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EDITORIAL

ADDRESSING PSYCHOSOCIAL ISSUES AND PROBLEMS OF CO-MORBIDITY FOR NATIVE AMERICAN CLIENTS WITH SUBSTANCE ABUSE PROBLEMS: A CONFERENCE PROCEEDINGS

R. S. Young, Ph.D., Jennie R. Joe, Ph.D., M.P.H., Jeanette Hassin, Ph.D.,
and Douglas St. Clair, Ph.D.

This proceedings consists of five papers presented at a conference titled: *Psychosocial Issues and Problems of Co-Morbidity for Native American Clients with Substance Abuse Problems*. The conference was held June 2-4, 1999, in Albuquerque, New Mexico, and was hosted by the Native American Research and Training Center (NARTC) and the National Center for American Indian and Alaska Native Mental Health Research.

This conference was the first of its kind linking substance abuse counselors, mental health care providers, and vocational rehabilitation (VR) counselors concerned about the treatment of American Indian patients with substance abuse problems and a co-existing co-morbid mental health disorder. Conference presentations focused on (a) the epidemiology, diagnosis, and treatment of American Indians with dual diagnosis; and (b) the use of the VR case management model as aftercare treatment for American Indian clients with co-existing substance abuse/dependence and mental health disorders.

The need for this conference emerged from discussions among clinicians and researchers about diagnostic and treatment problems of American Indian clients with dual diagnosis. The problems of diagnosis and treatment of persons with dual diagnosis is complicated by the reality that mental health and poly-substance abuse/dependence programs utilize different diagnostic and treatment approaches, and traditionally these approaches are not well-integrated to deliver a coordinated or an integrated treatment program for substance abuse clients presenting with a co-morbid disorder. Thus, psychiatric problems of clients in treatment for substance abuse are often poorly addressed, resulting in high rates of recidivism. Conversely, mental health clinicians may overlook the patient's history of substance abuse in providing treatment for psychiatric disorders. This fragmentation allows clients with dual diagnosis to "drift" through the system, resulting in high rates of recidivism.

Another problem contributing to poor client outcomes for American Indian clients with dual diagnosis is the lack of aftercare support or programs in their communities. As a result, clients in recovery from substance abuse often find themselves returning to the same environment that initially

facilitated their drinking behavior. These unchanged life situations, e.g., a dysfunctional family context, lack of employment, lack of education and skills, low self-perception, and lack of aftercare programs contribute significantly to the high rates of recidivism (Hassin, 1996).

One approach to aftercare for clients in recovery is the VR case management model. In a number of states and regions, VR has taken the initiative in bringing mental health agencies and poly-substance abuse treatment centers together to address the problems of addiction, psychiatric disabilities, and employment for individuals who have dual diagnosis. The VR case management model represents an excellent aftercare program for dual diagnosed clients in recovery who are eligible for job training and employment. Because the VR case management model is not well known among clinicians and substance abuse counselors, this conference provided a forum to introduce to a wider audience this model and its use as an aftercare program.

Background

Alcohol Abuse and Dual Diagnosis with a Psychiatric Disorder Among American Indians: Prevalence, Morbidity, and Mortality

Epidemiology of Alcohol Abuse

In 1995, the Indian Health Service (IHS) estimated that mortality rates from alcoholism and alcohol abuse among American Indians compared to the general population were 8.0 times as great for ages 25-34 and 6.5 times as great for ages 35-44 (Indian Health Service, 1997). Although these numbers represent American Indians as a group, the actual rates of alcohol and substance abuse vary inter-tribally and by age group, with some tribes and age groups having rates lower than those of the U.S. general population (May 1995). Most reported drinking behavior occurs among American Indians between ages 15-44.

Morbidity and Mortality

Four of the ten leading causes of death among American Indians—chronic liver disease and cirrhosis, suicide, homicide, and accidents—are alcohol related (May 1995; Wallace, Sleet, & James, 1997). According to IHS data, deaths attributed directly to alcoholism, alcoholic psychosis, and cirrhosis with mention of alcohol were 6.45-7.63 times greater for American Indians than for the general population, all races (May 1995).

Citing IHS statistics for the period 1986-1988, May (1995) finds that 17-19% of all American Indian deaths are alcohol related (alcohol abuse and alcoholism) compared with 4.7% for the U.S., all races. These figures include alcohol related deaths from motor vehicle accidents (65%), suicide (75%), homicide (86%), and alcohol dependency. Motor vehicle related injury is the leading cause of death for American Indians, ages 1-44. May (1995) attributes most of these alcohol related deaths to "recreational drinking" as opposed to "chronic alcoholism," and notes that among American Indians, recreational drinkers outnumber chronic alcoholics by a ratio of 3:1.

Rates of Recidivism

According to Marlatt and Gordon (1985), rates of recidivism in the general population after treatment for substance abuse dependency are as high as 86% 2 years post treatment, with the majority of the relapses occurring within 6 months of treatment. Hassin (1996) notes that for American Indians the high rates of recidivism are the result of a number of factors, including socio-economic issues, limited aftercare support, and an inability to see alternative options to a lifestyle that supports addictive behavior.

Psychiatric Disorders Associated with Substance Abuse

Data listing the number of ambulatory medical clinical impressions indicates that 317,745 American Indians, aged 5-54, were seen for mental disorders in FY1995 by IHS clinicians (Indian Health Service, 1998). Alcohol dependence with a co-morbid disorder is a problem particularly impacting American Indian and Alaska Native clients. Estimates of psychiatric disorders among American Indians with substance abuse problems range from 35-60% (Regier et al., 1990; Smail, Stockwell, Canter, & Hodgson, 1984; Westermeyer & Neider, 1994). Available data suggest that a co-morbid psychopathology is as least as prevalent in American Indian and Alaska Native populations with substance abuse problems as in the general population.

The types of mental disorders reported in association with substance abuse as a co-morbid condition among American Indians are major depressive disorder (Shore, Manson, Bloom, Keepers, & Neligh, 1987; Westermeyer & Neider, 1984); bipolar I and bipolar II disorder; dysthymia; anxiety disorders, including post traumatic stress disorder (PTSD) (Matsunaga, 1997; Neligh, Baron, Braun, & Czarnecki, 1990; Robin 1997a; 1997b; Scurfield, 1995; Westermeyer, 1993); and schizophrenia (Westermeyer, 1992).

Dual Diagnosis: Substance Abuse Presenting with a Psychiatric Disorder

Epidemiology and Dual Diagnosis

According to the Epidemiological Catchment Area (ECA) Study (Regier et al., 1990), clients with either a psychiatric or a substance abuse/dependence disorder are at increased risk for the other problem. Regier et al., (1990) found that among clients presenting with a mental disorder, 29% also had an alcohol or drug abuse disorder, and of the clients diagnosed with an alcohol or drug abuse disorder, 37% also had a co-occurring mental disorder. Eighty-three percent of individuals diagnosed with antisocial personality disorder also suffered from substance abuse/dependence disorder, and 60% of the individuals diagnosed with bipolar disorder also presented with substance abuse/dependence disorders. Regier et al. (1990) also found a high occurrence of co-morbidity among those clients presenting with a drug abuse disorder other than alcohol, with more than half of these clients (53%) also presenting with a co-occurring mental disorder.

Galanter et al. (1990) estimate that alcohol and/or drug consumption are the direct cause for one-third to one-half of psychiatric clients seen for admission, crisis intervention, or in emergency rooms following suicide attempts. Drake and Wallach (1989) found that 45% of schizophrenics hospitalized were also abusers of alcohol; however, alcohol abuse/dependence disorder was not listed in the diagnosis of these patients. Drake and Wallach (1989), suggest that estimates of co-morbidity are low because of denial by both client and clinician.

Problems in Treatment of Dual Diagnosis/Co-Morbidity

Society's pressures for accountability in mental health and substance abuse treatment outcomes in the past few years have led to increased interest in dual diagnosis. Dually diagnosed individuals present co-existing problems in treatment as a result of both mental health disorders and substance abuse/dependence disorders (Sciaccia & Thompson, 1996). As noted above, when these clients seek treatment, they often find themselves between competing and conflicting treatment systems, or they are lost in the system and fail to receive adequate or appropriate treatment.

Dual diagnosis is difficult for both the client and the clinician. The clinician must be skilled and knowledgeable in treating both substance abuse and psychiatric illnesses, but often only one problem is addressed. Traditionally, mental health professionals have been reluctant to treat clients with substance abuse. In some instances, addiction professionals have complained that mental health providers ignore and/or under-diagnose

substance abuse disorders, inappropriately prescribe minor tranquilizers, or hospitalize alcoholics in mental institutions rather than in alcohol treatment facilities (James Hagel, personal communication, 1998). Furthermore, mental health facilities may refuse to treat clients with substance abuse histories, and conversely, substance abuse programs may reject those with psychiatric histories.

A clash also occurs over the selection of a client's primary treatment goal; in mental health, treatment often begins with stabilization, followed by therapy that encourages increasing insight and subsequent behavior changes. Some mental health clinicians may decide that sporadic use of alcohol does not jeopardize the client's capacity for treatment. However, many substance abuse counselors believe that any use of a non-prescribed mind-altering substance interferes with recovery. For example, in substance abuse treatment, the goal is accepting dependency, maintaining sobriety, and abstaining from alcohol and drugs. The treatment goal is to eliminate all drugs that affect the central nervous system.

The use of empowerment strategies also differs in treating mental health and substance abuse disorders. From the mental health view, empowerment is used to enhance self-esteem and to assist clients to better deal with their problems. However, from the substance abuse perspective, recognizing one's powerlessness is an important step in accepting one's disease (James Hagel, personal communication, 1998). This is the paradox inherent in the Alcoholics Anonymous (AA) philosophy: when one accepts that one is powerless over the disease, it comes under control.

Clinicians from these disciplines often suffer from negative attitudes, some of which may be rooted in the clinician's own background or through personal use or experience with substances (James Hagel, personal communication, 1998). Clinicians may also have difficulty trying to determine which illness—the substance abuse dependency or the mental health disorder—comes first (Kessler et al., 1994; Robins & Regier, 1991; Ross, Glaser, Germanson, 1988; Schuckit et al., 1997; Swendsen et al., 1998). Some are fearful of trying to address both problems, and as a result, the client's treatment may be fragmented. Clients are referred to other facilities, which then also refer them out, resulting in a "dumping syndrome," which delays necessary, coordinated, comprehensive treatment (James Hagel, personal communication, 1998).

The most problematic issue in treating co-existing diagnoses is how lapses and relapses are viewed and handled. For example, in the classic mental health model, a "slip" or lapse is seen as a form of self-medication, an acting-out of unresolved conflicts, or simply misbehavior. However, in the classic substance abuse model, the substance abuse counselor might perceive the "slip" as a relapse that results from not adhering to their program (usually 12-step). In substance abuse treatment, only a few number of "slips," or lapses, are tolerated, as opposed to the mental health model in which any number might be accepted.

Summary

Major barriers to effective treatment of dual diagnosis are complicated by a number of factors: (a) determining a primary diagnosis, (b) determining who should best treat the client, (c) deciding which is the most appropriate facility, and (d) determining what treatment approach should be used. Even when these steps are followed, however, the client might not receive appropriate treatment until a crisis arises and hospitalization and/or emergency room visits are required. For the American Indian client with dual diagnosis, the lack of aftercare programs further compounds the problem of recovery. The need for effective aftercare programs for this patient population is critical.

Significance of the Conference

The purpose of this conference was to respond to some of these problems by bringing together mental health clinicians, substance abuse/dependence counselors, VR counselors, researchers, and policy makers to exchange information about successful cross-cultural primary and aftercare treatment of American Indian clients with substance abuse problems and a co-morbid psychiatric disorder. This conference was the first of its kind to discuss (a) dual diagnosis, poly-substance abuse/dependence, and psychiatric disorders in primary treatment in American Indian communities; and (b) the linking of aftercare treatment to vocational rehabilitation programs. The conference objectives were as follows:

1. To provide a forum for researchers, clinicians, and service providers to present and discuss critical psychosocial issues and problems of co-morbidity as they relate to substance abuse and American Indians.
2. To present information on the epidemiology of co-morbidity in American Indians and Alaska Natives as seen in both the research and clinical arenas.
3. To present research and clinical information on specific diagnostic characteristics of co-morbidity among American Indians.
4. To identify key issues related to culture in the treatment of co-morbidity.
5. To identify specific age and gender issues related to diagnosis and treatment of co-morbidity among American Indian people.
6. To present information on the case management model used in vocational rehabilitation as an effective aftercare model program for patients with a co-morbid disorder.

Conference Proceedings

The five papers that comprise the proceedings encompass the six objectives of the conference. They reflect the major topics -

epidemiology, diagnosis and treatment of co-morbid psychiatric disorders associated with substance abuse, the impact of cultural issues on the diagnosis and treatment of clients with dual diagnosis, the problem of gender differences in diagnosis and treatment, and the VR case management model as an aftercare program.

The epidemiology of substance abuse among American Indians is the focus of a paper by Drs. Philip May and J. Phillip Gossage, who conducted a study of alcohol consumption among four northern U.S. tribes. The authors sought to determine frequency of consumption, quantity consumed, and abuse of other substances among a random sample of 1,421 enrolled tribal members. Results indicate that the pattern of alcohol consumption for most informants was binge drinking on social occasions punctuated with very long periods of abstinence. Men consumed larger quantities than women. Highest prevalence of drinking occurred under the age of 30, and an older age group (40+) had very low rates of consumption. This study also confirmed earlier observations by May (1995) that most of the serious consequences of alcohol related behavior—accidents, suicides, homicides—occur as a result of binge drinking as opposed to solitary drinking behavior.

One of the major issues for clients with substance abuse problems and a co-morbid disorder is screening and assessment of the psychiatric disorder. By matching specific patient subtypes to specific treatments, McLellan (1986) found that treatment outcomes improved by 37%. Therefore assessment of psychiatric severity is essential in order to match patients to treatment. However, it should be noted that traditionally substance abuse programs and mental health programs within IHS have not assessed patients for a co-morbid condition. Consequently, the severity of any psychiatric disorder is unknown to both the patient and the substance abuse counselor.

An excellent overview of the screening, diagnosis, and treatment of patients with dual diagnosis is presented in the paper by Dr. Joseph Westermeyer. After discussing methods of screening and treatment for patients with dual diagnosis, Westermeyer discusses mood disorders, anxiety disorders, schizophrenia and other psychiatric disorders, alcohol related mental disorders, and behavioral disorders associated with substance abuse. The author includes case studies to illustrate some of the disorders and briefly discusses disorders of children and adolescents associated with substance abuse. Westermeyer stresses the importance of diagnosing psychiatric disorders in patients with substance abuse problems and adds that traditional healing practices may have a role in treatment of some co-morbid disorders.

Those substance abuse programs that do assess for co-morbidity often fail to address traditional American Indian cultural issues, which are a significant factor in the diagnosis and treatment of American Indians with dual diagnosis. The impact of culture on the diagnosis and treatment of a

psychiatric disorder was a focal point of several presentations at the conference. An overview of some of these issues is presented in a paper by Dr. Michelle Christensen, who provides background on the inclusion of culture in the latest edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). After a brief discussion of the history and evolution of the different editions of the DSM, Christensen briefly discusses the cultural variations presented in 76 DSM listed disorders as well as an appendix that includes a list of culture bound syndromes. The author also presents a case study that illustrates how traditional American Indian culture impacts psychiatric assessment and treatment.

There are a number of gender differences related to substance abuse, including different physiological responses (Lieber, 1997). Women have less alcohol dehydrogenase than men, making them more susceptible than men to cirrhosis, gastric disorders, cardiomyopathy, and brain impairment. Women who abuse alcohol are also more apt than men to be poly-substance abusers. Finally, women with substance abuse problems tend to experience different trauma than men, i.e., women who abuse alcohol report higher rates of sexual and physical abuse. These gender differences as they relate to clients with a co-morbid and psychiatric disorder are addressed in a paper by Drs. Norma Gray and Pat Nye, who observe that PTSD in woman contributes to the “co-morbid problems of addiction, depression, and violence.” The authors indicate that women with PTSD are more likely than men to be diagnosed with a mood disorder and anti-social disorder. The authors also briefly discuss the use of the medicine wheel as an effective treatment approach for American Indian women with dual diagnosis.

If treatment outcomes are to be improved, professionals must actively work toward coordinating and integrating alcohol and drug treatment programs with psychiatric and social services. McClellan (1986) observed that treatment efficacy improves when patients and therapists are presented with a variety of treatment options, and treatment efficacy significantly improves with the inclusion of employment.

An innovative aftercare program that leads to employment for American Indian clients in recovery is discussed in a paper by Sheila Hitchen, a VR counselor in Portland, Oregon. Based on the VR case management model, this particular aftercare program was developed as a collaboration between the Oregon VR Division, the University of Arizona, and a number of community and urban alcohol treatment and recovery programs. This model program has had significant success in rehabilitating American Indian clients with substance abuse problems (and dual diagnosis) who are interested in gainful employment or furthering their academic skills toward obtaining a job. Over 50% of those participating obtained and sustained employment through the VR system. This program,

which is the result of collaborative activity between a number of agencies, is the kind of effective aftercare program for clients in recovery that is necessary to help clients with dual diagnosis to maintain sobriety.

Jennie R. Joe, Ph.D.
University of Arizona
Native American Research and Training Center
1642 E. Helen Street
Tucson, AZ 85719

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R. S. Young, Ph.D., is a Research Associate with the Native American Research and Training Center at the University of Arizona. Jennie R. Joe, Ph.D., M.P.H., is the Director of the Native American Research and Training Center at the University of Arizona. Jeanette Hassin, Ph.D., is a Research Assistant Scientist with the College of Public Health at the University of Arizona. Douglas St. Clair, Ph.D., is the Interim Health Director for the Eastern Shoshone Health Department and Executive Director of Red Feathered Eagle Vocational Rehabilitation on the Wind River Reservation, Ft. Washakie, Wyoming.

NEW DATA ON THE EPIDEMIOLOGY OF ADULT DRINKING AND SUBSTANCE USE AMONG AMERICAN INDIANS OF THE NORTHERN STATES: MALE AND FEMALE DATA ON PREVALENCE, PATTERNS, AND CONSEQUENCES

Philip A. May, Ph.D., and J. Phillip Gossage, Ph.D.

Abstract: The quantity, frequency, and variability of alcohol and other substance use is described in a random sample of 1,436 enrolled members of four tribes from the northern United States. Overall, males begin regular drinking at an earlier age than do females (17 vs. 18.1 years), and more males drink alcohol than females (70.7% to 60.4%). There are some very heavy drinkers who drink daily in these populations, but most drinkers are binge drinkers. On any typical day abstinence from alcohol is the modal pattern. That is, most respondents indicated very infrequent drinking, and among the older age groups (40+), there is a high rate of abstinence. Males drink more frequently and in larger quantities than females. The number of drinking days per month is 4.7 for males and 2.1 for females, and on those days when drinking occurs, the males consume an average of 5.7 drinks and females an average of 3.1. The highest prevalence of drinking and the heaviest drinking occur among those who are under the age of 30. With the exception of tobacco use, which is high in all age categories, the use of other drugs is highest in those under 30.

Literature on drinking among American Indians numbers in the hundreds of articles, chapters, and books (Mail & McDonald, 1980). But those works that describe a complete epidemiology of adult drinking are quite rare (see May, 1994; 1996). Some works have very extensively described the epidemiology and drinking patterns of particular tribes, such as the Navajo (Kunitz & Levy, 1994; Levy & Kunitz, 1974), and others have provided epidemiology overviews in the form of articles in published journals (Beltrame & McQueen, 1979; Longclaws, Barnes, Grieve, & Dumoff, 1980; May & Smith, 1988; Whittaker, 1962; 1982). Still others have presented substance abuse epidemiology data for a subset of the American Indian

population as part of a study of another health problem (Welty et al., 1995). In total, there are fewer than two dozen studies published that contain detailed information on the quantity, frequency, and variability of drinking among American Indian adults (see May, 1996 for a review).

The above books and articles describe a number of patterns that seem to be unique, or at least more common, among American Indian adult populations. Many tribes are described as participating in alcohol abusive or heavy binge drinking behaviors, and the quantity of alcohol consumed exceeds that consumed by other western region populations, even though some other western populations practice relatively similar binge patterns (Jessor, Graves, Hanson, & Jessor, 1968). In fact, heavy drinking among a certain sub-segment of the American Indian population has been emphasized as a truly unique American Indian pattern of drinking (Arbogast, 1995; Brod, 1975; Lamarine, 1988; Lurie, 1971). While some of the earliest works have attributed binge-drinking behavior to such phenomena as socio-cultural deprivation (Dozier, 1966), others have pointed to unique alcohol beverage control laws (such as prohibition) as having been influential on such behaviors over many years (May, 1976; May, 1977).

Of major concern in the epidemiology of American Indian drinking is the fact that drinkers and their drinking patterns generate a large and disproportionate toll in terms of morbidity and mortality. Even though a number of American Indians are abstainers at any one period in time, those who do drink tend to ingest excessive amounts over a short period of time, producing high blood alcohol levels. Such a drinking pattern produces a high rate of alcohol-related mortality and morbidity as measured by the number of arrests (May, 1976), mental health co-morbidity (May, 1988; Parker et al., 1997), motor vehicle crashes (May, 1989), and Fetal Alcohol Syndrome and Alcohol-Related Birth Defects in some isolated American Indian communities (May, 1991).

Drinking among American Indians, as in virtually all American populations, is more prevalent in the younger age groups. Higher rates of substance use and abuse are recorded among those under 40 and are even more highly concentrated in those under the age of 30. Therefore, the consequences of alcohol-related morbidity and mortality are also greatest in the younger age groups (Kunitz & Levy, 1994; May, 1996). As a result of the extensive body of literature that has been generated from school surveys on drinking among American Indian adolescents (Beauvais, 1992; Oetting & Beauvais, 1989), our understanding of the social and psychological correlates of drinking among American Indian youth substantially exceeds our knowledge of these correlates among adults (Liban & Smart, 1982; Oetting, Beauvais, & Edwards, 1988).

A handful of studies has shown that American Indians, more so than other ethnic groups in the United States, have a tendency to give up alcohol during the middle years of adulthood (Kunitz & Levy, 1994; Levy &

Kunitz, 1974; Leung, Kinzie, Boehnlein, & Shore, 1993; Welty et al., 1995). Nevertheless, knowledge about the social and psychological reasons for drinking among adult American Indians and why American Indians quit drinking in adulthood is very limited. If more studies could be conducted on the epidemiology of adult drinking which examine patterns throughout the life course, we would have more adequate information on which to base our theories and from which to plan programs of targeted prevention to address alcohol-related problems (May & Moran, 1995). Truly, our knowledge of the prevalence and susceptibility to alcohol problems among American Indians is not as well developed as we would hope (Kunitz & Levy, 1994; May, 1982).

The data that follow come from an extensive study of the epidemiology of drinking among four tribes from the northern Plains and Rocky Mountain states of the United States. Their identities are kept anonymous. The data are aggregated across the four reservations, for examination of general patterns of drinking indicated that they do not vary greatly among the four reservations.

Previous studies of drinking epidemiology among Plains and Plateau tribes are rare in the published literature. Whittacker (1962; 1982) studied the Standing Rock Sioux and found a declining rate of drinking over a twenty-year period. From 69% of the population (15 years and older) drinking in 1962 (males 82%, females 55%), the prevalence of drinking dropped to 58% in 1980. Consumption of alcohol by females dropped the most during this period of time from 55% down to 35%; males dropped only 10% from 82% to 72%. Nevertheless, Whittacker wrote emphatically that heavy and abusive drinking was very common in both time periods. Among the Cheyenne River Sioux in 1987 (Welty, 1988), a study of health promotion and health risk behavior indicated that 46% of the Cheyenne River Sioux drank; but the study did not present the data by male and female. Another Plains study among the Ojibwa on a small reserve in Canada (Longclaws et al., 1980) found that 84% of people there drank alcohol; but again the difference between male and female patterns was not described. Longclaws et al., (1980) did describe details of the social nature of drinking. Finally, an age-specific study focused only on those American Indians 45 years of age and older among the Cheyenne River Sioux, the Devil's Lake Sioux, and the Oglala Sioux found that 47% of the middle and older age adults drank, (60% males, 37% females) (Welty et al., 1995). Among the American Indians in Oklahoma, the same paper reported a lower percentage of drinking among the Apache, Caddo, Delaware, Comanche, and Kiowa. Among these Oklahoma tribes, 37% of the adults 45 years and older drank (49% of the men and 28% of the women). In summary, drinking tapered off in the middle years and older ages among all of the Plains Indians, and drinking was substantially lower among the southern Plains Indians than among the northern Plains tribes.

Several extensive studies of drinking epidemiology have been carried out among the Navajo who are not a Plains culture tribe. These studies have also shown that a lower percentage of the adults of this southwestern Athabaskan tribe drink. The Navajo data indicate that only 30% to 52% of the adult population drinks (Levy & Kunitz, 1974; May & Smith, 1988), and that more males than females drink (64% for males, 40% for females).

Binge drinking, generally in social groups and gatherings, is common throughout all of these American Indian specific studies and particularly among Plains Indians. Binges are described as sporadic and heavy, clustering on weekends and special occasions.

The following study is currently being completed among four northern tribes. Most of the data, as described in the methodology section below, are gathered from northern Plains Indian and Plateau tribes. Therefore, the most meaningful comparisons of data about other American Indian tribes should generally be with data from Plains Indians rather than data from the southwestern tribes. In general, southwestern tribes and the Plains tribes of Oklahoma appear to have lower prevalence rates of drinking than do northern Plains tribes. To our knowledge there are no published studies of drinking among any of the Plateau culture tribes, another northern culture represented in this paper. In future analyses we will compare the Plateau tribes drinking data with the various other tribes to analyze subtle differences.

Methods

The new data presented in this paper come from a random sample of 1,436 American Indians selected from the tribal rolls of four different reservations in the north central and northern Rocky Mountain states of the country. Three of these reservations are of tribes classified as Plains culture and one as a Plateau culture. Approximately 380 of the respondents (26.7%) were from the Plateau culture and the remainder from the three Plains culture reservations. No large differences in drinking pattern were revealed between the Plateau sample and the Plains sample in gross descriptive analysis. Once copies of the tribal rolls were obtained from the officials of each tribe, a separate random sample of 384 individuals was drawn for each reservation via computer. The samples were drawn only from those zip codes that were on the four reservations and also from the counties and key border towns surrounding the reservations. Therefore, the sample contains both on and off reservation residents although the bulk is comprised of reservation residents.

All respondents in the sample were 16 years of age and older. Each was asked to complete a questionnaire that contained approximately 200 items. These items covered a variety of topics including the following: the use of alcohol and other drugs as measured by quantity, frequency,

and variability of use; the social context and consequences of drinking; the respondent's knowledge, attitudes, beliefs, and opinions about drinking and its acceptability; knowledge and opinions about alcohol policy that might be implemented on the reservation; demographic data, including various measures of socioeconomic status; and questions about levels of traditionality, adherence to mainstream norms, and acculturation. Most questions on the prevalence of drinking were similar or identical to those of National Institute on Drug Abuse (NIDA) and National Institute on Alcohol Abuse and Alcoholism (NIAAA) national surveys; so they are generally comparable across surveys. Drinks (ethanol units) were standardized to the national surveys as well.

Respondents were given the option of answering the questions by pencil and paper alone or by direct interview. This option was provided so that respondents would feel at ease with the questionnaire and provide the most accurate responses. After completion by the respondents, the questionnaires were scanned for completeness and sealed, along with the informed consent form, in an envelope that had a unique identification number on it. It was not opened until the data were entered at the University of New Mexico. This further protected confidentiality. Although the percentages choosing the pencil and paper vs. the interview option varied by reservation, approximately 80% of the entire sample chose pencil and paper. All interviews (20%) were completed by enrolled members of the tribe being surveyed, and respondents were offered the option of using either English or the native language. Less than 5% of the entire sample chose a native language interview. Respondents were provided a \$10 stipend for compensation.

A formal tribal council resolution of approval preceded all activity at each site. Furthermore, the protocols of the survey were reviewed and approved by a variety of institutional review boards including: the Arts and Sciences and Health Science Center Review Boards at The University of New Mexico, local service unit and/or tribal boards at each site, and the institutional review boards of the Indian Health Service area and national offices. The data presented here have been presented back to each tribe in analyzed form for their use in a variety of activities. Furthermore, the tribes have been provided the option of having the complete data sets analyzed further for them, and/or for the return of the complete survey results in electronic form.

Results

Demographics and Social Indicators

Tables 1 and 2 contain summaries of the social and demographic characteristics of the sample. Table 1 provides standard demographic indicators, while Table 2 summarizes traditional vs. modern values

regarding acculturation, language preference, and health care provider preference.

In Table 1 the ages of the male and female respondents are detailed. The median age of the female respondents is 1.6 years older than the males. This is not a surprise, as the male mortality rate is substantially higher among American Indians (more so than many other human groups), leaving more females at the older ages. Overall the sample is very well balanced given these differential mortality trends between male and female and appear to be a representative one. This is evidenced by the fact that most of the extra females in the sample are found in the 50 and older age category.

Educational attainment is also found in Table 1. Males in the sample are generally less educated in the formal sense and tend to cluster more at the lower levels. Fewer males have graduated from high school. The marital status of males and females is generally similar; 34.6% of both males and females in the sample are currently married. Males, however, are more likely to have never been married.

The socioeconomic status measures indicate that male and female income is relatively equal. Furthermore, when the sample is classified by occupation using the Hollingshead Occupational Codes (Hollingshead & Redlich, 1958), males are more likely to be in the skilled and unskilled manual labor categories while females dominate the homemaker, clerical, and administrative categories.

Finally, the last variable in Table 1 describes one isolated aspect of the respondents' social life, TV watching. On average, the males and females watch 3.1 to 2.7 hours, respectively, of TV per day and approximately 16.1 to 18 hours per week. Males report watching slightly more TV than do females. Males prefer to watch police shows and sports, while females are more likely to watch drama and soap operas.

Table 2 indicates that males and females are relatively equal in perception of their own levels of acculturation. Forty-two percent of the males and 43.5% of the females describe themselves as equally American Indian and White in their living practices. However, at the two extremes males are more likely to describe themselves as American Indian only or mainly American Indian, whereas females are more likely to describe themselves as mostly acculturated (White man's world with some American Indian). Language spoken provides another indicator of biculturalism and/or acculturation. Both males and females report speaking primarily English at home and with friends (95-98%). However, at work tribal languages are used more frequently: 23% of the women and 17.6% of the men report speaking traditional language at work.

Religious preference is described differently by the males and females. Males cite a higher adherence to traditional religious practices while females report more adherence to Christian practices, both Catholic and Protestant.

Table 1
Social and Demographic Characteristics of the Sample (N = 1,436)

Variable	Males	Females
Age (on day of interview) (%)		
<i>n</i> =	625	783
16-19	10.7	7.8
20-29	24.8	23.4
30-39	24.2	24.4
40-49	18.6	18.1
50+	21.8	26.3
Mean	37.3	39.9
Mode	19	34
$\chi^2 = 6.58, df = 4, p = 0.160$		
$t = 3.019145, p = 0.003$		
Educational Attainment (%)		
<i>n</i> =	629	790
Less than high school or GED	28.6	22.3
High school graduate or GED	24.2	25.4
Vocational schooling	8.7	4.9
Some college	27.7	31.3
College graduate and above	10.8	16.1
$\chi^2 = 22.10, df = 4, p = 0.000$		
Marital Status (%)		
<i>n</i> =	628	792
Single (never married)	35.2	27.4
Married	34.6	34.6
Living with significant other/common law partner	14.3	13.6
Separated	3.8	2.4
Divorced	10.0	13.4
Widowed	2.1	8.6
$\chi^2 = 38.73, df = 5, p = 0.000$		

Table Continues

Table 1 (Continued)
Social and Demographic Characteristics of the Sample (N = 1,436)

Variable	Males	Females
Occupation (Hollingshead Occupational Codes) (%) <i>n</i> =	572	717
Higher executives, major professionals, owners of large businesses	3.7	6.3
Business managers, medium businesses, lesser professionals	1.6	2.5
Administrative personnel, small businesses, minor professionals	7.7	9.3
Clerical and sales, technician, little businesses	6.8	18.4
Skilled manual	45.5	11.0
Semiskilled	8.4	6.3
Unskilled (unspecified and unemployed)	12.2	13.2
Homemaker	1.6	21.8
Student, disabled, or no occupation	12.6	11.2
$\chi^2 = 286.29, df = 8, p = 0.000$		
Yearly Income (%) <i>n</i> =	601	756
Less than \$9,999	32.9	38.6
\$10,000 to \$19,999	23.3	26.1
\$20,000 to \$29,999	18.3	15.1
\$30,000 to \$39,999	10.3	8.3
\$40,000 or above	15.1	11.9
$\chi^2 = 10.19, df = 4, p = 0.0374$		
Television Watching Habits <i>n</i> =	580	702
Mean hours TV watched yesterday <i>t</i> = 2.733915, <i>p</i> = 0.006	3.1	2.7
<i>n</i> =	618	770
Mean hours TV watched last week <i>t</i> = 2.671754, <i>p</i> = 0.008	18.2	16.1

Table Continues

Table 1 (Continued)
Social and Demographic Characteristics of the Sample (N = 1,436)

Variable	Males	Females
Television Watching Habits (Continued)		
Most watched TV shows (in alphabetical order) (top 6 each sex) (%)		
<i>n</i> =	629	792
Cops	3.0	
Day of our Lives	-	3.7
ER	-	5.1
Friends	2.7	3.3
Home Improvement	4.0	2.7
News (varied)	8.8	7.1
Seinfeld	4.3	3.1
Sports (varied)	6.7	-

Health-care-provider choices complete Table 2. When physically ill, there is no difference between males and females, for both sexes are equally likely to consult medical doctors from the Indian Health Service (IHS) or in private practice over 50% of the time. However, a substantial number (34-35%) consult *both* traditional healers and medical doctors. Few utilize only traditional healers. Regarding mental distress, males are more likely to consult a traditional healer than are females (17% to 12.9%). This male preference for traditional healers may be linked to issues of substance abuse.

Prevalence of Drinking

The prevalence (quantity, frequency, and variability) of drinking is summarized in Table 3. Males begin regular drinking at an earlier age than do females, (17.0 vs. 18.1 years), and are more likely to have consumed alcohol (at least once) in the last 12 months (70.7% for males, 60.4% for females). This is virtually identical to the overall U.S. population levels reported by the NIDA (1999, p. 85) National Household Survey (males = 68.3% and females = 60.0%). The *quantity* of drinks consumed by males is greater than females when measured over the last 12 months. The median number of drinks consumed per drinking day for drinking males was over 5 drinks, while the median number for drinking females is over 3 drinks.

Table 2
Social and Demographic Variables—Traditional Values vs. Modern Values, Language Preference, and Health Care Provider Preference

Variable	Males	Females
Level of Acculturation (%)		
<i>n</i> =	617	779
Indian only	8.4	5.0
Mainly Indian, some White man's world	23.5	20.3
Equally Indian and White man's world	42.0	43.5
Mostly White man's world, some Indian	24.5	29.3
White man's world only	1.6	1.9
Mean	2.8	3.0
Mode	3	3
$\chi^2 = 11.11, df = 4, p = 0.02534183$		
$t = 3.179652, p = 0.002$		
Languages spoken at home (%)		
<i>n</i> =	628	790
Respondents choosing English	94.9	96.3
$\chi^2 = 1.72, p = 0.189$		
Languages spoken with friends (%)		
<i>n</i> =	629	790
Respondents choosing English	96.2	97.6
$\chi^2 = 2.37, p = 0.124$		
Languages spoken at work (%)		
<i>n</i> =	629	790
Respondents choosing English	82.4	77.0
$\chi^2 = 6.21, p = 0.013$		
Religious Preference (%)*		
<i>n</i> =	628	791
Catholic	36.7	44.1
Traditional	48.5	36.4
Protestant	14.7	29.4
$\chi^2 = 24.95, df = 2, p = 0.000$		

Table Continues

Table 2 (Continued)
Social and Demographic Variables—Traditional Values vs. Modern Values, Language Preference, and Health Care Provider Preference

Variable	Males	Females
Preferred health care provider when physically ill (%)		
<i>n</i> =	622	784
Traditional healer	5.5	4.7
Medical doctor from IHS	35.4	37.2
Medical doctor in private practice	22.0	21.0
Both traditional healers and medical doctors	33.9	34.8
Other	3.2	2.2
$\chi^2 = 2.40, df = 4, p = 0.663$		
Preferred health care provider when mentally ill (%)**		
<i>n</i> =	627	789
Traditional healer	17.0	12.8
Counselor from IHS	16.5	16.5
Counselor in private practice	12.9	14.8
Clergy	7.2	9.1
Elder, relative, friend	19.5	22.0
Doctor or psychiatrist	16.2	16.1
High school counselor or social worker	1.4	1.1
Combination	4.9	5.7
Other	4.0	1.6
$\chi^2 = 23.67, df = 8, p = 0.003$		

* Respondents can choose more than one religion.

** Respondents can choose more than one type of provider.

Table 3
Population Experience with Alcohol: Prevalence of Drinking
(Adults, age 16 years +)

Variable	American Indian Males	Females
Age began drinking regularly <i>n</i> =	580	650
Range	3 - 49	2.5 - 60
Mean	17.0	18.1
Mode	18	18
S.D.	3.388	5.061
<i>t</i> = 4.505447, <i>p</i> = 0.000		
Drank alcohol in last 12 months (%)* <i>n</i> =	635	801
Respondents answering affirmatively $\chi^2 = 16.46, p = 0.000$	70.7	60.4
Alcoholic drinks consumed per day in last 12 months (%)** <i>n</i> =	507	566
0 drinks	13.6	27.2
1 to 2 drinks	15.0	19.8
3 to 4 drinks	17.2	17.7
5 to 6 drinks	14.2	14.3
7 to 9 drinks	14.6	10.2
10 or more drinks	25.4	10.8
$\chi^2 = 63.95, p = 0.000$		
Days consumed alcohol in last 30 days** <i>n</i> =	551	614
Mean	4.7	2.1
Median	2	1
Mode	0	0
S.D.	6.922	4.285
<i>t</i> = 7.686728, <i>p</i> = 0.000		

Table Continues

Table 3 (Continued)
Population Experience with Alcohol: Prevalence of Drinking
(Adults, age 16 years +)

Variable	American Indian	
	Males	Females
Alcoholic drinks consumed per day in last 30 days**		
<i>n</i> =	533	603
Mean	5.7	3.1
Median	4	1
Mode	0	0
S.D.	6.701	5.023
<i>t</i> = 7.361097, <i>p</i> = 0.000		
Number of days when 5+ alcoholic drinks were consumed in last 30 days**		
<i>n</i> =	544	612
Mean	3.0	1.3
Median	1	0
Mode	0	0
S.D.	5.368	3.443
<i>t</i> = 6.746823, <i>p</i> = 0.000		
Most alcoholic drinks consumed on any day in last 30 days**		
<i>n</i> =	529	597
Range	0 - 48	0 - 48
Mean	7.5	3.7
Median	6	0
Mode	0	0
S.D.	.390	5.899
<i>t</i> = 8.897953, <i>p</i> = 0.000		

* Includes all respondents, lifetime abstainers, current abstainers, and current drinkers.

** Data pertain only to those respondents who report having consumed alcoholic beverages in the past year (current drinkers).

Regarding the *frequency* of drinking, males are twice as likely to have drunk alcoholic beverages in the last 30 days than females. Males report an average of 4.7 drinking days in the last month while females report 2.1. On these drinking days, males report almost twice as many drinks consumed as females, 5.7 and 3.1. It should be emphasized here that the *modal* response for all of the above questions was *zero*. On most days, the respondents in this sample *consume no alcohol at all*.

As a measure of *binge* drinking (variability), we asked respondents to tell us how many days they drank 5 or more drinks. Males reported having 5 or more drinks on 3 days in the last month while females report 1.3 days of heavy drinking in the past month. Finally, when asked the most alcoholic drinks consumed on any one day in the last 30 days, males and females reported an equal range of 0-48 drinks. However, males reported drinking an average peak of 7.5 (S.D.=8.390) drinks on their highest drinking day, and females reported 3.7 (S.D.=5.898). All of these measures, therefore, indicate binge drinking among those who drink. Even though respondents are not drinking on *most* days, on days when they do drink, consumption is substantial.

Substance Use By Age

Table 4 provides the prevalence of drinking by key age categories. The prevalence of drinking by age group differs substantially between males and females. For males 20-29 years, over 86.2% drink as opposed to 72.8% for females. In the 50+ age group, 57.1% of the males in these tribes are still drinking as are 43.8% of the females. Therefore, drinking is more prevalent among the younger age groups as is true for other populations in the United States.

The quantity of alcohol consumed by age is also presented in Table 4. Over 60% of all males under the age of 40 report drinking 5 or more drinks per occasion in the last 30 days. Among females in the same age groups, 39-45% report drinking similarly large quantities. By ages 50 and older, over twice as many males (33.9%) than females (14.7%) are still drinking large quantities. However, alcohol consumption in the past 30 days is much higher among males under 40 than among older males and females. Male drinkers in this sample who are under 40 consume 9 to 10 drinks per occasion, whereas female drinkers of the same age consume 4.5 to 5.7 drinks. In the older categories (50+), males drink an average peak of 4.3 drinks per day while for most females consumption is 1.4 drinks.

Tobacco Use

A very high percentage of both males and females of these northern tribes smoke. The peak smoking prevalence for males is in the 16-19 year age group (76.9%), and it declines to 67.7% among 20-29 year-old males.

Rates of smoking among females in these age categories are 77.4% for the 16-19 year age group, and 70.0% for the 20-29 year age group. Unlike drinking, which tapers off in the older-age categories, smoking persists through the 50+-age category and involves almost half of all males (52.1%) and females (41.3%). These rates of smoking are much higher than national data, which indicate that overall 32.8% of males and 28.4% of females smoke (NIDA, 1999, p. 91). The highest national rates are reported in the 18 to 25 year olds at 50.3% for males and 43.9% for females (NIDA, 1999).

Smokeless tobacco use, as could be anticipated, is higher among males than among females. Among males below 40 years of age, almost one-third use smokeless tobacco while less than 10% of women below age 40 chew or "dip." These rates also exceed national averages where about 13% of males and 1% of females are current users of smokeless tobacco (NIDA, 1999, p. 97).

Other Substances

The use of other drugs is also summarized in Table 4. Marijuana use is highest in the 16-19 age group with 55.4% of the males and 38.7% of the females having used marijuana in the last 12 months. The use of marijuana stays high in both groups until age 40, when it begins to taper off dramatically, especially among males. In most age groups marijuana use exceeds national averages (NIDA, 1999, p. 25). Non-prescription painkillers are used more by males than females in the younger age categories. In the older categories, the use is equally modest for both genders. Methamphetamine use is reported to be higher for very young males than females, but both genders show a tapering off in use in the older age groups.

For other drugs of abuse, females consistently report *no use*. For example, females report no use of inhalants or solvents in the past 12 months. Among the males, inhalant use is extremely low. Less than 1% of males report using the inhalant or volatile substances in Table 4. What little use that does occur, occurs before age 30 (see May & Del Vecchio, 1997). These inhalants or solvents include gasoline or lighter fluid, spray paints, metallic spray paints, rubber cement, markers, lacquer thinner or paint solvents, correction fluids, or hair spray. Gasoline or lighter fluid is the most commonly inhaled substance with approximately 4.6% of the under-20 males having used it in the last 12 months. Although inhalant use has been reported as high among American Indian youth in school and dropout surveys (Beauvais, 1992) its use is not frequently reported among adults.

Therefore, the picture of low use of substances other than alcohol, marijuana, or tobacco is quite consistent in this sample for both males and females. Inhalants are primarily used by youth when it is difficult to obtain alcohol (May & Del Vecchio, 1997), and marijuana use among this sample tapers off with age. Alcohol use also tapers off, but not as dramatically so as demonstrated in several southwestern tribal studies (Kunitz & Levy, 1994).

Table 4
Prevalence of Substance Use by Age for Males and Females
(Adults, age 16 years +)

Variable to	Males					Females				
	16 to 19	20 to 29	30 to 39	40 to 49	50+	16 to 19	20 to 29	30 to 39	40 to 49	50+
Consumed alcohol in past 12 months (%)*										
<i>n</i> =	631					790				
Respondents answering affirmatively	80.0	86.2	72.7	59.8	57.1	73.3	72.8	67.9	53.8	43.8
(Males) $\chi^2 = 40.66, df = 4, p = 0.000$										
(Females) $\chi^2 = 47.36, p = 0.000$										
Consumed 5 or more drinks of alcohol on one or more days in past 30 days (%)**										
<i>n</i> =	542					606				
Respondents answering affirmatively	68.6	67.4	60.9	49.0	33.9	44.7	40.5	38.9	25.4	14.7
(Males) $\chi^2 = 36.45, df = 4, p = 0.000$										
(Females) $\chi^2 = 33.01, df = 4, p = 0.000$										
Most drinks of alcohol on any day in past 30 days**										
<i>n</i> =	528					592				
Mean	9.9	9.2	8.9	6.0	4.3	5.7	4.5	5.0	3.0	1.4
Median	8	8	8	4	0	3	2	3	0	0
Mode	0	0	0	0	0	0	0	0	0	0
S.D.	9.639	8.060	9.050	7.494	6.782	8.488	6.028	6.568	5.230	3.182
(Males) $F = 8.716, p = 0.000$										
(Females) $F = 9.408, p = 0.000$										
Smoked cigarettes in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	76.9	67.7	60.0	52.6	52.1	77.4	70.0	67.4	56.6	41.3
(Males) $\chi^2 = 17.81, df = 4, p = 0.001$										
(Females) $\chi^2 = 50.49, df = 4, p = 0.000$										

Table Continues

Table 4 (Continued)
Prevalence of Substance Use by Age for Males and Females
(Adults, age 16 years +)

Variable to	Males					Females				
	16 to 19	20 to 29	30 to 39	40 to 49	50+	16 to 19	20 to 29	30 to 39	40 to 49	50+
Used smokeless tobacco in past 12 months (%)										
<i>n</i> =	622					783				
Respondents answering affirmatively	30.8	33.3	30.7	14.9	10.0	19.4	10.6	3.1	0.7	1.4
(Males) $\chi^2 = 32.98, df = 4, p = 0.000$										
(Females) $\chi^2 = 48.96, df = 4, p = 0.000$										
Used marijuana in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	55.4	37.4	32.0	14.0	2.9	38.7	24.4	17.6	11.9	1.4
(Males) $\chi^2 = 90.02, df = 4, p = 0.000$										
(Females) $\chi^2 = 69.88, df = 4, p = 0.000$										
Used non-prescription painkillers in past 12 months (%)										
<i>n</i> =	623					786				
Respondents answering affirmatively	21.5	8.4	12.7	9.6	5.0	6.5	7.8	9.3	11.2	9.6
(Males) $\chi^2 = 14.66, df = 4, p = 0.005$										
(Females) $\chi^2 = 1.73, df = 4, p = 0.786$										
Used methamphetamines in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	21.5	12.9	10.0	1.8	2.1	12.9	7.2	5.2	4.9	1.4
(Males) $\chi^2 = 31.91, df = 4, p = 0.000$										
(Females) $\chi^2 = 14.90, df = 4, p = 0.005$										

Table Continues

Table 4 (Continued)
Prevalence of Substance Use by Age for Males and Females
(Adults, age 16 years +)

Variable to	Males					Females				
	16 to 19	20 to 29	30 to 39	40 to 49	50+	16 to 19	20 to 29	30 to 39	40 to 49	50+
Used gasoline or lighter fluid in past 12 months (%)										
<i>n</i> =	624					762				
Respondents answering affirmatively	4.6	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Males) $\chi^2 = 14.03, df = 4, p = 0.007$										
Used (regular) spray paints in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	0.0	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Males) $\chi^2 = 3.77, df = 4, p = 0.437$										
Used metallic spray paints in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	0.0	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Males) $\chi^2 = 2.10, df = 4, p = 0.717$										
Used rubber cement in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	0.0	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Males) $\chi^2 = 3.77, df = 4, p = 0.437$										
Used markers in past 12 months (%)										
<i>n</i> =	624					786				
Respondents answering affirmatively	0.0	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Males) $\chi^2 = 2.10, df = 4, p = 0.717$										

Table Continues

Table 4 (Continued)
Prevalence of Substance Use by Age for Males and Females
(Adults, age 16 years +)

Variable to	Males					Females				
	16 to 19	20 to 29	30 to 39	40 to 49	50+	16 to 19	20 to 29	30 to 39	40 to 49	50+
Used lacquer thinner/paint solvents in past 12 months (%) <i>n</i> =					624					786
Respondents answering affirmatively (Males) $\chi^2 = 2.10, df = 4, p = 0.717$	0.0	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Used correction fluids in past 12 months (%) <i>n</i> =					624					786
Respondents answering affirmatively (Males) $\chi^2 = 2.10, df = 4, p = 0.717$	0.0	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Used hair spray in the past 12 months (%) <i>n</i> =					624					786
Respondents answering affirmatively (Males) $\chi^2 = 2.52, df = 4, p = 0.641$	0.0	0.6	0.7	0.0	1.4	0.0	0.0	0.0	0.0	0.0

* Includes all respondents, lifetime abstainers, current abstainers, and current drinkers

** Data pertain only to those respondents who report having consumed alcoholic beverages in the past year (current drinkers).

The Context and Consequences of Drinking

The settings and consequences of drinking are presented in Table 5. Both male and female respondents report social factors as the main reason that they drink. To socialize, celebrate a special occasion, and to fit into a group of acquaintances are social contexts reported equally by males and females as the major reasons for drinking. The above variables tell us that most people drink in groups. Results from two other questions also confirm this result. The question, “When drinking, do you socialize with others?” was answered affirmatively by 97% of the males and 96% of the

females. Asked in another way, "When drinking, do you isolate yourself and drink alone?" only 20% of the males and 12% of the females said that they occasionally or frequently drink alone. Therefore, drinking is primarily a social experience and is rarely done in isolation.

Regarding the consequences of drinking, males were more likely to respond affirmatively to the risky behaviors and negative consequences. For example, males were more likely to report driving while intoxicated, getting arrested, passing out, and staying away from home for long periods of time when drinking. Sixty-two percent of the males and 45% of the females said they drove while intoxicated. Forty-seven percent of the males and 25% of the females reported having been arrested while drinking. The only variable where women reported greater negative consequences from drinking was leaving children alone; 9.2% of the females and 7.6% of the males reported this as a consequence of their drinking.

Discussion

The above data illustrate the value of separating male and female drinking data. On virtually all of the alcohol variables, males report heavier drinking, more frequent drinking, and more prevalent negative consequences. Even though males and females seem to drink primarily for social reasons, the males drink more heavily and get into more trouble when drinking. These differences occur in spite of the fact that the social, demographic, and cultural backgrounds of the two sexes are similar. Therefore, most of the differences between the groups lie along gender lines (sex roles) than along socioeconomic or cultural lines.

Not to be missed or ignored from these data is the great variability in drinking behaviors from one day to the next and from one individual to the next. An over-emphasis on drinking among American Indians, while ignoring the abstinence measures, has been common in the past among journalists, academics, and others. That is, even though the males (and to some extent the females) of this sample drink substantial quantities when they do drink, on most days no drinking occurs at all. Similarly, approximately 35% of the adults are complete abstainers. Therefore, abstinence days in each month and year far outnumber drinking days. On average, males only drink 5 days per month and females 2 days per month. Conversely, males are not drinking 25 days in an average month, and females are not drinking 28 days of each month. If the point prevalence of drinking is taken as any day, particularly a weekday, the modal pattern of drinking among American Indians is abstinence. This is not intended to minimize the fact that heavy drinking causes a tremendous number of problems ranging from adverse social consequences, morbidity, and mortality. It is, however, intended to emphasize the clearly documented strengths rather than the weaknesses exhibited in this particular population. The modal category on most of the frequency of drinking variables is zero drinks for both males and females.

Table 5
The Context of Drinking and Its Consequences by Sex
(Adults age 16 years +)

Variable	American Males	Indian Females
Reasons for dinking (top 4)(%)* <i>n</i> =	594	718
To be sociable	59.9	58.8
To celebrate a special occasion	57.1	53.8
Because the people I know drink	46.0	40.4
To be part of a group	37.5	34.8
When drinking, do (did) you socialize with others? (%) <i>n</i> =	569	678
Respondents answering "occasionally" or "frequently" $\chi^2 = 1.27, p = 0.259$	97.2	96.0
When drinking, do (did) you isolate yourself and drink alone? (%) <i>n</i> =	493	569
Respondents answering "occasionally" or "frequently" $\chi^2 = 12.59, p = 0.000$	19.9	12.0
When drinking, do (did) you drive while intoxicated? (%)* <i>n</i> =	542	647
Respondents answering "occasionally" or "frequently" $\chi^2 = 34.13, p = 0.000$	61.8	44.8
When drinking, do (did) you get arrested? (%)* <i>n</i> =	534	633
Respondents answering "occasionally" or "frequently" $\chi^2 = 61.88, p = 0.000$	47.4	25.3

Table Continues

Table 5 (Continued)
The Context of Drinking and Its Consequences by Sex
(Adults age 16 years +)

Variable	American Indian Males	Indian Females
When drinking, do (did) you pass out? (%)* <i>n</i> =	540	641
Respondents answering "occasionally" or "frequently" $\chi^2 = 17.19, p = 0.000$	57.0	44.9
When drinking, do (did) you stay away from home for long periods? (%)* <i>n</i> =	539	640
Respondents answering "occasionally" or "frequently" $\chi^2 = 38.81, p = 0.000$	41.7	24.7
When drinking, do (did) you leave your kids alone? (%) <i>n</i> =	497	608
Respondents answering "occasionally" or "frequently" $\chi^2 = 0.86, p = 0.354$	7.6	9.2

* Data pertain only to those respondents who report having consumed alcoholic beverages at sometime during their lifetime.

Two items that underscore this point can be added here: First a very high percentage of the males (82.3%) and females (83.1%) report having quit drinking at least once in their lifetime. While some of these have relapsed, a very high percentage have successfully quit drinking, many without the aid of formal treatment (see also Kunitz & Levy, 1994; Leung, et al., 1993; Levy & Kunitz, 1974). Using abstinence in the past year as a benchmark, 29.3% of the males and 39.6% of the females are abstainers. Secondly, in the items that surveyed the respondents' opinions about alcohol policy, most expressed conservative values. For example, when asked of their tribal council should be drug free, 75.5% agree or strongly agree. Furthermore, when asked if bar hours should be limited, if alcohol should be less available on the reservation, or if DWI laws should be strictly enforced, an even larger percentage of respondents (over 78%) responded affirmatively. Therefore, the values of abstinence and of reducing drinking

problems are common among American Indians, particularly those over 30 (see also May & Smith, 1988). Furthermore, the vast majority of the respondents have conservative ideas about alcohol use and abuse, but as in all other human populations their individual behaviors do not always conform to these high standards.

The picture painted in this survey is one that has been sketched by some authors and painted by others using different data. Problem drinking among American Indians is most highly concentrated in the lower age groups (Beauvais, 1992; Oetting & Beauvais, 1989; Oetting, Beauvais, & Edwards, 1988), and drinking is sporadic (Longclaws et al., 1980; Whittaker, 1962; 1982). However, when drinking occurs, it has a large number of consequences for the drinker, particularly because large quantities are consumed in short periods of time. Furthermore, the overall percentage of the population drinking in this sample (65%) is higher than found in studies of the Navajo of the southwest and of the Plains tribes in Oklahoma. These data therefore indicate that annual drinking prevalence and heavy drinking are higher among northern tribes than among southwestern tribes.

One unique aspect of this survey is that all four of these reservations are "wet." Even though only approximately 40% of all reservations have ever legalized alcohol (legal sale, purchase, and possession), all four of these reservations have legalized alcohol since the late 1950s (May, 1976). Although we do not have historical data on the characteristics of drinking on these reservations, one would suspect that the normative drinking patterns documented here have been developed and shaped by a number of factors including: historical patterns in response to prohibition prior to the late 1950s, availability through a number of outlets (including bars, grocery stores, and drive-up windows at some sites), and social and cultural norms. Therefore, the present pattern of binge drinking may be residual from the norms developed in the American Indian prohibition years. They may also be a response to minority status and the related inadequate environmental and social conditions. It would be very instructive to have data on the non-Indian population of these same regions. Are the American Indian drinking patterns substantially different from that of the non-Indians in these areas? Is it simply a matter of difference as measured by the quantity and frequency, or do non-Indians of the northern states have totally different patterns?

Conclusion

This study has found a pattern of heavy binge drinking among the four tribes studied, and these binges are isolated to relatively few days per week, per month, and per year. While this is one of the first completely random samples of drinking on and around the reservations of the northern states collected from the entire population (not just phone interviews), this binge pattern of heavy, sporadic drinking has confirmed some findings from other studies. As this study shows very clearly, when quantity,

frequency, and variability are taken together, there are many more non-drinking days than there are drinking days in these populations. The public health challenge that emerges from this study is how to prevent or minimize the consequences of heavy drinking on those occasions when it occurs.

Philip A. May, Ph.D.
Professor of Sociology and Research Scientist
Center on Alcoholism, Substance Abuse, and Addictions
(CASAA)
The University of New Mexico
2350 Alamo SE
Albuquerque, NM 87106

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Philip A. May, Ph.D., is a Professor of Sociology and Senior Research Scientist at the Center on Alcoholism, Substance Abuse, and Addictions (CASAA), at the University of New Mexico. J. Phillip Gossage is a Senior Research Scientist for the Center on Alcoholism, Substance Abuse, and Addictions (CASAA).

ALCOHOLISM AND CO-MORBID PSYCHIATRIC DISORDERS AMONG AMERICAN INDIANS

Joseph Westermeyer, M.D., M.P.H., Ph.D.

Abstract: Much of the data reported here regarding American Indian (AI) people has originated from specific areas with particular peoples. Thus, one must be cautious in applying information from one tribe to the hundreds of tribes living across the United States. As with any people, psychiatric disorder may be a pre-existing rationale for using alcohol. Or alternatively, alcohol may lead to various psychiatric disorders, such as organic mental conditions, posttraumatic stress disorder, or other conditions. A third alternative is that both alcoholism and other psychiatric disorder merely happen to affect the same person by chance. Recognizing alcoholism and treating it in a timely manner before disabling or even permanent psychiatric disorders ensue are key strategies. In addition, clinicians must be able to recognize and then either treat or refer co-morbid patients for appropriate care. Some psychiatric disorders, such as panic disorder, posttraumatic stress disorder, and various organic mental disorders may occur more often in some AI groups. Other co-morbid conditions, such as eating disorders, may occur less often among AI patients with alcoholism. It could be argued that resources should go solely to preventive efforts, thereby negating the need for psychiatric services. However, successful prevention of alcoholism may hinge upon, and increase the need for greater psychiatric services in AI communities.

Caveat

American Indian (AI) people in the United States comprise over 300 federally recognized tribes. They live on 278 mostly rural reservations and in scores of towns and cities. AI use of alcohol into modern times, and

its associated problems, has differed in at least as many respects as drinking practices and attitudes across other continents (Christian, Dufour, & Bertolucci, 1989). As a result of such diversity, co-morbid psychiatric disorders in alcoholism may differ across tribes, just as rates of alcoholism have varied among AI groups. Thus, we cannot conclude that the findings below necessarily apply everywhere. Nonetheless, the co-morbid conditions described below have been observed among AI people, both in clinical studies of AI patients as well as in surveys of non-patient AI groups in the community.

Problems in Recognizing Co-morbid Psychiatric Disorders in Alcoholism

Co-morbid psychiatric problems are not easily recognized in patients presenting to treatment with alcoholism. Several obstacles make the task a difficult one. First, virtually all symptoms of alcoholism can mimic psychiatric disorders and vice versa. These include all of the common symptoms encountered in alcoholism and psychiatric treatment facilities, such as insomnia, fatigue, anxiety, sadness, anger, hopelessness, appetite or weight changes, difficulty with concentration and memory, and suicidal ideation, as well as some of the less common symptoms such as hallucinations, delusions, and dangerous behavior. Second, alcoholics may not perceive that their anxiety, depressive or other symptoms are due to a co-morbid psychiatric condition. Instead, they often view these experiences as the concomitants of alcoholism, or as untreatable elements of their basic constitution. Third, clinicians in an alcoholism treatment facility may not think to inquire about psychiatric symptoms; and those in a mental health facility may not inquire about the use of alcohol and drugs.

Causes of Psychiatric Co-morbidity in Alcoholism

Many different factors account for co-morbid psychiatric disorders in alcoholic patients, including the following:

1. Use of alcohol as an antidote for fear, insomnia, dysphoria, anxiety, and other psychiatric symptoms.
2. Genetic causes: a person may have an inherited genetic propensity for both alcoholism and co-morbid psychiatric disorder (such as mood or anxiety disorder, schizophrenia).
3. Constitutional causes from birth: maternal and paternal alcohol abuse can damage the developing infant, resulting in fetal alcohol syndrome, fetal alcohol effect, and learning disorders (Cicero, 1994).
4. Acute or chronic brain impairment from the direct effects of alcohol to the central nervous system: alcohol abuse or dependence can produce delirium, dementia, organic mood disorder, organic anxiety disorder, or organic personality disorder.

5. Losses and stresses associated with alcoholism: these can cause adjustment disorders and can precipitate mood and anxiety disorders.

6. Damage to the brain from biomedical problems associated with alcoholism: damage includes traumatic brain injury, nutritional problems such as Korsakoff's psychosis, and stroke involving areas of the brain where damage can produce psychiatric disorder (e.g., mood symptoms or disorder from prefrontal lobe damage).

More than one of these factors can occur in the same person.

Sequence of Alcoholism and Co-morbid Psychiatry Disorders

There is still much to be learned about the sequence of co-morbid alcoholism and psychiatric disorder. However, the alcoholism sometimes predates the co-morbid psychiatric disorder, and in other cases the co-morbid psychiatric disorder predates the alcoholism. In relatively fewer instances, the two disorders begin around the same point in time (or at least within the same year), so that it is not possible to distinguish which began first.

Several studies among non-AI alcoholics have revealed conflicting findings about the sequence of alcoholism and co-morbid mood and mood/anxiety disorders (Ross, 1989). Renner and Ciraulo (1994) have remarked, "Unfortunately, it is extremely difficult to reconstruct a reliable history [regarding the sequence of mood symptoms and substance use] from some patients" (p. 533). Moreover, heavy alcohol use can predate the onset of diagnosable alcohol abuse or dependence by years.

It is reasonable to assume that timely intervention and treatment for the disorder that first appears may prevent the subsequent disorder. Thus, timely treatment for alcoholism may prevent subsequent episodes of alcohol-related organic anxiety or mood disorder. Likewise, timely treatment for anxiety or mood disorder may prevent alcoholism. Further research will be needed to ascertain whether this is true, but in the meantime—until future research can determine whether this is an effective modality—early intervention is a prudent attempt to prevent co-morbidity. In addition, timely treatment can prevent the psychological, social, and biomedical damage that often results from either untreated alcoholism or untreated psychiatric disorder.

Clinical Methods to Discern Co-morbid Alcoholism and Psychiatric Disorder

Alcoholism often accompanies other psychiatric disorders today, among AIs as well as other peoples. For example, about half of patients with schizophrenia also have a co-morbid substance abuse problem, usually alcoholism, at some point in the course of their schizophrenia (Westermeyer, 1992). Thus, screening for alcoholism and other substance abuse is a reasonable activity when evaluating or reevaluating a patient

with a psychiatric disorder. Clinicians can screen for alcohol and other substance abuse by routinely asking patients about their use of alcohol or drugs in the last year. There are also written questionnaires that patients can complete and take only seconds to score. These include the Alcohol Use Disorders Identification Test (AUDIT) to ascertain amount of alcohol use, and the Michigan Alcohol Screening Test (Selzer, 1971) which has been modified to include use of drugs (Westermeyer & Neider, 1988).

In a clinical sample of patients coming to treatment for alcoholism and other substance abuse, the rate of associated psychiatric disorder has usually varied from about 35% to 60% (Regier et al, 1990; Smail, Stockwell, Canter & Hodgson, 1984; Westermeyer, Specker, Neider, & Lingenfelter, 1994). Screening for psychiatric disorder should not occur while the person is intoxicated, hung-over, or in withdrawal from alcohol. Although screening in the first week or two of sobriety is apt to provide valuable information, the prevalence of diverse psychiatric symptoms is high even among those who do not have a co-morbid psychiatric disorder. By 2 to 3 weeks, however, most alcoholics without a psychiatric disorder will not be reporting symptoms suggestive of psychiatric disorder. At 3 to 6 weeks of sobriety, those patients with a high level of psychiatric symptoms are apt to continue to have a high level of symptoms. This is the group that should receive further assessment for psychiatric disorder. One problem facing clinicians who screen for psychiatric disorder is the diversity of psychiatric disorders that are apt to occur among alcoholics. A psychiatric interview to screen for the common psychiatric disorders can easily take an hour or two, which translates to considerable expense. In many programs, a number of rating scales or questionnaires can be administered to recovering alcoholics after a few to several weeks of sobriety. This screening process requires a half-hour to an hour of the patients' time and can be scored in a few minutes. Clinicians familiar with these scales can then determine whether repeat testing in a few weeks or an evaluation by a psychiatrist is warranted. Among screening tests that can be used to detect co-morbid psychiatric disorders are the following:

1. For dementia or delirium: the MiniMental State Exam (Escobar, Burman, & Karno, 1986).
2. For mood and anxiety symptoms: the 90-item Symptom Checklist (SCL-90) (Derogatis, Lipman, & Covi, 1973), Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and the Zung Depression Scale (Zung, 1971), these tests have shown good validity with depression across ethnic groups.
3. For posttraumatic stress disorder: the Clinician Administered PTSD Scale or CAPS (Blake, Weathers et al., 1995).

Mood Disorders and Alcoholism

Major Depressive Disorder

Shore, Manson, Bloom, Keepers, and Neligh (1987) in a study of depression among 86 American Indians with depression, found that former alcoholics comprised a significant subgroup of depressed persons. Thus, even former alcoholics with a period of sobriety appear to be at risk to depression. Westermeyer and Neider (1984) in a 10-year follow-up of alcoholic American Indians, found that recovering sober alcoholics had significantly fewer depressive symptoms as compared to those who continued to drink. Moreover, when these formerly treated alcoholics were asked to rate their depressive symptoms when sober and when drinking, they reported more depressive symptoms when drinking. The latter finding held for both recovering and actively drinking subjects. Consequently, it also seems likely that depressive symptoms do abate in many AI alcoholics with a period of stable sobriety.

The following case reveals the difficulty that diagnosis of this common co-morbid disorder can present.

A 21-year-old single man from a Woodlands tribe was brought for evaluation by his mother, who worked in a medical setting. Until recently, he had been a college student. During his first two years in college he had achieved excellent grades. With increasing amounts and duration of drinking during the previous year, his grades had fallen and he had been put on academic probation. His mother reported that he had not drunk over the previous two months, but spent much of his time in his room alone with shades drawn. Although family history for treatment of mood disorder was negative, a maternal grandparent had committed suicide and two maternal uncles were alcoholics. An interview revealed that for the last year he had experienced increasing problems with insomnia, weight loss, loss of appetite and enjoyment in life, trouble with concentration, feelings of worthlessness and hopelessness, and suicidal ideas. During the interview, the young man grasped the handles of his chair strongly. When asked why, he said it was to keep him from diving out the window of the office (located several floors above the ground). He subsequently did well on treatment for major depressive disorder while attending a self-help group for alcoholics.

Hypomania and Mania (Bipolar I and Bipolar II)

Some mental health clinicians familiar with caring for AI patients aver that they have never seen a case of mania, or even hypomania among their AI clientele. They conclude, then, that mania must be rare, or even

nonexistent among AI people. Although I have no epidemiological data to dispute this notion, I disagree with it. In my view, non-Indian clinicians have difficulty detecting hypomania (mania symptoms short of psychosis) and even psychotic mania in its earlier stages in AI patients. In my experience, AI patients with mania start from a baseline in which they are less intrusive, expansive, demanding, and confrontational—i.e., their interpersonal symptoms are less evident. Thus, when they become notably more flirtatious, garrulous, argumentative, bossy, or demanding than they had previously been, non-Indian clinicians may perceive these behaviors as within the normal range (as they may well be in other ethnic groups). However, psychological and vegetative signs and symptoms of mania are typically present, as in the following case:

A 32-year-old man from a Plains Indian group presented after several days of heavy drinking. He had recently been hired by an association to write grant applications—a job for which he said he was well prepared in view of his purported college education and recent graduation with a master's degree. While in treatment, he was noted to be voluble, required only a few hours of sleep at night, and spoke about his grand plans to write successful, highly remunerative grants for his employer. On direct questioning, he confirmed racing thoughts and problems keeping his thoughts organized. He also viewed himself in messianic terms, perceiving that he would raise local Indian people to the status of a “chosen people” through his own accomplishments. Ward staff did not view him as manifesting the usual behavioral or interpersonal problems associated with manic patients. Collateral information from his family indicated that he had never attended college, had often traveled from city to city, and had a large number of brief jobs. Subsequently he did well on a regimen of lithium and as a resident in a halfway house.

In more disorganized patients with severe mania, schizophrenia may be diagnosed. Poor judgment, insensitivity to others, and inappropriate behaviors arising out of grandiose delusions can lead to a misdiagnosis of antisocial personality disorder.

Dysthymia

Estimates of dysthymia among substance abusers in the general non-AI population have varied from under 5% to over 20% (Eames, Westermeyer, & Crosby, 1998; Keller, 1994; King, Naylor, Hill, Shain, & Greden, 1993; Westermeyer & Eames, 1997). In part, this difference may be due to the difficulty of diagnosing dysthymia in those with alcoholism and other substance abuse. Two years or more of sobriety with depressive

symptoms must occur before the diagnosis can be made. In addition to the diagnostic difficulties, treatment of this “minor depression” remains a serious challenge to the field.

Anxiety Disorders

Phobic and Panic Disorder

Phobic and panic disorder are probably as common and perhaps are even more common among AI patients with alcoholism. In a study of 100 AI vs. 200 non-AI substance abuse patients, AI patients had a higher rate of anxiety disorders (Westermeyer, 1993). Neligh, Baron, Braun, and Czarnecki (1990) also found a high rate of panic disorder among AI people with mood disorder and substance abuse. However, alcoholic patients of any ethnic background often fail to complain about these symptoms, unless the clinician inquires about them. The following case exemplifies this cause of delayed recognition or failure to diagnose the co-morbid disorders.

A 28-year-old single, unemployed Plains Indian man had been drinking heavily for a decade. His periods of abstinence rarely lasted more than a few weeks, except when he spent several weeks or months in jail for minor property offenses. On a screening questionnaire for psychiatric symptoms (the 90-item Symptom Checklist), he endorsed many anxiety and phobic symptoms. Additional interviewing revealed that he had begun to experience severe anxiety symptoms in groups during his mid-teen years. This led to his quitting school before he graduated from high school. He also became gradually more socially isolated, as he could not attend movies, powwows, or other social events without disabling anxiety. In his early twenties, he began to experience more severe anxiety attacks, consistent with panic attacks, in social situations (such as riding a bus, standing in line with others). Alcohol temporarily alleviated both his social anxiety and his anxiety attacks, although eventually he experienced the same symptoms even while drinking. Subsequently, he was able to control his anxiety symptoms with a combination of psychotherapy (desensitization) and a Selective Serotonin Reuptake Inhibitor (SSRI) while living in a residential treatment facility for alcoholics.

Post-traumatic Stress Disorder (PTSD)

AI veterans appear to be especially at risk to PTSD (Friedman, Ashcraft, et al., 1997; Scurfield, 1995). In part, this grows out of their high exposure to violence, including combat while in the military, vehicular accidents, and fights among family members and friends. In a study now

underway in Minnesota and New Mexico, our preliminary analysis has shown that many more AI veterans have PTSD as compared to the general population.

Schizophrenia and Other Psychotic Disorders

Clinicians unfamiliar with AI patients may misdiagnose psychosis for two prominent reasons. One cause can be the incorrect identification of cultural beliefs as delusions. For example, belief in spirit possession or witchcraft as a cause for poor health or bad luck may be a culturally consistent explanation for such events, rather than a psychopathological symptom.

Another cause for misdiagnosis is preternatural experiences, which may be sought as a means for resolving a crisis or setting a life course or seeking a major life goal (sometimes referred to in the literature as a “vision quest”). Such events may be mistaken for hallucinations and/or delusions. Such visions may occur in visual, auditory, and/or kinesthetic realms. Fasting, isolation, dehydration, prolonged exertion, or other means may be employed to experience visions of this type. Anyone undergoing a vision must then give meaning to it—a process that can mimic delusional interpretation of hallucinations. However, a guide or mentor usually helps the person undertaking a vision quest with such meaning.

Other Behavioral or Impulse Disorders

Pathological Gambling

In Minnesota, a state that has had increased access to legalized gambling in recent years, the state-estimated lifetime prevalence rate of pathological gambling has been 1%. A survey at the Minneapolis Veterans Administration Medical Center showed that veterans receiving either psychiatric care or care for substance abuse had a 10% lifetime prevalence rate of pathological gambling (Miller & Westermeyer, 1996)—ten times the average prevalence in the adult population. Although these veterans were from the general population, and not exclusively AI, the ready access of gambling to many AI communities poses a special risk for this co-morbid disorder. The South Oaks Gambling Scale, developed by Dr. Sheila Blume, is a good instrument for screening patients for pathological gambling. Given the high rate of pathological gambling in association with alcoholism and the ready access to gambling to AI communities, routine screening of AI patients entering treatment is warranted.

Eating Disorder

In one study of 100 AI vs. 200 non-AI substance abuse patients, AI patients had a lower rate of eating disorder compared to non-AI patients (Westermeyer, 1993). Nonetheless, we have encountered a few AI patients—male and female—with co-morbid alcoholism and eating disorder. Strong affiliation with the majority society and its cultural values (e.g., valuing thinness) may have played a role in these few cases.

Alcohol Related Mental Disorders

In one study conducted at a university alcohol-drug program in the upper Midwest, 100 AI substance abuse patients were compared with 200 non-Indian patients (Westermeyer, 1994). The 200 non-AI patients were matched for sex and age with the 100 AI patients. The protocol for evaluation included standard clinical practice (including mental status examination) as well as specific additional measures (e.g., repeating numbers backwards and forwards). In this study both acute and chronic organic mental disorders occurred more often among the AI patients. These disorders are described below.

Delirium Tremens

This condition occurs when a person dependent on alcohol stops drinking. Cessation of drinking may occur for a variety of reasons, such as incarceration, running out of money, inability to purchase alcohol due to remote location or prohibition in the local county or reservation, or an intervening illness (such as vomiting from alcohol-induced gastritis). During the first day or so after cessation of drinking, the withdrawing alcohol dependent person is at risk for convulsions. After two or three days of withdrawal, delirium tremens may appear. Its hallmark symptom is hallucinations, often visual or kinesthetic. Delusions (fixed false beliefs unaffected by logic or reality testing) may also be present; these often involve a mistaken belief that one will be harmed, perhaps by objects, animals, or people in the hallucinations. Patients are often disoriented for time and even place, but they may be disoriented in early stages. This life-threatening condition should receive immediate medical attention in a facility skilled at conducting alcoholism withdrawal treatment. Treated early and adequately, patients typically recover without incident. If treatment is delayed, the course is prolonged and patients are at risk to a variety of complications (e.g., self-injury, infections of the lungs or urinary tract, dehydration, cerebral edema, sudden death).

Alcoholic Hallucinosi

This condition usually involves auditory rather than visual or kinesthetic hallucinations. Such patients tend also to have paranoid delusions, often related to the auditory hallucinations. Typically, these patients have a clear sensorium (i.e., are oriented for time and place). Although such symptoms do not occur during prolonged periods of sobriety, they can occur in a variety of drinking situations, such as a prolonged drinking binge, increased drinking over a weekend or holiday, or following a binge. Such patients may be misidentified as having schizophrenia or other psychotic disorders.

A 36-year-old single man from a Woodlands tribe worked at various seasonal jobs and then drank for periods of several weeks in between jobs. During one such bout, he was observed yelling for no apparent reason on a public street. Police called an ambulance, which brought him to an emergency room. He was admitted to a psychiatric unit and treated with anti-psychotic medication. Additional history the next day clarified the diagnosis, and he was discharged to alcoholism treatment once his hallucinations cleared.

A brief course of anti-psychotic medication is often needed to terminate an episode of alcoholic hallucinosi. However, long-term medication (as in schizophrenia) is not needed and can lead to complications, such as seizure or Tardive Dyskinesia.

Alcohol Amnesic Disorder

Alcoholic patients may have short-lived periods of amnesia during heavy drinking. These are often referred to as "black-outs." With sobriety, these alcoholics resume their capacity for normal memory. In another condition, long known as Korsakoff's psychosis, short-term memory can be lost permanently. This disorder, due to thiamin deficiency, is apt to occur in chronic alcoholics with poor nutrition. Rapid treatment within hours can completely reverse this condition; most such patients regain normal short-term memory. If treatment is delayed for a week or two, permanent damage is highly likely. Delays in treatment for a few to several days can result in only partial memory recovery. Moderate-to-severe impairments in short-term memory are so disabling that such patients are totally disabled from useful work and require life-long care in a nursing home or similar setting.

Alcoholic Dementia

After a few decades of heavy drinking, some people become demented during their middle adult years, between age 30 and 60. Clinicians can have difficulty isolating the cause of such dementias. Alcohol itself may cause cerebral atrophy in some chronic heavy drinkers. In addition, repeated head injuries from falls or fights may produce a series of small brain insults. Hypoxia from repeated alcohol overdoses during binge drinking can have the same result. Repeated nutritional deficiencies, especially of B vitamins, may also produce small increments of dementia. For example, pellagra can cause either a temporary or—if untreated—permanent dementia. Although rare, pellagra is characterized by a distinctive butterfly rash on the face and may be accompanied by diarrhea.

Although one might expect that demented individuals may lose their interest in drinking, this is rarely the case except in terminal stages. In fact, patients with dementia often show remarkable ingenuity in obtaining alcohol despite their intellectual limitations. This apparent ingenuity may be the result of “over-training” during years of drinking or simply the result of unexpected goal-directed behavior that is within the capacity of the demented person.

Organic Disorders**Traumatic Brain Injury**

Episodes of acute intoxication can put patients at risk for traumatic brain injury. Dementias associated with brain trauma can occur in these patients, even in the absence of alcohol dependence. The following cases provide examples.

A 42-year-old married skilled worker from a Woodlands tribe met a woman in a bar. He accompanied her home, where an altercation developed with the woman’s husband, who shot the man in the head with a small caliber pistol. Although the man recovered from the gunshot wound, he became irritable and less precise in his work. He lost a series of jobs and began drinking regularly and heavily. During these drinking bouts, he got into fights, resulting in more injuries to himself as well as to others. Despite treatment in several alcoholism treatment facilities, he spent his subsequent years in jails and prisons as a result of his escapades while drinking.

A 28-year-old divorced secretary from a Woodlands tribe presented with inability to meet her job responsibilities as a result of a closed head injury following a car accident. Although she was not the driver, everyone in the car (including her) had been drinking heavily over a holiday. The car left the highway at a high speed, rolling several times. The driver and front passenger died, and another passenger in the back seat received multiple fractures and internal injuries. This patient received a closed head injury, with unconsciousness lasting more than a few minutes but less than an hour. Subsequently, she had amnesia for the accident and for the few days after the injury. Following her return to work, her typing rate was notably slower, she had difficulty performing multiple tasks in the same day, she could not retain telephone numbers, and her spelling ability deteriorated. She became more irritable with her two school-aged children. Her intellectual capacities improved over the subsequent several months but did not fully return to their former level of function.

Infectious Disease

AIDS cases have been occurring among AI peoples, often in association with alcohol abuse (Metler, Conway, & Stehr-Green, 1991; Sullivan, 1991). Although such patients usually present with infections, they can come to psychiatric clinics. Presenting problems can include symptoms of depression, increasing dementia, personality change, or other conditions. We have encountered AI patients with homosexual, bisexual, and heterosexual preferences. Although our AIDS patients have primarily been urban-dwelling, it is likely that this condition will also appear in reservation communities.

Pre-Senile Dementia

Alcohol abuse has contributed significantly to both the etiology and severity of diabetes mellitus, a common illness in many AI groups (Mohs, Leonard, & Watson, 1988). This can in turn lead to pre-senile dementia, with onset during ages 50 to 70. Previous or concomitant medical problems often include hypertension, renal insufficiency, recurrent infections, hypoglycemia, and diabetic coma. Alcoholism can render diabetes mellitus more unstable, so that poor control of blood glucose results. This in turn can accelerate disease in the small arteries of vital organs, including the brain, heart, and kidney.

Disorders of Children and Adolescence

Children With Alcohol-related Disorders

As early as two decades ago, one team collected 42 cases of AI children ages 2 to 16 with alcohol-related problems (Swanson, Bratrude, & Brown, 1971). In this group of 42 children, 20 were male and 22 were female. Parents of the 2 year old in this sample had given the child alcohol for sedation; the other children were school age. A case of delirium tremens has been reported in a 9-year-old AI child (Sherwin & Mead, 1975). Such children may present with behavioral problems at home or school, violence against peers, or academic failure. Glue sniffing can also lead to the childhood-onset of mental retardation.

Maternal Alcoholism and Childhood Psychiatric Disorder

Mental retardation, learning disability, and conduct disorder have all been reported in association with fetal alcohol effects. May, Hymbaugh, Aase, and Samet (1983) have recorded high rates of fetal alcohol syndrome and fetal alcohol effects in certain AI communities. Several workers in AI communities have demonstrated that fetal damage from alcohol can be reduced through education and early intervention efforts (May & Hymbaugh, 1989; Robinson, Armstrong, Moczuk, & Looch, 1992).

Para-psychiatric Problems

These problems, often but not always associated with alcohol and psychiatric disorders, surface to societal recognizance in social service agencies, foster homes, courts, jails, prisons, acute surgery wards, and the morgue. Although alcoholism does not accompany all cases in this category, alcoholism and co-morbid psychiatric disorder are significant contributors to these problems in many AI communities.

Violence

Violent deaths—i.e., deaths due to accidents (vehicular and non-vehicular), homicide, and suicide—pose an important public health problem to many AI tribes (DeBruyn, Hymbaugh, & Valdez, 1988; Gallaher, Fleming, Berger, & Sewell, 1992; Westermeyer & Brantner, 1972). Within the last decade, AIs across the U.S. had vehicular accident mortality rates that were 5.5 times that of the general population, 2.8 times greater for homicide, and 2.3 times greater for suicide (DeBruyn, Hymbaugh, & Valdez, 1988; May, 1986). Depending on the data source, between 60% and 90% of these deaths have been associated with alcohol use or abuse. In some places and times and for some ages (i.e., 1 to 44 years), combined violent deaths have exceeded heart disease as the most common cause of death

among AI people (Westermeyer & Brantner, 1972). Although violent death rates appear to have leveled off recently in some AI groups, rates still increase in groups whose rates of alcoholism are increasing (Forbes & VanDerHyde, 1988).

Vehicular death has varied greatly among tribes. For example, White Mountain Apache have had rates that are three times higher than those of all AIs in the U.S. (Levy & Kunitz, 1969). Reservation prohibition laws and local topography appear to affect these rates. Prohibition, plus long distances from alcohol sources to homes may also contribute to pedestrian and hypothermia deaths (Morbidity Mortality Weekly Report, 1989).

Homicide is more prevalent among many AI groups as compared to the general population in the U.S. (Levy, Kunitz, & Everett, 1969; Westermeyer & Brantner, 1972). Alcoholic intoxication or alcoholism accompany a majority of such cases, in victims as well as in perpetrators. Some of these occur during alcoholic amnesia, or "blackout" (Wolff, 1980). Levy and Kunitz (1969) observed that the homicide rate in one tribe remained unchanged over several decades during the transition from rare alcohol availability to high availability. Today, most homicide in this particular tribe is now associated with alcohol intoxication, alcohol abuse, or alcoholism. Perhaps homicide rates may have fallen if alcohol were not present, but the fact remains that alcohol may not be the only factor in the genesis of the on-going high homicide rate.

Suicide has long been associated with alcohol abuse in AI groups, especially among young males (Bechtold, 1988; Claymore, 1988; Dizmang, Watson, May, & Bopp, 1974; Grossman, Milligan, & Deyo, 1991; Havighurst, 1971). Suicide among AI peoples decreases in older ages (a time when Euro Americans commit suicide in large numbers). Overall, the suicide rate for young AI people in the U.S. exceeds that of the general population. However, the rate among tribes varies quite widely, with some tribes having extremely high rates and other tribes having rates well below the general population. The "suicide epidemics" or "cluster suicides" that occur among young people may contribute to this considerable difference, although cultural and historical differences may also play a role.

Social Alienation

Numerous associated psychosocial conditions have received research attention, especially among younger AI substance abusers. These studies have demonstrated the association of unemployment, alienation, and lack of optimism regarding the future with substance abuse (Beauvais, Oetting, Wolf, & Edwards, 1989; Binion, Miller, Beauvais, & Oetting, 1988; Holmgren, Fitzgerald, & Carmen, 1983; Oetting & Beauvais, 1987; Oetting, Beauvais, & Edwards, 1988). Dick, Manson, and Beals (1993) observed that greater alcohol use in an AI boarding school was associated

with less family support and greater emotional distress. Unfortunately, such cross-sectional or synchronic studies do not inform us whether these factors are etiologic or merely associated. The high mortality among young AI people may contribute to widespread vulnerability through frequent bereavement, loss of parents, and the financial losses associated with the disability or death of adults in their prime.

Poverty

Alcohol abuse drains AI communities of much needed financial resources in other ways besides death. Money spent directly on alcohol and drugs can amount to a large proportion of available funds (Loretto, 1988). Indirect costs in lost wages, medical expenses, and social welfare can also weigh heavily on AI families and communities afflicted with alcoholism (Beauvais, Oetting, Wolf, & Edwards, 1989). Many social problems without a specific “price tag” can still undermine AI economics, including time spent in jail or prison or failure to realize one’s full potential. Poverty is not only a financial condition, but it may involve loss of control over one’s own community, life, and destiny.

Nutritional Problems

Nutritional problems are common among alcoholics, at least in part due to the fact that beverage alcohol is a high-calorie food (7 calories per gram of ethanol, compared to 4 calories per gram for carbohydrates) that usually contains minimal amounts of vitamins or minerals. Among AI alcoholics, nutritional deficiency may be more severe than in other groups. For example, nutritional deficiencies were more frequent among AI alcoholics in a comparison of 30 Chippewa alcoholics and 200 other alcoholics (Westermeyer, 1972). The Chippewa patients had significantly lower levels of serum protein, suggesting a reduced intake of proteins. The Chippewa also had below-normal levels of vitamins and minerals, as evidenced by abnormally low serum carotene in 73% of cases, low serum iron in 58% of cases, low vitamin C in 58% of cases, and low hemoglobin (anemia) in 34% of cases.

Homelessness

Poverty, unemployment, family alienation, and excessive expenditures on alcohol comprise common precursors of homelessness in any ethnic group. In an urban study of homeless persons, AIs comprised 19% of homeless although they were only about 1% of local residents (Kroll, Carey, Hagedorn, Gog, & Benavides, 1986)—a rate almost twenty times greater than their proportion in the general population.

Treatment Seeking for Alcoholism

Several factors suggest that AI people with alcoholism seek treatment later than do alcoholic patients from other ethnic groups. One factor is the high rate of nutritional abnormalities cited above, since poor nutrition may ensue from more prolonged alcohol abuse. Another indicator of delayed treatment-seeking is more severe withdrawal syndromes, which has been observed in one clinical study comparing AI and non-AI alcoholics in acute detoxification (Westermeyer, 1972). A third factor suggesting delayed treatment is the relatively high rate of organic brain disorders, such as alcohol-related dementia and delirium tremens in AI alcoholics as compared to non-AI alcoholics (Westermeyer, 1993). Cultural and legal problems regarding commitment to involuntary treatment may undermine efforts at early intervention in AI families and communities (Humphrey, 1985). The following case exemplifies this common dilemma between traditional and modern values.

A 32-year-old Chippewa man was admitted to the hospital for delirium tremens, following a lengthy binge after a divorce and termination of parental rights for his four children. After successful acute care, he was referred to a AI halfway house, where he made a successful recovery from his alcoholism. Subsequently, he became a certified alcoholism counselor, remarried, and had a child. At age 35 he returned for therapy regarding an event in his adolescence. When he was fifteen years old, his mother had deserted the family, leaving him and four younger siblings in the care of his father. One weekend, the family members were happily engaged in various chores, homework, and play in their small home. His father, still intoxicated following a night of drinking took out a shotgun, practiced holding the gun to his head while pulling the trigger with his toe. The teenage son knew exactly what his father was doing, but felt strongly that his father was making a major decision and should not be dissuaded from it. His father then loaded the shotgun with a shell, held the gun to his forehead, and fired, killing himself. During the interim years, this image recurred to the man frequently; but he never doubted his decision at that moment. However, his recent training and work as a counselor led him to doubt his decision. He knew that he could have easily grabbed the gun from his father and removed it from the home; he was strong and his father was weak from intoxication and hangover. Moreover, he knew that such an act might have kept the family together, since his father was, when sober, a devoted, caring, and hard-working parent. Previously, he had been wholly devoted to the notion that every person must decide their own destiny unfettered by others. Now, aware that alcoholism can impede self-

determination rather than enhancing it, he doubted his decision of twenty years earlier and now judged himself adversely for his youthful, tradition-driven decision.

This theme recurs in AI communities. If the family members impose involuntary treatment, they both break tradition and impose “White man’s law” in a family matter. If they do not impose involuntary treatment, a chance for recovery is lost. If they do impose involuntary treatment and it is not successful, they then have a double burden—i.e., having broken tradition, and an unsuccessful outcome. No doubt new traditions for meeting this impasse will evolve, since cultures are ever-changing; but the pain in the meantime is palpable.

Despite delays in treatment seeking, AI alcoholics do present for, comply with, and benefit from treatment of alcoholism if such treatment is available. For example, at a rural Minnesota state hospital alcoholism program, the AI clients’ demonstrated rates of treatment completion, improvement during treatment, and readmission that were very similar to those of the non-Indian alcoholics (Hoffman & Noem, 1975). This occurred despite the fact that the AI clients were on average poorer, less well educated, more often unemployed, and more often not living with a spouse.

In some urban settings, the relative number of AI alcoholics receiving detoxification services is high, leading to the stereotype that AI alcoholics abuse detoxification services and fail to benefit from them. However, in a study of one urban detoxification facility, approximately 90% of AI clients had been admitted only once or twice in the previous 18 months; the percentage of non-AI clients admitted only once or twice was above 90%. The perception of increased AI use of detoxification arose from the 10% AI clients who had three or more admissions in the last 18 months. In this latter group, a small number repeatedly used detoxification—often a few times per month. Thus, staff at the facility perceived general abuse by AI clients when in fact the relative and absolute number using the facility excessively was quite small (Westermeyer & Lang, 1975).

Some data suggest that AI alcoholics eventually receive alcoholism treatment, albeit delayed. For example, a group of 100 AI alcoholic patients presenting to a mid-western university program were contrasted with a group of 200 non-AI alcoholics (Westermeyer, 1994). Unexpectedly, the AI group had actually received more previous treatment for substance abuse than the non-AI patients, as follows:

1. Detoxification: 77% vs. 48%, $P < .001$.

2. Inpatient admission for alcoholism: 66% vs. 43%, $P < .001$.

The AI patients had also received more outpatient treatment for alcoholism, but the difference was not statistically significant: 46% vs. 33%, $P = .08$.

Follow-up studies of AI people with alcoholism indicate late treatment seeking and/or high rates of co-morbidity, since recovery rates have tended to be low. Walker, Benjamin, Kivlahan, & Walker (1985) studied the outcome for AI alcoholics in three Seattle programs. Improvement rates were as follows:

1. Fifty alcoholics at a detoxification center: 3 subjects (6%) showed 6 months or more of sobriety over the two-year follow-up period.

2. Forty-four subjects in a residential treatment facility: 9% showed some improvement.

3. Forty-six subjects in a halfway house: 16% showed some improvement.

A longitudinal community study of northwestern Indians revealed that about one-fourth of AI alcoholics recovered (Boehnlein, Kinzie et al., 1993; Leung, Kinzie, Boehnlein, & Shore, 1993). Those who did recover tended to do so spontaneously after a few decades of heavy alcoholic drinking and much misery. Similarly, in a ten-year follow-up of 45 treated Chippewa alcoholics, 15% were alive, "improved," and abstinent for two years or longer (Westermeyer & Peake, 1983). In contrast to the Boehnlein, Kinzie, et al. and the Leung, Kinzie, et al. sample, those Chippewa who recovered had received extensive treatment, often including psychiatric treatment, residential treatment, and halfway house residence. This difference between the two studies could reflect different tribal or regional differences, but they could also reflect sampling differences (i.e., community survey in the northwestern study, and clinical sampling in the Chippewa study).

Alternative Medicine and Self-help Methods

Traditional AI healing has been applied to alcoholism in many settings. In the Southwest U.S., peyote rituals in the Native American Church (in which peyote is a sacramental) have proven safe and effective for some alcoholics (Albaugh, 1974; LaBarre, 1964; Bergman, 1971). In many areas, shamanistic healing has been applied (Jilek, 1982). Ritual sings and dances involving relatives and the community at large have been a source of solace and support to some recovering AI alcoholics (Jilek, 1976). New pathways between the traditional past and the evolving future are appearing (Medicine, 1982; Taylor, 1987; Thompson, 1992; Zitzow, 1990).

No outcome studies of self-help have yet been conducted among AI alcoholics. However, the role of environmental events (e.g., education, confrontation by friends and family), which may have utility in AI families and communities, has been examined (Tucker, Vuchinich, & Gladsjo, 1994). In the main, these are generic strategies that can be employed by anyone (Godlaski, Leukefeld, & Cloud, 1997). Since keeping sober may rest on motivations different from those that stimulated early sobriety, recovering alcoholics may need to augment their self-help skills as abstinence periods lengthen (Sobell & Sobell, 1993).

Conclusion

Those serving AI alcoholics should be aware of the high rates of certain co-morbid psychiatric disorder, as well as the special causes and types of psychiatric disorder apt to occur in this group. Moreover, clinicians must be able to recognize and then either treat or refer co-morbid patients for appropriate care. Another key strategy lies in the early recognition and timely treatment of alcoholism before disabling or even permanent psychiatric disorders ensue. Community leaders must also have knowledge regarding co-morbid disorders in order to seek and support resources that can address co-morbid disorders. Some co-morbid conditions, such as eating disorders, may occur less often among AI patients with alcoholism. It could be argued that resources should instead go solely to preventive efforts, so as to negate the need for psychiatric services. Many clinicians, epidemiologists, and other alcoholism investigators have urged that future emphasis should depend more on prevention and early intervention rather than on late entry into treatment. However, even if community based strategies can reduce the prevalence of alcoholism in AI communities, psychiatric disorder will still exist. In fact, various anxiety and mood disorders may become more prominent once these conditions are no longer co-morbid with alcoholism. Thus, no matter what the outcome from community efforts to address the alcoholic endemic in many AI communities, the need for timely recognition and care of psychiatric disorders will persist.

Joseph Westermeyer, M.D., M. P. H., Ph.D.
Veterans Medical Center
1 Veterans Drive
Minneapolis, MN 55417
and
Department of Psychiatry
University of Minnesota
Minneapolis, MN 55455

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Footnote

¹Chippewa people are also known as Ojibway; their term for themselves is Anishinabe.

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DIAGNOSTIC CRITERIA IN CLINICAL SETTINGS: DSM-IV AND CULTURAL COMPETENCE

Michelle Christensen, Ph.D.

Abstract: Historically, the Diagnostic and Statistical Manual of Mental Disorder (DSM) gave little attention to cultural variations in mental disorder. DSM-IV includes a cultural case formulation outline. The current paper presents a case formulation of an American Indian client who presented with depressive symptoms and a history of substance dependence.

The Diagnostic and Statistical Manual of Mental Disorders (DSM) distinguishes sixteen broad classes of mental disorders (e.g., mood disorders, anxiety disorders) and over 100 specific types of mental disorder (e.g., depression, dysthymia, generalized anxiety disorder), each defined by a set of symptom criteria. The types of mental disorders included in DSM and the symptoms characterizing those disorders have often been considered universal experiences that manifest similarly for all people regardless of cultural background. However, the publication of the DSM-IV, with its attention to culture acknowledges, as Manson (1995) states, "the need to better understand, articulate, and incorporate relevant cultural insights from clinical care into the taxonomic codification of major mental illness" (p. 487-488). This paper will present a brief background regarding the inclusion of culture in DSM, followed by a DSM-IV cultural case formulation of an American Indian client.

DSM and the Inclusion of Culture

The process of psychiatric diagnosis has been described as an interpretation of an interpretation (Kleinman, 1996). The first level of interpretation is the process by which an individual translates his/her experience into culturally based categories, words, images, and feelings. The second level of interpretation is the process by which a clinician then

translates a client's translation of his/her internal experience into the language of psychiatry. The *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM-IV); (American Psychiatric Association, 1994) provides a professional standard of psychiatric nomenclature to capture that experience in terms of psychiatric diagnosis.

The DSM has been in existence since 1952 and over the course of almost fifty years, has undergone five revisions (i.e., DSM-I, DSM-II, DSM-III, DSM-III-R, and DSM-IV). Each of these revisions reflected advances in the ways in which mental disorders are understood. The system of classifying mental disorders most familiar to mental health providers today was introduced with DSM-III. DSM-III provided a greater level of specificity, with regard to diagnostic criteria, implemented a multi-axial system for organizing an array of clinically relevant information, and provided a descriptive approach to mental disorders that was assumed to be neutral with regard to etiology. Though DSM-III signified an advance in defining and classifying mental disorders, it paid little attention to the role of culture in psychiatric diagnosis. It was not until DSM-IV that the impact of culture on psychiatric diagnosis was more fully acknowledged. Through the efforts of a task force of 50 experts from psychiatry, psychology, medical anthropology, and sociology, DSM-IV now recognizes the role of culture in the expression, course, treatment, and existence of psychiatric disorders, in three significant ways (for a complete discussion of the efforts of this group, see Mezzich et al., 1995).

First, DSM-IV provides a discussion of the cultural variations in 76 currently recognized DSM disorders. For these 76 disorders, a discussion of the cultural variations in describing distress, patterning of symptoms, course of the disorder, and socio-demographic correlates of the disorder is provided (Mezzich et al., 1995). For example, the DSM notes that major depression may be predominantly characterized by somatic complaints in some cultural groups, rather than by feelings of sadness or guilt. It is noted that for the Hopi in particular, such symptoms of distress may include a sense of being "heartbroken" (American Psychiatric Association, 1994).

Second, DSM-IV includes an appendix (Appendix I) of culture-bound syndromes. These syndromes are "recurrent, locality-specific patterns of aberrant behavior and troubling experience that may or may not be linked to a particular DSM-IV diagnostic category" (p. 844). For example, "ghost sickness," an experience observed among certain American Indian groups, is described as a preoccupation with death and/or the deceased person that can lead to symptoms such as bad dreams, loss of appetite, fear, and anxiety.

Third, Appendix I of the DSM-IV includes an outline for a culturally relevant case formulation of the individual's presenting concerns. Of the three additions to DSM-IV, the cultural case formulation has provided an especially important tool for understanding mental disorders in a cultural context (Manson, 1997). The cultural case formulation outline consists of

five dimensions along which to elaborate the clinical picture in a cultural context. These five dimensions include the following: cultural identity of the individual, cultural explanation of the individual's illness, cultural factors related to psychosocial environment and levels of functioning, cultural elements of the relationship between the individual and clinician, and overall cultural assessment for diagnosis and care. This cultural case formulation outline offers clinicians a way to supplement the standard diagnostic formulation with a statement unique to the individual, emphasizing his/her personal and cultural experiences (Mezzich et al., 1995).

Cultural Case Formulation of an American Indian Client

The following is the hypothetical case of an American Indian woman who presents with a history of alcohol dependence and major depression. For reasons of confidentiality, the following case does not represent any particular individual. It is, however, based on a composite of observations made in the course of clinical and research work with American Indian people.

Clinical History

Patient Identification: Kim was a 37-year-old American Indian woman residing on a Northern Plains reservation. She had been with her common-law husband for 15 years. She lived with him and six of her seven children (who ranged in age from two to 15 years). At the time of intake, Kim was unemployed, having lost her housekeeping job with the tribal casino about six months prior, due to a car accident, which left her without a means of getting to work. Kim helped her uncle with his recycling business periodically to supplement her monthly general assistance check. She presented with marital and relationship difficulties, feelings of anger and boredom, frequent crying spells, and loss of appetite. Though she had not pursued counseling previously, she was considering it because her 15 year-old daughter was being seen by a counselor through the tribal mental health program for her own problems with alcohol and depression, and had been urging Kim to do the same. Kim was concerned that if she did not do something about her problems, she would return to using alcohol to cope. She had actively been contemplating drinking again for the previous six months, and on several isolated occasions drank beer and wine to the point of intoxication. Given her history of alcohol dependence, it was a serious concern that her presenting problems could precipitate a relapse of alcohol abuse and dependence. However, Kim had reservations about pursuing counseling. She worried whether or not counselors at the tribal mental health program would respect her confidentiality. Her worry was in part due to the fact that she was related to, or otherwise knew, many of the counselors who worked at the tribal mental health center. There was a new counselor at the center

who was not from Kim's community. Thus, Kim was willing to speak with this person.

History of Present Illness: Kim reported that the marital problems between her and her husband had always existed, with periods of abatement and escalation. In the last 6 months, their marital problems escalated, as her husband's drinking and drug use worsened. Kim reported that her husband was often not home to help with their children and household duties, was out drinking and drugging with his friends four to five nights a week, and routinely spent the majority of his monthly general assistance check on alcohol and drugs. In addition, Kim suspected her husband of having an extramarital affair. When Kim confronted her husband about his behavior, these discussions often turned to violence in which Kim and her husband threw things and hit one another. Kim called the tribal police on numerous occasions, but never pressed charges for fear that she too would be subject to jail time for her own behavior. Kim reported such confrontations with her husband on a weekly basis. After these confrontations Kim reported feelings of rage and anger, uncontrollable crying, and loss of appetite. In addition, Kim took her anger out on her children by yelling at them and being impatient with them. She denied being physically abusive to her children and also reported that her husband was not physically abusive to them. Feeling hopeless that her situation would improve, Kim frequently contemplated drinking. On three occasions in the previous six months Kim bought a bottle of wine and a six-pack of beer, drinking at home alone to the point of intoxication and passing out.

Psychiatric History and Previous Treatment: Kim reported a history of depression, suicide attempts, and substance abuse, starting when she was 15 years old. Kim described her life between ages 15 and 19 by saying that she "really had a hard time" and that those were the "roughest times" of her life. During her late teenage years, Kim was dealing with the loss of her mother and her father. Her mother had been murdered, and her father convicted of that murder and incarcerated. Kim maintained that her father was innocent, and indeed his conviction was overturned and he was released from prison when new evidence came to light about the case several years ago. Kim described herself as having felt "totally lost" without her mother and father. With both of them gone, Kim decided to quit school and set out on her own. Kim moved in with a boyfriend she met at boarding school who lived on a nearby reservation. Soon after she moved in with him the two began using alcohol heavily. Kim said that using alcohol was one way of forgetting about her life and the tragic turn it had taken. Despite her attempts to "forget" the trouble in her life, Kim became quite depressed and made two suicide attempts. On her first attempt Kim swallowed a bottle of her boyfriend's grandmother's heart medication. She was hospitalized at the local Indian Health Service hospital for several days and encouraged to pursue counseling with a local mental health counselor after discharge (which she chose not to do). After her second suicide attempt, in which she

cut her wrists, Kim was sent to an inpatient psychiatric hospital off-reservation where she stayed for 30 days. Kim spoke positively of this experience and stated that it was here that she felt safe, understood, and cared for, for the first time in her life. Her inpatient therapy focused on becoming sober and participating in individual and group therapy to address Kim's history of loss, her feelings related to same, and her coping strategies. Kim's psychiatrist stabilized her on a program of antidepressant medication during her stay at the hospital. Following discharge, Kim was encouraged to adhere to a regimen of outpatient therapy, AA, and antidepressant medication. When Kim returned to her home reservation she did not pursue these recommendations, citing distrust of the local mental health workers and perhaps more importantly, a return to using alcohol after being pressured by her friends to do so. It was when Kim became pregnant at age 19 that she made a commitment to sobriety. Her sobriety at age 19 was achieved without therapy or AA.

In the years following this difficult period Kim struggled with sobriety, with intermittent bouts of use of and dependence on alcohol. One significant relapse into alcohol dependence occurred after the death of Kim's first child, in an automobile accident, when Kim was 21 years old. This relapse lasted over a year, until she became pregnant with her second (and now oldest) child. During this period of relapse Kim had two DUIs, often got into fights with both men and women, and was arrested several times for disorderly conduct.

Kim said that nowadays she tries to remain committed to her sobriety by thinking of her children and her pledge to provide a better life for them than the one she had. Despite continued struggles with depression, extreme feelings of anger, and a general sense of boredom with her life over the years, Kim did not seek further therapy or counseling. She reported attending sweat-lodge ceremonies from time to time, though in general she felt her access to these traditional ceremonies was limited for reasons outlined below.

Social and Developmental History: Kim was born and raised until age five on the Northern Plains reservation on which she currently resides. Until age five Kim lived with her mother and father and was sent to live with other relatives, like her grandparents and various aunts, when her parents drinking and partying "got out of hand," in the eyes of her other relatives. She attended boarding school from first through ninth grade. Because the boarding school was located over 100 miles away from her home reservation, Kim's parents and relatives could not afford to visit her nor could they afford for her to return home during the school year to visit them. Kim expressed much regret over having grown up essentially without her parents and relatives. She expressed much lingering resentment toward her parents for "abandoning" her. She felt it was due to her parents' excessive "drinking and partying" that they were unable to care for her and thus sent her away to be raised by strangers. Kim dropped out of school in

10th grade because of trouble at home (i.e., the death of her mother and incarceration of her father). She never completed high school, nor did she receive a general equivalency degree (GED). Though not uncommon for people in Kim's community and generation to leave high school, many ultimately receive their GED. Kim expressed embarrassment about her lack of education and made several unsuccessful attempts to complete her GED at the tribal college, but each time problems at home have prevented her from finishing the coursework. After dropping out of school, Kim returned home to help care for her younger siblings, who were without parents. However, she left the reservation shortly after returning home because, as she described, it had become "just too lonely" without her parents around. She described herself as feeling completely "lost" at the time and so sought to find a new home in a place that would not be filled with so many painful memories. Kim moved to a neighboring reservation to live with a boyfriend she met at boarding school. Kim quickly turned to partying and drinking heavily with her boyfriend. After two suicide attempts, she stayed at an inpatient psychiatric hospital for 30 days. Upon discharge Kim again returned to her home reservation. She lived with her aunt and helped take care of her aunt's young children. Still devastated by the loss of her parents, Kim said she quickly gave in to pressure by her friends to party; thus, her abusive use of alcohol resumed. At age 19, Kim became pregnant with her first child. This served as a rallying point for Kim to stop drinking. Shortly after the child's birth, however, Kim and her baby were in a car accident, in which the child was killed. This triggered another period of drinking and depression for Kim, which again she emerged from when she became pregnant with her now 15-year-old daughter. Kim remained with the father of this child, and subsequently they had 5 more children.

Family History: Kim reported a history of alcohol abuse and dependence among her mother and father, as well as several of her siblings. She had one brother who committed suicide 10 years prior, by hanging himself in the tribal jail, after being arrested for drunk driving. Her father maintained his sobriety following his release from prison and frequently reminded Kim of the importance of sobriety for Native people.

Course and Outcome: With encouragement from her daughter to seek counseling, Kim was willing, at the time of intake, to try outpatient therapy for the first time. Though she had a good experience with counselors and group therapy during her inpatient stay as a teenager, Kim remained reluctant to go to counseling on the reservation for fear that the counselors would not protect her confidentiality. Kim also noted that she considered counseling in the past, but was easily discouraged by the lack of available appointments. Kim was eager at intake, however, to do something. She felt as though she was on the verge of using alcohol again given the escalating trouble with her husband, and her increased despair and anger over that situation. With a new counselor from outside her community now working at the tribal mental health clinic, Kim was ready to seek counseling

in hopes of avoiding a return to alcohol abuse/dependence, a relapse into clinical depression, and ultimately, in hopes of feeling more pleasure in her life.

Diagnostic Formulation:

- Axis I: 296.35 Major Depressive Disorder, Recurrent, In Partial Remission
03.90 Alcohol Dependence, Sustained Partial Remission
- Axis II: Deferred
- Axis III: 493.90 Asthma, unspecified
- Axis IV: Current: Marital difficulties, including domestic violence
Substance abuse (drug and alcohol) in the home
Inadequate health care services (her perception)
Recent car accident
Friends urging her to drink
- Past: Tragic loss of mother
Tragic loss of daughter in automobile accident
Father incarcerated
Grew up without parents, in boarding school
- Axis V: Global Assessment of Functioning: 51

Cultural Formulation

A. *Cultural Identity of the Individual*

1. *Cultural Reference Group(s):* Kim was an enrolled member of a Northern Plains American Indian tribe; both of her parents were enrolled tribal members, as were her husband and his parents. All of Kim's six surviving children were tribal members and resided on the reservation.

2. *Involvement with Culture of Origin:* Kim was born on the reservation but her school-aged years (from five to 16) were spent away from the reservation at boarding school. She participated in traditional ceremonies over the years, but felt alienated because she did not speak her Native language as well as others who participated and also because she and her parents were raised as Christians. She expressed a desire to someday participate more fully in the traditional ways and spiritual practices of her tribe. She did incorporate certain Native practices into her daily life such as "smudging" with sage (Yellow Horse Brave Heart & Spicer, 2000), dancing in powwows, and helping her children put together their powwow dancing regalia.

3. *Involvement with Host Culture*¹: Kim's greatest contact with the "host culture" was during her years at boarding school. Though boarding school was a lonely place for her because of the alienation she felt from her family and culture, she said she was glad she learned "discipline and good housekeeping" there. In boarding school Kim reported there were strict rules for all boarders to follow about making beds, shining shoes, pressing clothes, and so forth. The reservation on which Kim was residing at intake is located about 40 miles from the nearest small rural non-Native community where reservation residents often go for a greater selection of groceries and other supplies, such as clothing, vehicles, and house wares. Reservation residents have described this community as a "racist" town where they felt unwelcome and discriminated against (e.g., being watched carefully in stores, being made to pay for gas upfront when locals seem not to be required to do the same, slower service in restaurants). Kim reported one incident when she and her children were shopping for new school shoes, and the store clerk followed them out of the store and threatened to call the police if Kim did not show her what was inside her handbag, under suspicion that Kim had taken some socks from the store. Indeed, Kim had not taken anything but nonetheless felt humiliated in front of her children. Other than her trips to this small neighboring town, Kim reported little direct contact with non-Native communities and people, outside of what she watched on television.

4. *Language*: Kim spoke English fluently and as her first and primary language. She used isolated words from her Native language but did not have full command of her Native tongue. This was not uncommon for individuals of Kim's generation on her reservation. Having been raised in a boarding school, where children were often forbidden from speaking their Native language (Child, 1998), combined with the fact that Kim had little contact with her family during her years in boarding school, it was even less surprising that she did not speak her Native language. Kim reported that her parents were both fluent speakers of their Native language, but that they only spoke their language with their own parents (Kim's grandparents) and on occasion with one another. Her parents only spoke English with Kim and her siblings. In fact, Kim's parents pushed her and her siblings to speak English and learn "White ways" so that they would be better equipped to succeed in school and get jobs afterwards. People of Kim's generation, and in her reservation community, often rue the loss of their language and seek to relearn it (or learn it for the first time). Likewise, Kim regretted not knowing her language and felt that this was a deep cultural loss that would be hard, if not impossible, to recover.

5. *Cultural Factors in Development:* Both Kim's maternal and paternal grandparents participated fully in the Native rituals and ceremonies practiced among their tribe, and were fluent speakers of their Native language. While recognizing that their children would begin to lose their language and cultural practices, they made the difficult decision to send Kim's parents to a missionary-run boarding school, because the boarding school could better provide for their basic needs. Kim's grandparents were quite poor and the boarding school provided regular meals and amenities, such as indoor plumbing and heating, in addition to an education that would prepare their children for the changing world they lived in. Kim's parents represented the first generation in her family to speak English and be converted to Christianity. For many of the same reasons their parents did, Kim's parents sent her and her siblings to boarding school. Kim resented this since the boarding school she attended was so far away from home that she was unable to see her parents during the school year. In addition, Kim often spent summers at the boarding school because her family also did not have the means to support her and her siblings during the summer. Kim felt added resentment over being "sent away to strangers" since she believes her parents could have supported her and her siblings if, as she says, "they hadn't spent all their money on partying." As a result of her boarding school years, Kim felt she essentially grew up without parents. This only compounded the devastation she felt when she lost her parents completely through her mother's death and her father's incarceration. Kim felt deprived not only of the emotional experiences of having parents and family close by during childhood, but also of the cultural experiences she would have experienced growing up near her extended family. Kim blamed the fact that she grew up without her parents for some of her difficulties as an adult - e.g., in raising her own children and in feeling so desperate for love that she stayed in a troubled relationship. She also felt alienated from the medicine people in her tribe and unable to access the traditional healing practices they utilized because she was raised as a Christian and knew little of her Native language and practices.

B. *Cultural Explanations of the Individual's Illness*

1. *Predominant Idioms of Distress and Local Illness Categories:* Kim stated that she was "cranky" and angry much of the time. She spoke little of feeling depressed per se, but clearly was unhappy with her life and situation.

She also described herself as frequently “bored,” and reported it was difficult to find meaning or pleasure from her life, which largely consisted of taking care of her children, arguing with her husband, and helping her uncle with his recycling business. Kim also reported somatic complaints, such as trouble sleeping and eating. Kim attributed her crying spells more to a sense of frustration and anger, than to sadness per se.

2. *Meaning and Severity of Symptoms in Relations to Cultural Norms:* The experience of boredom is not unusual in Kim’s community. The reservation on which Kim resides offers few opportunities for entertainment outside of community events (e.g., powwows and summer fairs) that occur from time to time. There are only a couple of restaurants on the reservation, few shops, no movie theaters, no coffee shops, and little else for reservation residents to enjoy. The small town, about 40 miles away, has a movie theater and other entertainment venues, but this is often difficult to access given Kim’s lack of reliable transportation. Kim’s feelings of anger are also not uncommon for women in her community who experience troubled marital relationships, feel overwhelmed and unsupported in caring for their children and household, and who have little time for themselves. In all, Kim’s presentation was not unlike that of others in her community reporting a general sense of malaise but not meeting all the DSM-IV criteria for depression or any other specific psychiatric disorder. Kim’s boredom and anger may indeed be a form of depression as they resemble a sense of hopelessness and despair in Kim’s case.

3. *Perceived Causes and Explanatory Models:* Kim explained her boredom, anger, desire to drink, and somatic complaints as largely related to the current relationship problems she was experiencing with her husband, as well as related to the loss of important relationships in the past (i.e., her parents symbolic and actual loss, her daughter’s death). Kim felt that a return to abusive drinking was always a strong temptation given the fact that her friends and family drank heavily, and frequently encouraged her to join them. In her attempt to remain sober Kim was thus faced with decreasing her contact with friends and family because of their drinking. This has left her feeling isolated and more angry and bored.

4. *Preferences for and Experiences with Professional and Popular Sources of Care:* Kim only received professional counseling once. That was during her inpatient stay at a psychiatric hospital when she was in her late teens. She planned to speak with the new mental health counselor at the tribal mental health center. She was willing to work with him since he was not from her community. Kim also wanted the help of a Native healer or medicine person, but was unsure of how to make this contact. She heard, through her daughter, that the local mental health clinic recently hired a medicine man as part of its staff and planned to make an appointment to see him as well. Kim's uncle had been encouraging her to pursue more traditional methods of healing.

C. *Cultural Factors Related to Psychosocial Environment and Levels of Functioning*

1. *Social Stressors:* Kim was unemployed at intake, and as a result did not have a steady income apart from the small general assistance check she received every month. She had no high school education, nor a GED, thus it was even more difficult for her to compete for the small number of jobs in her community. Because she lacked a car, it was impossible for Kim to seek employment off the reservation. Other social stressors included Kim's husband's behavior and the trouble it caused in their relationship. Kim felt alienated from her friends and family because she wanted to stay sober but felt pressured to drink when around them.

2. *Social Supports:* Kim had virtually no source of social support in her life, outside of the relationship with her father and one of her uncles, the only two people close to her who were committed to sobriety. In her moments of greatest despair, Kim felt that the only way to stay sober and create a better life for her and her children was to leave the reservation entirely. This reflected the fact that Kim felt surrounded by people she deemed dysfunctional, hopeless, and damaging. The belief that she must "leave the rez" contradicted her more hopeful view that regaining her cultural practices, and by necessity, reconnecting with others in her tribe would be healing. Though Kim did not speak of it as such, she did benefit from some tribal support systems. In particular, Kim relied upon the tribe for healthcare, food commodities, and housing.

3. *Levels of Functioning and Disability:* The losses, both interpersonal (e.g., mother, daughter, and father) and cultural (e.g., language and cultural practices), Kim sustained over the years are not uncommon in her reservation community. Nor is the fact that she was unemployed and found it difficult to make ends meet for her family. There are differences, however, between the ways in which others deal with these losses and stresses, and how Kim dealt with them. For example, whereas Kim seemed to have reached a certain level of hopelessness, others in her community have taken it upon themselves to enroll in language classes or seek relationships with elders or spiritual leaders who can provide guidance in terms of cultural practices.

D. *Cultural Elements between the Individual and Clinician:* Kim indicated that she preferred a clinician or counselor who, whether or not s/he was Native, was not from her community. To her, this provided an added assurance that what she shared with this person would remain confidential and not gossiped about around town. Whether or not her fears were founded or based on her knowledge of true breaches of confidentiality by mental health clinic staff, it was important that Kim see someone who was from outside her community. In this way Kim would at least begin the process of counseling, which she seemed in desperate need of at the time of intake. It was recommended that her counselor be patient with Kim and not press her to divulge more than she was ready to. Her counselor was aware that there would likely be a period in which Kim needed to “test the waters” with him/her in order to feel certain that her story would be kept confidential. Once a trusting relationship was developed, Kim would have benefitted from having a reliable source of support in her life, which she was without. It was also recommended that Kim’s counselor should support her efforts to connect with the medicine man at the mental health center and not see that work as contradictory to the work that Kim did in her therapy sessions. In addition to individual therapy, Kim was encouraged to join a local women’s support group.

E. *Overall Cultural Assessment for Diagnosis and Care:* Kim was a 37-year-old American Indian woman living on a Northern Plains reservation with her common-law husband of 15 years and their six children. At the time of intake, Kim sought counseling because of escalating marital problems, feelings of anger and boredom, crying spells, and loss of appetite. Kim had a history of alcohol dependence, depression, and suicide attempts. She felt that if she did not seek help soon, she would relapse into alcohol dependence and depression. Kim was born on the reservation and raised there until age five by her parents. Before age five, she lived with aunts and grandparents at various times, because of her parents’ alcohol abuse. At age five, Kim was sent to a missionary-run boarding school, where she felt

both abandoned by her parents and deprived of her cultural heritage. Kim dropped out of school when her mother was killed and her father sent to prison. This was the start of a period of heavy drinking and deep depression, during which Kim made several suicide attempts and was hospitalized at a psychiatric facility. She struggled since this time with periods of depression and alcoholism but always maintained sobriety during her pregnancies and was inspired to remain sober because of a commitment to raising her children in a healthy way. In addition to the marital difficulties that initiated her desire to seek counseling, Kim blamed many of her past struggles with alcoholism and depression on the significant losses she sustained over the course of her life - that of her mother, daughter, and brother (all of whom died tragically and unexpectedly).

Kim expressed her distress predominantly through feelings of anger and boredom, which in Kim's case may have represented a form or symptom cluster of depression not currently specified in the DSM-IV. In particular, the "boredom" she experienced could have been a marker for the DSM-IV criterion of "loss of pleasure or interest." In this regard, it would have been important to ascertain whether Kim's boredom coincided with or increased at the onset of her other symptoms of depression (e.g., loss of appetite, feeling sad) or whether she experienced boredom more generally. If the former were true, it would seem plausible that Kim's boredom was related to the DSM-IV criterion of "loss of pleasure or interest." Kim's feelings of anger, on the other hand, seemed tied to the interpersonal struggles (e.g., marital, familial) in her life. In her moments of greatest frustration, Kim felt that "leaving the rez" was the only option for improving her life, as she felt surrounded by a host of people whom she deemed dysfunctional and destructive. Yet Kim clearly was not universally angry and disappointed by the people around her, as evidenced by the ways in which Kim was embedded in the social network of her family and her tribe. On a familial level, Kim had a close relationship with her six children and had a close relationship with her father and uncle, who lived nearby. On a tribal level, Kim lived in tribal housing, sent her children to tribally-run schools, received tribal food commodities, and depended on tribal health services for herself and her children. In addition, Kim's thoughts of "leaving the rez" were in opposition to her desire to reconnect with the traditional practices of her tribe.

Regarding psychiatric care, Kim sought help from both a professional outside of her community and a traditional healer deeply embedded in her community. Kim sought a counselor from outside of her reservation community due to her perception that such a counselor would fully respect her confidentiality, whereas someone from her community would not. Though Kim felt alienated from the traditional healers and healing practices in her tribe at the time of intake, she was interested in receiving help from a medicine man who worked at the tribal mental health clinic. In planning for Kim's care, Kim would likely have benefited from a program of

counseling that incorporated both Western therapeutic practices and traditional Native healing practices. Kim's ambivalence about her tribal community (i.e., that it was simultaneously a place to leave/avoid and a place in which to become more deeply embedded) might have been addressed through an historical trauma recovery group (e.g., as outlined by Yellow Horse Brave Heart & DeBruyn, 1998). Such a group could have helped Kim to understand the larger historical forces that have negatively impacted her tribal community and its members—and as a result, perhaps alleviate the anger she felt toward those individuals who somehow failed her (e.g., by abandoning her). In particular, an historical trauma recovery group may have helped Kim understand the impact of one generation's trauma (e.g., her parents own experiences of growing up without parents and being raised in a boarding school) upon the next (e.g., Kim's own sense of abandonment). Ideally, such a group might have helped Kim forgive those who transgressed against her and indicate a traditional path of healing along which to move forward.

More generally, Kim could have benefited from a treatment plan that facilitated her use of tribal services to improve her quality of life, such as a GED program, job training, and connection with a supportive group of other tribal members (e.g., domestic violence support group or recovery support group).

Conclusion

As it relates to the experience of illness, culture can be understood as a set of shared value orientations about the self, illness, and treatment (Kleinman, 1996). If psychiatric assessment is the process by which a clinician translates another's story of illness into the terms of psychiatric diagnosis, careful attention to the cultural context in which these stories unfold allows for a more meaningful telling of that story. Ideally, this practice will result in a system of psychiatric diagnosis and care that better serves the needs of the client. DSM-IV now includes a structured outline for gathering such culturally relevant information that encourages clinicians to gather this information more routinely, and provides a systematized means of doing so.

Michelle Christensen, Ph.D.
American Indian and Alaska Native Programs
University of Colorado Health Sciences Center
4455 E. 12th Ave., Box A011-13
Denver, CO 80220
michelle.christensen@uchsc.edu

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Footnote

¹It is interesting to note, that for Native people, the "host culture" is in essence their own culture as their inhabitation of this land preceded that of what is now known as the "dominant" culture. Nonetheless, this speaks to the experience of American Indians in today's world as guests, so to speak, in their own home. For the purposes of this article, "dominant culture" will be used instead of "host culture" to reflect this experience.

AMERICAN INDIAN AND ALASKA NATIVE SUBSTANCE ABUSE: CO-MORBIDITY AND CULTURAL ISSUES

Norma Gray, Ph.D., and Patricia S. Nye, M.D., CSAC

Abstract: The devastating impact of substance abuse on American Indians and Alaska Natives (AI/ANs) is reviewed with an emphasis on psychological and physical effects. Co-morbidity of substance abuse, trans-generational trauma, Post-Traumatic Stress Disorder, and depression among AI/ANs is also discussed since each condition may cause, impact, and/or exacerbate the others. The Medicine Wheel, one respected and accepted treatment approach developed by AI/AN communities, is described in detail since it helps address all of the co-morbid issues discussed.

Diversity and AI/AN Nations

Although AI/ANs are reportedly less than 1% of the total U.S. population, they comprise over 280 separate cultural groups consisting of 478 tribes (Liepman, et al., 1996). While the research literature frequently reports that alcohol abuse and its consequences are the primary health problems faced by AI/ANs today, one must remember that the patterns of substance use vary widely from group to group and that research has been conducted with only a limited number of AI/AN nations. Furthermore, the specific issues related to the cultural and individual history of each person must be considered as research findings may vary for that particular individual. It is also important to emphasize that substance abuse is only one of many problems experienced by a number of AI/AN Nations. As substance abuse progresses, however, it may become an all-encompassing disease. Substance abuse and its consequences may be seen as a cyclic result and cause of trans-generational trauma, depression, poverty, and a powerful destructive force in the lives of individuals, families, and communities.

This paper will review some of the research on substance abuse and co-morbidity in the general population along with similar research conducted among specific AI/AN groups. Deloria (1995) has clearly defined the problems related to scientific research and how it is frequently not applicable to AI/ANs. Therefore, in this paper an attempt will be made to maintain an awareness of the heterogeneity among AI/AN nations and an understanding that research methodology cannot adequately explore the depth of these issues in their lives.

Substance Abuse Prevalence and Patterns

Prevalence rates of alcohol abuse among adults in AI/AN Nations may be unreliable due to measurement error and stereotypes associated with alcohol use. However, we do know that death related to alcoholism is higher for American Indians and Alaska Natives than for any other ethnic category (Shalala, Trujillo, Nolan, & D'Angelo, 1996). Young (1988) reported that 75% of all AI/AN deaths can be traced to alcohol and that 80% of suicides and 90% of homicides have alcohol as a factor. In the general U.S. population, males abuse alcohol more frequently than women. Among AI/AN Nations, alcohol mortality is greater among men than women (Shalala, Trujillo, Hartz, Skupien, & D'Angelo, 1997).

Although the use of non-alcoholic substances is generally less for women than for men (Kandel, Davies, Karus, & Yamaguchi, 1986), it is associated with crime among women as well as among men (Lex, 1996). However, when women have alcohol problems, they are at increased risk for polydrug use (Lex, 1996). A study of AI/AN adolescents in treatment for substance abuse showed that females were more likely than males to use cocaine and amphetamines, and they reported using more total substances than males (Novins, Beals, Shore, & Manson, 1996).

Comparing AI/AN groups in several urban and rural settings, Weibel-Orlando (1986-1987) found that women tend to drink less than men. In addition, women in urban settings were found to drink less than women in rural settings, providing further evidence for potential ecological influences on drinking behavior.

Regarding substance abuse among AI/AN youth, Swanson, Bratrude, and Brown (1971) reported several case studies of chronic alcohol use among AI/AN children ages 2–16 in one northwestern tribe, and Sherwin and Mead (1975) reported a case of a nine-year-old AI/AN with delirium tremens. Recently, one of the authors of this paper conducted an informal survey of 20 Substance Abuse Counselors from two southwestern tribes and found that most of their clients started regular abuse of substances such as alcohol, marijuana, and inhalants at age 10 or 11, many by age 7 or 8, and no counselor would be surprised to hear a client report that they had regularly abused substances at age 5 (P.S. Nye, personal communication, February 9, 2000).

Case studies are supported by several survey studies. Rebach (1992) found that White and AI/AN youth have the highest lifetime and annual prevalence rates and the highest rates of heavy use of alcohol among the major U.S. ethnic categories. May (1986) has reported that 50% - 90% of AI/AN youth, depending on their tribe, have experimented with alcohol. There is evidence of substance abuse related mortality in the 5–14 year old age range of AI/AN youth (Trujillo, Nolan, McCloskey & D'Angelo, 1996). Another survey study reported by Beauvais, Chavez, Oetting, Deffenbacher, and Cornell (1996) examined substance use and violence among students in good and poor academic standing and dropouts by ethnicity and gender. The lack of interactions between ethnicity, gender, and academic status on use of any drug indicated that, regardless of gender and ethnicity, differences in drug use among dropouts and the other groups are basically the same. The significant effects of ethnicity with use of specific drugs indicated that American Indian youth had higher rates of inhalant use only. Across all ethnic and academic status groups, greater numbers of males were heavily involved in drug use than females. Clearly, more research is needed regarding the prevalence of substance abuse among AI/AN youth. Since use in childhood or adolescence may be related to chronic use and abuse in adulthood, it is important to examine prevention and early intervention methods in our work with AI/AN youth.

Although frequently overlooked, some studies have verified that there are both abstainers and heavy drinkers among AI/ANs, with fewer numbers of those who drink in moderation (Heath, 1989). Other studies have shown that approximately 50% of abstainers had been heavy drinkers when they were younger. This pattern of “maturing” out of drinking is more common for women than for men, and sometimes occurs when family responsibilities begin (Lemart, 1982; Leland, 1978). In a study of 174 Navajo women and men (May & Smith, 1988) with an age range of 16–60+ years and of which 51% were women, 64% of the men and 40% of the women reported drinking. Drinking peaked in the 20–29 year age group with 80% of the men reporting drinking compared to 52% of the women in that age range. Drinking declined with age to 22% of the men and none of the women drinking at age 60.

Other studies with non-AI/AN groups have indicated that marriage consistently reduces alcohol consumption among both young women and men (Fillmore et al., 1997). Differences between men and women do occur in risk of alcohol abuse and are related to marital status. Young men who have never been married drink more per occasion than women who have not been married. However, when young women are separated or divorced, their consumption of alcohol per occasion increases more than young men's (Fillmore et al., 1997).

May (1995) determined that the drinking pattern among some southwestern AI/AN groups is bimodal, with a high proportion not drinking at all and another proportion drinking heavily. In other words, among the

group that drinks, there are a high proportion of heavy and abusive drinkers. The heavy drinkers are likely to be part of a subculture that engages in long binges that lead to very high blood alcohol levels over several days. Women in the heavy drinking subculture are frequently stigmatized and socially isolated, which sometimes leads to further entrenchment of heavy drinking and contributes to a high frequency of Fetal Alcohol Syndrome (FAS), alcohol related birth defects (ARBD), and alcohol related neurological defects in birth.

Individual and cultural attitudes regarding substance use also influence rates of use and associated problems. Historically women's drinking behavior has been associated with deviance, abnormality, and "evil" in comparison to the drinking practices of men. Women's drinking has been linked to prostitution, promiscuity, and abnormality. It has also been seen as a means by which women could move away from their traditional feminine roles (Fillmore et al., 1997). As we consider gender issues related to substance use, we cannot ignore the impact of gender role stereotypes and the history of cultural perceptions of women's drinking behavior. Research regarding gender roles, substance use, and AI/AN women are extremely rare. There is some research that considers the relationship of women's need to cope with others in her family who use alcohol and has shown that AI/AN women tend to have no alternatives but to passively adjust (Leland, 1978). This may be closely associated with more recent findings showing that AI/AN women who feel they must fit into traditional female roles are significantly more depressed than those who view themselves as androgynous (Napholz, 1995).

Physiological Effects of Substance Abuse

Sex differences are evident in the physiological effects of substance abuse, with most studies focusing on the effects of alcohol. Some research has shown that the drinking levels of women are increasing and are becoming more similar to those of men (Mercer & Khavari, 1990). This potential increase in consumption makes it especially important to consider the impact of heavy drinking on women, especially since some research indicates that women may have a greater susceptibility to the development of alcohol-related medical disorders than men. For example, women develop cirrhosis, gastric ulcers, cardiomyopathy, and brain impairment at the same rate or sooner than men despite lower lifetime levels of alcohol consumption (Lieber, 1997; Rabinovitz, Van Thiel, Dindzans, & Gavalier, 1989). Some researchers attribute women's vulnerability to the medical consequences of alcohol to their higher blood alcohol concentrations (Wilsnack, 1995). Overall, there appears to be an increased "bio-availability" of alcohol in women, and this may have a medical impact on women at all levels of alcohol consumption (Lieber, 1997).

Pre-menopausal women have less alcohol dehydrogenase (an enzyme that oxidizes or breaks down alcohol) in their gastric lining and therefore may initially have higher concentrations of alcohol in their bloodstream. Men's gastric alcohol dehydrogenase decreases with age, while women's does not (Lieber, 1997). Although women have an initially higher blood and tissue concentration of alcohol per unit of alcohol than men, women are able to clear the alcohol from their bodies more rapidly. However, alcohol may increase estrogen-related hormones such as estradiol (Wilsnack, 1995), and the higher estrogen concentration caused by alcohol, combined with the high tissue concentrations (even for a relatively short period of time), may have a synergistic effect on body tissues, resulting in more devastating physical damage sooner in women than in men (Lieber, 1997).

The oxidation or breakdown of alcohol results in an increase in the metabolic co-factor NADH (reduced nicotinamide adenine dinucleotide or nicotinamide adenine dinucleotide plus a hydrogen atom from alcohol), which results in several metabolic and hormonal changes. Increased NADH not only inhibits gluconeogenesis (the formation of blood glucose from amino acids), which may result in alcoholic hypoglycemia but also causes an increase in uric acid, which may cause gout and a decrease in testosterone production. Men with cirrhosis or other hepatic disease may no longer have the capacity to metabolize or breakdown estrogens to maintain the normally low level of estrogens found in the male body. The result of a relative decrease in male hormones and a relative increase of female hormones is the "feminization" of the male body: gynecomastia (breast development), less body hair, and a decrease in the size of male genitalia. In addition, there may be decreased libido and impotence. Alcohol also causes endocrine abnormalities in women, including menstrual irregularities, amenorrhea, infertility, and decreased libido (Project Cork Institute, 1989).

There is minimal research delineating any genetically related physiological differences between AI/AN and other ethnic groups' metabolism of alcohol (Long et al., 1998). These studies show some evidence for genetic linkage to alcohol dependence (Long et al., 1998) and there are some ethnic differences in the enzymes necessary for the metabolism of alcohol that most likely have a polygenic basis (Gill, Eagle Elk, Liu & Deitrich, 1999; Novoradovsky et al., 1995; Reed, 1985; Wall, Garcia-Andrade, Thomasson, Carr, & Ehlers, 1997). However, more research is needed, as the meaning of these studies is very unclear.

Use of cocaine, marijuana, and opiates has been associated with female reproductive problems such as amenorrhea, anovulation, and spontaneous abortion. The effects of alcohol abuse on a fetus are well substantiated. However, the effects of substance use on reproductive capacity in general needs to be examined further in conjunction with the influence of nutrition and trauma (Lex, 1996).

Fetal Alcohol Syndrome (FAS) presents a unique physiological effect of alcohol in women during pregnancy. It is important to remember that alcohol crosses the placenta freely, so when the mother drinks the developing baby also drinks, and alcohol may destroy the tissues of the developing fetus resulting in: a) a spectrum of neurological sequelae [ranging from learning disorders to mental retardation], b) a characteristic facial dysmorphism [flat mid-face, thin upper lip, small chin, short palpebral fissures (eye openings), epicanthal folds (folds of skin at the inner eye opening), and ear anomalies], and c) growth retardation, including the baby's length, weight, and head circumference. Alcohol also is available in mother's breast milk, so when a breastfeeding mother drinks the baby drinks too and further damage may occur (Mitchell, 1993).

Cocaine use by the mother during pregnancy may result in fetal microcephaly, growth retardation, fetal high blood pressure and stress, risk of stroke, and even fetal demise. At birth, a baby who has been exposed to cocaine during gestation may have cocaine intoxication or withdrawal symptoms, cardiovascular dysfunction, irritability, tremors, jitters, inconsolability, increased risk of seizures, abnormal sleep patterns, and a much higher risk of SIDS. There are important implications for the increased risk of trauma and neglect for such potentially "difficult" babies born to addicted mothers (Mitchell, 1993).

Mothers actively addicted to opiates have increased risk of fetal death and put the developing baby at great risk for HIV as well as other STDs. Babies born to opiate addicted mothers may have low birth weight, meconium aspiration, neonatal opiate withdrawal symptoms, and delayed effects such as restlessness, agitation, irritability, and poor socialization. It is probably best for mothers who are established on methadone maintenance to continue methadone at the lowest effective dose because they will be more likely to seek more consistent pre-natal care and have a decreased risk of HIV, STDs, and fetal loss. However methadone exposed babies may have low birth weight, neonatal opiate abstinence syndrome, thrombocytosis, hyperthyroid, and a rate of SIDS 3–4 times that of the general population (Mitchell, 1993).

As a protective factor for developing babies, it may be wise for men to consider that when their spouses or partners are pregnant, they could regard themselves "pregnant" as well. This mindset is important because if the male partner or spouse is alcohol/substance free, it may be much easier for the pregnant woman to remain alcohol/substance free as well—a tremendously important and effective prevention plan. There is also a need for research into the effects of paternal drinking and substance abuse on the sperm, which may contribute to fetal and infant morbidity and mortality as well (Passaro & Little, 1997).

Substance abuse may put individuals at higher risk for developing cancers. In both men and women, chronic heavy alcohol use is associated with a higher risk of nasopharyngeal, laryngeal, thyroid, esophageal,

melanoma, and hepatic (liver) cancers. Many studies have shown that women who abuse alcohol are at much greater risk of developing breast cancer (Lieber, 1997).

Finally, alcohol abuse has effects on sexual arousal and function in both men and women. At high levels of alcohol consumption, men self-report decreased sexual arousal, whereas women self-report increased sexual arousal (although this may be a result of a misinterpretation of unrelated physiological responses). Alcohol increases testosterone in women, but not in men, which may produce increased feeling of sexual arousal in women. Drinking alcohol may be interpreted as a sexual signal because potential sexual partners are more likely to engage in sexual activity if they have been drinking alcohol, and alcohol consumption is positively correlated with increased sexual activity. Under the influence of alcohol, sex may become a high-risk activity with individuals exposing themselves to the possibility of HIV, STDs, sexual assault, and pregnancy (Wilsnack, Plaud, Wilsnack, & Klassen, 1997).

Although most of the studies cited above focus on non-Native populations, the second author, and her AI/AN colleagues, have found them clinically relevant for AI/AN men and women clients. It would be useful if research were conducted on gender-related physiological differences with specific AI/AN Nations.

Co-morbidity of Substance Abuse and Psychiatric Disorders

Post-Traumatic Stress Disorder (PTSD)

In our clinical work with southwestern AI/ANs, we have learned that the experience of chronic psychological trauma is intertwined with depression and alcohol and drug abuse. We see PTSD as the umbrella disorder that may cause, or at least exacerbate, the co-morbid problems of addictions, depression, and violence. There is extensive evidence that trauma frequently occurs in the lives of AI/ANs. According to IHS data from 1990-1992 (Shalala, Lee, Trujillo, Reyes, & D'Angelo, 1995), "accidents and adverse effects" at 15.1% of total mortality were the second leading cause of death among all age groups in all IHS cases. This is in comparison to the 1992 "U.S. All Races" data, which rated "accidents and adverse effects" as the fifth leading cause of death at 4.1% (p. 47).

Not only do potentially traumatizing events occur at an overwhelming rate in the lives of AI/ANs today, but also each generation has faced the impact of cumulative trans-generational stressors related to genocide, racism, poverty, death, and alcoholism. Historical trauma of much earlier generations may accumulate and affect the cultural and emotional strength of each Nation, leaving its people more vulnerable to using alcohol or other drugs as a means of coping. Thus, it is important to address lifetime trauma in the prevention and treatment of alcohol abuse

as well as the cultural and spiritual aspects of trans-generational trauma. Addressing issues of trauma in alcohol prevention and treatment programs for AI/ANs may enhance the beneficial programmatic effects (Gray, 1998).

Traumatic experiences often result in PTSD, which is believed to contribute to rates of substance abuse among some groups (Evans & Schaefer, 1987; Fullilove et al., 1993; Zweben, Clark, & Smith, 1994). Substance abuse, especially alcoholism, has been described as a common complication of PTSD (Blank, 1994). Substance abuse has been viewed not only as a behavioral response to childhood traumatization (Briere, 1992; McCann, Sakheim & Abramson, 1988), but also several studies have shown strong associations between substance abuse and sexual, physical, or emotional abuse. In a study examining histories of incest in participants in substance abuse treatment, Janikowski and Glover (1994) found 48% of their sample of both women and men reported a history of at least one incident of incest. Approximately 30% of their sample believed that there was a causal relationship between incest and the substance abuse problems they experienced subsequent to the incest. However, only 8% of the sample reported receiving any treatment regarding the incest during their treatment for substance abuse. A national survey on women's drinking (Wilsnack, Vogeltanz, Klassen, & Harris, 1997) found that a history of child sexual abuse was strongly related to drinking behaviors, such as intoxication, alcohol dependence symptoms, and other drinking-related problems. Their findings suggest, "women's experiences of sexual abuse in childhood may be an important risk factor for later abuse of alcohol and illicit drugs" (p. 268).

These studies conducted with non-AI/ANs are now being substantiated in other research with some southwestern AI/AN Nations. In a small study of adult AI/ANs in substance abuse treatment in the Southwest (Gutierrez, Russo, & Urbanski, 1994), 84% of the women and 56.5% of the men reported a history of emotional abuse. There were also gender differences related to the prevalence of physical and sexual abuse. The women in the study reported high rates of past physical abuse (74.1%) and sexual abuse (51.9%), while the men reported lower rates. For men in this treatment program, 26.9% reported a history of physical abuse, and 3.7% reported a history of sexual abuse.

In a recent study (Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997) of a southwestern AI/AN group that was not selected for clinical or trauma history, the prevalence of PTSD was 21.9% ($n = 247$). This rate is comparable to rates for groups experiencing severe and extreme events, such as survivors of mass shooting, major burns, and combat. Prevalence of PTSD in non-AI/AN non-clinical populations usually ranges from 1% to 9% (Norris, 1992). In this study (Norris, 1992), 81.4% of the subjects reported at least one traumatic event, and of those, one in four was diagnosed with lifetime PTSD. For men, the risk of developing PTSD was significantly greater for individuals with a history of multiple traumatic

events, which is consistent with other findings. Robin et al. (1997) suggest "the high prevalence of PTSD in this community is, therefore, more likely due to a high rate of exposure to trauma and the types of traumatic events than to any specific vulnerability to PTSD" (pp. 1585-1586).

As in previous national studies, there were strong relationships between PTSD and other psychiatric disorders, such as depression and substance abuse and dependence (Robin et al., 1997). Of the subjects diagnosed with lifetime PTSD, 83.3% were also diagnosed with at least one other lifetime psychiatric disorder. Women with PTSD were more likely to be diagnosed with a mood disorder, to have drug use disorders, and to be diagnosed with antisocial personality disorders.

There were no statistically significant gender differences in the prevalence of PTSD in this study (Robin et al., 1997). However, there were differences in the impact of specific events on men and women. Physical assault was the most predictive variable for PTSD in the women. Women who had been sexually abused as children (at age 15 or less) were more likely to receive a lifetime diagnosis or current diagnosis of PTSD than women who had not been sexually abused as children. For men, the most predictive factors of lifetime PTSD were a history of combat and having experienced more than 10 traumatic events.

As non-Native therapists experienced in working with AI/ANs, the authors feel that ultimately, such factors as gender, ethnic background, and personality type of the therapist may not be crucial factors in the therapeutic process as long as the therapist is skilled, kind, empathic, and professional. However, patients with trauma histories have varying degrees of hypervigilance (decreased trust, and increased defenses for self-preservation). So when such clients are initiating therapy, their preferences in this regard should be respected and provided for whenever possible. Therapist preference by AI/AN clients is an important aspect of the healing process that warrants further study.

Mood Disorders

Since approximately 70% of the patients who use Indian Health Service (IHS) mental health services report drug or alcohol problems (Walker, Lambert, Walker, & Kivlahan, 1993), it is clear that general mental health is also related to alcohol/drug abuse and dependence among some AI/AN peoples. In a study examining psychiatric symptoms among AI/AN women with and without a history of alcohol dependence, Walker et al. (1993) found that women with such a history scored significantly higher on scales measuring obsessive-compulsive behaviors, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoses.

Although there may be a strong association between mental health and drug or alcohol problems among AI/ANs, results are mixed regarding

whether there is a higher prevalence of depression among some Nations than among non-AI/ANs. As we consider the issue of depression among AI/ANs, we must remember that it may be conceptualized differently within different cultural groups. In fact, the same words are seldom used to describe and interpret the similar physiological changes that occur across cultures. Furthermore, the social responses of others to so-called depressive symptoms usually vary (Marsella, 1980).

Recent research has examined rates of depression and factors associated with it in several AI/AN nations. These studies utilized measures of depressive symptoms and associated concepts that were created with non-AI/AN groups. However, they may provide new information that will be useful in the diagnosis and treatment of depression as well as allow the development of a database related to AI/AN nations. In a recent study of the relationship between childhood abuse and depression in young women of four ethnic groups in Arizona, including AI/ANs (Roosa, Reinholtz, & Angelini, 1999), it was found that the only predictor of depression was childhood physical abuse, not child sexual abuse. The authors suggest these results may be related to the potentially chronic nature of physical abuse. In another study of 104 southwestern AI/ANs at a primary care clinic (Wilson, Civic, & Glass, 1994), 8.9% met the criteria of major depression. This rate is similar to non-AI/AN clinic populations studied; however, it is important to note that a much higher percentage (20.7%) responded positively to questions related to specific symptoms of depression. This study also reported the prevalence of alcohol abuse (40%), trauma (37%), and assault (20%) within this small group.

In a unique study, Napholz (1995) examined how 148 professional AI/AN women in an urban mid-western setting characterized themselves in terms of sex role behavior (i.e., androgynous, sex-typed, etc.). Women who characterized themselves as androgynous had similar rates of depression (21.7%) as non-AI/AN professional women. However, women who were sex-typed (i.e., felt they had to fit into traditional female roles) had double the rate of depression (48%). The author of this study notes that it is important to examine the impact of the pressures of acculturation and multiple roles on the mental health of AI/AN women. There may be a type of synergistic effect between traditional and majority cultural demands that can increase the likelihood of depression for women.

In a larger study with 605 AI/AN college students (Beals, Manson, Keane, & Dick, 1991), 45% scored above the criterion for clinical depression on a self-report measure. There were no significant differences between sexes on their total depression scores, but women did report more "crying spells" than men. There were lower rates of depression reported in AI/AN adolescents in juvenile detention (10%) (Duclos et al., 1998) and in substance abuse treatment (more than 1/3) (Novins, Beals, Shore, & Manson, 1996), than among college age AI/ANs. The Novins et al. (1996) study also revealed a number of gender differences in that females reported

abusing more different types of substances than males and more emotional, physical, and sexual abuse. In addition, Dion, Gotowiec, and Beiser (1998) found no significant differences in the level of depressive symptoms between AI/AN and non-AI/AN children in the 2nd and 4th grades.

Suicide

Although these studies do not clearly indicate a consistently higher rate of depression among AI/AN peoples than non-AI/ANs, there is considerable evidence that the rates of suicide are higher (Van Winkle & May, 1993) and may be related to alcohol abuse (Johnson, 1994). The age-adjusted suicide death rates per 100,000 in 1992-1994 for American Indians and Alaska Natives was 19.2, which is 70% higher than the U.S., all races, rate of 11.3 in 1993. As in non-AI/AN populations, American Indian males have a higher suicide death rate for all age groups in comparison with American Indian females (Shalala, Trujillo, Hartz, Skupien, & D'Angelo, 1997). One author (Strickland, 1997) has noted that the problem of youth suicide among AI/ANs continues to climb after two decades of work focusing on its reduction. EchoHawk (1997) has suggested that the high suicide rate may be related to historical and cultural factors that have weakened and fragmented tribal unity. A study examining protective factors among sexually abused AI/AN adolescents has highlighted the associations between sexual abuse and hopelessness, suicidal thoughts, and suicide attempts in both females and males (Dexheimer Pharris, Resnick, & Blum, 1997). Thus, the potential impact of substance abuse among AI/ANs, coupled with trans-generational, childhood, and current abuse may be a life and death issue worthy of more research.

The Medicine Wheel as a Treatment Modality

One useful treatment approach for AI/AN substance abusers with co-morbid physical and psychological disorders may be the Medicine Wheel. The Medicine Wheel model differs from community to community and from family to family, and may be unfamiliar to some AI/AN communities. It is a useful tool that helps address the individual in a holistic manner with a focus on balance of the spiritual, physical, mental/emotional, and social/cultural aspects of the whole person. The Medicine Wheel is a simple, elegant circle with a cross bar in the center and may be enhanced by creative local artists. At each of the four directions—north, south, east, and west—an element of a balanced life is assigned. This differs from community to community, but the variations in assignments of the elements of balance to one of the four directions makes no difference. The Medicine Wheel is another creative, rich approach that is the hallmark of a healthy, balanced AI/AN approach to life.

It may be helpful to have substance abuse clients graphically demonstrate on the Medicine Wheel the extent of their wellness in each area by marking their status or progress from the inner circle to the outer rim in each of the four directions. Imagine the wheel spinning, blurring the aspects to an integrated whole; the client's Medicine Wheel drawing is a momentary snapshot of a dynamic process. The beauty of the wheel concept is that it doesn't matter which geographic direction is used to designate the aspects of life that are balanced; communities or programs create the Medicine Wheel that reflects their unique approach to life. It is the very opposite of the Cartesian model of mind/body split; rather it is a method of incorporating many life aspects into a balanced whole. Some activities or attitudes may not fit into rigid categories. The Medicine Wheel allows for a free-flowing, individual interpretation, which enhances the client's participation in staging themselves and planning their treatment. For example, running may be most meaningful for a client in any one of the four directions, or all four! The Medicine Wheel is a model of balance and wholeness in which all aspects of life blend into each other.

A client completing their Medicine Wheel must consider, discuss, and fill in or darken each direction from the center of the wheel to the outer rim in order to display the relative health in that life aspect. In the spiritual direction, for example, the individual may gauge their spiritual life in regard to their participation in activities that feed their spirit such as art, music, drumming, singing, prayer, humor, and gratitude. In the direction of the physical, one might illustrate the extent to which they are clean & sober, engage in preventive medical care, exercise, rest, sleep, and maintain a healthy diet. The social/cultural aspect may be measured by the individual's participation in healthy social activities; the quality of relationships with significant others, family, and community; school/work habits and performance; and knowledge of their culture and participation in ceremonies including tribal, church, or family traditions. Health in the mental/emotional realm may be measured by serenity, joy in their relationships and work, active participation in therapy, respect for self and others, stability of their mood, and their ability to "let go" of inevitable life irritations.

The Medicine Wheel, then, can provide a visual picture of an individual's wellness status and need for balance. The Wheel reminds the provider and the individual client to incorporate the whole person in their journey of wellness. If treatment is to be successful, recovery from the ravages of substance abuse in AI/ANs must address the whole person, their historical intergenerational trauma, the spectrum of additional traumas, all varieties of psychological pain, spiritual expression, the quality of relationships, the knowledge and practice of tradition and culture, physical health and strength, and education/employment. The Medicine Wheel is a clever AI/AN visual device that can be used to incorporate all these vital aspects into treatment. It may be used as a comprehensive staging tool, a strengths/needs list, a goal list, and a treatment plan all in one.

Conclusion

The results of the holocaust experienced by AI/AN peoples during the past five centuries includes ravaged communities, destroyed families, the brutal murder of hundreds of thousands of AI/AN people, organized attempts to erase rich cultures and beautiful languages, and trans-generational scars that affect AI/ANs to this day. The introduction of alcohol has had a devastating impact on their lives and has served to perpetuate the trans-generational trauma in a variety of forms.

There are a number of gender differences related to substance abuse including different physiological responses to alcohol use and different experiences of trauma. Women's bodies have a more sensitive response to the destructive physical effects of alcohol abuse than the bodies of men. Of particular note is the destructive impact of alcohol and substance abuse during pregnancy. AI/AN men who maintain sobriety may have a positive influence on their pregnant partner/spouse and possibly prevent the occurrence of Fetal Alcohol Syndrome or alcohol related birth defects.

Substance abuse is associated with high rates of sexual trauma, physical trauma and accidents, high death rates from physical complications of substance abuse as well as suicide and homicide, depression and grief, poor school performance, and low employment rates. AI/AN women are more likely to experience emotional, physical, or sexual abuse in their lifetime; AI/AN men are likely to experience a high rate of traumatic events as well. Trans-generational trauma can fracture the spiritual/cultural connections that may be protective against substance abuse, resulting in devastating psychological consequences.

It is crucial to examine historical experiences of the AI/AN client's nation, village, and family in order to understand the possible use of substances to self-medicate and soothe psychological pain and grief. All types of traumatic experiences may be related to substance abuse, and trauma and its aftermath (anger, grief, and depression) must be addressed when developing treatment approaches for AI/AN substance abusers. One traditional AI/AN approach has been described. It would be helpful to conduct research on the efficacy of various traditional healing methods in AI/AN communities, as well as other treatment and prevention modalities. In addition, there is a need for expanded research on ethnic differences related to the absorption, metabolism, and the physiological effects of alcohol abuse.

Understandably, many AI/AN Nations have historically been reluctant to take the role of research subject; the impetus for research such as this must come from AI/AN communities themselves. Research entities (whether Native or non-Native) must include tribal members in planning and implementation of all research activities. Moving from research to practical application of results in treatment and prevention is an integral part of presenting research opportunities to tribal councils. AI/ANs are

deeply invested in prevention, education, treatment, relapse prevention and wellness in their communities. AI/AN communities continue to conduct and participate in research they feel is beneficial to the wellness of their people now and for generations to come.

Norma Gray, Ph.D.
Assistant Professor of Public Health
University of Arizona College of Public Health
P.O. Box 245163
Tucson, AZ 85724-5163

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Authors' Note

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MAKING CONNECTIONS THAT WORK: PARTNERSHIPS BETWEEN VOCATIONAL REHABILITATION AND CHEMICAL DEPENDENCY TREATMENT PROGRAMS

Sheila R. Hitchen, M.A.

Abstract: One of the most exciting and frustrating times in the treatment process for a client in recovery is the period when that individual moves into aftercare. There are many challenges and obstacles to maintaining his or her clean/sober status, and support systems are key to a client's success in aftercare. Unfortunately, a group of professionals who can have a very strong impact on that success—those in Vocational Rehabilitation (VR)—are often left out of the system. Treatment and aftercare counselors may have a good understanding of many of the social services needed by clients who are transitioning into aftercare, but most are not aware of, or are under-informed about, the scope of services offered by VR that can meet the client's rehabilitation needs. Clients in recovery from substance abuse are eligible to apply for VR services. Bringing VR counselors into the process and encouraging them to be active participants in the aftercare of the client can therefore help a client prevent relapse and become a contributing, successful member of society. However, if treatment and aftercare counselors are unfamiliar with VR programs, they will not include VR counselors in aftercare planning and service provision. In an effort to assist such partnerships to be established and maintained, this article will discuss VR and its history, briefly outline its case management format, and discuss the limitations of the format. It will touch upon ways to incorporate VR staff into the aftercare process. This article will also discuss partnership efforts in the state of Oregon between American Indian-based treatment center and the Oregon Department of Human Services; Office of Vocational Rehabilitation Services (OVRS), and outline suggestions to allow the reader to create and maintain ties for improving collaboration in their communities.

Part I: How Vocational Rehabilitation Works

In order to understand how Vocational Rehabilitation (VR) staff can work with other service providers to assist their clients to become healthy, independent, and employed it is first essential to understand how the VR system works and what its parameters are.

What is Vocational Rehabilitation?

Sometimes referred to as “the best kept secret in state government,” VR is one of the most powerful programs available to people with disabilities. Tracing its current roots back to 1918, the state/federal VR program has a strong legacy of service and support to people with disabilities, to employers, and to the taxpayers whose monies provide the funding for the agencies’ activities.

VR was introduced into federal law in 1918 with the Soldiers’ Rehabilitation Act. This act authorized VR for all veterans with a disability resulting from military service that presented a handicap to employment. Civilians with disabilities were not provided similar legal rights until June 1920, when the Smith-Fess Act was passed. This was temporary legislation, however, and had to be extended with additional legislation in 1924 (Rubin & Roessler, 1987). The program was further shaped and added to throughout the next 50 years as legislators on the federal level worked to ensure the program served increasingly broad categories of individuals with disabilities.

The most sweeping and important changes to the public VR program came with the Rehabilitation Act of 1973. That act mandated state programs to serve people with severe disabilities (such as deafness, blindness, spinal cord injuries, mental retardation, etc). It also promoted consumer involvement, stressed program evaluation, provided support for research, and advanced the civil rights of people with disabilities (Rubin & Roessler, 1987). Legislation in the late 1970s and 1980s continued to build on the Rehabilitation Act of 1973 and shifted from the focus of “fixing” the person with the disability to one of overcoming the societal barriers that were often more handicapping to the persons with disabilities than the disabilities.

In 1990, the Americans with Disabilities Act was passed and signed into law. This and the subsequent amendments to the Rehabilitation Act of 1973 (which were completed in 1996 and 1998) have brought the VR program to its present state as a leader in creating employment opportunities for people with disabilities and promoting their ability to lead productive, independent lives.

How Does the VR Program Work?

VR is a federally mandated program, with services administered on the state level. Though the format varies slightly from state to state, there are some constants in how the program is managed. VR is an eligibility-based program, meaning that those who receive services must first qualify for them. This differs greatly from other federal, state, and local entitlement-based programs. Eligibility is addressed in the 1998 Amendments to the Rehabilitation Act of 1973 in section 102. In order to qualify for VR services, three criteria must be met: the individual must have a documentable physical, mental, or emotional disability; that disability must have limitations which pose barriers to obtaining or maintaining employment and require vocation rehabilitation services to overcome; and the individual shall be presumed to be able to benefit from those vocational rehabilitation services unless medical/psychological records or the individual's demonstrated abilities clearly show otherwise. There is an additional presumption of eligibility for those individuals who are recipients of Social Security Disability Insurance (SSDI) or Supplemental Security Income (SSI). In the case of presumptive eligibility, VR counselors must still weigh the presumptive benefit issue and gather supporting documentation for the file to demonstrate the severity of the disability and the associated limitations it imposes (State of Oregon Vocational Rehabilitation Division, 1998). VR services are focused on assisting the client with vocational issues. All services are provided on an entirely voluntary basis. VR counselors do not mandate clients to participate in services, and there is no limit on the number of times an individual may apply for services over the course of his or her lifetime.

Clients are referred to VR by a variety of sources. Referrals are common from medical and other service providers, employers, schools, unions, family members, and even self-referrals. Most VR agencies serve people with all types of disability, though in some states there are separate commissions for services to deaf or blind individuals. Some states encourage the practice of specialized caseloads for severe disabilities, allowing counselors with specialized skills, training, and/or experience to work with a specific population or disability group. Other states consider every counselor capable of providing effective services to consumers with disabilities of all types. There are generally branch offices across each state that serve clientele in specific catchment areas. These may be based on regions of the state, counties, or even portions of metropolitan areas.

VR counselors are trained professionals. There has recently been increased emphasis placed on the professional development of VR counselors. The 1998 Amendments to the Rehabilitation Act of 1973 require state agencies to establish employment practices that ensure counselors possess qualifications which are consistent with national or state certification/registration criteria for counselors providing VR services (e.g.,

those working in the private sector, those working in the Workers' Compensation system) (State of Oregon Vocational Rehabilitation Division, 1998). Many states give hiring preference to applicants who hold at least a bachelor's degree in a human service field. Most have or are developing strategic plans to ensure the majority of their counseling staff have a Master's degree in rehabilitation counseling or similar fields.

The Rehabilitation Process

At the time of intake, clients generally meet one-to-one with their VR counselor. A good deal of background information about the client is required, and the counselor will generally spend time exploring the client's personal, educational, social, vocational, and disability-related history. From the very beginning, the client and VR counselor work as partners, gathering information to document disability and limitations, exploring skills and obstacles, and discussing vocational options. VR services are very individualized. No two plans for employment are alike, even if the constellation of disability is almost identical among clients.

Substantial efforts are made to access existing medical, psychological, and treatment records. The Rehabilitation Act allows VR staff 60 days from the date of initial application to make a determination of eligibility for VR services. If records are not available or do not outline the impediments to employment, additional evaluations may be required. In rare cases, a VR counselor may ask the consumer for permission to extend the eligibility determination period in order to clear up specific issues or to allow more time to gather needed documentation.

Following eligibility determination, the client and counselor work together to determine a vocational goal that is within the client's physical, mental, and emotional abilities and which also incorporates their interests and aptitudes. If a return to a previous type of employment is appropriate, with or without accommodations or other supports, VR will assist the client to do so. If the individual is unable to return to previous employment, the counselor will look for skills which transfer into other types of work and which can be used as a basis for future employment.

The client and VR counselor share responsibility for putting together a plan for services that will lead to achievement of the vocational goal. Recent changes brought about by the 1998 amendments allow a client to complete all or portions of their own plan for employment with or without assistance from others outside the VR system. In these cases, the VR counselor maintains the responsibility to ensure that federal and state laws and agency policies are upheld in the plan. The services included in the plan vary based on individual needs and circumstances as well as the severity of disability and limitations imposed. These can include counseling and guidance, evaluation services, skills training, equipment and tools required for employment, job placement assistance, accommodations and

assistive technology, etc. All levels of employment are available, ranging from sheltered/supported employment (where there is substantial supervision) through self-employment. Choice of employment is based on the individual's needs and limitations. The plan itself is a working document, not an item set in stone. If changes or additions are needed, they can be completed with the client and counselor's agreement.

After the services are provided and the client is employed, support from the VR does not end. Follow-along services are provided for a minimum of 90 days to ensure that the client is able to complete the essential functions of the job, that he/she has received support to request reasonable accommodations if needed, and that the job itself is a good match for the client's abilities and interests. After 90 days, the client's file is usually closed and considered a "successful rehabilitation." Should the client need assistance to maintain the job or obtain another in the future, he or she can contact the VR counselor or any local VR office and ask for assistance. It is possible that short-term services can be provided in VR's Post-Employment Services category, which allows service provision without having to re-determine eligibility and draft an entirely new plan.

VR Requirements for Clients in Recovery (Oregon Eligibility Criteria)

The 1998 Amendments to the Rehabilitation Act of 1973 included some language specific to the right to services for people in recovery from substance abuse. The act and amendments do exclude individuals "currently engaging in the illegal use of drugs" from eligibility for VR services. However, those who are no longer engaging in drug or alcohol use and who meet one or more of the following guidelines may be evaluated for eligibility for services:

1. has successfully completed a supervised drug rehabilitation program and is no longer engaging in the illegal use of drugs, or has otherwise been rehabilitated successfully and is no longer engaging in such use;
2. is participating in a supervised rehabilitation program and is no longer engaging in such use; or
3. is erroneously regarded as engaging in such use, but is not engaging in such use; except that it shall not be a violation of this Act for a covered entity to adopt or administer reasonable policies or procedures, including but not limited to drug testing, designed to ensure that an individual described in sub-clause (I) or (II) is no longer engaging in the illegal use of drugs (State of Oregon Vocational Rehabilitation Division, 1998).

This means that there are no federal rules regarding a mandatory "clean and sober" period before a person is permitted to apply for VR services.

Confidentiality

As in other counseling fields, VR staff members are quite conscious about the importance of confidentiality. Case records and their contents are carefully maintained. Information about a client, or even about the fact that a person has applied for or is receiving VR services, is not disclosed without written consent from the client or someone legally able to act on his or her behalf. VR staff will also ask clients for written permission to access existing records and information often available through treatment programs, mental health clinics, and similar service providers. Records are kept for a short period (in Oregon, the practice is to hold closed files for a period of four years) and then are purged. Some states have computerized case management programs to assist their staff in serving clients. Information stored in those databases will be maintained much longer, but likely will not have the extensive information about the client found in the paper-based file.

Tribal Vocational Rehabilitation

American Indian Tribal VR programs are becoming more and more prevalent across the United States. Mandated by the Rehabilitation Act, these programs are established on federal grant funding. There are currently 55 tribal VR programs in the United States, run on a similar process as the state/federal programs. There are, however, some differences between the tribal and state/federal programs. Tribal programs generally do not have the policy-based restrictions that are found in the long-established state/federal system. Tribal programs are, therefore, able to be more flexible in the types of job goals supported and the types of employment outcomes developed. The tribal programs tend to be much smaller and are frequently restricted to enrolled members of a specific tribe who are located on a specific reservation or service area.

Tribal programs are allowed only a portion of the funds allotted to the states for administration of the VR services. Consequently, the number of clients these programs are able to serve and the level of service available can be restricted. Fortunately, the federal legislation allows for consumers who are eligible for tribal VR to also have a case file open with the state/federal agency. Care must be taken to ensure services are not duplicated between the two programs, but collaboration between tribal and state VR programs is highly encouraged at the federal level. As the number of tribal grantees increases, the interplay between the state VR staff and the tribal counselors should increase. This will add another layer of support for consumers who can access tribally based services.

Part II: Bringing Vocational Rehabilitation to the Table

Involving state and/or tribal VR counselors in treatment and discharge planning with consumers is an excellent way to ensure the vocational and income needs of the client will be addressed. Referral processes vary from state to state, and even within different geographic areas of a state. Making contact with a local office and getting to know the staff there is the first step to forging a partnership. Unfortunately, it's not always easy to make these contacts. The following program established in Oregon illustrates some of the key elements necessary for successful rehabilitation of clients in recovery using the VR case management model.

The Oregon Experience: A Successful VR Aftercare Program Leading to Employment for Clients in Recovery from Substance Abuse

The Oregon Department of Human Services Office of Vocational Rehabilitation Services (OVRs) had historically underserved American Indian clients. According to a report generated by the OVRs Research and Evaluation Unit (State of Oregon Vocational Rehabilitation Division, 1996) there were 13,934 Oregonians with disabilities who received VR services between July 1, 1994 and June 30, 1995, 294 of whom were identified as American Indians. This indicates that only approximately 2% of OVRs' clientele at that time were American Indian. This data was not limited to new applications during that time frame, but also included clients who had applied for services prior to the time of data collection and had established cases. Given that the VR process takes an average of 24 months to complete, it is highly likely that only a small fraction of these clients had applied for services during that period. Based on this report, only 42% of those American Indian clients who applied for OVRs services would successfully complete the VR process during the data collection period.

A frequent lament from OVRs staff and administration was that American Indian clients were not coming into their offices to apply for services. At the request of representatives from OVRs and the Native American Rehabilitation Association (NARA), a tribally based chemical dependency treatment program with both inpatient and outpatient facilities located in Portland, a cognitive behavioral program called Self Empowerment (SE), which was developed at the University of Arizona (Skinner, 1995) was implemented in cooperation with NARA and Oregon OVRs' North Portland branch office. The SE program was eventually implemented in three areas along the I-5 corridor in the western part of the state. In the other two locations, Salem and Klamath Falls, different partnerships were established. These partnerships were not solely based with American Indian service providers or tribal organizations, but did seek to serve tribal members when possible. The Salem groups initially had a

higher rate of referrals of American Indian participants in recovery, so data from those groups will be included in the results and discussion that follows.

The program was comprised of four full-day sessions and explored participants' perceptions, behaviors, and emotions related to their interaction with the world. The aim of the program was to assist participants to see that each action or inaction is a consciously made choice and is therefore something they could control. The program was also intended to help participants understand triggers to "old behaviors" before they presented themselves (or at least at the moment of presentation) and to be able to make a decision that would lead to a healthier, drug-free, safer and more successful lifestyle. This was accomplished through discussion and exploration of cultural values and traditions and through roundtable discussion of the principles found in the nine-unit text (Skinner, 1995). With these new skills, it was expected that participants would be more outgoing in accessing and utilizing services from VR, and would be familiar with and comfortable with the VR process. This would, in turn, cause them to be more equal partners in the planning and implementation of services identified as necessary. It was expected that the project would ultimately lead to successful employment outcomes for participants and increased independence from government support programs. Success would be measured on several fronts, including increased collaboration between VR and treatment counselors and staff, increased OVRS referral rates of American Indian clients, increased percentage of American Indian clients gaining and maintaining employment, increased ability for participants to apply theories presented in the training sessions to real-life situations, and a decreased percentage of recidivism for VR services.

Through a second grant-funded project administered by the Native American Research and Training Center (NARTC) at the University of Arizona, a position was created within OVRS to address the issues that were preventing services from being available to American Indians with disabilities residing in Oregon. The role of that employee, who had the working title of Native American Technician (Locust & Springer, 1996), was to bridge the cultural and informational gaps that were barriers to effective service provision and consumer success. Having an American Indian person in this position started the process of improving the access of American Indian clients in Oregon to services, but did not entirely address the problem of making partnerships, which were mutually beneficial.

NARA staff had noted that clients in recovery were having extreme difficulty obtaining and maintaining employment following completion of treatment for substance abuse. This was disturbing, as many were relapsing and having to undergo treatment again. The feeling was that if a partnership could be formed with an organization that specialized in employment issues, perhaps the recidivism rate would decrease and clients would be able to maintain their sobriety as well as provide for themselves and their families. Unfortunately, as a non-profit organization, NARA was

very short-staffed. Creating a position for this specific need was out of the question. The Community Resources Coordinator was already working hard on ensuring clients had access to basic support resources such as housing, transportation, medical services, child care, and food. When the OVRS contacted NARA to inquire about the organization's interest in participating in a new program to be funded through the NARTC at the University of Arizona, staff at NARA thought that the program represented a very good solution to a longstanding problem.

Results

By 1996 (eighteen months into the project), 14 clients from the Salem group had completed the SE program, nine had achieved full time employment, and three were still receiving VR training (Hassin, 1996). Eight of the nine who were employed received their jobs as a result of VR, which represented an 800% increase in the number of American Indians completing the VR process out of the Salem office.

By 1998, 92 individuals had completed the SE training in Portland and Salem; 42 (45.6%) were still in VR; 19 (21%) had successful VR closures, i.e., they had obtained employment, and 31 (33.7%) had unsuccessful closures (Hassin, 1998, unpublished data). The majority of the American Indian participants completed the program in the North Portland location. Unfortunately, discrete data for the Klamath Falls groups is not available. No tie to the local tribal government or service organizations was established there and the groups were comprised of clients from a wide range of referral sources. This makes it nearly impossible to track the effect of the program on the participants and diminishes the applicability of the results to the topic of this article.

Between July 1995 and January 2001, OVRS served a total of 1,290 American Indian clients statewide (OVRS Research and Evaluation Unit, personal communication with Aaron Hughes, February 16, 2001). This represents an average of 235 new applications for service each year and is a significant increase in new applications annually. Statewide data for the same period indicate that 46% of American Indian clients would successfully complete their planned services with OVRS and maintained suitable employment for at least 90 days. This is a significant increase in the number of successfully employed American Indian OVRS clients.

It should be noted that not all those represented in the results above can be isolated to only those American Indians who were in recovery, or those who were served in the offices where SE was initiated. The results above (unless specifically stated otherwise) encompass services provided statewide, in all 27-branch offices.

Discussion

The Self Empowerment (SE) program (Skinner, 1995) was begun in several VR branch offices across the state in 1995-96. It met with mixed success statewide, but was popular and effective particularly in the Portland area, where it was run in the North Portland branch office. The SE team in Portland consisted of four trainers: the Community Resources Coordinator for NARA/NW (an enrolled tribal member), the OVRs Native American Technician (an enrolled tribal member), an OVRs Counselor Assistant (an enrolled tribal member), and an OVRs Counselor (not American Indian). This was the only group of trainers statewide that was comprised primarily of American Indians. Two of the four trainers were also in recovery for substance abuse and had completed treatment many years before on at least two separate occasions; this also set the Portland training group apart from the other sites. Participants in the program were clients (volunteers) who were in outpatient treatment or aftercare for chemical dependency issues at NARA and at substance abuse facilities in the Salem area. The program was presented to small groups of 4-10 over a period of four weeks and was repeated at least quarterly. This meant that the training team became very familiar with one another and with the roles each person played in the training and outside it. As the participants were referred to OVRs for vocational counseling and placement assistance following the SE training, they each became familiar with the VR office and its staff as the training proceeded.

The key to the success of the program was the partnership developed between the three groups; the OVRs staff, the counselors from NARA, and the staff from the NARTC at the University of Arizona. Because of the close connection between the NARA and OVRs representatives, clients were able to see how the two programs worked in harmony with one another. Often, a participant would need information or advice on how to access specific services or goods. They would frequently ask the NARA representative for that assistance; however, when she turned to the other trainers and asked for their input, then shared her own knowledge, the participants were able to see the breadth of assistance and resource knowledge available through VR. Additionally, it became more and more easy for the individual participants to move past the idea that the OVRs staff members were "bureaucrats" or "a cog in the wheel" and realize that they truly were ready, willing, and able to lend support as needed.

Review of the statewide data from 1995-2001 indicates that the partnership between OVRs and NARA, as well as those ties made in the Salem area with the American Indian community, had a major impact on the number of American Indian people with disabilities of all types who applied for and received VR services. Frequently, participants who had completed the Portland project would return to their tribal lands in other parts of the state, or move back to the more rural areas after they completed

treatment in Portland. They then would access services from their local OVRs office. Word of OVRs would then spread throughout the family and community, as well as through the resource networks, 12 Step meetings, and cultural events and gatherings. This had a major bearing on the number of American Indians represented in the data set from 1995-2001.

Program Conflicts

One of the most disconcerting issues that arose out of the SE project was that of the variety of case management approaches and cultural sensitivity or competence in the five Portland metro area OVRs offices. Several of the branch offices were adapting case management styles based on teamwork and making a significant break from the traditional one-to-one client/counselor relationship. This was not always the structure that worked best with the individuals who completed SE. Because of their connection within the SE program, however, many were able to appropriately request that their files be transferred to the same office where the SE training was conducted. Another concern was the workload issue created by the original format of all participants being brought onto the caseload of the counselor who participated as a training leader. No sooner did one group of participants get through the eligibility determination period than the next group of participants was ready to apply for services. As this was not the only referral source for the counselor's caseload, there were periods of "bottlenecked" services. As the program continued, other staff members in the branch became familiar with the program and its principles, and they were able to accept referrals from the training groups. This helped the efficiency of the VR portion of the program and allowed clients to move more smoothly through the VR process.

Shared Values Lead to Shared Outcomes

What made the SE project such a success in Portland? Without a doubt, it was the mutual support and teamwork that grew out of OVRs and NARA having shared values and goals. The members of the SE team all believed in the importance of helping clients to improve their lives, in the need to develop programs and relationships that last and are of benefit to clients, in the need for culturally relevant services from each agency, and in focusing the services based on individual needs as key to the program's success. They understood that in succeeding with the SE program, each agency would also meet with success in serving clientele and resolving the concerns discussed previously. Out of those shared values, a shared vision was crafted. That vision included seamless referral from treatment to OVRs' services and effective communication between the two agencies.

It may have been possible to create the partnership that developed between NARA and OVRs without Skinner's program. However, having

the formalized program lent structure and understanding of the available services to both organizations. It also allowed staff from both organizations to work closely together, and fostered their sharing personal and professional experiences during training and planning sessions. This sharing is what brought the group together and made the partnership between the two organizations function well. Taking on the risks of partnership, and building trust between organizations allowed the partnership to thrive.

While the outcomes have not all been perfect, the foundation has been set for a long-term collaborative relationship. That foundation has allowed for effective problem resolution when necessary. It has also allowed the staff of each organization involved to have a better idea of the limitations and processes the others must observe in their service delivery efforts. Administrative changes, staff changes, and budgetary challenges have all been addressed throughout the four years of the partnership. Because of the mutual trust and the understanding that has been cultivated, the partnership has survived.

Making Partnerships Work Locally

Getting started in the local community may seem like an overwhelming task, but it doesn't need to be. A large-scale scan to identify issues is a good starting place. It is important to truly brainstorm, and to get ideas down on paper. Involving others (individuals and agencies) in the process, even those who may not be directly impacted, can lead to a very informative and potentially ice-breaking session. Even if the individual or organization does not stand to benefit directly, the perspective provided may be helpful in outlining issues and possible solutions.

Determine the needs of those involved. What is the target population/issue? What gaps currently exist in services? What services are available but need change or adaptation? What can be created to meet a need? Which need is the most pressing? Which area can you impact the most profoundly? Which can be impacted the most easily or quickly? Getting the answers to these questions on paper will help form the process of determining what partnerships will develop. Don't recreate the wheel! Look to adapt or improve existing partnerships if possible. Seek new partners who have never been involved but whose missions and ideals are similar to the organization's. Find ways to break out of pre-existing molds. Work together with new and existing partners to create a new way of doing business.

The most important thing about these collaborations is the relationship forged between the partners. Get to know the people you'll be involved with. Help front-line staff from each organization meet, talk, and get to know one another as individuals. People are much more apt to work closely together when they know each other from personal contact, not just

as a name on an email distribution list or a voice on the phone. Involve management and administrative staff, but stay focused on the people who actually provide the direct client service. A bottom-up approach is going to be much more effective than one where change (sometimes sweeping change) is forced on those who serve the clientele.

No one is perfect, and neither is any system. Chances are the system, and not individual personalities, will be the cause of most issues. Communication is the key here. Meet as soon as a problem is identified and work out a solution that is acceptable to all participants. Flexibility on a personal and an organizational level is crucial, as is being willing to stretch and try things that have not been done before or which seem silly. Odds are high that the “silly” or simplistic solution will be the one that is most effective. Above all, keep in mind the factors that brought each individual and organization together. Focus on what the group agreed was valuable and work together to resolve the problem.

Conclusion

VR can be a powerful tool for clients in aftercare. Whether organizations use a formal program like Skinner’s Self Empowerment or develop their own means of working together isn’t as important as the efforts each organization makes to create the partnership. Understanding the system is the first step ensuring your consumers have access to it. Understanding the limitations of the VR program is also critical. Communicating that information in partnership with VR staff is the most effective way to make certain that the tool is not only available to the consumer, but is also used to its maximum effectiveness. It is in that collaboration that you will have truly made a connection that works.

Sheila R. Hitchen, M.A.
State of Oregon DHS/OVRS
4744 N. Interstate Avenue
Portland, Oregon 97217

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