5:

Are there significant acculturation group differences (more traditional vs. more assimilated) in alcohol expectancy subscale scores? To answer this question, a one-way MANOVA was conducted to explore potential acculturation group differences in alcohol expectancy scores. The same mean score of 3.08 was identified as the cut-off point for acculturation group differences. There were no statistically significant group differences in alcohol expectancy subscale scores $F(6, 176) = 1.28, p > .05$. (See Table 19 for these findings).

Follow-up analyses

Given that there were sex differences in alcohol use and some of the alcohol expectancies, follow-up analyses were conducted to control for these sex differences. A $2(\text{Sex: Male and Female}) \times 2(\text{Drinking Group: Hazardous and Non-Hazardous Drinkers})$ MANOVA was conducted for the alcohol expectancies subscales (6 subscales). This approach was used based on previous research (Rosenhow, 1983). There were no significant interaction effects (i.e., sex and drinking group did not interact in their relationship to alcohol expectancies), $F(6, 166) = 1.33, p > .05$. However, there was a significant main effect for sex, $F(6, 166) = 3.65, p < .05$, and a significant main effect for drinking group, $F(6, 166) = 5.41, p < .05$.

Follow-up univariate analyses revealed significant sex differences for all of the alcohol expectancy subscales: social/physical pleasure, $F(1, 171) = .97, p < .01$; sexual enhancement, $F(1, 171) = .87, p < .01$; power and aggression, $F(1, 171) = .99, p < .01$;

social expressiveness, $F(1, 171) = .70, p < .05$; cognitive and physical impairment, $F(1, 171) = .55, p < .05$, and careless unconcern, $F(1, 171) = .90, p < .01$. Follow-up univariate analyses revealed significant drinking group differences for two of the alcohol expectancy subscales: social and physical pleasure, $F(1, 171) = .62, p < .05$ and power and aggression, $F(1, 171) = .60, p < .05$. (See Table 20 for alcohol expectancies by gender and drinking group).

Another $2(\text{Sex: Male and Female}) \times 2(\text{Drinking Group: Hazardous and Non-Hazardous Drinkers})$ MANOVA was conducted for the historical loss subscales (Historical Loss Thoughts and Historical Loss Feelings). There was no significant interaction effect (i.e., sex and drinking group did not interact in their relationship to the historical loss subscales), $F(2, 177) = 2.14, p > .05$. There were also no significant main effects for sex, $F(2, 177) = .43, p > .05$, or alcohol group, $F(2, 177) = 6.54, p < .01$. (See Table 21 for historical loss by gender and drinking group).

A $2(\text{Sex: Male and Female}) \times 2(\text{Drinking Group: Hazardous and Non-Hazardous Drinkers})$ ANOVA was conducted for acculturation levels. There was no significant interaction effects for Sex (Men vs. Women) and Drinking Group (Hazardous vs. Non-Hazardous Drinking) on acculturation levels, $F(1, 178) = .13, p > .05$. In addition, there were no significant main effects for Sex (men vs. women), $F(1, 178) = .88, p > .05$, or Drinking Group (Hazardous vs. Non-Hazardous Drinkers) on acculturation levels, $F(1, 178) = .00, p > .05$.

CHAPTER FIVE

DISCUSSION

Purpose of Study

The purpose of this study was to explore personal and cultural factors associated with alcohol expectancies and alcohol use among American Indian people. Of specific interest were 1) the relationship of acculturation, thoughts and feelings about historical loss, and alcohol expectancies with alcohol use among Indian people and 2) the relationship of acculturation and thoughts and feelings about historical loss with alcohol expectancies. To date, no researchers have examined how this combination of variables may be related to alcohol use and alcohol expectancies among American Indian people. Two previous groups of researchers have examined alcohol expectancies in relation to level of acculturation among Indian people (Lysne, 2003) and the relationship between alcohol use, alcohol expectancies, and American Indian heritage (measured in terms of blood quantum; Garcia & Andrade, 1996). Whitbeck (2004) has explored the relationship between historical loss and alcohol use among American Indian people. The present study was an extension of these earlier studies in an effort to explore personal and cultural factors associated with alcohol use among Indian people. This was also the first study to use the Alcohol Effects Questionnaire (AEQ; Rosenhow, 1983) with an American Indian sample. The Alcohol Effects Questionnaire was used in this study because it measures both positive and negative alcohol expectancies. Previous alcohol expectancy research has focused primarily on positive alcohol expectancies. To address this limitation, both positive and negative alcohol expectancies among American Indians were explored.

Summary of Findings

Alcohol use was found to relate significantly to several of the main study variables. Alcohol use was significantly related to alcohol expectancies. Alcohol expectancies were found to significantly predict alcohol use among this sample. Alcohol use was also significantly related to Historical Loss Feelings. Those who drank more alcohol were likely to experience more feelings related to historical loss. Alcohol expectancies were significantly related to Historical Loss Thoughts, Historical Loss Feelings, and acculturation. When considered together, Historical Loss Thoughts, Historical Loss Feelings, and acculturation significantly predicted alcohol expectancies. Of all of these variables, Historical Loss Feelings was the most significant predictor of alcohol expectancies. In addition, there were significant relationships between and among the various alcohol expectancy subscales.

Several demographic differences (gender and education level) were found among the main study variables. Sex differences were found for alcohol use, alcohol expectancies, Historical Loss Thoughts, and Historical Loss Feelings. Men were more likely to make up the majority of the hazardous drinkers in this sample. Hazardous Drinkers also differed in their alcohol expectancies and feelings of Historical Loss compared to Non-Hazardous Drinkers.

Alcohol Use

Alcohol use was significantly related to several of the main study variables (alcohol expectancies and Historical Loss Feelings). That is, American Indian participants who used more alcohol reported more positive benefits from alcohol use, including social and physical pleasure, sexual enhancement, power and aggression, and

social expressiveness. Alcohol users also expected negative effects from alcohol use, including feelings of carelessness and unconcern. In addition, those Indian people who reported more feelings of historical loss were more likely to drink more alcohol. However, alcohol use was not related to thoughts about historical loss or levels of acculturation.

When combined, alcohol expectancies, thoughts and feelings of historical loss, and acculturation levels accounted for about 27% of the variance in alcohol use levels for this sample. In addition, alcohol was significantly predicted by two of the alcohol expectancies (Social and Physical Pleasure, Power and Aggression) and Historical Loss Feelings.

Alcohol Expectancies

There were also several significant relationships demonstrated between and among all of the alcohol expectancy subscales (Social and Physical Pleasure, Sexual Enhancement, Power and Aggression, Social Expressiveness, Cognitive and Motor Impairment, and Careless Unconcern) and other main study variables (Historical Loss Thoughts, Historical Loss Feelings, and acculturation). All of the alcohol expectancy subscales were significantly and positively correlated with Historical Loss Feelings. All of the alcohol expectancies were significantly and positively correlated with one another and with feelings about historical loss. The more American Indian people experienced feelings of historical loss, the more likely they were to expect positive and negative aspects of using alcohol; American Indian people with fewer feelings of historical loss were less likely to expect positive and negative aspects of using alcohol. One of the alcohol expectancies for sexual enhancement was negatively correlated with historical

loss feelings and positively correlated with acculturation level. Also, of particular interest to this study, historical loss feelings were a significant predictor for several of the alcohol expectancies.

These findings are similar to other research findings which indicated similar relationships between alcohol expectancies and alcohol use among several American Indian samples. Garcia-Andrade (1996) found that alcohol use levels were related to the alcohol expectancies for social and physical pleasure and power and arousal, among a sample of Mission Indian men. However, Garcia-Andrade (1996) did not specify whether or not these alcohol expectancies significantly predicted alcohol use, as they did in this current study. Lysne (2003) found contradictory relationships, in that, negative alcohol expectancies were more predictive of alcohol use among another American Indian sample.

Alcohol expectancies were significantly related to feelings of historical loss. Historical Loss Feelings were found to be the primary predictors of all six of the alcohol expectancies used in the data analyses portion of the study. For the alcohol expectancy for sexual enhancement, feelings about historical loss were the most significant predictor with level of acculturation next. This indicates that the more acculturated a person was the more likely they were to expect alcohol to enhance feelings of sexuality or sexual attraction. Those individuals who were more acculturated into mainstream society may have felt more comfortable acknowledging their sexuality and expressing this to others. Whereas, those who may have been more traditional may have felt modest or embarrassed by acknowledging how alcohol influences the expression of sexuality.

This alcohol expectancy research is new to the American Indian psychology literature. While previous studies have explored alcohol expectancies, no study has used the AEQ (Rosenhow, 1983) nor have these alcohol expectancies been explored in relation to acculturation or thoughts/feelings of historical loss. Furthermore, not much research has been conducted exploring the sexual behaviors of Indian people or how they may differ while under the influence of alcohol.

Two of the alcohol expectancies (social and physical pleasure and power and aggression) were significant predictors of alcohol use among this American Indian sample. This finding is similar to two other study in which alcohol use was significantly predicted by the alcohol expectancy for both social and physical pleasure and feelings of power and arousal, using Brown & Goldman's Alcohol Expectancy Questionnaire (AEQ; 1980) (Daisy, 1990; Garcia-Andrade et al., 1996). Garcia-Andrade et al. found that alcohol use was related to feelings of power and arousal and Daisy found that more Indians were more likely to expect feelings of social and physical pleasure from alcohol use when compared to other groups. While the findings of this study are similar to these two previous American Indian studies, these findings differ from Lysne's study (2003). Lysne (2003) found that negative alcohol expectancies were more predictive of alcohol use in a Northern Plains American Indian population than positive alcohol expectancies. However, Lysne did not use the same instrument used in this study but used the When I Drink Alcohol (WIDA) to measure alcohol expectancies.

Garcia-Andrade et al. (1996) explored alcohol use with a sample of Mission American Indian men, in relation to degree of American Indian heritage (measured by actual blood quantum reported by participants), alcohol expectancies, and family history

of alcohol use. Findings from a hierarchical multiple regression indicated that frequency of alcohol use accounted for a significant portion of the variance in the expectancies for overall, positive feelings from alcohol use and feelings of arousal and power over others, in addition to total alcohol expectancy score. These results were found after controlling for a positive family history of alcohol use and American Indian heritage. While these findings are an important contribution to American Indian psychology literature, the Garcia-Andrade et al. study only explored alcohol expectancies and alcohol use among men.

This current study addressed alcohol expectancies with both men and women. However, results from the current study indicated that men who were hazardous alcohol users expected more feelings of power and aggression in comparison to hazardous drinking women and non-hazardous drinking men and women. These findings are similar to those found by Garcia-Andrade et al. (1996), in that, men were found to expect feelings of power and aggression and social and physical pleasure from alcohol use. Based on these clear cut sex differences, it is apparent that more alcohol use and alcohol expectancy research needs to be conducted exploring potential sex differences in these variables.

While these alcohol expectancies provide a general idea of what it is people expect to obtain from alcohol use, there may be a cultural explanation for the endorsement of the alcohol expectancies for social and physical pleasure and power and aggression. For instance, the alcohol expectancy for power and aggression may relate to the sometimes inappropriate release of repressed anger on others. Duran and Duran (1995) highlight, one consequence of historical trauma is identification with the

oppressor. Some American Indian people take out repressed emotions on each other while under the influence of alcohol. These aggressive acts often result in domestic violence, intentional (i.e., suicide) and unintentional (i.e., automobile) accidents, and homicide directed at other American Indian people. All are possible causes of early deaths among American Indian men (NIAAA; 2002).

In addition to expectancies for power and aggression, it is apparent that American Indian people drink alcohol to feel good. The expectancy for social and physical pleasure among heavy alcohol users has been demonstrated among non- American Indian moderate and heavy alcohol using populations (Rosenhow, 1983). Daisy (1990) also found that in comparison to Asian-Americans and African-Americans, American Indians expected higher levels of social and physical pleasure from alcohol use. This finding is supported by Bach (1981) who explains that the peer drinking group is a major influence on American Indian alcohol use. This social contact emphasizes a communal use of resources and allows for maintenance of relationships. Generally, drinking may take place with family members and refusing a drink may be seen as rude. Furthermore, refusing a drink may be seen as an act of social isolation, contributing to further stressors increasing the desire to drink more alcohol.

There are numerous reasons for alcohol use today. This behavior may have been established during colonization when many American Indians were struggling to cope with numerous losses. Alcohol may have provided some form of emotional anesthesia. Today, it may be that alcohol use is a learned behavior which helps many Native people to deal with feelings of helplessness and hopelessness, especially in tribal or reservations located in more isolated areas of the country. Alcohol use may also provide a feeling of

control to those Native people who feel powerless in other areas of their lives. Alcohol intoxication may be one factor many heavy alcohol users believe they can control.

While these findings are focused on positive alcohol expectancies from alcohol use, Lysne (2003) found that negative alcohol expectancies were more predictive of alcohol use among an American Indian sample. Lysne (2003) attributed this finding to the possibility that heavy alcohol users were more acquainted with the negative consequences of alcohol use. For example, heavy alcohol users may be more familiar with hangovers or other negative social consequences resulting from alcohol use.

Previous research findings indicate both a relationship between both positive and negative alcohol expectancies and alcohol use among American Indian people. However, with this American Indian sample, only positive alcohol expectancies were predictive of alcohol use. Although this alcohol expectancy study provides some indication of what American Indians expect to achieve from alcohol use, it is unclear what reasons above and beyond those listed on alcohol expectancy questionnaires serve as motivational factors for alcohol use. For example, these alcohol expectancies may not identify core motivations for alcohol use. Additional analyses, perhaps of a qualitative nature, could be conducted explore personal reasons and motivations for alcohol use. This would greatly supplement the alcohol use and alcohol expectancy research. In addition, the alcohol expectancy questionnaire used in this American Indian research study has not been normed with Indian people. There may be different meanings implied from the alcohol expectancies defined in these instruments, or there may be additional alcohol expectancies for different cultural groups. Additionally, two of the alcohol expectancy subscales were not internally consistent for this sample.

Historical Loss Thoughts and Feelings

There were several significant relationships between Historical Loss Thoughts and Feelings and all of the main study variables (alcohol use, alcohol expectancies, and acculturation). A significant and negative relationship was found between Historical Loss Thoughts and Historical Loss Feelings among this American Indian sample. This means that those who thought more about historical losses were less likely to experience feelings associated with historical loss. On the other hand, those who indicated more feelings associated with historical loss were less likely to think about the historical losses of Indian people. These findings contradict Whitbeck's (2001) earlier findings which indicated that those American Indians who endorsed higher levels of historical loss thoughts were more likely to experience more historical loss feelings.

The avoidance of historical loss thoughts may be one way to avoid the anxiety of how these losses currently affect American Indian people today, especially on an individual level. However, from an anecdotal perspective, many Indian people may not believe that focusing on historical loss is non-productive if one wants to function in today's society. Whatever the reason these thoughts of historical loss are avoided, those who avoid thinking about these losses are more likely to experience a stronger emotional reaction in comparison to those who spend more time thinking about the personal, tribal, and societal effects of these losses. Furthermore, those who think more about these losses are less likely to be heavy drinkers. This cognitive awareness may serve as a motivating factor to live differently and not contribute to the perpetual alcohol use troubling to many Indian people.

In addition, historical loss feelings were identified as a significant predictor for all six of the alcohol expectancies used for data analyses. Those who were experiencing a strong emotional reaction to thoughts of historical loss were more likely to expect alcohol to provide some type of physiological or emotional change. It is possible the historical loss feelings subscale is a measure of unresolved grief or the “soul wound,” because the symptoms are those of general emotional distress. Whether or not there is a difference between the “soul wound” and general levels of emotional distress is still unclear. However, the Historical Loss Associated Symptoms scale specifically asked participants to identify which feelings they experienced when thinking about the historical losses of Indian people. It is possible that research participants endorsed these feelings because they are a general experience or form of dysthymia. Possible research ideas would be to compare and contrast the historical loss subscales with other measures of emotional distress. Furthermore, an additional qualitative element could assess how Indian people think the historical losses of Indian people effects their lives today. It would be helpful to clearly identify what exactly is the most distressing for them. When stressors are identified it is then possible to come up with healthy coping strategies that may help Indian people to use alcohol less as a coping strategy. The effects of the history of Indian people may not be clearly assessed with a scale.

Historical loss feelings significantly predicted alcohol use for both men and women in this American Indian sample. Whitbeck (2004) found that feelings of historical loss were related to alcohol abuse problems among American Indian women but not for men. Furthermore, there was no distinction between historical loss thoughts and feelings in Whitbeck’s 2004 study, because the total score for both Historical Loss

Thoughts and Historical Loss Feelings was used. It was unclear whether or not historical loss thoughts, historical loss feelings, or both historical loss thoughts and feelings were predictive of alcohol use among this sample of American Indian women. The findings in this current research study differ from Whitbeck's (2004) study since, the relationship between historical loss feelings and alcohol use was evident for both American Indian men and women. Historical Loss Thoughts and Historical Loss Feelings were assessed separately because of the need to explore the specific association of these components with alcohol use, alcohol expectancies, and acculturation.

Historical loss feelings, in the form of unresolved grief, are theorized to be a reason for alcohol use among American Indian people (Duran & Duran, 1995). It is possible that American Indian alcohol users who expect positive feelings from alcohol use are trying to find a way to avoid painful feelings related to both historical and current losses. It is also possible that the historical loss feelings subscale may be an accurate measure of the "soul wound" or intergenerational, unresolved grief. Problems with alcohol have been described as a "spiritual" problem of loss and emptiness, which in turn creates the desire to drink alcohol or "spired" beverages as a way to fill the emotional void (Duran, 2006; Duran & Duran, 1992; Lowery, 1998). This soul wound or feeling of emptiness is theorized to be a direct result of the American Indian history of traumas experienced by many American Indians (Lowery, 1998). Furthermore, when alcohol is the primary coping mechanism it is likely that traumas will continue to occur among American Indian people.

It is probable that the difficulty of experiencing unresolved grief may be a motivating factor to use alcohol. It is plausible that many American Indian people who

experience these negative emotions are unaware of the source of these feelings and may have difficulty labeling their emotional experience. This emotional unawareness is noted to be a symptom of the historical trauma response (Brave Heart, 2003). This can also be explained by understanding how trauma affects individuals. One response to trauma is emotional numbing, this helps people to cope with daily living in light of having experienced a significant traumatic event. Although this numbing response provides temporary relief, it can create difficulty in feeling any emotion, whether it be positive or negative. This can create further difficulty when trying to find some type of emotional resolution. The difficulty with obtaining some type of emotional resolution may increase the chances that a person will use alcohol especially if confronted with other personal and cultural psychosocial stressors.

Acculturation

Although there were significant relationships between Historical Loss Feelings with alcohol use and alcohol expectancies, there were not many significant relationships between acculturation and the main study variables. However, acculturation was related to historical loss thoughts. This means that those who were more acculturated into mainstream society were more likely to think about the historical losses of American Indian people. This could possibly mean that acculturation into mainstream society is a protective factor because it allows for individual to develop a cognitive awareness of American Indian history. Cognitive awareness may enable the emotional processing of losses and other traumatic events. Without some level of awareness, an individual may not be able to make meaning of a loss or traumatic event. This may help to explain why those participants in this sample who thought more about historical losses were not

hazardous drinkers and did not have a strong emotional reaction to these losses. On the other hand, those who did not think about historical losses, experienced more of an emotional reaction to these losses and were heavier drinkers. It is unclear whether this cognitive unawareness is intentional, avoidant behavior or something that people just don't think about.

Acculturation was not significantly related to alcohol use with the American Indian sample. This finding is not surprising considering that several researchers have found conflicting results when exploring the effects of acculturation on alcohol use among American Indian people. Some research findings support the idea that involvement with traditional American Indian culture is a protective factor against alcohol use (Whitbeck, 2006; 2004; Winterowd, Burris, & Montgomery, 2005). Lysne (2003), on the other hand, found that involvement with either Euro-American or Native-American culture was a protective factor against alcohol use problems among a sample of Northern Plains American Indians. Lysne indicated that any form of cultural involvement with either American Indian or Euro American, was a protective factor against alcohol use problems. Herman-Stahl, Spencer, & Duncan (2002) found that a bicultural American Indian orientation was a risk factor for alcohol use problems among reservation American Indians. These contradictory findings mean that the relationship of acculturation on alcohol use behaviors within an American Indian sample is still unclear.

One researcher has found significant negative relationships between enculturation and alcohol use in American Indian populations (Whitbeck, 2004; 2006). Enculturation refers to the adherence to traditional culture, whether in terms of values, beliefs, or behaviors (Miller, 2007). Whitbeck (2004; 2006) measured enculturation by assessing

participation in traditional activities, beliefs in traditional spirituality, and identification with American Indian culture. Whitbeck (2004) found that enculturation was negatively related to alcohol abuse for both men and women. Therefore, those who were more involved with their traditional American Indian culture of origin were less likely to abuse alcohol. Whitbeck (2006) also found that those American Indian adults who were more involved in traditional and spiritual American Indian activities and indicated higher levels of American Indian identity, were more likely to stop using alcohol. In comparison, those American Indians with low levels of cultural involvement were least likely to stop using alcohol. Specifically, among those who stopped drinking alcohol, traditional activities and traditional spirituality were found to be most related to alcohol cessation. However, cultural identity was not significantly related to alcohol cessation among this American Indian sample. These results indicate that involvement with cultural activities is a protective factor against alcohol use problems and may be a motivational factor in alcohol cessation. In an unpublished study, Winterowd, Burris, and Montgomery (2005) found that more participation in traditional ways was associated with less substance use risk among American Indian people. Traditional behaviors were assessed using a scale developed by this group of researchers.

Lysne (2003) found that high levels of cultural immersion contributed to lower levels of alcohol use among a Plains Indian sample. Cultural immersion in this study was measured using the Northern Plains Bicultural Immersion Scale (NBPI-Version 5; Allen & French, 1996). This scale measures both Euro-American and Native-American cultural immersion. Lysne (2003) asserted that any involvement or sense of connection

with either Euro-American or Native-American culture was a protective factor against alcohol use problems in the Native American sample he conducted research with.

Herman-Stahl, Spencer, & Duncan (2002) found that among a sample of reservation American Indians, those who were more bicultural were more likely to have difficulties with alcohol use. Level of acculturation was assessed by asking participants eight questions related to involvement with American Indian culture (language, ethnic pride, ethnicity of friends, time spent on reservation, participation in traditional activities, and time spent thinking or learning about American Indian culture). Results indicated that those who were described as bicultural were more likely to be steadily employed and have higher levels of education. Despite these strengths this group was more likely to have alcohol use problems, than their more traditional counterpart who was more likely to be unemployed with lower levels of educational achievement. While education and employment are generally associated with resilience, within a reservation area, these activities may decrease social involvement with other alcohol users who do not go to school or are unemployed. In a close-knit society, rejection from one's social group may create higher levels of stress, thus increasing alcohol use.

It is apparent that different researchers used different measures of acculturation. Acculturation measures seem to examine involvement with cultural and mainstream activities. Herman-Stahl, Spencer, & Duncan (2003) argue for a clearer understanding of acculturation and how it is measured. The American Indian Acculturation Scale used in this study does not directly measure cultural values or beliefs, but rather is more of a measure of behaviors theorized to be American Indian. It is unclear how similar or different this measure is from other acculturation measures used in American Indian

studies. It is also unclear how other acculturation measures would be related to alcohol use in this sample.

In summary, the findings of this study did not confirm that acculturation influences alcohol use or alcohol expectancies with this American Indian sample. It is probable that if this study were conducted in person, using non-internet data collection procedures results might be different. This type of data collection would have enabled non-Internet users who may have been considered more traditional to participate in this study. This is especially true for data which may have been collected on a reservation or tribal area. However, the current research study did not assess where participants currently lived. In addition to place of residence, the majority of this sample was college educated. Education has the potential to challenge pre-existing beliefs about the world, it is possible that some participants in this sample may have chosen to be more involved with their traditional culture or moved further away from their traditional culture. Furthermore, this sample is highly educated. High levels of education and employment may indicate a form of bicultural competence which is viewed as a strength based approach to dealing with different cultures (LaFromboise, 2003). Therefore, acculturative stresses may not be a significant factor for this sample, however, acculturative stressors were not explored in this study.

Gender Differences in Alcohol Use and Alcohol Expectancies

Furthermore, there were significant sex differences in both alcohol use and two alcohol expectancies. Men drank at more hazardous levels when compared to women. Approximately 50% of men were hazardous drinkers while almost 25% of the women in this sample were hazardous drinkers. This finding supports previous research findings

which indicate that men are primarily heavier drinkers within American Indian communities (NIAAA, 2002).

Men also expected to achieve more feelings of social and physical pleasure and feelings of power and aggression from alcohol, than the women in this sample. These results indicate that men and women use alcohol for different reasons. Men may use alcohol to feel a general sense of pleasure and a sense of power. This finding is not surprising considering that men are more likely to become involved in physical altercations while under the influence of alcohol (NIAAA, 2002). Heavier drinkers have been reported to expect these same expectancies in a non-American Indian sample.

Drinking Group Differences in Alcohol Expectancies, Historical Loss, and Acculturation

In addition to sex differences among alcohol use and alcohol expectancies, drinking group differences were also found for most of the main study variables (alcohol expectancies, Historical Loss Thoughts, and Historical Loss Feelings). Both hazardous and non-hazardous drinkers differed on all six alcohol expectancies. Hazardous alcohol users expected more positive and negative alcohol expectancies than non-hazardous drinkers. These results are similar Rosenhow's (1983) study with a Non-American Indian sample. Rosenhow (1983) found that moderate and heavy drinkers expected alcohol to provide more feelings of social pleasure and aggression in comparison to light drinkers. These findings provide some evidence that American Indian alcohol users may expect to achieve the same results as non-American Indian alcohol users.

Drinking group differences were also found for Historical Loss Thoughts and Feelings. Specifically, hazardous drinkers were more likely to report feelings of Historical Loss in comparison to non-hazardous drinkers. These results suggest

American Indians in this sample may drink more alcohol to cope with unresolved grief or other emotional distress. This emotional distress may be a result of the historical and current losses of American Indian people. These findings also support Brave Heart's (1998, 2003) theory about the ineffective coping strategies often used by American Indians. In this case, the one primary coping mechanism may be alcohol use.

Although there were drinking group differences in the other main study variables, hazardous drinkers and non-hazardous drinkers did not differ in their levels of acculturation. It is likely that because this sample of American Indian people is college educated they may function at a bicultural level. This means that they are able to navigate their way between both the American Indian and mainstream society, without heavy psychological stress. As a result, there may not be much cultural variation among those who drink heavily and those who don't. However, the majority of this sample was traditional when Native American Acculturation Scale scores were examined.

The discrepancy between the influence of acculturation and alcohol use in this study suggests that acculturation may not be a major stressor facing Indian people. One possible area of acculturation research would explore all American Indian acculturation measures and assess validity and reliability across samples. It is possible that while less acculturation and identification with American Indian culture has been deemed a primary factor in American Indian alcohol abuse and dependence, the measurement methods may not be accurately assess the real issue.

Furthermore, one limitation of this study is that acculturative stress was not explored. Also, this research did not focus on the possible ways cultural involvement may serve as a protective factor against alcohol problems. The Native American

Acculturation Scale assessed how active a person was in behaviors theorized to be traditional American Indian behaviors. Duran & Duran (1995) highlight that there is even a conflict among American Indian people about how alcohol is and is not a traditional behavior. Some American Indian people may believe that alcohol use is traditional behavior, while others may think alcohol use isn't. Therefore, the root of acculturative stress may be more a matter of values and beliefs rather than behaviors. These values and beliefs may be what serve as protective factors against alcohol use problems rather than behaviors.

One other possible explanation for historical loss feelings may be feelings of anxiety which can be a learned response to a threatening environment. For example, factor analysis found that a core belief of an Oklahoma American Indian sample was distrust of White people (Winterowd, C., Williams, D., Cain, M., Bland, K., Miville, M., Dorton, J., and LeRoy, K., August 2004). This lack of trust suggests there may be a general level of anxiety present within Native American people. This anxiety may exist at a basic level or be more complex, such as post-traumatic stress disorder. In addition, the "soul wound" and Historical Loss have been theorized to result from trauma. Brave Heart (2003) labels this the Historical Trauma Response. If Historical Trauma is examined from medical model perspective and compared to Post Traumatic Stress Disorder it is likely some of the symptoms may be similar among many American Indian people today.

Among combat veterans those who experience a high stress environment during military experience are sometimes likely to perpetuate this high stress level in order to feel "normal." This can be classified as an avoidance technique or emotional numbing

(Barlow, 2002). This model of avoidance would fit with the high incidence of historical loss feelings endorsed by this population of American Indian. It also fits with the idea that American Indian people may identify with their oppressors and continue to traumatize other American Indian people as a way to feel some control (Duran & Duran, 1995). This is definitely one area that warrants further exploration.

Implications for Counseling and Healing Practices with American Indian People

The results of this study suggest that the hazardous alcohol users in this sample were experiencing some type of emotional anguish. Since emotional distress was assessed by measuring feelings of historical loss, it is likely this sample was coping with feelings of unresolved grief. These feelings likely influenced hazardous alcohol use by affecting what Indian people expected from drinking alcohol. These demonstrated relationships between historical loss with alcohol use and alcohol expectancies provide reason to acknowledge historical loss with American Indian clients. This is especially true for mental health professionals or other care providers who may work with Indian people.

Furthermore, there was a negative relationship between Historical Loss Thoughts and Historical Loss Feelings. Exploring this negative relationship between thoughts and feelings of historical loss, may facilitate a healthy confrontation of individual and psychosocial stressors. If clients face these losses at a cognitive level they may be more likely to explore their emotional reactions in a therapeutic setting. This can provide a healthy level of exposure which can remind the client of their own emotional strengths when dealing with problems.

While it is important not to stereotype and assume all American Indian clients are dealing distress over the unique history of American Indian people, it is important to assess the client's acculturation and perception of how historical losses may affect them. Also, it would be beneficial to explore the personal history of alcohol use within the individual and family. It is important for the client to understand reasons for using alcohol. For instance, was alcohol use behavior a learned behavior? Is it possible the client is not aware of healthier alternatives? If this is the case, the client could benefit from exploring triggers for alcohol use and alternative behaviors when the client feels like drinking alcohol. However, it is important to remember that not every Indian person uses alcohol problematically. Therefore, individual alcohol use should always be assessed within a counseling or other healing relationship.

At some point, exploring the cultural meaning of alcohol with an Indian person may help to uncover thoughts and feelings about historical loss a person may not be aware of. Exploring cultural influence on alcohol use and emotional health can take place by asking the client what it means to be a member of their culture/tribe. Learning about family structure and alcohol use within the social or tribal structure could also allow the client to understand the cycle of alcohol use within their community. Once an Indian client is aware of this it may benefit them to explore their readiness to make changes. This could be done using Motivational Interviewing which has been used as a model for alcohol use treatment within Indian tribes (Miller & Rollnick, 2002; CASAA, 2007).

Regarding sex differences with alcohol use, it is essential that a personal history of trauma be examined with both men and women who use alcohol. It is possible that

women drink less because of the risk for physical and sexual assault while under the influence of alcohol. Furthermore, women in this sample expected more feelings of sexual enhancement and cognitive and motor impairment from alcohol use. These alcohol expectancies may be a major influence in less alcohol use among women. One possible reason women endorsed these alcohol expectancies is because they place women at risk for physical and sexual assault. Physical and sexual assault has been defined as a major risk associated with American Indian women's alcohol use (NIAA, 2002). Alcohol use has also been associated with a personal history of trauma and risky behaviors which can increase chances for further trauma (Simoni, 2003). Women may demonstrate more self protective behaviors (less alcohol use) as a way to defend against possible assault. Also, if women are aware that they become cognitively and physically impaired as a result of alcohol use it is possible they may choose to drink less than their male counterpart.

It is also important to explore the American Indian client's perception of individual, societal, and cultural gender roles and norms. It has been theorized and discussed in an earlier qualitative study that men were heavier drinkers because their roles as providers and defenders has been taken away (Duran & Duran, 1995; Quantz, 2005). Women on the other hand, are viewed as the tradition bearers (Duran & Duran, 1995). In the current researcher's opinion, this leaves the burden of responsibility for the continuation of traditional practices on the women in tribal communities. This however, has not been researched at great length.

Limitations

Design & Internal Validity

This data for this study was gathered via the Internet. For this reason, American Indian who do not have access to the Internet and who were not aware of this study were unable to participate. It is possible that more traditional American Indian people may not have been included in the participant sample because they may not be active Internet users. Furthermore, Internet data collection is relatively new. Therefore, the number of participants obtained may have varied if data were collected in person. Face to face contact with potential participants would have allowed for a personal connection to be established between the primary researcher and each potential participant. This could have influenced the number of research participants and the manner participants responded. However, at this point there is no way to determine how Internet data collection procedures influenced this American Indian participant sample.

External Validity and Generalizability

This study was not focused on one specific tribe or nation, specifically, ninety-nine tribes and nations were represented in this research study. Therefore, it may be difficult to generalize these results to all American Indian. It is theorized that many American Indian values are similar among American Indian people, however, there are also many differences among tribes and nations. Results would likely differ greatly if a specific region of the country or tribal affiliation was the main focus of study. Focusing on one tribe or region could help the helping professions to obtain some level of understanding regarding how tribal history may or may not affect American Indian alcohol use.

Furthermore, the majority of this participant sample was college educated. It is possible that this participant sample may be more aware of healthier coping alternatives,

in comparison to a participant sample who was not primarily college educated. The average age of participants was 40 years old. This demographic factor may not be representative of the American Indian populations under the age of 30 which have been noted to drink more alcohol and have more alcohol related problems. In addition, the majority of the participants in this study were women. For this reason, these results should be carefully applied to American Indian men who use alcohol. At this time it is unclear why the total number of men in this sample was significantly lower than women. However, this demographic factor has been demonstrated in other Native American studies.

Measurement

One of the primary foci of this study is to examine the alcohol expectancies and problematic alcohol use of American Indian people. However, the measures used to assess alcohol expectancies and alcohol use, have not been normed with American Indian people. Therefore, the instruments utilized in this study may not completely reflect the unique experiences of native people.

The Alcohol Effects Questionnaire had two subscales which were not reliable with this group of participants. However, six of the eight alcohol expectancy scores were found to be internally consistent measures of alcohol expectancies. The two subscales which demonstrated the least reliability were the expectation for Global Positive changes and the expectation for Relaxation and Tension Reduction. Were these two subscales reliable they would have provided beneficial information about expectations for this population of alcohol users.

The AUDIT which was developed by the World Health Organization and designed for use with various ethnicities and cultures throughout the world did not demonstrate reliability for the three subscales. Furthermore, American Indians were not included in the norming sample. While, this instrument proved effective in categorizing this sample into both hazardous and non-hazardous alcohol users, it was not possible to classify drinkers according to the three subscales on the AUDIT with this group of participants.

In addition, to measurement difficulties, the manner in which the survey instruments were designed seemed more appropriate for participants who currently use alcohol. However, the current researcher did not want to exclude those individuals who are currently abstinent from alcohol but may have at one time been active drinkers. Participants who were currently abstinent from alcohol had to recall alcohol expectancies which may be difficult and lead to incorrect responses due to recall error.

Furthermore, this study provides one example of what American Indian people expect to achieve from drinking alcohol. It would be beneficial to add a qualitative component which allows research participants to explain in detail what they expect to get from alcohol or further exploring their own personal reasons for alcohol use.

Summary

An on-line research study was conducted with a sample of 188 American Indian participants from throughout the country. This study was designed to assess the relationships between level of acculturation; positive and negative alcohol expectancies; thoughts and feelings about the historical losses of American Indian people; and current

alcohol use. Results indicated there were sex differences in alcohol use, alcohol expectancies, and historical loss.

In particular, men were heavier alcohol users than women. Men expected more feelings of power and aggression and social and physical pleasure from alcohol use. Women expected more feelings of sexual enhancement and cognitive and motor impairment from alcohol use. Differences in the main study variables were also noted in drinking group in both alcohol expectancies and historical loss feelings.

In particular, hazardous drinking men indicated more thoughts and feelings of historical loss in comparison to non-hazardous drinking men. Women who drank alcohol at a hazardous level indicated less thoughts about historical loss, but more feelings associated with historical loss in comparison to non-hazardous drinking women. When looking at the hazardous drinkers, men thought more about the historical losses of American Indian people than women. However, men experienced less emotional distress regarding historical losses. Non-hazardous drinking men thought less about the historical losses but felt more than non-hazardous drinking women who thought more about the historical losses of American Indian people but had less of an emotional reaction to these losses.

In general, acculturation was not related to alcohol use or alcohol expectancies, except in the case of for alcohol serving to enhance one's sexual experiences. This is especially true for American Indian women. It is likely that women who see themselves as more acculturated expect more sexual enhancement from alcohol use. It is also likely that this could be one reason women drink less than men because they are aware that alcohol may affect their sexual response especially when inhibitions are lowered. While

this may be beneficial in some cases, it may also increase the chance of sexual assault for women who may place themselves in risky situations with other males who may be just as intoxicated.

Hazardous and non-hazardous drinkers differed in their expectancies from alcohol use. This group differed on all of the positive and negative alcohol expectancies represented in this study. This indicates that hazardous drinkers expected to achieve more positive and negative effects from alcohol use in comparison to non-hazardous drinkers. Hazardous drinkers were also more likely to indicate feelings related to the historical losses of American Indian people than non-hazardous drinkers. Dealing with unresolved grief and a depressive state resulting from the current and historical losses of American Indian people may be one reason that hazardous drinkers use more alcohol than non-hazardous drinkers.

Acculturation did not influence the amount of alcohol a person drank. However, acculturation level did influence historical loss thoughts and the alcohol expectancy for sexual enhancement. It appears that among this American Indian sample those who are more acculturated into mainstream society are likely to have more thoughts of historical loss. Those who are more acculturated into mainstream society are also likely to expect more sexual enhancement from alcohol use. This finding may indicate that those who are more acculturated into mainstream society are less likely to be hazardous drinkers, considering that those who had more feelings of historical loss were more likely to be hazardous drinkers. However, this finding was not demonstrated through statistical analysis.

This study clearly provides an explanation of alcohol use from a socio-cultural perspective. It is essential that alcohol use be understood within the cultural context in which it exists. One aspect of this cultural context is historical trauma which has translated into emotional despair felt by many American Indian people. As a result, many American Indian people engage in dysfunctional coping patterns, such as substance use, physical aggression, and emotional detachment from Native traditions. These coping patterns strongly influence the continuation of trauma among American Indian people. It is important to remember that until this historical loss is appropriately recognized and dealt with among American Indian people this cycle is likely to continue.

The purpose of this study was to identify factors related to current alcohol use for American Indian people. This study was limited in that data was collected utilizing internet procedures. While the majority of this sample was college educated, the younger, male population confirmed to have the most problems with alcohol use was not represented in this study. The majority of the research participants in this study were women. Furthermore, this study did not focus on one American Indian tribe or nation. Therefore, the results should be interpreted with caution, and considered with care, especially when working with American Indian people.

It is recommended that practitioners learn about the individual relationship each American Indian client may have with alcohol and how personal and cultural factors may have directly influenced alcohol use. Given the findings of this study, it is important for counselors, psychologists, and healers to understand what people expect to get from drinking and to understand how the historical losses of American Indian people might affect their drinking behavior as a starting point in working with alcohol use among

American Indian people. These historical losses may be explored beginning with traditional beliefs and stories about the historical losses all the way to current losses and traumas experienced among the individual client and American Indian community within which your client may be a part of.

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Table 1
Demographic Information

	Female	Male	Total
<u>Age</u>			
Mean	41	41	41
<u>Quantum (n =)</u>			
Less than 1/16	3	2	5
1/16	6	1	7
1/8	6	4	10
1/4	17	10	27
1/2	38	12	52
3/4	19	14	35
4/4	42	12	54
<u>Education (n =)</u>			
Secondary	27	10	38
Post-Secondary	104	45	152
<u>Residence (n =)</u>			
Reservation	85	33	121
Rural	70	39	110
Urban	103	41	148

Table 2 Tribal Affiliation

Tribal Affiliation	N
Absentee Shawnee	1
Acoma Pueblo	1
Alabama-Coushatta	2
Alabama-Coushatta Tribe of Texas	
Apache	5
Arapaho	2
Arikara	4
Anishinabe	2
Assiniboine	3
Bad River Band WI	1
Blackfeet	1
Caddo	1
Cheyenne	3
Cheyenne-Arapaho	2
Chickasaw	2
Choctaw	10
Cree	2
Plains Cree	1
Creek	8
Crow	4
Cherokee	21
Chippewa-Cree	1
Chippewa	3
Comanche	2
Coushatta	1
Dine (Navajo)	19
EBCI: Eastern Cherokee Band of American Indians	1
Fort Sill Apache (Chiricahua)	1
Gros Ventre	2
Hidatsa Nation (three affiliated tribes)	4
Ho-Chunk of WI	1
Hopi	4
Hualapai	1
Isleta	2
Jemez Pueblo	3
Jicarilla Apache Nation	7
Iowa	2
Kaw Nation of Oklahoma	1
Kickapoo	4
Kiowa	6
Lac Courte Oreilles Band of Lake Superior Chippewa	3

Lac Courte Oreilles Band of Lake Superior Ojibwa	4
Lac du Flambeau Band Of Lake Superior Chippewa	1
Laguna Pueblo	1
Lake Superior Band of Chippewa	1
Lakota	2
Leech Lake Band of Ojibwe	3
Lower Brule Sioux – SD	2
Mandan Nation	2
Maricopa	1
Mdewakanton Sioux	1
Menominee	1
Mescalero Apache	1
Mexican Karankawa	3
MicMac	1
Minnesota Chippewa Tribe	4
Minnesota Chippewa Tribe-Leech Lake Band	1
Mississippi Band of Choctaw American Indians	14
Muskogee Creek	6
Nez Perce Tribe	1
Odawa	1
Oglala Sioux Tribe	1
Okay Owingeh (Formerly San Juan)	1
Ojibiway	7
Omaha Tribe of Nebraska	3
Omaha Nation of Iowa	1
Oneida Nation of American Indians of Wisconsin	2
Osage	4
Ottawa	1
Otoe	2
Otoe-Missouria	2
Owens Valley Paiute	1
Piaute	1
Pawnee Tribe	4
Pima	1
Pine Ridge - SD	1
Ponca	3
Pottawatomi	1
Powhattan	1
Red Cliff Band of Lake Superior Chippewa	2
Red lake Nation	1
Rosebud Sioux Tribe	3
Sac and Fox	4
San Carlos Apache Tribe	3
San Felipe Pueblo	1
San Ildefonso Pueblo	1
Santa Clara Pueblo	8

Seminole	2
Seminole Tribe of Florida	1
Seneca-Cayuga	1
Shakopee	1
Shawnee	1
Sicangu	2
Sioux	8
Spirit Lake Nation	2
Standing Rock Sioux Tribe (South Dakota side)	5
Standing Rock Tribe, Lakota Nation	
Tewa from Arizona	1
Tiano	1
Tohono O'odham	2
Tohono 'Odom	
Tongva/Gabrielino, San Gabriel Mission	1
Tonkawa	1
Turtle Mountain Chippewa, Belcourt, ND	4
Turtle Mountain Band of Chippewa American Indians	
Turtle Mountain Chippewas	
Turlte Mountatin Band of Chippewa	
Western Delaware of Oklahoma	1
White Earth Band of Chippewa	1
White Earth band of Ojibwe	1
Yuchi	1
Zia Pueblo	1

Table 3

Subscale Reliability Coefficients

Variable	χ	Mean	SD
<u>Alcohol Use Disorders Identification Test</u>			
Hazardous Drinking	.68	3.56	2.56
Dependence	.34	1.44	.94
Harmful	.67	1.98	2.65
Total Score	.83	6.18	5.59

Alcohol Effects Questionnaire

Global Positive	.58	1.08	.90
Social and Physical Pleasure	.74	2.79	1.66
Sexual Enhancement	.79	1.73	1.70
Power and Aggression	.77	2.52	1.97
Social Expressiveness	.77	2.91	1.72
Tension Reduction	.63	2.50	1.54
Cognitive and Physical Impairment	.73	3.27	1.64
Careless Unconcern	.77	2.57	1.46

American Indian Acculturation Scale

Total Score	.84	60.10	10.32
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Historical Loss Subscales

Historical Loss Thoughts	.95	43.00	14.30
Historical Loss Feelings	.93	37.60	12.95
Total Score	.80	80.00	14.42

Table 4

Descriptive Statistics for Main Study Variables

Variable	Mean	SD	Minimum	Maximum
<u>Alcohol Use Disorders Identification Test</u>				
Total Score	6.18	5.59	0	27
 <u>Alcohol Effects Questionnaire</u>				
Social and Physical Pleasure	2.79	1.65	0	5
Sexual Enhancement	1.73	1.70	0	5
Power and Aggression	2.52	1.97	0	6
Social Expressiveness	2.91	1.72	0	5
Cognitive and Physical Impairment	3.27	1.64	0	5
Careless Unconcern	2.57	1.46	0	4
 <u>American Indian Acculturation Scale</u>				
Average Score	3.00	.52	1.70	4.40
 <u>Historical Loss Subscales</u>				
Historical Loss Feelings	36.59	12.95	17.00	84.00
Historical Loss Thoughts	42.96	14.30	12.00	72.00

Table 5

T-tests (two-tailed) for Gender Differences (Men & Women) in Alcohol Use Level (Total AUDIT Score)

Variable	t	df	p	Mean Difference
Alcohol Use Disorders Identification Test	-4.33	180	.00	-3.78

Table 6

T-tests (two-tailed) for Gender Differences (Men & Women) in Alcohol Expectancies

Variable	t	df	p	Mean Difference
Social and Physical Pleasure	-2.47	181	.02	-.65
Sexual Enhancement	1.23	182	.22	.34
Power and Aggression	-2.08	182	.04	-.66
Social Expressiveness	-1.18	182	.24	-.33
Cognitive and Physical Impairment	.71	180	.48	.19
Careless Unconcern	-2.12	181	.04	-.50

Table 7

T-tests (two-tailed) for Gender Differences (Men & Women) in Historical Loss Thoughts and Historical Loss Feelings

Variable	t	df	p	Mean Difference
Historical Loss Thoughts	1.34	186	.18	3.07
Historical Loss Feelings	-1.34	186	.18	-2.76

Table 8

Subscale Means by Gender (Female and Male) for Alcohol Use (AUDIT), Alcohol Expectancies (AEQ), Historical Loss Thoughts, and Historical Loss Feelings

Variable	Gender	N	Mean	SD
Alcohol Use Disorders Identification Test (AUDIT)				
Total	F	128	5.07	4.53
	M	54	8.85	7.00
Alcohol Effects Questionnaire (AEQ)				
Social and Physical Pleasure	F	129	2.60	1.70
	M	54	3.26	1.46
Sexual Enhancement	F	130	1.84	1.73
	M	54	1.50	1.63
Power and Aggression	F	130	2.32	1.91
	M	54	2.98	2.05
Social Expressiveness	F	130	2.82	1.74
	M	54	3.15	1.64
Cognitive and Physical Impairment	F	128	3.34	1.69
	M	54	3.15	1.51
Careless Unconcern	F	129	2.43	1.52
	M	54	2.93	1.27
Historical Loss				
Historical Loss Thoughts	F	133	43.91	14.20
	M	55	40.84	14.45
Historical Loss Feelings	F	133	35.73	13.35
	M	55	38.49	11.75

Table 9

Correlation Matrix of Main Study Variables Alcohol Use (AUDIT), Alcohol Expectancies (SPP, SEX, AGG, SOC, IMP, CU), Historical Loss Thoughts (HL-T), Historical Loss Feelings (HL-F), and Acculturation (NAAS)

	AUDIT	SPP	SEX	AGG	SOC	IMP	CU	HL-T	HL-F	NAAS
AUDIT	-									
SPP	.37**	-								
SEX	.23**	.31**	-							
AGG	.36**	.23**	.36**	-						
SOC	.24**	.42**	.50**	.51**	-					
IMP	.15*	.21**	.23**	.42**	.34**	-				
CU	.28**	.16*	.32**	.60**	.46**	.60**	-			
HL-T	-.03	-.09	-.21**	-.19*	-.11	-.02	-.10	-		
HL-F	.28**	.19*	.33**	.32**	.33**	.15*	.25**	-.44**	-	
NAAS	-.02	.03	.14*	-.12	.08*	.02	.03	.24**	-.13	-

* Significant at .05 level

** Significant at .01 level

Table 10

Multiple Regression of Alcohol Expectancies, Acculturation, Historical Loss Thoughts, and Historical Loss Feelings on Alcohol Use

	R	R ²	R ² Change	F	F Change
Model 1	.52	.27	.27	6.77	6.77
Main Predictor Variables (SPP; SEX; AGG; SOC; IMP; CU; HL-T; HL-F; NAAS)					

Table 11

Forward Regression of Alcohol Expectancies, Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of Alcohol Use

	R	R ²	R ² Change	F	F Change	β
Social and Physical Pleasure	.37	.14	.14	27.91**	27.91**	.37
	.46	.21	.08	23.55**	16.69**	.28
Power and Aggression	.49	.24	.02	17.87*	5.36*	.16

Historical Loss Feelings

** Significant at .01

* Significant at .05

Table 12

Forward Regression of Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of the Alcohol Expectancy for Social and Physical Pleasure

	R	R ²	R ² Change	F	F Change	β
Historical Loss Feelings	.19	.03	.03	6.53	6.53	.1

Table 13

Forward Regression of Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of the Alcohol Expectancy for Sexual Enhancement

	R	R ²	R ² Change	F	F Change	β
Historical Loss Feelings	.33	.11	.11	22.66	22.66	.33
Native American Acculturation	.38	.14	.03	15.35	7.28	.19

Table 14

Forward Regression of Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of the Alcohol Expectancy for Power and Aggression

	R	R ²	R ² Change	F	F Change	β
Historical Loss Feelings	.32	.10	.10	20.92	20.92	.32

Table 15

Forward Regression of Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of the Alcohol Expectancy for Social Expressiveness

	R	R ²	R ² Change	F	F Change	β
Historical Loss Feelings	.33	.11	.11	22.58	22.58	.33

Table 16

Forward Regression of Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of the Alcohol Expectancy for Cognitive and Physical Impairment

	R	R ²	R ² Change	F	F Change	β
Historical Loss Feelings	.15	.02	.02	4.10	4.10	.15

Table 17

Forward Regression of Acculturation, Historical Loss Thoughts, and Historical Loss Feelings as Predictors of the Alcohol Expectancy for Careless Unconcern

	R	R ²	R ² Change	F	F Change	β
Historical Loss Feelings	.25	.06	.06	12.32	12.32	.25

Table 18

One-way ANOVA for Acculturation (More Traditional vs. More Assimilated) and Alcohol Use

Alcohol Use	Acculturation	
	More Traditional	More Assimilated
	m = 6.27	m = 6.05
	sd = 6.11	sd = 4.82
	n = 108	n = 78

Table 19

One-way MANOVA for Acculturation (More Traditional vs. More Assimilated) and Alcohol Expectancies

	More Traditional	More Assimilated
Social and Physical Pleasure	m = 2.71 sd = 1.69	m = 2.90 sd = 1.63
Sexual Enhancement	m = 1.52 sd = 1.62	m = 2.01 sd = 1.76
Power and Aggression	m = 2.66 sd = 1.93	m = 2.40 sd = 2.05
Social Expressiveness	m = 2.84 sd = 1.71	m = 3.06 sd = 1.71
Cognitive and Physical Impairment	m = 3.21 sd = 1.67	m = 3.35 sd = 1.58
Careless Unconcern	m = 2.57 sd = 1.49	m = 2.64 sd = 1.41
	N = 105	N = 78

Table 20

Alcohol Expectancies by Drinking Groups

	Hazardous		Non-Hazardous	
Women	AEQ SPP = 3.26	SD = 1.50	AEQ SPP = 2.36	SD = 1.74
	AEQ SEX = 2.24	SD = 1.88	AEQ SEX = 1.68	SD = 1.64
	AEQ AGG = 2.97	SD = 2.07	AEQ AGG = 2.01	SD = 1.71
	AEQ SOC = 3.37	SD = 1.51	AEQ SOC = 2.61	SD = 1.76
	AEQ IMP = 3.37	SD = 1.70	AEQ IMP = 3.27	SD = 1.68
	AEQ CU = 2.95	SD = 1.33	AEQ CU = 2.23	SD = 1.54
	(n=38)		(n=84)	
Men	AEQ SPP = 4.00	SD = .82	AEQ SPP = 2.84	SD = 1.53
	AEQ SEX = 2.23	SD = 1.85	AEQ SEX = 1.03	SD = 1.28
	AEQ AGG = 4.09	SD = 1.82	AEQ AGG = 2.29	SD = 1.85
	AEQ SOC = 3.59	SD = 1.56	AEQ SOC = 2.94	SD = 1.59
	AEQ IMP = 3.81	SD = 1.22	AEQ IMP = 2.77	SD = 1.48
	AEQ CU = 3.45	SD = .80	AEQ CU = 2.65	SD = 1.36
	(n=22)		(n=31)	

SPP = Social and Physical Pleasure
 SEX = Sexual Enhancement
 AGG = Power and Aggression

SOC = Social Expressiveness
 IMP = Cognitive Impairment
 CU = Careless Unconcern

Table 21

Historical Loss by Drinking Groups

	Hazardous	Non-Hazardous
Women	Historical Loss Thoughts	Historical Loss Thoughts
	M = 40.95	M = 44.93
	SD = 14.16	SD = 14.03
	Historical Loss Feelings	Historical Loss Feelings
	M = 41.71	M = 33.48
	SD = 15.39	SD = 11.96
	(n = 38)	(n = 90)
Men	Historical Loss Thoughts	Historical Loss Thoughts
	M = 43.87	M = 38.03
	SD = 15.19	SD = 13.47
	Historical Loss Feelings	Historical Loss Feelings
	M = 41.57	M = 36.71
	SD = 11.87	SD = 11.25
	(n = 23)	(n = 31)

APPENDIX A Demographic Sheet

Directions: Please answer each question by filling in the blank, checking the blank, or circling the number that best describes you.

1) How old are you? Age _____

2) Gender: _____ Female _____ Male _____ Other

3) What Native American Indian tribe (or tribes) are you from? (Please list all)

4) Your degree of Indian blood:

_____ Less than 1/16 _____ 1/16 _____ 1/8 _____ 1/4 _____ 1/2 _____ 3/4 _____ 4/4

5) Where have you lived? (Check all that apply) _____ urban _____ rural _____ reservation (tribal area)

6) How many years of school have you completed?

_____ a) Elementary School

_____ b) Junior High

_____ c) High School

_____ d) Graduate Equivalent Degree
(G.E.D.)

_____ e) Associate's Degree

_____ f) Bachelor's Degree/Vocational-Technical School or other college

_____ g) Graduate School

7) What is your present occupation? _____

8) Are you:

_____ a) Single

_____ b) Partnered/Common Law

_____ c) Married

_____ d) Separated

_____ e) Divorced

_____ f) Widowed

_____ g) Other

9) What type of school did you attend? (check all that apply)

_____ boarding school _____ public school _____ private school (Catholic or other)

_____ BIA school _____ military school

10) Who raised you during your childhood? (check all that apply)

mother and father father only mother only grandparents
 aunt/uncle other extended family friend other (please specify):

11) Have you ever served in the U.S. Armed Forces? (If yes, please check which branch)

Air Force Army Marine Corps Navy
 Air National Guard Army National Guard Coast Guard
 Reserve

12) If you have served in the U.S. Armed Forces did you ever serve in a combat zone? (If yes, please check which zone)

WWII Korea Vietnam Afghanistan Iraq
 Somalia
 Bosnia (any other zone)

APPENDIX B: Alcohol Effects Questionnaire (AEQ)

Directions: I would like to find out what you personally experience after you have had a few alcoholic drinks. For the following possible experiences, if an item is always or sometimes true for you, mark an X in the line under true. If the item is rarely or never true for you, mark an X in the line under false. Please answer every question without skipping any.

	True	False
1. Drinking makes me feel flushed.	_____	_____
2. Alcohol decreases muscular tension in my body.	_____	_____
3. Drinking makes me feel less shy.	_____	_____
4. Alcohol enables me to fall asleep much more easily.	_____	_____
5. I feel powerful when I drink, as if I can really influence others to do what I want.	_____	_____
6. I'm more clumsy after I drink.	_____	_____
7. I'm more romantic when I drink.	_____	_____
8. Drinking makes the future seem brighter to me.	_____	_____
9. If I have had alcohol it is easier for me to tell someone off.	_____	_____
10. I can't act as quickly when I've been drinking.	_____	_____
11. Alcohol can act as an anesthetic for me; that is, it can deaden the pain.	_____	_____
12. I often feel sexier after I've been drinking.	_____	_____
13. Drinking makes me feel good.	_____	_____
14. Alcohol makes me careless about my actions.	_____	_____
15. Alcohol has a pleasant, cleansing, tingly taste to me.	_____	_____
16. Drinking increases my aggressiveness.	_____	_____
17. Alcohol seems like magic to me.	_____	_____
18. Alcohol makes it hard for me to concentrate.	_____	_____
19. After drinking, I'm a better lover.	_____	_____
20. When I'm drinking, it is easier to open up and express my feelings.	_____	_____
21. Drinking adds a certain warmth to social occasions for me.	_____	_____
22. If I'm feeling restricted in any way, drinking makes me feel better.	_____	_____
23. I can't think as quickly after I drink.	_____	_____
24. Having drinks is a nice way for me to celebrate special occasions.	_____	_____
25. Alcohol makes me worry less.	_____	_____
26. Drinking makes me inefficient.	_____	_____
27. Drinking is pleasurable because it's enjoyable for me to join in with other people who are enjoying themselves.	_____	_____
28. After drinking, I am more sexually responsive.	_____	_____
29. I feel more coordinated after I drink.	_____	_____

- 30. I'm more likely to say embarrassing things after drinking. _____
- 31. I enjoy having sex more if I've had alcohol. _____
- 32. I'm more likely to get into an argument if I've had alcohol. _____
- 33. Alcohol makes me less concerned about doing things well. _____
- 34. Alcohol helps me sleep better. _____
- 35. Drinking gives me more confidence in myself. _____
- 36. Alcohol makes me more irresponsible. _____
- 37. After drinking it is easier for me to pick a fight. _____
- 38. Alcohol makes it easier for me to talk to people. _____
- 39. If I have alcohol it is easier for me to express my feelings. _____
- 40. Alcohol makes me more interesting. _____

APPENDIX C: Alcohol Use Disorders Identification Test (AUDIT)

Please circle the answer that is correct for you

1. How often do you have a drink containing alcohol?

Never	Monthly or less	Two to four times a month	Two to three times per week	Four or more times a week
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2. How many drinks containing alcohol do you have on a typical day when you are drinking?

1 or 2	3 or 4	5 or 6	7 to 9	10 or more
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3. How often do you have six or more drinks on one occasion?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
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4. How often during the last year have you found that you were not able to stop drinking once you had started?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
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5. How often during the last year have you failed to do what was normally expected from you because of drinking?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
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6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
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7. How often during the last year have you had a feeling of guilt or remorse after drinking?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
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8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
-------	-------------------	---------	-----------------------------	---------------------------

9. Have you or someone else been injured as a result of your drinking?

No	Yes, but not in the last year	Yes, during the last year
----	-------------------------------	---------------------------

10. Has a relative or friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?

No	Yes, but not in the last year	Yes, during the last year
----	-------------------------------	---------------------------

APPENDIX D: Native American Acculturation Scale (NAAS)

Instructions: This questionnaire will collect information about your background and cultural identity. For each item, choose the one answer that best describes you by circling the number that matches your experience.

-- 1. What language can you speak?

1. Tribal language only (e.g., Cherokee, Navajo, and Lakota)
2. Mostly tribal language, some English
3. Tribal language and English about equally well (bilingual)
4. Mostly English, some tribal language
5. English only

-- 2. What language do you prefer?

1. Tribal language only (e.g., Cherokee, Navajo, and Lakota)
2. Mostly tribal language, some English
3. Tribal language and English about equally well (bilingual)
4. Mostly English, some tribal language
5. English only

-- 3. How do you identify yourself?

1. Native American
2. Native American and some non-Native American (e.g., White, African American, Latino, and Asian American)
3. Native American and non-Native American (bicultural)
4. Non-Native American and some Native American
5. Non-Native American (e.g., White, African American, Latino, and Asian American)

-- 4. Which identification does (did) your mother use?

1. Native American
2. Native American and some non-Native American (e.g., White, African American, Latino, and Asian American)
3. Native American and non-Native American (bicultural)
4. Non-Native American and some Native American
5. Non-Native American (e.g., White, African American, Latino, and Asian American)

-- 5. Which identification does (did) your father use?

1. Native American
2. Native American and some non-Native American (e.g., White, African American, Latino, and Asian American)
3. Native American and non-Native American (bicultural)
4. Non-Native American and some Native American
5. Non-Native American (e.g., White, African American, Latino, and Asian American)

- 6. What was the ethnic origin of friends you had as a child up to age 6?
1. Only Native Americans
 2. Mostly Native Americans
 3. About equally Native Americans and non-Native Americans
 4. Mostly non-Native Americans (e.g., Whites, African Americans, Latinos, and Asian Americans)
 5. Only non-Native Americans
- 7. What was the ethnic origin of friends you had as a child 6 to 18?
1. Only Native Americans
 2. Mostly Native Americans
 3. About equally Native Americans and non-Native Americans
 4. Mostly non-Native Americans (e.g., Whites, African Americans, Latinos, and Asian Americans)
 5. Only non-Native Americans
- 8. Who do you associate with now in your community?
1. Only Native Americans
 2. Mostly Native Americans
 3. About equally Native Americans and non-Native Americans
 4. Mostly non-Native Americans (e.g., Whites, African Americans, Latinos, and Asian Americans)
 5. Only non-Native Americans
- 9. What music do you prefer?
1. Native American music only (e.g., pow-wow music, traditional flute, contemporary, and chant)
 2. Mostly Native American music
 3. Equally Native American and other music
 4. Mostly other music (e.g., rock, pop, country, and rap)
 5. Other music only
- 10. What movies do you prefer?
1. Native American movies only
 2. Mostly Native American movies
 3. Equally Native American and other movies
 4. Mostly other movies
 5. Other movies only
- 11. Where were you born?
1. Reservation, Native American community
 2. Rural area, Native American community
 3. Urban area, Native American community
 4. Urban or Rural area, near Native American community

5. Urban or Rural area, away from Native American community

-- 12. Where were you raised?

1. Reservation, Native American community
2. Rural area, Native American community
3. Urban area, Native American community
4. Urban or Rural area, near Native American community
5. Urban or Rural area, away from Native American community

-- 13. What contact have you had with Native American communities?

1. Raised for 1 year or more on the reservation or other Native American community
2. Raised for 1 year or less on the reservation or other Native American community
3. Occasional visits to the reservation or other Native American community
4. Occasional communications with people on reservation or other Native American community
5. No exposure or communications with people on reservation or other Native American community

-- 14. What foods do you prefer?

1. Native American foods only
2. Mostly Native American foods and some other foods
3. About equally Native American foods and other foods
4. Mostly other foods
5. Other foods only

-- 15. In what language do you think?

1. Tribal language only (e.g., Cherokee, Navajo, and Lakota)
2. Mostly tribal language, some English
3. Tribal language and English about equally well (bilingual)
4. Mostly English, some tribal language
5. English only

-- 16. Do you

1. Read only a tribal language (e.g., Cherokee, Navajo, and Lakota)
2. Read a tribal language better than English
3. Read both a tribal language and English about equally well
4. Read English better than a tribal language
5. Read only English

-- 17. Do you

1. Write only a tribal language (e.g., Cherokee, Navajo, Lakota)
2. Write a tribal language better than English
3. Write both a tribal language and English about equally well

4. Write English better than a tribal language
5. Write only English

-- 18. How much pride do you have in Native American culture and heritage?

1. Extremely proud
2. Moderately proud
3. A little pride
4. No pride, but do not feel negative toward group
5. No pride, but do feel negative toward group

-- 19. How would you rate yourself?

1. Very Native American
2. Mostly Native American
3. Bicultural
4. Mostly non-Native American
5. Very non-Native American

-- 20. Do you participate in Native American traditions, ceremonies, occasions, and so on?

1. All of them
2. Most of them
3. Some of them
4. A few of them
5. None at all

APPENDIX E: Historical Loss Scale/ Historical Loss Associated Symptoms Scale

HG1. American Indian people have experienced many losses since we came into contact with Europeans (Whites). Please read the types of losses that people have mentioned to us (the scale developers), and I would like you to circle how often you think of these losses, from never thinking about them to thinking about them several times a day. DK/REF means you don't know or refuse to answer that particular item.

Do you think of this...

	LOSSES	Several Times a Day	Daily	Weekly	Monthly	Yearly or only at special times	Never	DK/ REF
A	The loss of our land	1	2	3	4	5	6	9
B	The loss of our language	1	2	3	4	5	6	9
C	Losing our traditional spiritual ways	1	2	3	4	5	6	9
D	The loss of our family ties because of boarding schools	1	2	3	4	5	6	9
E	The loss of families from the reservation to government relocation	1	2	3	4	5	6	9
F	The loss of self respect from poor treatment by government officials	1	2	3	4	5	6	9
G	The loss of trust in whites from broken treaties	1	2	3	4	5	6	9
H	Losing our culture	1	2	3	4	5	6	9
I	The losses from the effects of alcoholism on our people	1	2	3	4	5	6	9

Do you think of this...

	LOSSES	Several Times a Day	Daily	Weekly	Monthly	Yearly or only at special times	Never	DK/ REF
--	--------	---------------------	-------	--------	---------	---------------------------------	-------	---------

J	Loss of respect by our children and grandchildren for elders	1	2	3	4	5	6	9
K	Loss of our people through early death	1	2	3	4	5	6	9
L	Loss of respect by our children for traditional ways	1	2	3	4	5	6	9

HG2. Now, I would like to ask you about how you feel when you think about these losses.

How often do you feel ...		Is it....					
	FEELING	Never	Seldom	Sometimes	Often	Always	DK/ REF
A	Sadness or depression	1	2	3	4	5	9
B	Anger	1	2	3	4	5	9
C	Like you are remembering these losses when you don't want to	1	2	3	4	5	9
D	Anxiety or nervousness	1	2	3	4	5	9
E	Uncomfortable around white people when you think of these losses	1	2	3	4	5	9
F	Shame when you think of these losses	1	2	3	4	5	9

How often do you feel ... Is it....

	FEELING	Never	Seldom	Sometimes	Often	Always	DK/ REF
G	A sense of weakness or helplessness	1	2	3	4	5	9
H	A loss of concentration	1	2	3	4	5	9
I	Bad dreams or nightmares	1	2	3	4	5	9
J	Feel isolated or distant from other people when you think of these losses	1	2	3	4	5	9
K	A loss of sleep	1	2	3	4	5	9
L	Feel the need to drink or take drugs when you think of these losses	1	2	3	4	5	9
M	Rage	1	2	3	4	5	9
N	Fearful or distrustful of the intentions of white people	1	2	3	4	5	9
O	There is no point in thinking about the future	1	2	3	4	5	9
P	Like it is happening again	1	2	3	4	5	9
Q	Like avoiding places or people that remind you of these losses	1	2	3	4	5	9

Appendix F: On-line Script

Hello, my name is Melanie J. Cain and I am a graduate student in Counseling Psychology at Oklahoma State University. I am requesting your participation with my American Indian research study. I am exploring the unique personal and cultural experiences of being American Indian and how these experiences relate to alcohol use. This research will be of great benefit to American Indian people because little is known about the unique personal and cultural experiences associated with alcohol use among American Indian people. There are no foreseeable risks in participating in this study.

Your participation would involve completing four questionnaires and a demographic sheet, on-line. This should take you no more than 25-30 minutes to complete. Due to the nature and focus of this study participants must be at least 18 years of age and have used alcohol.

If you participate in this study, you will have the opportunity to enter into a drawing to win a Pendleton Blanket.

Whether you choose to participate in this study or not, I would greatly appreciate it if you could please forward this email to other American Indians you know that may be interested. Thank you so much for your help with this very important study.

Your participation in this study is completely voluntary and all survey information collected in this study is strictly confidential. There will be no way to connect your identity to your survey responses.

If you would like to participate in this study, please click here:
<http://fp.okstate.edu/coe-sahep/cain>.

Melanie J. Cain (Santa Clara Pueblo/Jicarilla Apache)
Doctoral Candidate
Oklahoma State University
(405) 744-6040
melanie.j.cain@okstate.edu

Appendix H: On-line Informed Consent

You are invited to participate in a study exploring personal and cultural factors unique to American Indian people and their relationship with alcohol use. Due to the nature of this study you must be at least 18 years of age and have used alcohol. Participation in this study involves the completion of four questionnaires and a demographic form, which should take approximately 25-30 minutes to complete.

The potential benefit of participating in this study is that you will provide valuable information about personal and cultural experiences that may or may not be related to alcohol use among American Indian people which is an important area of research. We hope this information will guide health professionals in developing more culturally meaningful services for Native American people. There are no foreseeable risks in participating in this study.

Whether you choose to participate in the study or not, we would appreciate your help in forwarding the link to this study (<http://fp.okstate.edu/coe-sahep/cain>) to other Native American people who might be interested in participating in this study. This can include family, friends, or acquaintances.

Participation in this study is completely voluntary. There is no penalty for not participating and you have the right to withdraw your consent and participation at any time. If you agree to participate, please click on the “Accept” button. If you do not wish to participate, please click the “Decline” button. By clicking the “Accept” button, this will serve as informed consent and electronic signature for participation in this study.

All information collected in this study is strictly confidential. Since you will not write your name anywhere on the questionnaires there will be no way to connect your identity with your survey responses. We will be summarizing the overall findings of the group as a whole, in any professional presentations or publications.

After you have completed the questionnaires you will be connected to a link, separate from the study, allowing you the option to enter a drawing to win a Pendleton Blanket. If you choose to enter the drawing, you will be asked to provide your name and contact information for the sole purpose of informing the winner of the drawing. Your name and contact information will be collected separately from your survey responses. If you are the winner of the drawing, you will be contacted no later than April 2007.

Your participation in this study is greatly appreciated. If you have any questions concerning this study, please feel free to contact Melanie J. Cain, BGS, (405) 744-6040 or Carrie Winterowd, Ph.D., (405) 744-6040. You may also contact Sue Jacobs, Ph.D., Chair, IRB committee, Oklahoma State University, 219 Cordell North, Stillwater, OK 74078 at (405) 744-9895 if you have questions about participant rights related to this study.

[Accept](#)

[Decline](#)

Appendix I: Resources-Contact Sheet

Counseling Resources

Thank you for participating in this study. I am very interested in how American Indian people's personal and cultural beliefs may influence their alcohol use. Sometimes, when people participate in research studies, they may become aware of their own feelings and experiences that they may wish to discuss with others, including health care professionals such as counselors or psychologists.

If you are interested in knowing the counseling resources available to you in your community, please contact either your tribal/nation counseling center or contact the primary researcher of this study, Melanie J. Cain via e-mail at: melanie.j.cain@okstate.edu. Please use "[counseling resources](#)" in the subject line of your e-mail. Upon receiving your request, the primary investigator will contact you to determine the nature of your request so that the most appropriate resources may be located.

Thank you.

Drawing

If you are interested in entering the drawing to win a Pendleton Blanket please fill out the following contact sheet. If you are the winner of the drawing you will be contacted and the blanket will be delivered via United States Postal Service. The drawing will take place no later than April 2007. This contact information is in no way associated with your survey responses. Please click on the submit icon after you provide your information. Thank you.

Name: _____

Phone Number: _____

E-mail: _____

Home Address: _____

Oklahoma State University Institutional Review Board

Date: Tuesday, November 14, 2006
IRB Application No ED06184
Proposal Title: An Examination of the Personal, Psychological, and Cultural Factors Related to Alcohol Use and Abuse in American Indian/Native American People
Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/13/2007

Principal Investigator(s)

Melanie J. Cain
704 W. 8th St. Apt. 10
Stillwater, OK 74074

Carrie Winterowd
434 Willard
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Sue C. Jacobs, Chair
Institutional Review Board

Informed Consent

You are invited to participate in a study exploring personal and cultural factors unique to American Indian people and their relationship with alcohol use. Due to the nature of this study you must be at least 18 years of age and have used alcohol. Participation in this study involves the completion of four questionnaires and a demographic form, which should take approximately 25-30 minutes to complete.

The potential benefit of participating in this study is that you will provide valuable information about personal and cultural experiences that may or may not be related to alcohol use among American Indian people which is an important area of research. We hope this information will guide health professionals in developing more culturally meaningful services for Native American people. There are no foreseeable risks in participating in this study.

Whether you choose to participate in the study or not, we would appreciate your help in forwarding the link to this study (http://cwinter/mel's_dissertation.html) to other Native American people who might be interested in participating in this study. This can include family, friends, or acquaintances.

Participation in this study is completely voluntary. There is no penalty for not participating and you have the right to withdraw your consent and participation at any time. If you agree to participate, please click on the "Accept" button. If you do not wish to participate, please click the "Decline" button. By clicking the "Accept" button, this will serve as informed consent and electronic signature for participation in this study.

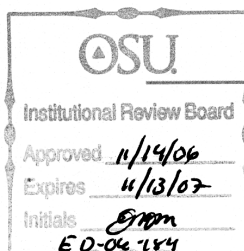
All information collected in this study is strictly confidential. Since you will not write your name anywhere on the questionnaires there will be no way to connect your identity with your survey responses. We will be summarizing the overall findings of the group as a whole, in any professional presentations or publications.

After you have completed the questionnaires you will be connected to a link, separate from the study, allowing you the option to enter a drawing to win a Pendleton Blanket. If you choose to enter the drawing, you will be asked to provide your name and contact information for the sole purpose of informing the winner of the drawing. Your name and contact information will be collected separately from your survey responses. If you are the winner of the drawing, you will be contacted no later than April 2007.

Your participation in this study is greatly appreciated. If you have any questions concerning this study, please feel free to contact Melanie J. Cain, BGS, (405) 744-6040 or Carrie Winterowd, Ph.D., (405) 744-6040. You may also contact Sue Jacobs, Ph.D., Chair, IRB committee, Oklahoma State University, 219 Cordell North, Stillwater, OK 74078 at (405) 744-9895 if you have questions about participant rights related to this study.

Accept

Decline



SCRIPT

Hello, my name is Melanie J. Cain and I am a graduate student in Counseling Psychology at Oklahoma State University. I am requesting your participation with my American Indian research study. I am exploring the unique personal and cultural experiences of being American Indian and how these experiences relate to alcohol use. This research will be of great benefit to American Indian people because little is known about the unique personal and cultural experiences associated with alcohol use among American Indian people. There are no foreseeable risks in participating in this study.

Your participation would involve completing four questionnaires and a demographic sheet, on-line. This should take you no more than 25-30 minutes to complete. Due to the nature and focus of this study participants must be at least 18 years of age and have used alcohol.

If you participate in this study, you will have the opportunity to enter into a drawing to win a Pendleton Blanket.

Whether you choose to participate in this study or not, I would greatly appreciate it if you could please forward this email to other American Indians you know that may be interested. Thank you so much for your help with this very important study.

Your participation in this study is completely voluntary and all survey information collected in this study is strictly confidential. There will be no way to connect your identity to your survey responses.

If you would like to participate in this study, please click here: http://cwinter/mel's_dissertation.html.

Melanie J. Cain (Santa Clara Pueblo/Jicarilla Apache)
Doctoral Candidate
Oklahoma State University
(405) 744-6040
melanie.j.cain@okstate.edu



VITA

Melanie Joy Cain

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN EXAMINATION OF THE PSYCHOLOGICAL AND CULTURAL FACTORS RELATED TO ALCOHOL USE IN AMERICAN INDIAN PEOPLE

Major Field: Counseling Psychology

Biographical:

Personal Data: Born in Espanola, New Mexico, of Native American and Spanish descent. Grew up in the Southwestern United States. Enlisted in the United States Air Force in 1993, served as an enlisted service member until December of 1998.

Education: Graduated from Camelback High School, Phoenix Arizona in May of 1993. Attended the Community College of the Air Force; Park College at Laughlin Air Force Base; Southwest Texas Junior College in Del Rio, Texas; University of Nebraska at Omaha in Omaha, Nebraska; Metropolitan Community College in Omaha, Nebraska; and Bellevue University in Bellevue, Nebraska. Graduated with a Bachelor's in General Studies in August of 1999, Major: Psychology, Minor: Sociology. Completed all course requirements, excluding dissertation requirement in Fall of 2006.

Experience: Enlisted as an active duty service member in the United States Air Force from February 1993 – December 1998; Employed by Oklahoma State University as a Graduate Assistant from; Completed various psychology practicum sites within the state of Oklahoma; Completed psychology internship at the Pacific Islands Veteran's Administration Hospital in Honolulu, Hawaii.

Name: Melanie Joy Cain

Date of Degree: May, 2007

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: AN EXAMINATION OF THE PSYCHOLOGICAL AND CULTURAL
FACTORS RELATED TO ALCOHOL USE IN AMERICAN INDIAN
PEOPLE

Pages in Study: 152

Candidate for the Degree of Doctor of Philosophy

Major Field: Counseling Psychology

Scope and Method of Study: The primary purposes of this study were to identify significant predictors of alcohol use and alcohol expectancies; and acculturation group differences in alcohol use and alcohol expectancies in an American Indian sample. The participants were 188 American Indians from a variety of tribal affiliations. Data was collected using an on-line survey. Each participant completed the Alcohol Use Disorders Identification Test, the Alcohol Effects Questionnaire, the Historical Loss Questionnaire, the Historical Loss Associated Symptoms Questionnaire, and the Native American Acculturation Scale. T-tests, Pearson r Correlations, Multiple Regressions, Forward Regressions, ANOVAs, and MANOVAs were conducted to answer the five research questions.

Findings and Conclusions: Gender differences were found between alcohol use and alcohol expectancies. Men in this sample made up the majority of hazardous drinkers and expected more feelings of Social and Physical Pleasure and Power and Aggression from alcohol use. Hazardous and non-hazardous drinkers differed in all of 6 of the alcohol expectancies. All 6 of the alcohol expectancies were significantly correlated with alcohol use and Historical Loss Feelings; Historical Loss Feelings were a significant predictor of all 6 alcohol expectancies. However, the alcohol expectancy for Sexual Enhancement was significantly predicted by both Historical Loss Feelings and acculturation. Alcohol use was significantly predicted by the alcohol expectancies for Social and Physical Pleasure and Power and Aggression, and Historical Loss Feelings. Acculturation did not relate significantly to alcohol use, Historical Loss Thoughts, or Historical Loss Feelings.

ADVISER'S APPROVAL: _____

Carrie L. Winterowd, Ph.D.