

## DRINKING AND DRINKING-RELATED PROBLEMS AMONG ALASKA NATIVES

BERNARD SEGAL, PH.D.

In 1996, the most recent year for which data are available, alcohol consumption in Alaska was 2.63 gallons per person<sup>1</sup>; only eight States had higher rates, many of which are attributable to cross-border alcohol sales (Williams et al. 1998). Alaska's consumption rate has been among the highest in the Nation in each year for which statistics exist. Although heavy alcohol use in Alaska is not restricted to Alaska Natives, alcohol abuse and its consequences are disproportionately high among this group, which constitutes approximately 15.7 percent of Alaska's total population (Alaska Department of Labor 1996).

One theory to explain the high rates of alcohol use among this special population faults the rapid industrialization that has taken place in Alaska. For many Alaska Natives, conflicts involving cultural identity as well as behavioral and lifestyle problems have resulted from adjusting to the rapid cultural changes. One way of coping with those feelings, particularly for younger Alaska Native men and women, may be to drink alcohol (Segal 1999).

This sidebar reviews what is known about alcohol use and alcohol-related problems among Alaska Natives. Directions for future research on preventing and treating alcohol abuse among this population also are discussed.

### *Alcohol-Related Violence and Death Among Alaska Natives*

Since the late 1980s, Alaska has been among the five States with the highest annual rates of child abuse, accidental death, assaults, rape, and suicide, all of which have been linked to alcohol abuse (Brems 1996). For example, 25 percent of all deaths in Alaska are alcohol-related (Alaska Department of Health and Social Services [ADHSS] 1994). More recently, of the 192 Native deaths (from any cause) that occurred in rural Alaska between 1990 and 1993, 128 (66.6 percent) were found to be alcohol-related (i.e., the deceased had a blood alcohol concentration [BAC] of 0.08 or higher) (Demer 1997). In addition, Alaska Native men and women exceed other ethnic groups in Alaska with respect to alcohol-related problem behaviors, such as arrests for driving while intoxicated (DWI), alcohol-related accidents and injuries from automobile

crashes, fishing-related accidents, and other causes of injury (ADHSS 1994).

Although all Alaskans have a higher risk of dying by accident or suicide compared with those in the lower 48 States, the rates are notably high for Alaska Natives. Suicides in Alaska have exceeded national rates for more than 20 years (Berman and Leask 1994). Hlady and Middaugh (1988) reported that the percentage of suicides that were alcohol-related in Alaska was almost twice the national average during the period 1983–1984 and that the percentage was significantly higher among Alaska Natives than among non-Natives (Hlady and Middaugh 1988).

### *Alcohol-Related Health Problems Among Alaska Natives*

Alaska Natives have unusually high rates of drinking, which results in many health problems. Hisnanick (1992) reported that between 1980 and 1987, Alaska ranked fifth among 11 Indian Health Service sites for alcohol-related illnesses and symptoms, such as liver cirrhosis, delirium tremens (DTs), and pancreatitis.

Another alcohol-related health problem is fetal alcohol syndrome (FAS), which appears to occur with higher frequency among Alaska Natives than among other populations. Weeks (1989) reported an FAS rate among Alaska Natives of 5.2 cases per 1,000 births, with regional variations of from 2.7 to 20.6 cases per 1,000 births. In comparison, the FAS rate for the United States ranges from 1 to 3 cases per 1,000 births (May 1996). Although the reliability of some of Alaska's FAS data has recently been questioned (Segal 1999), the problem remains serious: In 1994, 39 percent of pregnant Alaska Native women were estimated to be at risk for delivering a baby prenatally exposed to alcohol or other drugs (Alaska Area Native Health Service 1995).

### *Correlates of Drinking Among Alaska Natives*

The high rates of violence and health problems attest to the seriousness of drinking and its effects among Alaska Natives (Brems 1996; Segal 1983a, 1983b, 1990, 1991a, 1991b, 1999; Segal and Hesselbrock 1997). Relatively little information, however, has been reported about the factors that might underlie those problems. The next sections describe specific areas in which research is needed to better understand alcohol use and abuse among Alaska

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Natives; those areas include genetics, quantity of consumption, behavioral and other correlates, and the possible role that a loss of Native culture may play in problem drinking.

**Genetics.** Until recently, it was believed that Alaska Natives were relatively recent descendants of East Asian ancestors. If that theory were accurate, one would expect Alaska Natives to possess a particular variant of a specific gene that has been linked to the alcohol-induced flushing reaction<sup>2</sup> observed in some Asians after drinking (Shibuya and Yoshida 1989; Singh et al. 1989). This unpleasant reaction is believed to help mitigate against heavy drinking and alcoholism (Thomasson et al. 1991). A series of studies (Avksentyuk et al. 1994, 1995; Segal et al. 1998; Thomasson et al. 1992), however, found that Alaska Natives do not resemble Asians with respect to this genetic trait. These findings and other research (Segal et al. 1998; Chen et al. 1997) suggest that the genetic characteristics that may “protect” some people against alcoholism are not present in Alaska Natives. It is unknown, however, if Alaska Natives have a genetic factor that may place them at particular risk for developing alcoholism. Given the disproportionately high numbers of alcohol problems in this population it is important that this group be included in studies searching for a genetic link to alcoholism.

**Quantity of Alcohol Consumed.** Alaska Natives who drink heavily may consume greater quantities of alcohol per drinking session than their non-Native counterparts. Segal (1991a) studied repeat users of an Anchorage “sleep-off center” (i.e., a shelter where homeless inebriates could sleep off their intoxication) and found that the average BAC of the Alaska Natives who entered the facility during the study period was significantly higher than that of the Caucasians entering the shelter (0.186 versus 0.137).<sup>3</sup> No differences in BACs were found between genders for either ethnic group. Additional

research is necessary to verify that the pattern of alcohol consumption among Alaska Natives is different from that found in other populations.

**Behavioral and Other Factors.** Survey data, which compare common manifestations of alcohol abuse among Alaska Natives and other ethnic groups, have been compiled. The table on page 278 compares Segal and Hesselbrock's (1997) study group of Alaska Natives with other ethnic groups on selected behavioral and psychiatric characteristics; it shows that in many categories, Alaska Natives present a more severe set of physical and social complications. No research has focused on whether certain drinking behaviors are specific to Alaska Natives. Moreover, the methodology of the alcohol studies that have been completed in Alaska prohibits direct comparisons among ethnic groups (Hesselbrock et al. 1997).

**Family Violence.** Native women in Alaska face a much higher risk of violence than do women nationwide (Berman and Leask 1994). The severity and nature of the violence is consistent with other research showing a relationship between being victimized and drinking (e.g., Miller et al. 1993). Studies are needed to determine the effect that such family violence has on children (e.g., does it place children at risk for abuse and neglect as well as increase the chance that they too will abuse alcohol later in life?).

**Cultural Factors.** The cultures of indigenous Alaskans have been radically modified by the influx of Russians, Anglo-Europeans, and other people, who have imposed new customs, traditions, and economic systems. Over the past 25 to 30 years, the development of the oil industry has spurred Alaska Natives' transition from a subsistence to a cash economy. The resulting alterations in family roles, community functions, and other aspects of culture may play a role in Alaska Natives' use of alcohol. Research will help to determine the relationship between changing cultural mores and increased alcohol use.

### *Treatment Issues*

Clearly, the problems associated with abusive drinking and other drug use among Alaska Natives are severe. Sociocultural factors likely play an important role in drinking behavior. Alaska Natives may benefit from

<sup>1</sup>Per person alcohol consumption equals the total quantity of alcohol sold divided by the total population age 14 and over in the State.

<sup>2</sup>The alcohol-induced flushing reaction consists of increased blood flow to the face, neck, and chest and is sometimes accompanied by increased heart rate, decreased blood pressure, and nausea.

<sup>3</sup>The difference was statistically significant ( $F = 35.225, df = 1, p < 0.001$ ).

Comparison of Alaska Natives With Other Ethnic Groups on Selected Characteristics

|  | Ethnic Group (%)                             |      |  |      |   |      |                                       |      |
|--|--|------|--|------|---|------|---------------------------------------|------|
|  | Alaska Native<br>Male (n=141) Female (n=120) |      | Caucasian<br>Male (n=1,087) Female (n=443) |      | African-American<br>Male (n=285) Female (n=119) |      | Hispanic<br>Male (n=74) Female (n=25) |      |
| <b>Alcohol-Related Violence</b>                            |  |      |  |      |   |      |                                       |      |
| Arguments  | 94.3   | 95.8 | 84.7                                       | 80.7 | 84.6  | 80.7 | 86.5                                  | 96.0 |
| Threw/hit things   | 88.7   | 80.8 | 69.1                                       | 65.5 | 59.3  | 52.1 | 64.9                                  | 76.0 |
| Hit family   | 58.9   | 65.0 | 33.8                                       | 37.0 | 37.2  | 37.0 | 35.1                                  | 48.0 |
| Hit others   | 46.1   | 49.2 | 25.8                                       | 28.2 | 34.4  | 28.6 | 29.7                                  | 46.1 |
| Physical fights  | 88.7   | 75.0 | 66.6                                       | 46.3 | 68.4  | 42.9 | 71.7                                  | 72.0 |
| <b>Serious Alcohol Symptoms</b>                            |  |      |  |      |   |      |                                       |      |
| Morning drinking*  | 64.0   | 63.0 | 51.5                                       | 41.8 | 57.5  | 56.3 | 50.0                                  | 32.0 |
| Delirium tremens   | 36.9   | 26.7 | 21.6                                       | 24.4 | 18.9  | 20.2 | 23.0                                  | 28.0 |
| Seizures   | 7.8  | 6.7  | 6.7  | 4.1  | 4.9   | 9.2  | 12.2                                  | 4.0  |
| Stomach problems   | 29.8   | 18.3 | 13.7                                       | 11.3 | 16.5  | 12.6 | 8.1                                   | 20.0 |
| Liver disease  | 4.3  | 5.8  | 12.9                                       | 6.8  | 9.8   | 10.1 | 13.5                                  | 12.0 |
| Pancreatitis   | 2.1  | 2.5  | 3.6  | 2.3  | 7.0   | 9.2  | 4.1                                   | 4.0  |
| <b>Alcohol-Related Behavior Problems</b>                   |  |      |  |      |   |      |                                       |      |
| Driving while<br>intoxicated (DWI)                         | 68.8   | 45.8 | 62.6                                       | 28.9 | 34.4  | 7.6  | 56.8                                  | 16.0 |
| Arrests  | 73.8   | 69.2 | 46.6                                       | 23.9 | 44.6  | 29.4 | 45.9                                  | 28.0 |
| Accident/injury  | 68.8   | 72.5 | 62.7                                       | 58.9 | 50.2  | 47.1 | 50.0                                  | 60.0 |
| Reckless behavior  | 95.7   | 89.2 | 97.3                                       | 90.7 | 87.7  | 58.0 | 95.9                                  | 88.0 |
| <b>Drug Abuse/Antisocial Personality Disorder (ASPD)**</b> |  |      |  |      |   |      |                                       |      |
| Marijuana  | 62.5   |      | 42.8                                       |      | 39.6  |      | 45.5                                  |      |
| Cocaine  | 44.1   |      | 37.6                                       |      | 63.5  |      | 44.9                                  |      |
| Stimulants   | 14.6   |      | 23.4                                       |      | 10.7  |      | 29.3                                  |      |
| ASPD   | 33.3   |      | 20.1                                       |      | 20.3  |      | 34.3                                  |      |

\*The number of Alaska Native cases for this variable only is 50 males and 46 females.

\*\*Percentages are for men and women combined. The number of cases is the same as shown at the top of the table.

NOTE: The comparison groups were derived from consecutive admissions to alcohol residential treatment facilities who met both DSM-IV criteria for alcohol dependence and Feighner criteria for definite alcoholism. The Feighner criteria (Feighner et al. 1972) were the first set of diagnostic criteria for alcoholism to be based on research rather than on subjective judgment and clinical experience. They were developed in the 1970s in response to perceived deficiencies in the first and second editions of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*.

SOURCES: Hesselbrock et al. 1998; Segal 1998.

treatment that incorporates Native values and attitudes, although research is needed to determine whether culture-specific treatment programs are more effective than other programs. Preliminary research on a culturally oriented treatment program for Alaska Native women is encouraging (Segal 1998).

### *Future Research Directions*

Treatment and prevention of alcohol problems among Alaska Natives would be enhanced by research efforts in the following areas:

- The increases in alcohol abuse and other alcohol-related problems in Alaska correspond to a period of rapid growth and industrialization and a concomitant loss of Native cultural traditions. Research is needed to determine whether a cause-and-effect relationship exists between cultural loss and Alaska Natives' alcoholism rates.
- Further research is needed to demonstrate how genetic factors may predispose Alaska Natives to alcohol problems.
- Research is needed to address the risk factors, behavioral correlates, and signs and symptoms of alcohol dependence that are specific to Alaska Natives.
- Studies are needed to refine our understanding of the severe behavioral manifestations of alcohol abuse among Alaska Natives and the connection of drinking with high rates of violence among this population. For example, intergenerational transmission of violent behavior is a serious problem in Alaska Native families. Future research should explore how to treat and prevent alcohol abuse among victims of physical and sexual abuse as well as investigate ways of breaking the cycle of violence.
- Studies must be undertaken to determine if incorporating cultural factors into treatment makes those approaches more effective. For instance, how does the increased training and employment of Alaska Native alcoholism counselors, as well as additional cultural training for non-Native counselors, affect treatment results with Alaska Native clients?
- Prevention-based approaches are important and can be enhanced by research to improve understanding of how cultural factors influence the initiation of drinking and drug taking or reinforce drinking behavior once it begins.

### *Summary*

Alcohol use has adversely affected many aspects of the Alaska Native community. To a large extent, overcoming the problem of alcohol abuse may require that Alaska Natives craft individual and community solutions to detrimental health, social, and economic conditions and instill new patterns of living that inhibit alcohol abuse. An example of this approach is the Alaska Federation of Natives' "sobriety movement," a grassroots campaign to promote sobriety that emphasizes traditional values and lifestyles. The use of "healing" or other traditional methods may help Alaska Natives both recover from the trauma of decades of cultural conflict and address alcohol problems in their communities. ■

### *Acknowledgments*

Part of the findings reported herein were supported by grant no. AA10288 from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and from the NIH Office of Minority Health and by NIAAA grant AA07611 to the Indiana University School of Medicine. Additionally, the collaboration with Victor M. Hesselbrock, Department of Psychiatry, University of Connecticut School of Medicine, helped make this review possible.

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# Special Populations in Alcoholics Anonymous

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***The vast majority of Alcoholics Anonymous (AA) members in the United States are white, and only a few studies have investigated the program's effectiveness for ethnic minorities. Project MATCH, a multisite research study aimed at developing guidelines for assigning alcoholics to appropriate treatment approaches, also assessed AA effectiveness for minority clients. Some differences in AA attendance existed among white, African-American, and Hispanic Project MATCH participants who had received some inpatient treatment before entering the study, but not among participants who had not received inpatient treatment. Further analyses of white and Hispanic Project MATCH participants demonstrated that although Hispanic clients attended AA less frequently than white clients, their involvement with and commitment to AA was higher than among white clients. For both Hispanics and whites, AA involvement predicted increased abstinence.*** KEY WORDS: Alcoholics Anonymous; special populations; minority group; ethnic group; sociocultural norms; AODD (alcohol and other drug dependence) recovery; Hispanic; African American; white American; epidemiology; psychosocial treatment method; outpatient care; after-care; treatment outcome; AOD abstinence; comparative study; New Mexico; literature review

**A**lcoholics Anonymous (AA) describes itself as a mutual-help program that is based on the attraction of its members to the program's philosophy rather than on program promotion (Alcoholics Anonymous 1976). How attractive, however, is AA to ethnic minorities with alcohol-related problems? In other words, can a mutual-help program with strong Protestant roots that was started by white, middle-class Americans equally appeal to clients with diverse ethnic and cultural backgrounds? The spread of AA-based 12-step ideology and practices to 44 countries and the publication of the AA core literature in at least 8 languages would argue in the affirmative. Several factors may explain the growth and acceptance

of AA across cultures (Makela 1993). For example, the 12-step philosophy is intentionally broad and open to divergent interpretations. This ideological flexibility permits its wide application across diverse cultures holding different beliefs and values. Furthermore, AA explicitly renounces political affiliations and shuns associations with other social movements. This "isolationism" has facilitated the introduction of AA into geopolitical areas that have traditionally discouraged the formation of grassroots social movements.

A slightly different question is whether minorities consider AA an attractive resource when the program is practiced within a larger dominant culture, such as that of the United

States. In this situation, minority groups are asked to both adopt and modify the majority's interpretations, values, and beliefs about what is most germane in 12-step ideology and practice. These conditions raise a series of related

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questions, such as the following: How do minority groups in the United States use AA? How, if at all, do practices among AA members vary because of ethnic and cultural differences? Finally, do ethnic and cultural factors influence the benefits associated with AA attendance and involvement? This article addresses those questions based on findings obtained from epidemiological studies, the Project MATCH treatment study, and analyses of two samples of Hispanic clients with alcohol problems recruited in Albuquerque, New Mexico.

## FINDINGS FROM EPIDEMIOLOGICAL RESEARCH

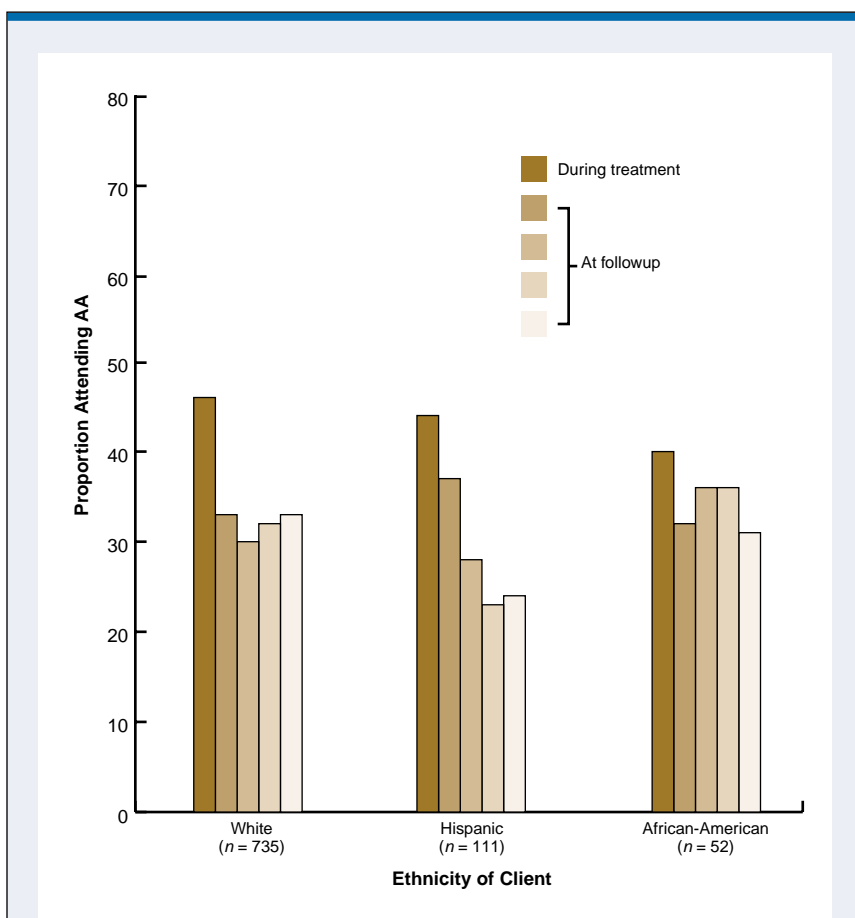
Epidemiological analyses in the general population of the United States indicate that AA is well known among Hispanics and African-Americans. Moreover, a vast majority of the people in those ethnic groups generally would recommend AA affiliation for alcohol-related problems (Caetano 1993). Prevalence estimates vary considerably, however, on the extent to which African-American and Hispanic clients actually select AA as a resource. For example, Caetano (1993) suggested that the proportion of people among the general population who were likely to attend AA was greater among Hispanics (12 percent) than among African-Americans (5 percent) or whites (5 percent). In contrast, Humphreys and Moos (1996), in a sample of clients with primary alcohol dependence, found no ethnic preferences as to whether the clients selected formal outpatient treatment or AA. Finally, the 1996 AA membership survey (Alcoholics Anonymous 1997) indicated that about 4 percent of its members were Hispanic and 5 percent were African-American.

## FINDINGS FROM PROJECT MATCH

Project MATCH is a multisite research study aimed at developing practical guidelines for assigning patients with alcohol problems to appropriate treatment based on patients' characteristics

(Project MATCH Research Group 1993, 1997). Study participants were recruited at 10 locations throughout the country and were randomly assigned to one of three psychosocial therapies: (1) cognitive behavioral therapy, (2) motivational enhancement therapy, or (3) 12-step facilitation therapy. Cognitive behavioral therapy consisted of skills training to achieve the treatment goals—that is, teaching clients the skills necessary to cope with situations (e.g., stress or social occasions at which alcohol is served) that might induce drinking.

Additional emphasis was placed on skills thought necessary to avoid a full relapse should drinking occur. Motivational enhancement therapy, in contrast, supportively encouraged the clients to take responsibility for changes in their behavior. This approach focused on enhancing the client's self-efficacy and mobilization of resources to promote and sustain change. Finally, 12-step facilitation therapy guided the clients through the first five steps of the AA program and actively promoted affiliation with AA. All three therapy approaches



**Figure 1** Proportion of clients of different ethnicities in the Project MATCH outpatient sample who reported Alcoholics Anonymous (AA) attendance during and after treatment. The clients received 12 weeks of psychosocial therapy (i.e., cognitive-behavioral therapy, motivational-enhancement therapy, or 12-step-facilitation therapy) without previous residential treatment. The clients' AA attendance was assessed during the 12-week treatment period as well as during four consecutive 3-month followups (shown as increasingly lighter shades of gold over time). No significant differences in the rates of AA attendance existed among ethnic groups.

were manual guided, and each participating therapist administered only one type of therapy.

All clients were offered 12 weeks of the assigned therapy on an outpatient basis. During that time, AA attendance was neither promoted nor discouraged in the cognitive-behavioral and motivational-enhancement therapy approaches. After the treatment period, the clients were followed at 3-month intervals for 12 months. At each followup, their AA attendance and AA involvement<sup>1</sup> were determined. An initial analysis has suggested that more than 70 percent of the entire Project MATCH sample elected at least minimal AA attendance and that more than 30 percent of the sample attended AA throughout the 12 months of followup (Tonigan et al. in press).

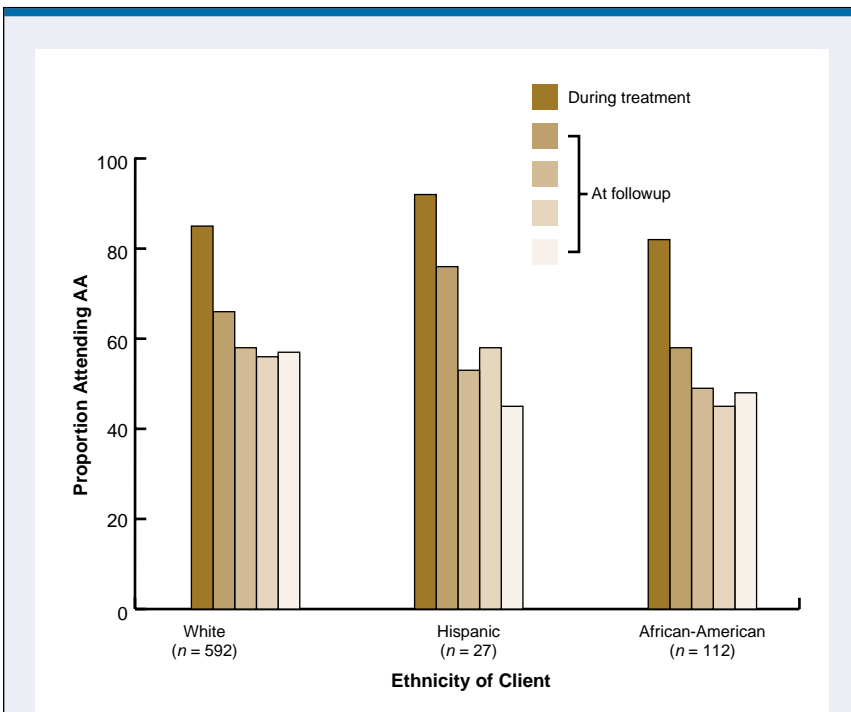
The study included two groups of participants: (1) the aftercare sample, who had already completed at least 7 days of residential treatment before being recruited to the study, and (2) the outpatient sample, who had received no residential treatment (for a more detailed description of the samples, see Project MATCH Research Group 1997). Most clients in both samples fulfilled the diagnosis of alcohol dependence and reported no other current drug dependence (aside from marijuana use).

Because Project MATCH also included minority clients, the study's findings can be used to examine minority participation in AA after formal treatment. In fact, Project MATCH offers a unique perspective on AA participation among different ethnic groups for two reasons. First, the

study included both clients who did and clients who did not receive residential treatment (i.e., the aftercare and outpatient samples). Second, the measures with which AA attendance and involvement were determined had strong reliability and were corroborated by independent sources (Tonigan et al. 1996, 1997, in press).

The proportions of clients of various ethnicities who attended any AA meetings during treatment and during the four consecutive 3-month followup periods differed between the outpatient and aftercare samples. In the outpatient sample, the client's ethnicity (i.e., white, Hispanic, or African-American) did not predict AA attendance at any followup point after controlling for the psychosocial treatment the clients had received (figure 1): Relatively equivalent proportions of each ethnic group attended AA. These findings are similar to those reported in single-group studies in which clients were not randomly assigned to different treatments (e.g., Humphreys et al. 1994; Humphreys and Moos 1996). Furthermore, no differences in AA attendance existed among ethnic groups in the outpatient sample after a long-term followup (i.e., after 3 years).

In the Project MATCH aftercare sample, the proportion of clients who attended any AA meetings generally was higher than in the outpatient sample (figure 2). In addition, some ethnic differences existed in AA attendance during the 12-month followup period. Proportionally fewer African-American than Hispanic or white clients reported AA exposure during the first 6 months after treatment. In addition, the difference between African-Americans and whites became statistically significant during the last 3 months of the 12-month followup period. Other studies, however, have reported that African-Americans were as likely to attend AA after residential treatment as were whites and that AA attendance



**Figure 2** Proportion of clients of different ethnicities in the Project MATCH aftercare sample who reported Alcoholics Anonymous (AA) attendance during and after treatment. The clients had completed at least 7 days of residential treatment before receiving 12 weeks of psychosocial therapy (i.e., cognitive-behavioral therapy, motivational-enhancement therapy, or 12-step-facilitation therapy). The clients' AA attendance was assessed during the 12-week treatment period as well as during four consecutive 3-month followups (shown as increasingly lighter shades of gold over time). Some differences in the rates of AA attendance existed among ethnic groups.

<sup>1</sup>AA involvement refers to the client's commitment to AA-related principles and practices and therefore differs from mere AA attendance. One study has suggested that AA involvement is a better predictor of outcome than AA attendance (Montgomery et al. 1995).



was beneficial<sup>2</sup> to African-Americans (Humphreys et al. 1994). No difference in AA exposure existed between Hispanics and whites in the aftercare sample during the first 9 months after treatment. During the last 3 months of the followup period, however, significantly fewer Hispanics than whites reported any AA exposure, and no significant differences in AA exposure existed between Hispanic and African-American clients.

### STUDIES COMPARING HISPANIC AND WHITE CLIENTS

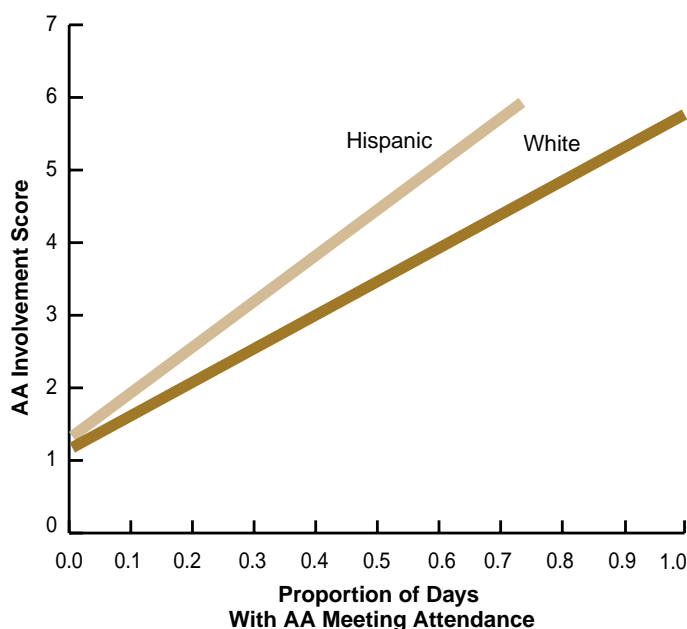
The frequency of AA attendance and the associated benefits for Hispanic and white clients who had received formal treatment were investigated in more detail in a long-term (i.e., longitudinal) study of Hispanic and non-Hispanic clients in Albuquerque, New Mexico, and in the Hispanic and white clients recruited in Albuquerque for the Project MATCH study. The first of these two studies examined factors associated with relapse (Miller et al. 1996). In this study, Hispanic clients attended AA significantly less frequently than did non-Hispanic clients during the 6 months after study recruitment. Conversely, the Hispanic clients reported attending a significantly higher number of formal outpatient treatment sessions than did the non-Hispanic clients (Arroyo et al. 1998). Regardless of ethnic group membership, however, AA attendance was associated with significantly less intense drinking when drinking did occur and with significantly lower total alcohol consumption.

Similar attendance patterns also were seen in the Project MATCH study, in which the Albuquerque clinical site recruited the majority of the Hispanic clients (i.e., 100 out of 111) in the outpatient sample. Again, Hispanic clients had significantly lower rates of AA attendance than did white clients during the early followup periods. This difference decreased, however, at the 12-month and 3-year followups. It is noteworthy that in contrast to other

cities, AA meetings held in Spanish are readily available in Albuquerque. Thus, it is unlikely that lower rates of AA attendance among Hispanic clients in the two studies were a result of language barriers. In fact, the AA attendance estimates obtained in these studies may be even higher than what may be expected in less culturally sensitive regions.

Because AA involvement and commitment to AA-related principles and practices better predict a successful outcome than does mere AA attendance (Montgomery et al. 1995), one can also ask whether Hispanic clients who elect to attend AA become as engaged in AA-related activities as do their white counterparts. To address this question, Tonigan

and colleagues (1996) investigated the relationship between AA attendance and AA involvement at 6 months after treatment for both Hispanics and non-Hispanics recruited for the Project MATCH study. Some of the measures of AA involvement in this study included the extent to which AA participants practiced each of the 12 steps, had or were a sponsor, and celebrated AA birthdays. The study found that compared with whites, Hispanic clients reported higher levels of commitment to AA-related practices despite lower AA attendance (figure 3). These findings suggest that for those Hispanics who elect to attend AA, the program's practices



**Figure 3** Relationship between Alcoholics Anonymous (AA) attendance and AA involvement in Hispanic and white clients recruited for the Project MATCH study in Albuquerque, New Mexico. AA attendance and involvement were determined 6 months after the clients had completed a 12-week course of psychosocial therapy (i.e., cognitive-behavioral therapy, motivational-enhancement therapy, or 12-step-facilitation therapy). AA attendance was expressed as the proportion of days on which the clients attended an AA meeting. The AA involvement score included such measures as to what extent the clients practiced each of the 12 steps, had or were a sponsor, or celebrated AA birthdays. Hispanic clients reported a higher level of AA involvement despite lower AA attendance.

SOURCE: Tonigan et al. 1996.

<sup>2</sup>Beneficial outcomes included increased employment, decreased alcohol and other drug use, and improved legal status.

may be readily acceptable and easily adopted.

Current evidence suggests that AA attendance after treatment is modestly related to abstinence (Emrick et al. 1993). The influences of ethnicity and the type of formal treatment received on outcome (e.g., abstinence), however, have not been evaluated systematically. The two studies among Hispanics described earlier in this section statistically controlled for the type of treatment the clients had received. These analyses detected no differential benefit associated with AA attendance based on client ethnicity. For both Hispanics and whites, greater frequency of AA attendance was associated with an increase in the percentage of abstinent days during followup. As in previous studies, AA involvement predicted a positive outcome more strongly than did AA attendance for the Albuquerque Project MATCH outpatient sample, but this relationship did not depend on the clients' ethnicity. It is not known, however, whether ethnicity mediates potential benefits of AA in other domains, such as increased purpose in life, reduced depression, and improved legal or employment status. This question certainly warrants additional research.

## PRELIMINARY CONCLUSIONS

The findings described in this article allow several tentative conclusions. First, the modest positive association between AA attendance and abstinence that has been reported previously (Emrick et al. 1993) appears to apply to all AA members regardless of their ethnic backgrounds. The studies conducted to date provide no evidence that the drinking status of people who elect to attend AA is affected by their ethnicity. These conclusions, however, are based on studies involving preselected participants who had sought formal treatment. Consequently, it remains unknown whether the benefits associated with AA attendance apply equally to people with various ethnic backgrounds who do not seek formal treatment.

Second, analyses of the attractiveness of AA to minority groups have yielded

complex findings that defy simple interpretations. On the one hand, survey research has indicated that in contrast to whites, fewer Hispanics and African-Americans attend AA than attend formal treatment. On the other hand, two clinical trials evaluating outpatient treatment reported inconsistent findings about the likelihood of Hispanic clients attending AA at the same rate as did white clients. It is important to note, however, that the study by Arroyo and colleagues (1998), which reported less AA utilization by Hispanic clients, only had a relatively short followup period of 6 months. It is unclear whether the ethnic differences reported in that study would have persisted over longer followup periods. The second study—the Project MATCH aftercare sample—found the reverse situation: In that study, proportionally fewer Hispanic and African-American clients attended AA during late followup periods, but no differences from whites existed during early followup. These apparently contradictory findings indicate that global questions regarding ethnic rates of AA utilization should be discarded in favor of more specifically focused questions that consider contextual factors, such as the time since the cessation of treatment.

Finally, in the studies described in this article, Hispanic clients reported greater gains in AA involvement while attending fewer AA meetings compared with white clients. The assessment of minority utilization of AA therefore should go beyond simple measurements of the frequency of AA attendance, because such measurements might underestimate the influence of AA on the recovery efforts of minority clients. ■

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