

ALCOHOLISM AND CO-MORBID PSYCHIATRIC DISORDERS AMONG AMERICAN INDIANS

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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 hallucinosis. 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, & Loock, 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 typography 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).

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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.

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Footnote

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

Authors' Note

These studies have been supported over time by the National Institute of Alcohol Abuse and Alcoholism, the state of Minnesota, the Minnesota Medical Foundation, the Department of Psychiatry at the University of Minnesota, the Indian Health Service, the Upper Midwest Indian Association, and the Laureate Foundation in Tulsa.