

# Discrimination, Historical Loss and Enculturation: Culturally Specific Risk and Resiliency Factors for Alcohol Abuse among American Indians\*

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**ABSTRACT. Objective:** This report investigates the effects of discrimination, historical loss and enculturation on meeting diagnostic criteria for 12-month alcohol abuse among American Indians who share a common culture in the upper Midwest. We introduce an empirical measure of historical loss and hypothesize that historical loss will mediate the effects of discrimination on meeting 12-month diagnostic criteria for alcohol abuse. We also hypothesize that enculturation will be negatively associated with 12-month alcohol abuse and mediate or moderate the effects of discrimination. **Method:** A sample of 452 (351 women) American-Indian parents/caretakers (mean age: women = 39 years, men = 42 years) of children ages 10 to 12 years participated in diagnostic interviews for lifetime and 12-month alcohol abuse. The subjects' perceptions of discrimination, historical loss and enculturation were also

measured. Structural equation modeling was used to evaluate direct and potential mediating effects of latent constructs of enculturation (a resiliency factor) and historical loss (a risk factor) on the relationship between discrimination and meeting criteria for 12-month alcohol abuse. **Results:** Historical loss mediated the effects of discrimination on 12-month alcohol abuse among women. Enculturation neither mediated nor moderated the effects of discrimination but had an independent negative effect on alcohol abuse. In a combined model comprising both enculturation and historical loss, the effects of discrimination on 12-month alcohol abuse were mediated. **Conclusions:** This study presents important new evidence that historical loss affects American-Indian alcohol abuse. It also provides evidence for the resiliency effects of enculturation on alcohol abuse. (*J. Stud. Alcohol* 65: 409-418, 2004)

A RAPIDLY EMERGING literature reports the effects of discrimination-induced stress effects on physical and mental health among minority groups (Kessler et al., 1999; Krieger and Sidney 1996; Williams and Williams-Morris, 2000; Williams et al., 1997). Evidence is accumulating that discrimination functions in a way similar to that of other psychological stressors (Dion et al., 1992; Thompson, 1991; Williams et al., 1999) and is a primary contributor to psychological distress among minority people. Indeed, Kessler and colleagues (1999, p. 227) rank it with major negative life events such as the death of a loved one, divorce and job loss. They suggest, "The conjunction of high prevalence and strong impact would mean that discrimination is among the most important of all the stressful experiences that have been implicated as causes of mental health problems" (Kessler et al., 1999, p. 224).

Stress is systematically related to socioeconomic status, geographic location and social roles (Pearlin, 1989). Although many ethnic groups suffer economic disadvantage, minorities in other respects occupy very different geographic

and social locations in our society. The intensity and prevalence of discrimination, the forms it takes, its interpretation within specific minority cultures and the cultural adaptive and maladaptive responses to it may vary widely by ethnic group.

American Indians, who make up 1.5% of the U.S. population (Ogunwole, 2002), are among the smallest, least politically powerful and most rural of all U.S. minorities. (In accordance with the preferred terminology of the people with whom we work, we use the term "American Indian" to refer to Native people in the U.S. Other terms in the research literature include "Native American" or "American Indian.") After enduring a long history of prejudice and indignities, American Indians remain the only major ethnic group that is still the subject of national and local team mascots, sports chants, stereotypical statuary and widely accepted derogatory language and place names (e.g., "squaw"). The psychological and physical health disparities between American Indians and European Americans are enormous and often documented (Snipp, 1997).

This report focuses on the association between discrimination and the likelihood among American-Indian adults of meeting criteria for alcohol abuse according to the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R; American Psychiatric Association [APA], 1987). It incorporates measures of "historical loss," a culturally specific counterpart of discrimination

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emerging from an extensive contemporary grassroots movement among Native people. We also investigate another important movement in Native cultures: the effects of enculturation as a potential mediator and/or buffer for the effects of discrimination on alcohol abuse. "Enculturation" refers to the degree an individual is embedded in traditional cultural practices (e.g., language, everyday activities, spiritual activities) and maintains a strong cultural identity (Zimmerman et al., 1994).

#### *Alcohol problems among American Indians*

Many popular media reports and some of the research literature on alcoholism and alcohol use among Native people are naïve and guilty of stereotyping. Misleading language (e.g., "alcoholism" vs "alcohol abuse"), perpetuation of disproved assumptions (e.g., racial differences in metabolizing alcohol and an "Indian" style of drinking), duplicated arrest and morbidity data that exaggerate prevalence rates and failure to identify factors not unique to American Indians all serve to create an image of the "drunken Indian" (see May, 1994, for a review of these "myths"; for a more recent review see Gray and Nye, 2001). These popular misrepresentations aside, alcohol use is a serious problem among *some* American-Indian Nations and specific communities within Nations, particularly among adolescents and young adults. The most recent National Household Survey on Drug Abuse (Substance Abuse and Mental Health Services Administration [SAMHSA], 2003) report on substance use among Native people indicates that rates of heavy alcohol use were higher for American Indians and Alaska Natives than for African Americans and Asians, but were similar to those for European Americans and Hispanics. American Indians were more likely than any other ethnic group to be dependent on alcohol or illicit drugs (SAMHSA, 2003). According to the Drug and Alcohol Services Information System (SAMHSA, 2002), alcohol was the leading substance of misuse among American Indians and Alaska Natives presenting for treatment, with rates higher in rural (76%) than in urban (47%) areas.

Alcohol misuse is an important contributing factor to preventable deaths rates that are 133% higher among American Indians ages 15-24 years than those of whites of the same age group. Among older Native people (25-44 years), death rates from liver disease are six times greater than they are for whites (Snipp, 1997, p. 76). May (1994) points out that in 1986 almost 75% of alcohol-related deaths were associated with meeting DSM-IV diagnostic criteria for alcohol abuse, and about 25% of the alcohol-related deaths were associated with meeting diagnostic criteria for alcohol dependence (p. 122). He argues that, in forming an understanding of the impact of alcohol on Native populations, to omit alcohol abuse means missing "the majority (three fourths) of the problem" (p. 124).

#### *Discrimination*

"Wooden Indians" still abound. National team mascots caricaturing "Indians" still exist and are defended when they would not be tolerated in the case of other minorities (King and Springwood, 2001a,b; Spindel, 2000). Demeaning place names and language still persist in everyday usage. In addition to the overt institutional racism that pervades the life of American-Indian people, measures of perceived discrimination indicate high levels of everyday discrimination in the form of insults, humiliation and anomalous treatment suffered by both adults and adolescents. Perceived discrimination is associated with internalizing symptoms, externalizing symptoms and substance use among American-Indian adolescents (Whitbeck et al., 2001a) and depressive symptoms among American-Indian adults (Whitbeck et al., 2002).

#### *Historical loss*

The concepts of "intergenerational trauma" and "historical trauma" began forming in the 1960s and 1970s as manifestations affecting the offspring of World War II Holocaust survivors (e.g., Alexandrowicz, 1973; Rakoff et al., 1965). There have been more than 400 published articles on the intergenerational transmission of trauma from Holocaust survivor parents to their children (Kellermann, 2001a,b). During the past decade, several researchers have begun to apply the concept to the ethnic cleansing experienced by Native people in the United States. Led by seminal works of the Durans (Duran and Duran, 1995) and Brave Heart (1998, 1999a,b; Brave Heart and DeBruyn, 1998), contemporary symptoms of depression, posttraumatic stress disorder (PTSD) and grief have been attributed to the American-Indian genocide, during which the North American population of Native people was reduced from as many as five to seven million at first European contact to approximately 250,000 in 1890 (Snipp, 1997). Two centuries of U.S. federal policies were aimed at forced acculturation of those who survived (Duran and Duran, 1995). The symptoms attributed to these historical catastrophes range from PTSD in the form of "historical trauma" (Brave Heart, 1998, p. 288) to those of unresolved grief and depression in the case of "historical grief" (p. 291).

Recent research suggests that perceived historical losses are very much on the minds of the current generation of American-Indian adults and that these perceptions lead to specific emotional responses (Whitbeck et al., 2004). There have been no studies to date, however, that tie the concept of perceived historical loss to specific psychopathology or substance use.

#### *Enculturation*

Much of the research on effects of cultural identity on alcohol misuse has focused on "acculturation" or the extent

to which individuals are influenced by or adopt cultures other than their own (Vega and Gil, 1998). With numerous other researchers concerned with American-Indian alcohol use, we believe that "enculturation" is a resiliency factor that may protect against alcohol misuse or serve as an important curative factor in alcohol treatment programs (Gray and Nye, 2001; Herman-Stahl et al., 2003; Moncher et al., 1997; Noe et al., 2003; Spicer et al., 2003). "Enculturation" refers to the degree to which individuals are embedded in their cultures as manifested by practicing the traditional culture and self-reported cultural identity (Zimmerman et al., 1994). For several decades (and historically among most tribal elders) there has been a movement to use traditional cultural knowledge in various treatment and educational settings. Although there are few controlled studies, an abundance of counseling and treatment publications and programs that espouse cultural relevance and cultural practices exist (e.g., Brady, 1995; May and Moran, 1995 [review]; Ramirez, 1998). Empirical studies attempting to demonstrate effects of various components of enculturation (e.g., cultural identification) have shown mixed results or negative results (Bates et al., 1997; Beauvais, 1998). Recently, measures using multiple indicators of enculturation (e.g., traditional spirituality, traditional activities and cultural identity) have shown promising results associated with prosocial behavior in adolescents and buffering depressive symptoms in adults (Whitbeck et al., 2001b, 2002).

### *Hypotheses*

*Hypothesis 1.* The interrelated factors of discrimination, historical loss and enculturation have each been associated with emotional and behavioral problems among American-Indian people. Discrimination and historical loss are viewed as stressors that are negatively associated with well-being. Enculturation is viewed as a resiliency factor that mediates or moderates distress, lessening or eliminating its potential negative effects. To investigate the interrelationships among these three factors, we first hypothesized that discrimination would be positively associated with meeting DSM-III-R diagnostic criteria for alcohol abuse during the past 12 months (APA, 1987). Alcohol abuse could be reactive to internalized anger resulting from discrimination (e.g., Whitbeck et al., 2001a), or it could be a way to ameliorate the negative effects of discrimination via self-medication.

*Hypothesis 2.* Although there have been no empirical studies of the effects of historical loss on alcohol abuse, various emotional and behavioral problems among the American-Indian people have been attributed to its demoralizing consequences (Brave Heart 1998, 1999a,b; Brave Heart and DeBruyn, 1998). To investigate its effects and relationship to discrimination and alcohol abuse, we hypothesized a mediating effect of historical loss on the relationship between discrimination and alcohol abuse. That is,

in the presence of historical loss, the effects of discrimination on alcohol abuse would become nonsignificant, and historical loss would be positively associated with alcohol abuse.

*Hypothesis 3.* We further hypothesized that enculturation as a resiliency factor would mediate or moderate the effects of discrimination on alcohol abuse. In the proposed mediation model, enculturation would be negatively associated with alcohol abuse, and discrimination would become nonsignificant. For the moderating model, it was hypothesized that the interaction of enculturation and discrimination would show that the presence of enculturation would reduce the positive effects of discrimination on alcohol abuse.

### **Method**

#### *Sample*

Our data were collected as part of the "Healing Pathways Project," a 3-year longitudinal study currently underway on two American-Indian reservations in the upper Midwest and on one Canadian First Nation reserve. The reserves and reservations share a common cultural tradition and a common language with minor regional variations in dialects. It is among the most populous Native cultures in the United States and Canada. The purpose of the study is to identify culturally specific resilience and risk factors that affect children's well-being and to use the information to guide the development of culturally based interventions. The data are from the first wave of the study in which 401 American-Indian families were interviewed. These families were made up of 511 parents/caretakers (378 women) and 401 children ages 10-12 years. This report is based on information from 452 (351 women) of the parents/caretakers. We dropped 32 of the parents/caretakers from the analysis because they were non-Indian; 27 were lost as a result of listwise deletion.

The project was designed in partnership with the participating reservations. Prior to the application funding, the research team was invited to work on these reservations, and tribal resolutions were obtained. As part of the agreement to work together, the researchers promised that participating reservations would be kept anonymous in published reports. On each participating reservation, an advisory board representing all reservation districts was appointed by the tribal council. The advisory boards were responsible for handling difficult personnel problems, advising on questionnaire development and reviewing reports for respectful wording. All participating staff on the reservations were approved by the advisory board and were either tribal members or, in a few cases, nonmembers who were spouses of tribal members. To ensure quality of data collection, all the interviewers underwent special training for conducting pencil-and-paper and computer-assisted per-

sonal interviewing for the diagnostic measures. The training included practice and feedback sessions.

Families were recruited through a personal visit by an interviewer in which the project was explained to them. They were presented with a gift of wild rice and were invited to participate. If a family agreed to be interviewed, each family member received \$40 for his or her time when the interviews were completed. The recruitment procedure resulted in an overall response rate of 75%. In this type of research, a response rate of 70% is usually viewed as acceptable.

### *Sample characteristics*

The sample for this analysis was made up of 452 parents/caretakers (351 women). Fathers/male caretakers ranged in age from 25 years to 68 years, with an average age of 42 years; mothers/female caretakers ranged in age from 19 years to 77 years, with an average age of 39 years.

About one third (31%) of the families contained two biological parents, and one third (34%) were single, mother-headed households. The remaining one third was made up of various family configurations, including mother and stepfather or live-in partner (11%), mother living with other relatives (e.g., grandmothers, aunts, uncles) (9%), single fathers (4%) or multi-generation households. Predictably, the distribution of income in the sample varied greatly according to family structure. Single-parent households were twice as likely as two-parent households (includes stepfathers and live-ins) to have incomes of \$15,000 or less (49.4% vs 24.9%). Almost one third (30.3%) of single-parent households were getting by on \$10,000 or less per year. Median income for single-parent families was under \$15,000, compared with about \$25,000 for two-parent families. Financial assistance was also common. About one half of single-parent (58.3%) and two-parent households (41.8%) received food stamps. Approximately one half (53.6%) of single-parent households and 38.9% of two-parent households received Temporary Assistance to Needy Families (TANF) or the Canadian equivalent in the past year.

### *Measurement*

*Enculturation.* Enculturation was a latent construct assessed by three basic elements: (1) participation in traditional activities, (2) identification with American-Indian culture and (3) traditional spirituality. The traditional activities scales were developed through focus groups with elders and consisted of three dimensions: participation in traditional pow-wow activities, knowledge and use of the tribal language and involvement in 19 types of traditional activities. The cultural identification measure was adapted from Oetting and Beauvais's (1990-91) American-Indian cultural identification items. Respondents were asked three

questions regarding the degree to which they participated in American-Indian culture, how much their family lived by American-Indian culture and how much they lived by American-Indian culture. Response categories ranged from 1 (a lot) to 4 (none). The scale scores were computed by taking the mean response to the four items. Traditional spirituality was assessed by four global items. The respondents were asked if they participated in traditional spiritual activities (0 = no, 1 = yes), how often they participated in such activities (1 = every day, 7 = never), the importance of traditional spiritual values for how they led their lives (1 = very important, 4 = not at all important) and involvement in 16 traditional spiritual activities. Before computing the traditional spirituality scale, the items were standardized. The enculturation scale had high internal consistency (Cronbach's alpha = 0.83).

*Historical loss.* Historical loss was a latent construct measured by two dimensions: historical loss and historical loss associated symptoms (Whitbeck et al., 2004). The Historical Loss scale consists of 12 items, each of which lists a type of loss identified by focus groups made up of American-Indian elders, American-Indian service providers and American-Indian advisory board members on three reservations. These losses comprise loss of land, language, culture and traditional spiritual ways; loss of family and family ties; loss of self-respect; loss of trust; loss of people through early death; and loss of children's respect for elders and for traditional ways. The response categories were 1 = several times a day, 2 = daily, 3 = weekly, 4 = monthly, 5 = yearly or at special times and 6 = never. The items were recoded so that a high value signaled high historical loss. The Historical Loss Associated Symptom Scale is made up of 12 items, each of which specifies a potential symptom identified by focus group participants and other tribal members. These symptoms include feeling of sadness or depression, anger, anxiety or nervousness, shame, loss of concentration, isolation or distance from other people, loss of sleep, rage, feeling uncomfortable around white people, fear or distrust of the intentions of white people, feeling as though it is happening again and feeling like avoiding places or people. The response categories ranged from 1 = never to 5 = always. Both scales have high internal reliability, with Cronbach's alpha coefficients of 0.94 for historical loss scale and 0.90 for historical loss associated symptoms scale.

*Perceived discrimination.* Perceived discrimination was measured with an 11-item scale. Respondents were asked how often they had been insulted, treated disrespectfully, hassled by police, ignored, recipient of a racial slur, threatened with physical harm, suspected of doing something wrong, treated unfairly, expected not to do well by whites, discouraged to achieve an important goal and treated unfairly in courts as a consequence of their American-Indian minority status. The response categories ranged from 1

(never) to 4 (always). The scale had a high internal reliability with a Cronbach's alpha of 0.90.

The University of Michigan Composite International Diagnostic Interview (UM-CIDI) was used to assess 12-month diagnosis of alcohol abuse. The UM-CIDI is based on the DSM-III-R criteria and represents the University of Michigan revision of the CIDI used in the National Comorbidity Study (for information regarding the University of Michigan revisions, see Kessler, 1994a,b; Wittchen and Kessler, 1994). The CIDI (World Health Organization, 1990), from which the UM-CIDI is derived, is a well-established diagnostic instrument (see Wittchen, 1994, for review) that has shown excellent interrater reliability, test-retest reliability and validity for the diagnoses used in this study. The UM-CIDI is a state-of-the-art diagnostic interview schedule that has been used extensively with trained interviewers who are not clinicians. Adults who met criteria for 12-month alcohol abuse were coded as "1," and those who did not were coded as "0."

*Age.* Age was a control variable in the model. The average (SD) age was 38.7 (9.38) years for women and 41.9 (9.62) years for men.

## Results

Nearly three fourths (73.5%) of the adults in the sample (81.4% men; 71.1% women) met DSM-III-R criteria for lifetime alcohol abuse. Of these, 15.1% of the adults met DSM-III-R 12-month criteria for alcohol abuse (15.7% women; 13.3% men). The following analyses pertain to those who met 12-month criteria for alcohol abuse. Means and standard deviations for all the study variables are presented at the bottom of Table 1.

### *Bivariate correlations*

Bivariate correlations (Table 1) indicate moderate to strong correlations between discrimination and historical loss and the measures of enculturation. There was a modest, but statistically significant correlation between discrimination

and alcohol abuse, supporting Hypothesis 1. Alcohol abuse was negatively associated with age, positively associated with historical loss and negatively associated with measures of enculturation.

### *Multivariate analyses*

Structural equation modeling (SEM) was used to evaluate the theoretical hypotheses. The analysis was performed using Mplus 2.02 (Muthén and Muthén, 2001). Following Hoyle and Panter (1995), we used Absolute index chi-square statistics, Type-2 index Tucker-Lewis Index (TLI) and Type-3 index comparative fit index (CFI) to assess the fit of the models. The widely used cutoff value of 0.90 was used to represent an acceptable model fit (Hoyle and Panter, 1995). Because some of the endogenous variables in these models were dichotomous, the models were estimated using the unweighted least squares method (Bollen, 1989). Because this was a nested sample made up of households, some of which contained both husbands and wives, separate analyses were run for men and women.

### *Discrimination, historical loss and alcohol abuse*

Historical loss mediated the effects of perceived discrimination (Baron and Kenny, 1986) on alcohol abuse among the American-Indian women (Figure 1). Perceived discrimination was strongly positively associated with historical loss ( $\beta = 0.53$ ). Historical loss, in turn, was positively associated with alcohol abuse among women ( $\beta = 0.33$ ). The direct effect of perceived discrimination on alcohol abuse was nonsignificant. Age of the adults was negatively associated with alcohol abuse ( $\beta = -0.30$ ) and positively associated with historical loss ( $\beta = 0.13$ ). The model fit the data well. The chi square was nonsignificant ( $\chi^2 = 5.08$ , 2 df,  $p = .08$ ). The CFI was 0.99, and the TLI was 0.95. The model explained 16% of the variance of alcohol abuse among women. Possibly as a result of a much smaller sample size, the model for men did not converge.

TABLE 1. Correlation matrix ( $N = 452$ )

	1	2	3	4	5	6	7	8	9
1. Age	1.00								
2. Male	0.12*	1.00							
3. Discrimination	-0.11*	0.11*	1.00						
4. Historical loss	0.02	0.10*	0.29†	1.00					
5. Historical loss symptoms	0.05	0.04	0.41†	0.47†	1.00				
6. Traditional activity	0.04	0.17†	0.22†	0.23†	0.09	1.00			
7. Culture identity	0.13†	0.04	0.22†	0.29†	0.16†	0.58†	1.00		
8. Spiritual activity	0.09	0.12*	0.34†	0.30†	0.19†	0.66†	0.60†	1.00	
9. 12-month alcohol abuse	-0.15†	-0.04	0.10*	0.06	0.18†	-0.13†	-0.10*	-0.12*	1.00
Mean	39.49	0.25	1.79	2.18	2.10	2.83	2.93	0.04	0.15
(SD)	(9.56)	(0.43)	(0.53)	(1.17)	(0.74)	(2.06)	(0.72)	(0.81)	(0.36)

\* $p < .05$ ; † $p < .01$ .

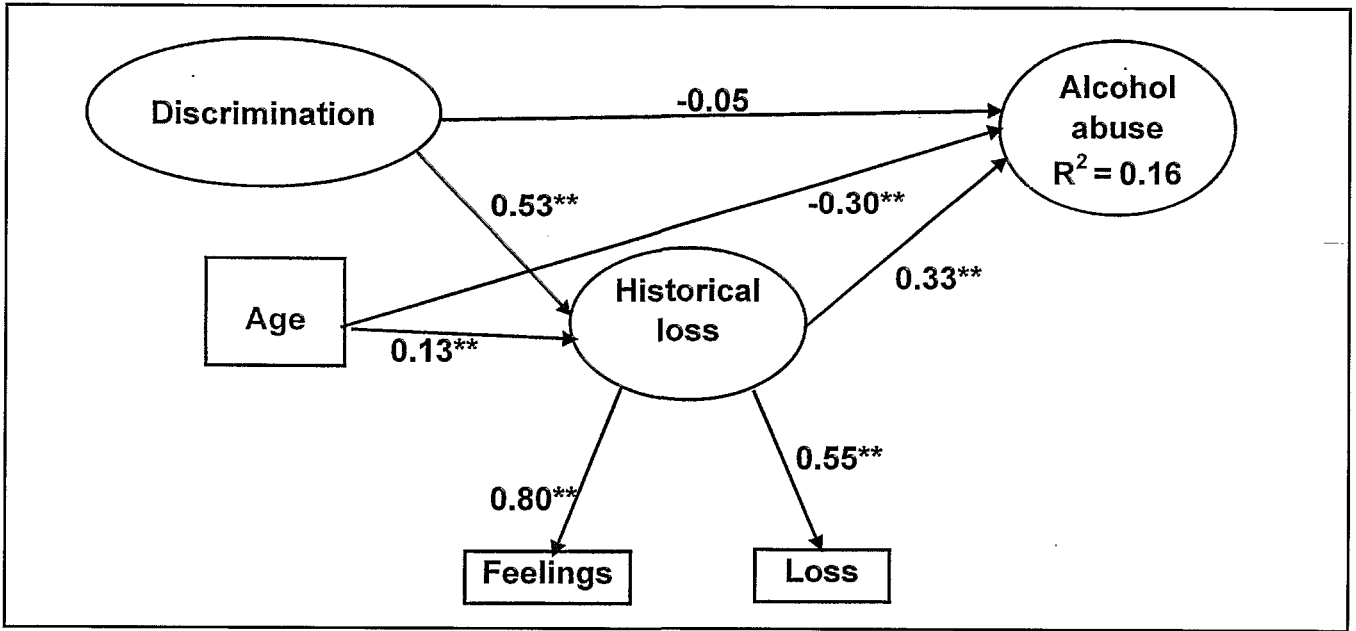


FIGURE 1. Historical loss model predicting alcohol abuse in female adults (\*\**p* < .01)

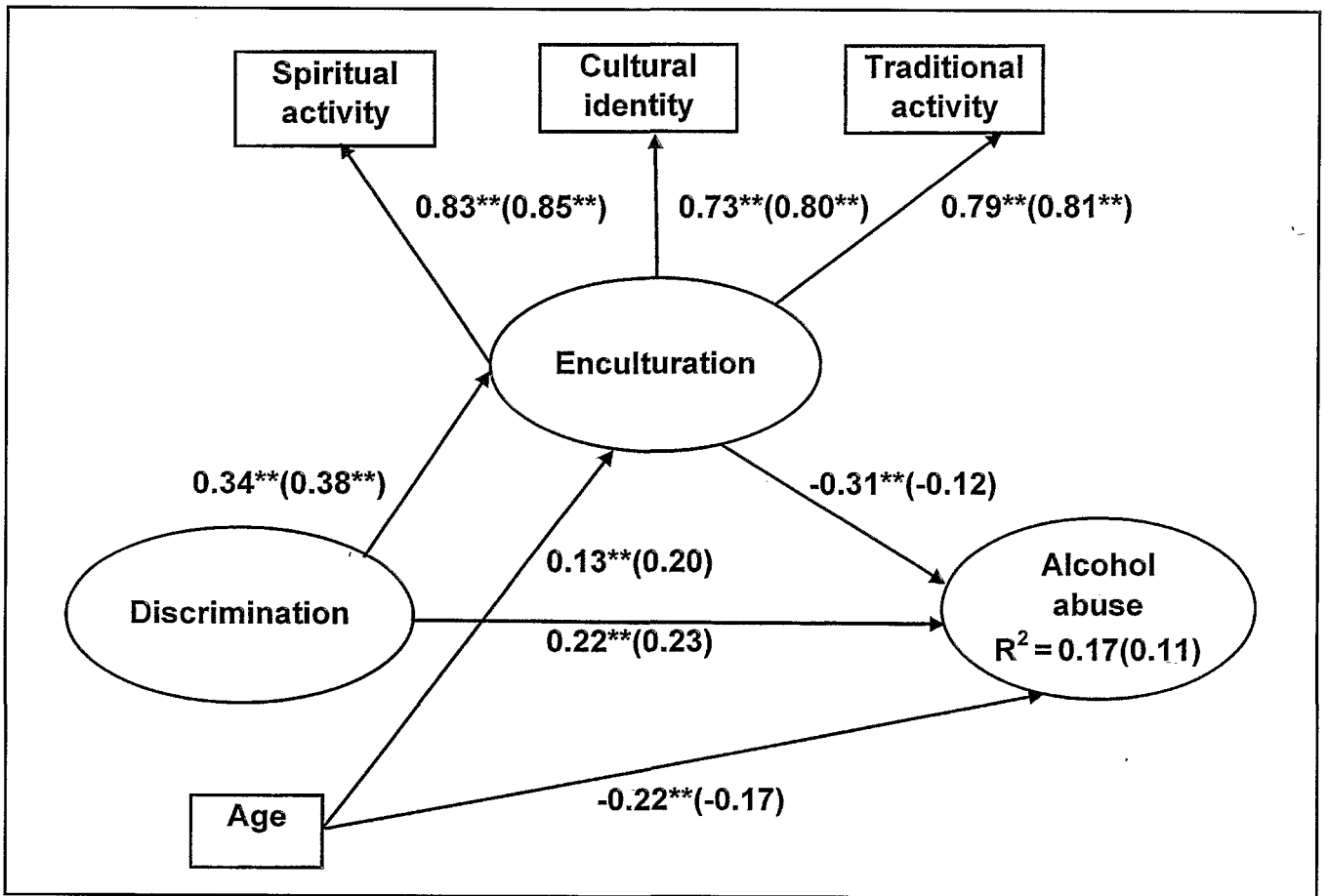


FIGURE 2. Enculturation model predicting alcohol abuse (coefficients for men are in parentheses; \*\**p* < .01)

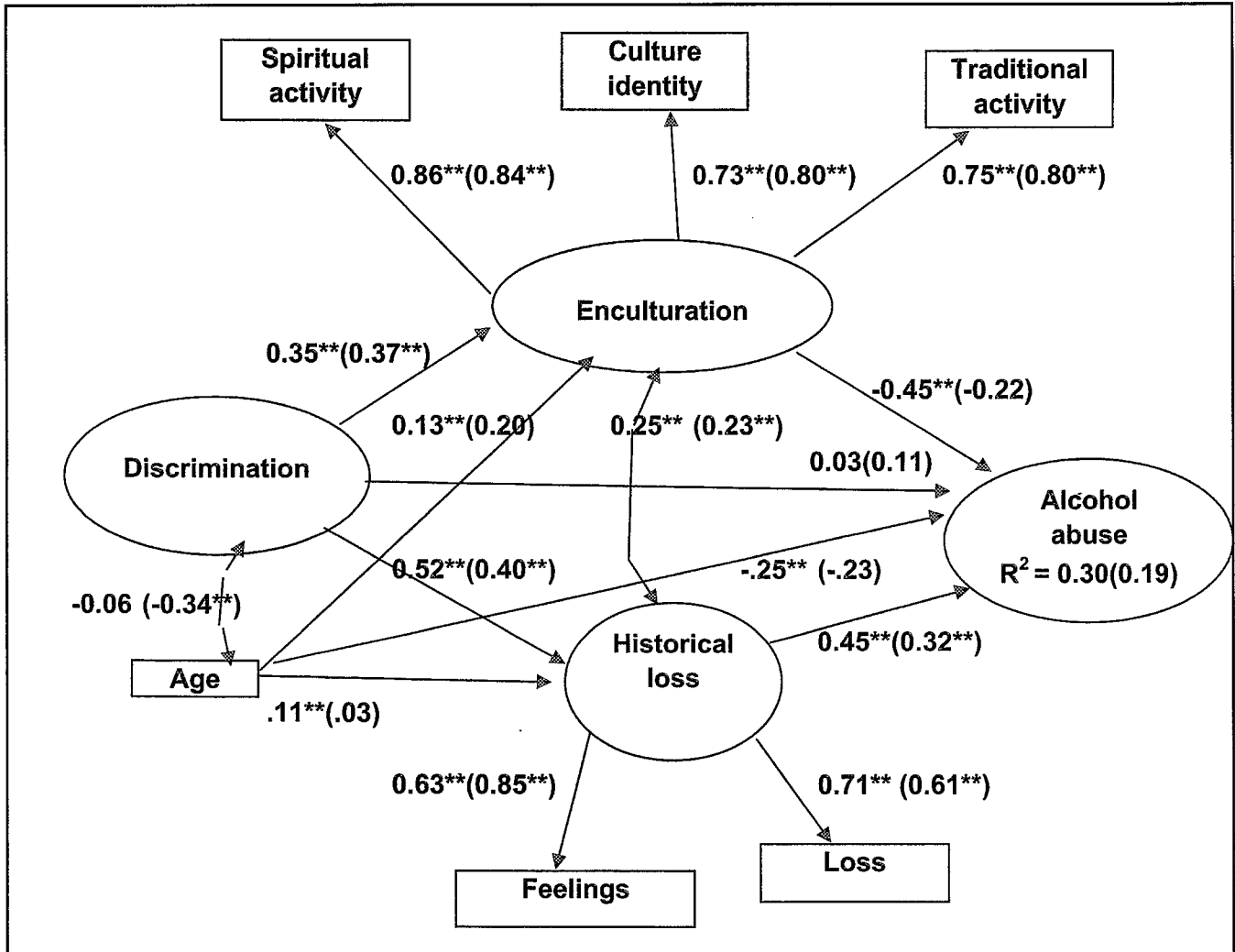


FIGURE 3. Full model predicting alcohol abuse (coefficients for men are in parentheses; \*\**p* < .01)

*Discrimination, enculturation and alcohol abuse*

Enculturation did not mediate the effects of discrimination among American-Indian adults (Figure 2). Perceived discrimination was positively associated with enculturation (women,  $\beta = 0.34$ ; men,  $\beta = 0.38$ ) and with alcohol abuse (women,  $\beta = 0.22$ ; men,  $\beta = 0.23$ , NS). Enculturation was negatively associated with alcohol abuse (women,  $\beta = -0.31$ ; men,  $\beta = -0.12$ , NS). Although enculturation was negatively associated with alcohol abuse for American-Indian women, it neither reduced nor eliminated the positive influence effects of perceived discrimination. Among women, age was negatively associated with alcohol abuse ( $\beta = -0.22$ ) and positively associated with enculturation ( $\beta = 0.13$ ).

The model fit the data fairly well. The chi square was significant for women ( $\chi^2 = 16.69$ , 6 df, *p* = .01) but not for men ( $\chi^2 = 7.20$ , 5 df, *p* = .21). The CFI was 0.98 for women and 0.99 for men. The TLI was 0.97 for women

and 0.98 for men. The model explained 17% of the variance of alcohol abuse among women and 11% among men.

*Combined model*

When the two mediating models were combined, the effects of perceived discrimination became nonsignificant (Figure 3). However, the positive effects of historical loss (women,  $\beta = 0.45$ ; men,  $\beta = 0.32$ ) and the negative effects of enculturation (women,  $\beta = -0.45$ ; men,  $\beta = -0.22$ , NS) almost balanced. Perceived discrimination was positively related to both enculturation (women,  $\beta = 0.35$ ; men,  $\beta = 0.37$ ) and historical loss (women,  $\beta = 0.52$ ; men,  $\beta = 0.40$ ) at similar levels. Among women, age was positively associated with enculturation ( $\beta = 0.13$ ) and historical loss ( $\beta = 0.11$ ) and negatively associated with alcohol abuse ( $\beta = -0.25$ ). The model explained 30% of the variance of alcohol abuse for women and 19% of the variance for men.

The full model fit the data within acceptable limits. The chi square was significant for women ( $\chi^2 = 55.51$ , 10 df,  $p = .00$ ) but nonsignificant for men ( $\chi^2 = 14.15$  10 df,  $p = .17$ ). The CFI was 0.94 for women and 0.98 for men. The TLI was 0.92 for women and 0.98 for men. The model explained 30% of the variance of alcohol abuse among women and 19% of the variance among men.

### *Moderating effects*

We investigated potential moderating effects between variables through logistic regression models that included the interaction of enculturation and discrimination. The interaction was nonsignificant, indicating that enculturation did not buffer the effects of discrimination on alcohol abuse.

## **Discussion**

These findings have significant implications for alcohol abuse among American Indians. First, the transmission of the negative effects of perceived discrimination through the construct of historical loss suggests that discriminatory acts may trigger a sense of loss among some Native people. It is possible that discrimination directed at American-Indian adults serves as a reminder of their historical status and the events that led to it. This fits with the world view of some Native people in that it reflects a sense of group, rather than individual, perspective. Because an individual American Indian may view himself or herself as a part of the whole Nation, discrimination may represent societal attitudes toward the Nation and the perpetuation of what has gone before—a reminder of policies of ethnic cleansing and cultural eradication. Discriminatory acts are meant to remind the person of his or her “place” in the societal hierarchy. In this case, the “place” is ethnic cleansing, relocation and forced acculturation.

Second, these results suggest that enculturation or being embedded in American-Indian traditional culture has a protective effect against meeting 12-month criteria for alcohol abuse. However, the protective effect is limited. It does not eliminate the effects of discrimination; although, when considered with historical loss, the effects of discrimination on alcohol abuse became nonsignificant, and the opposing effects of historical loss and enculturation were almost equal. Bivariate correlations suggest that those who are highly enculturated are also those who report higher levels of historical loss. It may be that traditional culture both sensitizes one to loss and serves as a protection from reminders of loss.

Third, alcohol abuse is strongly associated with historical loss. Although there is much work to be done to understand the specific mechanisms responsible for this association, the potential relation to stress theory is intriguing.

Other findings indicate that historical loss is much on the minds of some American-Indian adults, and they attribute negative emotional responses to it (Whitbeck et al., 2004). Alcohol may serve to reduce intrusive thoughts or feelings related to historical loss and to numb reminders of that loss. Alcohol abuse may also represent anger manifested in self-destructive behaviors.

Fourth, it is important to note that the final model based only on cultural factors explained 30% of the variance of alcohol abuse among women and 19% of the variance among men. This finding implies that culturally specific factors need to be included in models investigating alcohol use among American-Indian people. Failure to identify and properly measure these factors may mean that important processes are being overlooked. This is likely the case in minority cultures other than American Indians.

### *Limitations*

These findings introduce novel concepts and specific cultural interpretations into the discussion of the effects of perceived discrimination on well-being. Although they are intriguing, they must be regarded with appropriate caution. First, the results are from a single culture and may not be generalizable across the diversity of American-Indian Nations. Second, even though our data are from several sites, they reflect the attitudes and behaviors of people who live on or near rural reservations. The data may not represent urban American Indians, even those who are from the same cultural background as those on the rural reservations. Third, the nested sample required separate analyses for men and women. The small sample of men resulted in the failure of one of the SEM models to converge and in nonsignificant paths in some of the other models. Although we believe the gender differences reflect sample size, they may imply that different processes are at work for men and women. These findings need to be replicated with larger samples of men. Fourth, the data are cross-sectional, a feature that always raises questions about the direction of effects. Alcohol abuse may lead to greater levels of perceived discrimination rather than the theorized relationship. Longitudinal data are needed to understand the effects of perceived discrimination, historical loss and enculturation on drinking behaviors. Fifth, our data do not reflect “within-group” discrimination. We could not investigate the degree to which the adults experience discrimination from other American-Indian people on the basis of their tribal affiliation, projected assimilation or the degree to which they are “Indian.” Sixth, our measures of historical loss and symptoms of historical loss are new. The findings and measurement characteristics (see Whitbeck et al., 2004) should be replicated and examined with other groups of American Indians with regard to validity and reliability.



## Conclusions

We believe these results point toward an urgent need for increased attention to culturally specific risk and resiliency factors pertaining to alcohol misuse. Cultural interpretations and responses to stressors almost certainly vary. Failure to identify and understand these culturally specific nuances is to ignore important information. Evidence is mounting that majority-based stress models may no longer fit our increasingly diverse population. The challenge is that culturally specific research is difficult to do; it is "smaller," more focused research. It must take into account hard-to-access populations, language problems and issues of measurement that can make it expensive. Without the effort, however, we may be missing key elements in understanding important, culturally unique mechanisms of risk and resilience.

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