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ORIGINAL ARTICLE

Comparison of substance abuse treatment utilization and preferences among Native Hawaiians, Asian Americans and Euro Americans

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Abstract
Use and preferences for substance abuse treatment can vary by ethnicity. However, little is known about use and preferences among Native Hawaiians and Asian Americans. Interviews from 192 admitted multi-ethnic residents from two treatment facilities in Hawaii were conducted. More similarities than differences were found. The most utilized treatments were Alcoholics Anonymous and the emergency department, with no significant ethnic differences. However, Native Hawaiians and Asian Americans were significantly less likely to have spoken to a mental health provider about alcohol problems (32%, 39%, respectively vs. 69% of Euro Americans) and to have seen a physician for a drinking-related problem (21% of Native Hawaiians and 19% of Asian Americans vs. 41% of Euro Americans). Native Hawaiians were significantly more likely to consider marriage counselling to be an effective form of treatment (33% vs. 11% of Asian Americans and 9% of Euro Americans). Implications for substance abuse treatment are discussed. The findings suggest that it is important to integrate the field of substance abuse in multiple systems; including substance abuse, medical, criminal, social service and community settings to ensure treatment preferences are met. Ethnic differences may also have implications for expanding and tailoring services.

Keywords: *Substance-abuse treatment, complementary therapies*

Introduction

Addiction is a significant public health problem. There is relatively more information on substance abuse and dependence among minority samples from the general population than there is on clinical samples of the same groups [see, for instance, Anthony & Helzer (1991); Muthen et al. (1992); Caetano (1993); Grant (1994); Niv et al. (2007)]. Epidemiological data demonstrate variable patterns and trajectories found by racial and ethnic groups.

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Furthermore, the majority of treatment programs indicate that minorities constitute the majority of clients in these programs (Alexander et al., 2008). Evidence indicates that ethnic minorities often enter treatment with limited social and economic resources and numerous co-occurring problems when compared with Euro Americans, potentially resulting in reduced access to and quality of care (Arciniega et al., 1996; Caetano & Schafer, 1996; Arroyo et al., 1998; Wells et al., 2001). Most of these studies have all been conducted in the U.S. mainland and compared Caucasians, Blacks and/or Hispanics. Also, in many of these studies the samples of Hispanics are highly acculturated to U.S. society, which further limits generalization of findings to other ethnic groups.

Preferences for treatment for alcohol and drug abuse have also been found to vary by ethnicity and gender. For example, Native Americans most commonly utilize a combination of formal and traditional healing practices with the utilization of treatment predicted by gender, age and insurance coverage (Herman-Stahl et al., 2003). African American and Latina women were less likely than Euro American women to utilize mental health treatment including treatment for a substance use disorder (Alvidrez, 1999). Overall, Hispanic Americans prefer to seek help for alcoholism outside a formal clinical setting (Arroyo et al., 1998). Cognitive, affective, value orientation and physical barriers have been identified as factors contributing to the underutilization of mental health services by Asian Americans (Leong & Lau, 2001). Asian Americans tend to consider alcoholism to be a private matter and therefore may be less likely to seek treatment. Niv and colleagues (2007) found that Asian American and Pacific islanders received fewer total services within their treatment program. Although Asian Americans and Pacific Islanders entered treatment with less severe addiction, they exhibited significantly more negative attitudes towards treatment compared with non-Asian American and Pacific Islanders. Generally, treatment outcomes were similar between the two groups.

There are numerous methods for the treatment of addiction beyond conventional medicine. A growing body of evidence suggests that alternative therapies play a significant role in substance abuse prevention and rehabilitation (Winkelman, 2001; Dillworth et al., 2009). Alternative therapies include, among others, traditional and spiritual healing, acupuncture, herbal medicines, hypnosis, relaxation, prayer, family support and changing one's environment (Meyerstein, 2000). Studies on alternative treatments generally examine the outcomes of utilizing these methods alone or in conjunction with conventional, allopathic treatment on mostly Euro American participants (Wesa & Culliton, 2004). Moreover, these studies have largely centred on the alternative method under investigation rather than the participants' preferred methods, treatments they have used in the past and the relationship among preferences and ethnicity, culture or beliefs.

Asian Americans and Pacific Islanders are not only one of the fastest growing groups in the United States, but they also demonstrate an increasing problem with substance abuse (Mercado, 2000). According to the Substance Abuse and Mental Health Services Administration (Substance Abuse and Mental Health Services Administration [SAMHSA], 2009a), the rate of substance abuse treatment admissions among Asian American and Pacific Islanders increased dramatically. Despite concerns nationally with health disparities (Smedley et al., 2003; Thomson et al., 2006), the differential access and impact of services on racial/ethnic groups have received limited attention, especially among Asian American and Pacific Islanders (Galvan & Caetano, 2003). Matching treatment preferences of individuals may be an important factor for engaging and retaining clients in treatment entrance and improving outcomes (Marlatt & Witkiewitz, 2002).

In Hawaii, where the culture is diverse, little is known on the determinants of seeking alcohol treatment among Native Hawaiians and Asian Americans, and to what degree alternative treatments are utilized. This study examined the use of alcohol treatment and treatment preferences among Native Hawaiian, Asian American and Euro American clients in residential treatment in Hawaii and provides important information needed for planning and tailoring treatment of these ethnic groups.

Methods

Participants were recruited from two major residential treatment programs in Hawaii. During orientation, clients were asked, by facility staff, whether they were interested in participating in a research project. Those wanting to take part met with research personnel. Participants provided informed consent, and the procedures followed were in accordance with the standards of the University's Committee on Human Studies (IRB). There was an 89% participation rate.

Participants were selected from among those clients consecutively admitted to treatment during the study period. Participants were interviewed as soon as possible after their admission. This was done to minimize program influence on their perception of treatment and preferences. The interview was divided into two sections – (1) treatment utilization and preferences and (2) diagnostic. Each interview lasted approximately one and one half hours in length, and was conducted in the facility where clients were being treated.

The questionnaire was adapted from one developed by Caetano and colleagues (Caetano et al., 1999). The cultural questions were modified for Native Hawaiians, Filipino Americans and Japanese Americans. It contained sociodemographic data (sex, age, education, income, religious preference, place of birth). Primary self-identified ethnicity was strongly correlated with responses to same-group cultural scales and therefore used for these analyses. There were insufficient numbers to analyze Japanese American and Filipino American participants separately, so they were grouped as Asian American. Participants indicated treatments they had used as well as their treatment preferences.

The main objective of the analysis was to examine treatment preferences among Asian Americans, Euro Americans and Native Hawaiians in the sample. Analysis involved cross tabulations between treatment use and treatment preference by ethnicity, with associations being tested by chi-square.

Results

A total of 70 participants (41%) were Euro American, 76 participants (44%) were Native Hawaiian and 26 (15%) participants were Asian American. Native Hawaiians were significantly more likely to seek treatment for problems with both alcohol and drugs (55%) when compared with Asian Americans (16%) and Euro Americans (29%), whereas Asian Americans were more likely to seek treatment for drugs only (84%) versus 40% of Native Hawaiians and 33% of Euro Americans, and Euro Americans were more likely to seek treatment for alcohol only (38%) versus no Asian Americans and only 5% of Native Hawaiians ($\chi^2 = 49.4$, $df = 4$, $p < 0.001$).

Treatment was most commonly recommended by family members (56%). However, Asian American participants were more likely to have been given an ultimatum from a family member (53% vs. 29% for Euro American and 24% for Native Hawaiian) as well as from the legal system (80% and 71% for Native Hawaiians vs. 44% for Euro American).

Table I. Treatment use by ethnicity.

Treatment use	Euro American ($n = 71$)	Native Hawaiian ($n = 90$)	Asian American ($n = 31$)	Significance test χ^2 ($df = 2$)	p
Substance abuse					
Detox	54%	33%	29%	8.6	0.013
Residential treatment (previous)	52%	49%	42%	0.9	0.639
Outpatient	44%	49%	52%	0.6	0.753
Alcoholics anonymous	97%	94%	94%	0.9	0.630
Alanon, Alateen or AC	23%	8%	7%	9.0	0.011
Legal					
Drug abuse program	38%	59%	55%	7.2	0.028
Drunk driving program	35%	17%	16%	8.7	0.013
Prison/jail	69%	71%	68%	0.2	0.925
Probation officer	43%	52%	45%	2.8	0.593
Medical					
Emergency department	76%	62%	71%	4.2	0.121
Physician	41%	21%	19%	11.3	0.024
Mental health provider	55%	32%	39%	10.2	0.037
Mental health facility	34%	18%	19%	5.9	0.053
Social service					
Social service	47%	65%	52%	5.9	0.053
Social worker	22%	22%	7%	5.0	0.282
Employee assistance program	17%	16%	19%	0.2	0.885
Family violence program	11%	10%	16%	0.9	0.651
Other					
Minister	13%	12%	19%	2.4	0.661
Traditional healer	7%	6%	0%	2.2	0.331

Table I provides the frequencies of treatment use by ethnicity. The most utilized treatments were Alcoholics Anonymous and the emergency department, with no significant ethnic differences. Approximately 70% of clients had been incarcerated for each ethnic group. When compared to Euro American clients, Native Hawaiian and Asian American clients were significantly less likely to have seen a physician or mental health provider about their substance use, utilized detoxification services, enrolled in a drunk driving program and participated in Alanon, Alateen or Adult Children Anonymous. Native Hawaiian and Asian American clients were significantly more likely to have been enrolled in a drug abuse program.

There were no statistically significant differences in treatment preference for counselling sessions led by ethnic-specific counsellors, counselling sessions open only for ethnic-specific clients, or ethnic-specific counsellors important to recovery process. Only 10% of Native Hawaiian participants preferred their individual 1-on-1 counsellor to be Native Hawaiian. However, 25% of participants preferred to talk with a counsellor who was the same gender.

Treatment preferences by ethnicity are given in Table II. Clients generally felt that residential treatment, abstinence and self control training were helpful methods for dealing with alcoholism (70–80%). Approximately 30–40% of clients felt social skills training, stress management and psychotherapy were helpful. When compared to Euro American

Table II. Treatment preferences for alcoholism by ethnicity.

Treatment preference	Euro American ($n = 71$)	Native Hawaiian ($n = 90$)	Asian American ($n = 31$)	Significance test	
				χ^2 ($df = 2$)	p
Skills and education					
Relaxation	31%	52%	58%	9.4	0.009
Self-control training	31%	51%	48%	6.2	0.045
Educational lectures/films	29%	52%	52%	9.6	0.008
Exercise/diet	63%	62%	45%	3.3	0.189
Stress management	40%	49%	52%	1.8	0.404
Social skills training	37%	44%	40%	0.9	0.646
Environmental change					
Change environment	32%	48%	55%	6.2	0.045
New friends	51%	55%	68%	2.4	0.309
Job change	15%	21%	27%	2.1	0.357
Drinking pattern					
Abstinence	77%	82%	61%	5.3	0.071
Drink moderately	10%	18%	23%	3.3	0.197
Allopathic					
Marriage counselling	9%	33%	11%	13.9	0.001
Psychotherapy	37%	40%	52%	1.9	0.397
Family support	71%	83%	68%	4.2	0.126
Prescription medications	27%	18%	23%	1.6	0.451
Alternative/complementary					
Seek minister/priest/rabbi	15%	36%	33%	9.0	0.011
Prayer	46%	58%	58%	2.5	0.285
Traditional Healer	18%	33%	28%	4.3	0.117
Acupuncture	8%	17%	14%	2.4	0.299
Herbal medicine	6%	10%	10%	0.8	0.687
Hypnosis	5%	10%	15%	2.4	0.306

clients, Native Hawaiian and Asian American clients were significantly more likely to prefer a change in environment, relaxation, self-control training and educational lectures and film. They were more than twice as likely to prefer seeking help from a minister, priest or rabbi. Additionally, Native Hawaiian clients were three times more likely to prefer marriage counselling.

Discussion and conclusions

There were significant differences in treatment preferences and use. Asian American and Native Hawaiian clients were significantly less likely to have spoken to a physician or mental health professional about alcohol problems than Euro American clients.Mojtabai (2005) found that individuals with substance use disorders were more likely to seek mental health treatment than substance abuse treatment and, similarly, were more likely to perceive an unmet need for mental health treatment than for substance abuse treatment. Although the finding with regard to service use might be explainable by the wider availability of mental health services compared with substance abuse services or better insurance coverage for mental health care in the community, the striking differences with regard to perceived unmet

need cannot be fully explained by service availability alone. One possible explanation for this puzzling finding is that the perceived need for mental health treatment for psychological distress and impairment associated with substance use disorders overshadows the perceived need for specialty substance abuse treatment. Studies based on the National Survey on Drug Use and Health and the National Epidemiologic Survey on Alcohol and Related Conditions surveys indicate significantly higher prevalence of such disorders among individuals with substance use disorders (Kandel et al., 2001; Wu et al., 2003; Compton et al., 2007). A second related possible explanation is that many individuals perceive their substance use disorder as primarily a mental health problem and, therefore, seek mental health treatment rather than specialty substance abuse treatment. Unfortunately, the National Survey on Drug Use and Health surveys did not collect information about the complaints for which the participants sought professional help and the specific treatments that they received. Such data could help to further elucidate the service use pattern in this population.

The vast majority of clients had utilized the hospital emergency department for a drinking-related problem. Intoxication from alcohol and illicit substances is a frequently cited reason for emergency department visits [Drug Abuse Warning Network (DAWN), 2009]. The high utilization of the emergency department by substance abusers points to the support for and the need to implement screening, brief intervention and referral in emergency departments. Screening, brief intervention and referral research has shown that large numbers of individuals at risk of developing serious alcohol or other drug problems may be identified in the emergency department (SAMHSA, 2009b). Screening, brief intervention and referral to treatment can decrease the frequency and severity of drug and alcohol use, reduce the risk of trauma and increase the percentage of patients who enter specialized substance abuse treatment. Additionally, screening and brief interventions have also been associated with fewer hospital days and fewer emergency department visits. Therefore, emergency department physicians, nurses and other staff should be educated concerning the provision of brief intervention as well as the availability of local referral resources. Additionally, information on ethnic variations in the etiology, course and treatment of alcohol abuse and dependence should be shared. Physician and mental health provider training would also be of benefit in the primary care arena as 50% or more of Euro Americans had utilized those practitioners.

It is imperative that alcohol and drug treatment be a priority within the criminal justice system. In this study, a majority of participants received treatment while in prison or jail. Prison or jail is an excellent and cost-effective time to intervene in a root cause of crime. Without intervention, over 80% of inmates who are addicted to alcohol and other drugs will be rearrested and back in jail within 1 year (Northern California Service League, 2005). The strongest predictor of the inmates staying drug and arrest free is completion of an in-prison therapeutic community program plus remaining in aftercare upon prison release (Melnick et al., 2001). Conversely, the strongest predictor of relapse and reincarceration is early treatment dropout. Females typically enter treatment with more problematic psychosocial and drug, physical and sexual abuse histories than do their male counterparts (Messina et al., 2006), yet they often demonstrate equivalent or better treatment outcomes than do males (Hser et al., 2003, 2005; Inciardi et al., 2004). Although minorities are more likely to be incarcerated, whether there is a differential response to treatment among ethnic groups in the prison system remains to be determined. There are current treatment groups in some prison systems, but most often there is a waiting list and inmates often never recieve the needed treatment. It is important that prisons provide an ample amount of trained staff and volunteers to provide education on addiction and recovery, individual and group

counselling, and relapse prevention groups. It should be a priority that drug courts and probation officers continue to support the need for treatment and relapse prevention in both treatment facilities and jails.

Additionally, at least 20% of all ethnic groups indicated having utilized Drunk Driving Programs. Several other studies have demonstrated that ethnicity is linked with driving under the influence of alcohol and drugs (e.g., see Caetano & McGrath, 2005; Caetano et al., 2008). The mechanism whereby ethnicity may impart a vulnerability to driving while intoxicated is not well understood and may relate to acculturation levels (Hunter et al., 2006). Acculturation has been shown to be both a positive and negative factor. For example, Caetano and Clark (2000) speculated that less-acculturated individuals are more susceptible to DUI violations because of their lack of knowledge about DUI laws. However, others have shown that integration into one's ethnic group may result in less substance use (e.g. lower rates among Japanese Americans) and thus less likely to drive under the influence (Clark, 1988; Singh & Siahpush, 2001; Finch & Vega, 2003). Despite, a lack of understanding, the rate of utilization indicates a need for local policy to ensure that treatment referral is available from these programs. It also suggests a need for culturally tailored programs.

The application and integration of culture into health care appears to be inadequate. Several trends in treatment use and preference by ethnicity were identified such as the use of acupuncture and traditional healers. These findings may underestimate preference, given that study participants sought allopathic treatment. Community interest may be substantially higher. Recently, tailoring programs have received attention (Alexander et al., 2008). "Tailoring" refers to the creation of interventions that utilize information about a given individual to determine what specific content s/he will receive, the contexts surrounding that information, by whom it will be presented and the way it will be delivered (Hawkins et al., 2008). Yu et al. (2009) implemented strategies to enhance the continuum of care in the Asian American community by adapting a well-documented generic early intervention model in a culture-specific setting. They found that when culturally competent services combined with case management and motivational interviewing are provided, there tends to be an increase in Asian American clients' chance of accomplishing treatment goals. Further research is needed in culturally tailored approaches.

Not all tailoring may involve cultural practices. Ethnic differences in mainstream approaches were also found. Native Hawaiians, in particular, were more likely to consider family support and marriage counselling to be effective forms of treatment. Marriage and family therapy should be considered an important factor in the treatment of addiction. The addition of family therapy decreased alcohol use in Caribbean men at 1 year after treatment (Maharajh & Bhugra, 1993). Although there is a paucity of research evaluating marriage and family therapy among minorities and women clients, findings from multiple studies conducted during the last three decades have consistently revealed that participation in such therapy by married or cohabiting drug-abusing and alcoholic clients results in robust positive outcomes across multiple dimensions of functioning [(for a review, see Fals-Stewart et al. (2004)]. For example, clients report marked improvement in co-worker's relationships, family relationships, partner relationships, emotional health, overall health, social life, work productivity and community involvement (American Association of Marriage and Family Therapists, 2005). Marriage and family therapy also reduces social costs, domestic violence and emotional problems of the couple's children. Interventions can be viewed as part of a stepped care treatment model (Sobell & Sobell, 2000). Couples who do not reach their treatment goals in the brief treatment modality would be offered further treatment of a

higher level of intensity. Studies on a stepped care model of marriage and family counselling for clients with addictions have yet to be conducted but are an important future research direction.

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References

Alexander, J. A., Nahra, T. A., Lemak, C. H., Pollack, H., & Campbell, C. I. (2008). Tailored treatment in the outpatient substance abuse treatment sector: 1995–2005. *Journal of Substance Abuse Treatment*, 34, 282–292.

Alvidrez, J. (1999). Ethnic variations in mental health attitudes and service use among low-income African American, Latina, and European American young women. *Community Mental Health Journal*, 35, 515–530.

American Association of Marriage and Family Therapists. (2005). FAQ's on MFT's. Retrieved from http://www.aamft.org/faqs/index_nm.asp#what

Anthony, J. C., & Helzer, J. E. (1991). Psychiatric disorders in America: The epidemiologic catchment area study. In L. N. Robins & D. A. Regier (Eds.), *Syndromes of drug abuse and dependence* (pp. 116–154). New York: The Free Press.

Arciniega, L. T., Arroyo, J. A., Miller, W. R., & Tonigan, J. S. (1996). Alcohol, drug use and consequences among Hispanics seeking treatment for alcohol-related problems. *Journal of Studies on Alcohol*, 57, 613–618.

Arroyo, J. A., Westerberg, V. S., & Tonigan, J. S. (1998). Comparison of treatment utilization and outcome for Hispanics and non-Hispanic Caucasians. *Journal of Studies on Alcohol*, 59, 286–291.

Caetano, R. (1993). Priorities for alcohol treatment research among U.S. Hispanics. *Journal of Psychoactive Drugs,* 25, 53–60.

Caetano, R., & Clark, C. L. (2000). Hispanics, Blacks and Whites driving under the influence of alcohol: Results from the 1995 national alcohol survey. *Accident Analysis Prevention*, 32, 57–64.

Caetano, R., & McGrath, C. (2005). Driving under the influence (DUI) among U.S. ethnic groups. *Accident Analysis and Prevention*, 37, 217–224.

Caetano, R., Mora, M. E. M., Schafer, J., & Del Carmen, M. M. (1999). The structure of DSM-IV alcohol dependence in a treatment sample of Mexican and Mexican American men. *Addiction*, 94, 533–541.

Caetano, R., Ramisetty-Mikler, S., & Rodriguez, L. A. (2008). The Hispanic Americans baseline alcohol survey (HABLAS): Rates and predictors of DUI across Hispanic national groups. *Accident Analysis and Prevention*, 40, 733–741.

Caetano, R., & Schafer, J. (1996). DSM-IV alcohol dependence in a treatment sample of Caucasian, Black and Mexican American men. *Alcoholism: Clinical and Experimental Research*, 20, 384–390.

Clark, W. B. (1988). A comparative analysis of facial flushing among alcohol drinkers in Japan, Hawaii and California. In T. Harford & L.Towle (Eds.), *Cultural influences and drinking patterns: A focus on Hispanic and Japanese populations* (pp. 197–222). Washington, DC: DHHS.

Compton, W. M., Thomas, Y. F., Stinson, F. S., & Grant B. F. (2007). Prevalence, correlates, disability, and comorbidity of DSM-IV drug abuse and dependence in the United States results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*, 64, 566–576.

Dillworth, T. M., Kaysen, D., Montoya, H. D., & Larimer, M. E. (2009). Identification with mainstream culture and preference for alternative alcohol treatment approaches in a community sample. *Behavior Therapy*, 40, 72–78.

Drug Abuse Warning Network. (2009). *Detailed tables: Drug-related emergency department visits for 2004–2006*. Retrieved from https://dawninfo.samhsa.gov/pubs/edpubs/tables.asp

Fals-Stewart, W., O'Farrell, T. J., & Birchler, G. R. (2004). Behavioral couples therapy for substance abuse: Rationale, methods, and findings. *Science & Practice Perspectives*, 2, 30–41.

Finch, B. K., & Vega, W. A. (2003). Acculturation stress, social support, and selfrated health among Latinos in California. *Journal of Immigrant Health*, 5, 109–117.

Galvan, F.H., & Caetano, R. (2003). Alcohol use and related problems among ethnic minorities in the United States. *Alcohol Research & Health*, 27, 89–94.

Grant, B. F. (1994). Alcohol consumption, alcohol abuse and alcohol dependence. The United States as an example. *Addiction*, 89, 1357–1365.

Hawkins, R. P., Kreuter, M., Resnicow, K., Fishbein, M., & Dijkstra, A. (2008). Understanding tailoring in communicating about health. *Health Education Research*, 23, 454–466.

Herman-Stahl, M., Spencer, D. L., & Duncan, J. E. (2003). The implications of cultural orientation for substance use among American Indians. *American Indian and Alaska Native Mental Health Research*, 11, 46–66.

Hser, Y.-L., Evans, E., & Huang, D. (2005). Treatment outcomes among women and men methamphetamine abusers in California. *Journal of Substance Abuse Treatment*, 28, 77–85.

Hser ,Y.-L., Huang, D., Teruya, C., & Anglin, M. D. (2003). Gender comparisons of drug abuse treatment outcomes and predictors. *Drug and Alcohol Dependence*, 72, 255–264.

Hunter, S. B, Wong, E., Beighley, C. M., & Morral, A. R. (2006). Acculturation and driving under the influence: A study of repeat offenders. *Journal of Studies on Alcohol*, 67, 458–464.

Inciardi, J. A., Martin, S. S., & Butzin C. A. (2004). Five-year outcomes of, therapeutic community, treatment of drug-involved offenders, after release from prison. *Crime & Delinquency*, 50, 88–107.

Kandel, D. B., Huang, F. Y., & Davies, M. (2001). Comorbidity between patterns of substance use dependence and psychiatric syndromes. *Drugs and Alcohol Dependence*, 64, 233–241.

Leong, F., & Lau, A. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental Health Services Research*, 3, 201–214.

Maharajh H. D, & Bhugra, D. (1993). Brief family-therapy with alcohol-dependant men in Trinidad and Tobago. *Acta Psychiatrica Scandinavica*, 87, 422–426.

Marlatt, G. A., & Witkiewitz, K. (2002). Harm reduction approaches to alcohol use: Health promotion, prevention, and treatment. *Addictive Behaviors*, 27, 867–886.

Melnick, G., De Leon, G., Thomas, G., Kressel, D., & Wexler H. K. (2001). Treatment process in prison therapeutic communities: Motivation, participation, and outcome. *American Journal of Drug and Alcohol Abuse*, 27, 633–650.

Mercado, M. M. (2000). The invisible family: Counseling Asian American substance abusers and their families. *The Family Journal*, 8, 267–272.

Messina, N., Burdon, W., Hagopian, G., & Prendergast, M. (2006). Predictors of prison-based treatment outcomes: A comparison of men and women participants. *American Journal of Drug and Alcohol Abuse*, 32, 7–28.

Meyerstein, I. (2000). Family therapy and alternative medicine: Acupuncture as a case in point. *Contemporary Family Therapy*, 22, 3–18.

Mojtabai, R. (2005). Use of specialty substance abuse and mental health services in adults with substance use disorders in the community. *Drug and Alcohol Dependence*, 78, 345–354.

Muthen, B., Grant, B., & Hasin, D. (1992). *Subgroup differences in factor structure for DSM-III-R and proposed DSM-IV criteria for alcohol abuse and dependence in the 1988 national health survey*. Retrieved from http://www.gseis.ucla.edu/faculty/muthen/articles/Article_049.pdf

Niv, N., Wong E. C., & Hser Y. (2007). Asian Americans in community-based substance abuse treatment: Service needs, utilization, and outcomes. *Journal of Substance Abuse Treatment*, 33, 313–319.

Northern California Service League. (2005). *Substance abuse counseling and in-jail drug treatment*. Retrieved from http://www.norcalserviceleague.org/drugcnsl.htm

Singh, G. K., & Siahpush, M. (2001). All-cause and cause-specific mortality of immigrants and native born in the United States. *American Journal of Public Health*, 91, 392–399.

Smedley, B. D., Stith, A. Y., & Nelson, A. R. (Eds.). (2003). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, DC: The National Academies Press.

Sobell, M. B., & Sobell, L. C. (2000). Stepped care as a heuristic approach to the treatment of alcohol problems. *Journal of Consulting and Clinical Psychology*, 68, 573–579.

Substance Abuse and Mental Health Services Administration. (2009a). Racial and ethnic groups: Reports and data. Retrieved from http://www.oas.samhsa.gov/race.htm#Asians

Substance Abuse and Mental Health Services Administration. (2009b). *Screening, Brief Intervention, and Referral to Treatment*. Retrieved from http://www.sbirt.samhsa.gov/

Thomson, G. E., Mitchell, F., & Williams, M. (Eds.). (2006). *Examining the health disparities research plan of the national institutes of health: Unfinished business*. Washington, DC: The National Academies Press.

Wells, K., Klap, R., Koikie, A., & Sherbourne, C. (2001). Ethnic disparities in unmet need for alcoholism, drug abuse, and mental health care. *American Journal of Psychiatry*, 158, 2027–2032.

Wesa, K. M., & Culliton, P. (2004). Recommendations and guidelines regarding the preferred research protocol for investigating the impact of an optimal healing environment on patients with substance abuse. *Journal of Alternative and Complementary Medicine*, 10, S193–S199.

Winkelman, M. (2001). Alternative and traditional medicine approaches for substance abuse programs: A shamanic perspective. *International Journal of Drug Policy*, 12, 337–351.

Wu, L., Ringwalt, D. L., & Williams, C. E. (2003). Use of substance abuse treatment services by persons with mental health and substance use problems. *Psychiatric Services*, 54, 363–369.

Yu, J., Clark, L. P., Chandra, L., Dias, A., & Lai, T. (2009). Reducing cultural barriers to substance abuse treatment among Asian Americans: A case study in New York City. *Journal of Substance Abuse Treatment*, 37, 398–406.