Outcomes of AA for Special Populations

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This chapter reviews research examining outcomes of Alcoholics Anonymous (AA) for special populations. It begins by discussing what is meant by the term "special populations" and why the question of if and how AA is beneficial for special populations needs to be considered. The chapter then examines studies of outcomes of AA participation among women, adolescents and the elderly, racial and ethnic minority groups, disabled individuals, and people with co-occurring substance abuse and mental illness. It concludes by summarizing what existing research shows about the outcomes of AA among special populations, and issues that future studies should address.

1. What Are Special Populations?

Special populations are groups whose needs may not be fully addressed by traditional approaches or who feel they may not comfortably or safely access and use the standard approaches. Generally, special populations include women, adolescent or elderly individuals, different racial and ethnic groups, and people with disabilities. Special populations may also be defined more broadly such as by sexual orientation, current living situation (e.g., homeless, institutionalized such as in a psychiatric hospital or prison), or geographical area (urban or rural).

2. Why Should We Study AA Outcomes In Special Populations?

We need to study outcomes of AA participation in special populations because the benefits of AA and its active ingredients that have been found for the mainstream population may not hold for these subgroups. Possibly, AA participation is not associated with positive outcomes among special populations. Or, AA participation may be associated with positive outcomes, but AA's mechanisms of action may differ across special populations. That is, 12-step self-help groups may benefit different subgroups in different ways.

There are at least two main reasons why AA participation may not be associated with positive outcomes, or be associated with unique mechanisms of change, for special populations. The first involves the fact that AA's origins were not targeted toward special populations, and the second is that in AA groups, special populations are often small proportions of the attendees. AA was developed by adult, White men from a middle class, Christian background. The question for special populations is whether AA, used by and beneficial to such men, is accepted by and helpful to subgroups who do not share the founders' background, such as older, African-American women, for example. A somewhat different issue is that, if the 12-step approach achieves positive outcomes for special populations, is it effective in mixed groups, in which most participants may be White, middle class adult men, or is it more effective in groups specific to the special population, such as women-, elder-, or African-American-specific groups.

Tonigan et al. (1998) raised the question of whether AA, a mutual help program with strong Protestant roots that was started by White, middle class Americans, can appeal to clients with diverse backgrounds based on culture, ethnicity, and other characteristics. They hypothesized that the answer is yes. This is because the 12-step philosophy is intentionally broad and open to divergent interpretations. AA's ideological flexibility permits wide application across diverse special populations holding different beliefs and values.

However, generally, people are more likely to join and benefit from groups that are composed of members with similar characteristics and who have goals and values that are consistent with their own (Mankowski et al. 2001). The degree of correspondence or compatibility between potential members' own beliefs and understandings and those in a given AA group may be especially important in determining an individual's level of attraction to,

attendance of, and involvement in the group. That is, the degree of similarity or compatibility between personal and group belief systems may influence how active the person becomes in the group and how much benefit he or she derives from it. The broad question we are in part addressing here is whether the assumptions and values of AA are compatible with the beliefs and interests of special populations in our society. AA's only requirement for membership - a desire to stop drinking - may not be enough of a common bond in AA groups to attract, retain, and benefit special populations.

In the next sections, AA participation among women, youth, older people, individuals of different ethnic and racial groups, people with disabilities, and those with psychiatric problems is discussed. We examine studies of why these special populations may or may not be attracted to AA, and whether they benefit from AA when they do attend and become involved. We also suggest areas in which research on AA in these special populations is lacking.

3. Outcomes of AA for Women

Women have consistently made up about one-third of AA members. As noted by Kelly (2003), some researchers have speculated that women who participate in AA may not benefit as much as men do. This is because the focus on powerlessness espoused in the first step of the 12-step program may serve to reinforce low self-esteem and a diminished societal role among women. In addition, the minority status of women in 12-step groups may make women-specific issues more difficult to discuss.

In contrast, others hypothesized that women may be more likely than men to attend and benefit from AA because AA's philosophy, involving acknowledgment of powerlessness over alcohol, lack of control over one's behavior, and one's dependence on a higher power to attain sobriety is easier for women to accept. Women's characteristics of lower self-esteem, more

frequent drinking when feeling powerless or inadequate, and having stable attributions for failure and a more external locus of control than men or nonalcoholic women are congruent with AA steps that ask the alcoholic to admit past wrongdoing and the inability to control alcohol use, and to trust a greater power to achieve recovery. In addition, AA is free, eliminating financial barriers to help that are more common among women than men, and anonymous, so friends and family do not need to know about it; anonymity may be important for women due to historically greater social stigma of alcoholism for women than for men (Beckman 1993; Timko et al. 2002).

Furthermore, as pointed out by Forcehimes and Tonigan (2003), AA group processes and prescribed behaviors may be better aligned with women's distinguishing characteristics. AA processes are based on trust, consensus building, and cooperation, features associated with women more so than with men. Because women tend to have a stronger need for affiliation than men do, women may, relative to men, experience increased alliances to AA groups that provide a social support network and fulfill the need for affiliation.

Research has shown that women often attend and become more involved in AA than men do. This finding held in Project MATCH, which was a multisite clinical trial designed to test how patient-treatment interactions related to outcomes for alcohol problems; two independent but parallel matching studies were conducted, one with clients recruited from outpatient settings, the other with patients receiving aftercare treatment following inpatient care. In Project MATCH, women attended AA meetings as frequently as men did in the outpatient arm. Among aftercare clients, women attended more AA meetings and were more involved in AA than men were (Del Boca and Mattson 2001). In a sample of outpatients in a chemical dependency recovery program, women attended more 12-step meetings than men did at 6-month and 5-year follow-ups (Weisner et al. 2003). A separate analysis of the older, alcohol-dependent patients in

this sample also found that older women had more AA attendance than older men did at the 6-month follow-up (Satre et al. 2004).

Two studies have examined outcomes of AA affiliation among women in comparison to those of men. A study of previously untreated problem drinkers found that women were generally worse off than men were at baseline on drinking and functioning indices. In keeping with their poorer baseline status, women were more likely to participate in AA during the first follow-up year. In addition, women benefitted more than men did from more AA attendance during Years 2-8 of follow-up; that is, positive associations between more AA attendance and favorable drinking outcomes at 8 years were stronger for women. However, for women, the positive association between more AA attendance and being employed at 8 years was weaker than it was for men, perhaps because social networks developed in AA are less likely to lead to job referrals for women (Timko et al. 2002).

A 3-year study of alcohol-dependent outpatients enrolled in a randomized controlled telephone case monitoring trial found that more self-help meeting attendance was associated with abstinence and fewer drinks per drinking day. However, the relationship between attendance and drinking outcome was not influenced by gender. That is, AA attendance was as beneficial for women as it was for men (Kelly et al. 2006).

These findings suggest that women may integrate more easily into AA than men do and benefit just as much. However, there is still a scarcity of information about attendance at and effects from AA participation among women. It is not clear to what extent women attend women-only AA meetings, which are increasingly available and may moderate the likelihood of attendance and involvement as well as AA outcomes for women. Further, it is not clear whether

other organizations specific to women and women's needs such as Women For Sobriety may be more beneficial for women (Kaskutas 1996).

4. Outcomes of AA for Youth

Only 2% of AA members are under age 21 and nonattendance and dropout from 12-step groups among youth with alcohol and other substance use problems are high (Kelly et al. 2000). As also noted by Kelly (2003), possibly, the 12-step program of AA as created for adults may not be optimal for youth, and the predominantly adult composition of most AA groups may hinder teens' identification with the group and present a barrier to initial and continued attendance and affiliation, as well as positive outcomes. Youth may have trouble identifying with issues related to adult recovery such as employment, marriage, and children. Teenagers may have more logistical barriers to attending self-help group meetings than adults do, such as difficulties with transportation, finances, and obtaining parental permission (Kelly et al. 2002).

Adolescents' AA or Narcotics Anonymous (NA) attendance post-treatment was related to higher abstinence rates and better social functioning at a two-year follow-up (Alford et al. 1991). In a study of 91 adolescents in inpatient substance use disorder treatment, those who attended AA and/or NA were almost four times less likely to relapse over the follow-up year than were those who did not attend. AA/NA attendance was the best predictor of abstinence at one year. The authors suggested that 12-step group attendance has a therapeutic effect for adolescents by providing support and reinforcing the message of the treatment program (Kennedy and Minami 1993). Among 2,317 adolescents who received inpatient treatment for substance use problems, 12-step meeting attendance (mainly AA and NA) was again the most powerful predictor of abstinence at 6 and 12 months posttreatment (Hsieh et al. 1998).

Analyses of data by Kelly et al. (2002) on adolescent inpatients interviewed during treatment and at 3 and 6 months postdischarge found that severely substance-involved youth were more motivated for abstinence and more likely to attend and affiliate with 12-step groups. A higher frequency of 12-step meeting attendance and, to a lesser extent, greater involvement with 12-step groups (i.e., perceived importance of attending groups, having a sponsor, working the steps, engaging in 12-step social activities), were associated with better posttreatment substance use outcomes. There was a high degree of collinearity between 12-step attendance and involvement such that involvement did not predict outcomes over and above frequency of attendance. Kelly et al. (2002) suggested that the association of attendance with involvement among adolescents may be higher than it is among adults. That is, given the logistical barriers facing adolescents in getting to 12-step meetings, those who do attend more are likely those who place value on attendance and follow suggestions regarding aspects of involvement such as sponsorship and working the steps. Kelly et al. (2002) also found that 12-step involvement mediated between 12-step attendance and motivation for abstinence; that is, 12-step involvement was the mechanism through which attendance maintained and enhanced adolescents' motivation.

Kelly et al. (2002) summarized their full, empirically-supported model as follows. Adolescents in treatment with more severe substance use problems are more motivated to cease using substances. Motivation for abstinence is related to increased likelihood of attendance at 12-step meetings. Regular attendance is associated with more involvement in the 12-step program, which in turn increases motivation to abstain, which reduces future use. In contrast to studies with adults (e.g., Morgenstern et al. 1997; Snow et al. 1994), coping and self-efficacy did not mediate between 12-step attendance and substance use outcomes in this adolescent sample. Accordingly, Kelly et al. (2002) suggested that the mechanisms through which benefits from AA

are derived may differ depending on life stage. Adults may derive more benefit through increases in coping skills and related self-efficacy, whereas adolescents may benefit more through maintenance of motivation and an ongoing commitment to abstain.

The widespread recommendations that adolescents attend and become involved in 12-step groups appear to be supported by existing research. Kelly (2003) emphasized the need for analyses examining explanations of how AA participation benefits outcomes among adolescents. In light of the marked heterogeneity of adolescents' substance use disorders and developmental stages, there is a need for further explication and testing of both intrinsic (e.g., substance use severity, age) and environmental-contextual (e.g., family composition, resources, characteristics of peers) mediators and moderators of effects from youth's self-help attendance and involvement. Because the attendance of self-help groups has been found to be very influential on positive outcomes, attracting more substance abusing adolescents to attend and stay in these groups is an important issue (Hsieh et al. 1998). Accordingly, Kelly (2003) also emphasized the need for more qualitative data regarding youths' perceptions of and experiences in 12-step groups to benefit clinical 12-step facilitation efforts.

5. Outcomes of AA for Older People

Satre et al. (2004) hypothesized that older people may experience practical barriers to attending 12-step meetings such as lack of transportation, physical disabilities that make getting from one place to another more difficult, or reluctance to go out in the evening. Older people may also experience developmental changes that make them less interested in expanding their social networks or rely more exclusively on their spouse for support. Both of these changes would discourage AA participation and lessen AA's benefits.

In fact, at intake to chemical dependency treatment, older patients were less likely than middle-aged adults to have ever attended AA (Satre et al. 2003). At a 5-year follow-up (Satre et al. 2004), older people were similar to younger patients on amount of AA participation overall, but older adults were less likely than middle-aged adults to have ever considered themselves a member of a 12-step group or called a 12-step member for help in recovery. That is, on items signifying a greater depth of AA involvement, older adults scored lower than younger adults did. Satre et al. (2004) suggested that older adults may benefit from smaller AA groups, or AA groups that focus on older adult issues.

Lemke and Moos (2003) compared older male veterans with alcohol use disorders in residential care to matched (on demographic variables and dual diagnosis status) young and middle-aged male veterans in these programs. As in Satre et al.'s (2004) study, older people participated in 12-step groups as much as younger people did overall (attendance and involvement were combined into one index), during treatment and at the 1-year follow-up. For each age group, including the group of older patients specifically, 12-step group participation during Year 1 of follow-up was related to better drinking outcomes at 1-year and 4-year follow-ups. Using similar methods on a different sample of male veteran inpatients with alcohol use disorders, Lemke and Moos (2003) found that older patients had similar overall 12-step group participation as younger patients did at 1 and 2 years posttreatment, and that more participation during Years 1 and 2 was associated with better drinking outcomes at 5 years.

Together, the results of these studies suggest that older people as a group may be reluctant to join AA and so are especially in need of efforts during treatment to facilitate their entry into and involvement with AA. They may also need help from treatment staff to locate a

home group composed of members similar to themselves. Once older people participate in AA, they appear to benefit from that participation in terms of drinking-related outcomes.

6. AA Outcomes for Racial and Ethnic Groups

The vast majority of AA members in the US are White (Tonigan et al. 1998). However, help for the substance use problems of individuals of a specific race or ethnicity may be more effective when the individual's race, ethnicity, and culture are considered (Durant 2005). As noted, AA is primarily Euro-American in origin. Possibly, to be helpful to racial and ethnic groups with different cultures, AA groups must be modified by participants to fit with the culture.

6.1 African-Americans. In 1993, Humphreys and Woods argued that research on African American 12-step group participation must recognize that African- and White-Americans are still largely segregated both culturally and geographically. Self-help group participation has different meanings, predictors, and outcomes for African-Americans than for Whites. African-Americans were more likely to attend self-help groups if they lived in a predominantly African-American rather than predominantly White area. In short, people abusing substances may prefer meetings in which their own race and ethnicity are well-represented.

Recent estimates are that about two million African-Americans are alcoholics (Durant 2005). Possible resistance to 12-step groups by African-Americans is based on their perception that the groups are racist and exclusive (they have only White, mainstream, middle class members who will not understand African-American dialects) and their dislike of AA's references to the need for surrender and powerlessness (Smith et al. 1993). Specifically, surrender and powerlessness may be viewed negatively because, as a group, African-Americans

have been denied power in American society. Furthermore, many African-Americans do not accept the AA premise that alcoholism is a disease (Durant 2005).

Kaskutas et al. (1999) examined the possibility that AA is seen as a White, middle class organization and is unlikely to appeal to African-Americans, by interviewing clients entering treatment. Whites were more likely to attend AA independent of treatment, whereas African-Americans attended AA as part of treatment. Although African-Americans entering treatment were less likely to attend AA on their own without referrals from treatment providers, once they were introduced to AA, African-Americans were as inclined as Whites toward active involvement in AA. Even so, African-Americans and Whites participated differently. African-Americans were more likely to self-identify as an AA member, to report a spiritual awakening due to AA, and to perform service at a meeting. Whites were more likely to have a sponsor and to read AA literature.

6.2 American Indians. In its original formation, AA was explicitly rooted in Western theism and European-American cultural values and so may not be suitable for many American Indian individuals and tribes. AA has been criticized as inappropriate for American Indian populations because it entails the confession-like disclosure of personal problems, has a Western religious emphasis, and excludes nonalcoholics. AA's philosophy of powerlessness over alcohol runs counter to the mores of many tribes emphasizing self-reliance and stoicism (Smith et al. 1993). The AA approach could be highly offensive to a Native American person who maintains a traditional self-identification, and forcing such a person to attend 12-step groups could lead to further trauma and harm (Szlemko et al. 2006). A study of alcohol problems in an urban American Indian community revealed divided opinions about AA. Some saw AA as more appropriate for Anglo-Americans, given its Christian overtones. Others reported having felt

uncomfortable at AA meetings until they found Indian AA groups where they did not experience discrimination or the burden of having to explain themselves to non-Indians. Still others saw AA as congruent with Indian spiritual traditions (Spicer 2001).

As highlighted by Spicer's (2001) study, although AA cannot be universally appropriate for all American Indian tribes, due to the tribes' cultural diversity, it can be appropriate for some. For example, whereas the Hopi and Alaska Natives have made little use of AA, the Salish of British Columbia have modified and adapted AA to fit their needs. The confession-like nature of AA meetings, which is precisely what is disliked and criticized by some tribes, appeals to the Salish (Abbott 1998).

Native American modifications of AA incorporate elements of the medicine wheel, purification sweat, and sacred pipe as healing devices. Within this milieu, alcoholism and other substance abuse is viewed as a broken hoop or broken circle issue. The values enshrined in Indian AA are vested in the traditional Harmony Ethos (cooperation and shared responsibility) rather than practices rooted in Western culture (competition and ownership). For example, Step 2 (We came to believe that a power greater than ourselves can restore us to sanity) is restated as: We came to believe that the power of the Pipe is greater than ourselves and can restore us to our Culture and Heritage. Step 6 (We are ready to have God remove all our defects of character) is restated as: Be entirely ready for the Great Spirit to remove all the defects of an alien culture (French 2004).

The 12 steps of AA have been blended with the medicine wheel in the Wellbriety Movement, a culture-specific recovery approach for Native Americans. To help Native Americans take advantage of AA, each of the steps is associated with a principle of positive character development. This program created possibly the first culture-specific adaptation of the

Big Book of AA, *The Red Road to Wellbriety: In the Native American Way* (White Bison 2002). An African-American group is working on their own culture-specific book inspired by the Native American version (Coyhis and Simonelli, 2005).

6.3 Hispanics. A study of clients of an alcohol treatment center found that Hispanics attended fewer AA meetings than Whites did over 6 months of follow-up. Nonetheless, attendance at AA was associated with decreased intensity and quantity of alcohol use for both groups (Arroyo et al. 1998). Analyses of Project MATCH data yielded similar results. Specifically, Hispanic clients were less likely to attend AA and attended AA less frequently after treatment than White clients did. However, involvement with and commitment to AA were similar or even higher among Hispanic clients who attended meetings, in comparison to White attendees. And, for both Hispanics and Whites, AA involvement predicted increased abstinence at 1 year (Tonigan et al. 1998; Tonigan et al. 2002). Although Hispanic clients report a lower likelihood of AA attendance, they have equal involvement with and benefit from AA as Whites do when they do attend.

Unfortunately, there are no studies of outcomes of AA for African-Americans or Native Americans. In addition, studies are lacking as to how Asian-Americans perceive 12-step programs. Such perceptions influence the extent to which this special population is attracted to attending and becoming involved in AA. There is an absence of research on outcomes of AA among Asian-Americans generally and specific Asian-American subgroups (e.g., Chinese, Filipino, Vietnamese, Korean, Japanese) as well as other racial/ethnic groups, such as individuals whose origins are in the Middle East. Furthermore, mechanisms of action that explain why AA may be effective for these special populations have not yet begun to be examined in research on 12-step groups.

7. AA Outcomes for Disabled Groups

For people with cognitive, sensory, and/or physical disabilities, less attendance at and benefit from AA parallels their inability to obtain adequate substance use disorder treatment. That is, people with disabilities may not be able to access AA meetings in the first place, or may attend AA but perceive groups to not be tailored to their needs and therefore fail to sustain attendance at AA, become involved in AA, and experience AA's benefits. The nature of these access and tailoring problems includes physical and architectural barriers (buildings where meetings are located do not have a wheelchair ramp or elevator) and other problems such as barriers to communication (lack of program materials in large print, Braille, or audiotape formats; lack of sign language interpreters). In addition, there may be a perception of rigid no-medication rules that do not allow for needed pain or other medications. Furthermore, AA groups may be seen as having "one size fits all" program materials and meeting styles that do not accommodate different types and levels of disabilities. To date, research on AA among disabled special populations has focused on cognitively impaired individuals.

7.1 Cognitive impairment. A study of people with traumatic brain injury who had alcohol problems found that less than 20% were interested in getting help from AA or treatment (Bombardier et al. 2002). Another study of alcohol use among people with recent traumatic brain or spinal cord injury found that the most severe problem drinkers expressed the most interest in participating in AA; even so, only 29% of this group was interested in AA (Turner et al. 2003).

Another investigation found that cognitive impairment moderated the relation of AA affiliation with substance use outcomes at six months following addiction treatment. AA affiliation was a robust predictor of better outcomes in unimpaired individuals, but only a weak

predictor in persons with clinically significant impairment. Possibly, the processes of AA attendance and involvement supporting positive outcomes in unimpaired persons may operate with less potency in clients who are cognitively impaired (Morgenstern and Bates 1999).

In Project MATCH, in the outpatient arm, higher cognitive impairment at treatment entry predicted greater AA involvement during, and for 6 months (Donovan et al. 2001) and 15 months (Bates et al. 2006) following, treatment. Greater AA attendance and involvement were associated more strongly with better 15-month alcohol outcomes among more impaired clients than among less impaired ones.

The Project MATCH result appears to contradict that of Morgenstern and Bates (1999). In the Morgenstern and Bates (1999) study, individuals classified as cognitively impaired had significant clinical disability, but this was not necessarily true in Project MATCH. Possibly, severely cognitively disabled individuals benefit less from AA participation, whereas moderately disabled individuals are able to benefit more. If and how severity of cognitive impairment moderates associations of AA attendance and involvement with substance use and other outcomes remains to be settled by additional research, as do mechanisms that explain any positive effects of AA participation on outcomes in the cognitively disabled special population. In addition, research is needed examining AA - how it is perceived and experienced - among people with co-occurring substance use disorders and sensory and physical disabilities.

8. AA Outcomes for Individuals with Dual Substance Use and Psychiatric Disorders

Individuals treated for dual substance use and psychiatric disorders have very high rates of posttreatment relapse and additional episodes of treatment (Chen et al. 2006). AA may provide an element of continuing care that reduces relapse rates and use of services. The American Psychiatric Association recommends that dual diagnosis patients be referred to self-

help groups, especially those in which psychiatric medications and therapies are recognized and encouraged as useful (APA 1995). A systemwide study in the Department of Veterans Affairs reported that most formally treated substance use disorder patients are referred to AA or NA (Humphreys 1997). However, dual diagnosis patients are less likely to be referred to 12-step groups than are substance use disorder-only patients (Humphreys 1997).

Studies indicate that although the majority of individuals treated for dual disorders try self-help groups, only a minority of these patients become closely linked to self-help groups by using them consistently over time (Noordsy et al. 1996). When dual diagnosis patients become linked to AA or NA, they benefit from participation. For example, in a study of acute care for dual diagnosis patients, those who attended more meetings during and following treatment had better 6-month and 1-year substance use and psychiatric outcomes (Timko and Sempel 2004).

A subset of studies related to AA outcomes of dually diagnosed individuals has focused on substance use disorder patients with post-traumatic stress disorder (PTSD) (Ouimette et al. 2003). Many of the issues raised by this subset of studies apply generally to dually diagnosed individuals. Namely, there is debate about whether substance abuse-PTSD patients should participate in and will benefit from 12-step groups. Some clinicians have advocated for patient involvement in 12-step groups an adjunct to substance abuse-PTSD treatment (Evans and Sullivan 1995). Persuading these patients to participate in AA may be one way to offset their poor prognoses. Substance abuse co-occurring with PTSD is often a chronic disorder that requires long-term help, which AA may provide. Establishing AA membership, with its positive association with abstinence, good psychological functioning, and supportive social networks, may encourage positive growth that helps with long-term remission for people experiencing PTSD.

Several aspects of 12-step activities may address core issues of trauma-related symptoms and enhance treatment outcomes. AA group membership may be helpful for substance abuse remission because it reduces PTSD and its associated symptoms that trigger relapse. The spiritual aspect of the AA fellowship may help to lessen the hopelessness about the future often expressed by trauma survivors and enhance feelings of having a purpose in life. AA's disease model approach to addiction may decrease the shame often associated with PTSD. Because substance abuse-PTSD patients may be stigmatized, the support of peers may be especially helpful to them. Seeking and experiencing similarity between oneself and AA group members may improve self-image and increase optimism about the future.

In contrast to those advocating AA for dually diagnosed individuals, some have raised concerns about AA for substance abuse-PTSD clients (Satel et al. 1993). These concerns involve contrasting views of what problem is primary; PTSD may be seen as primary by those who have been diagnosed with it, whereas substance abuse may be seen as primary by AA group members. Being in AA groups that emphasize the primacy of addictions may invalidate patients' perceptions of PTSD as the primary problem and increase their distress. The self-medication of PTSD symptoms often underlies and contributes to alcohol use. AA suggests that life is manageable if sobriety is maintained. However, PTSD often worsens in newly abstinent patients. AA groups may be perceived as objecting to psychotropic medications to help manage PTSD's symptoms.

Trauma, and PTSD-specific symptoms of loss of faith and hope for the future, may deter individuals from embracing the concept of a higher power and the directive to surrender. PTSD often leads to a crisis of faith, the painful disruption of ingrained belief systems, and doubts about the basic goodness of human beings and the existence of God in light of the tragedies that

have occurred. Trust is shattered such that a benevolent spiritual force is hard to imagine, and so surrender to a higher power may be seen as impossible. Futher, hypervigilence and the need to maintain control are integral parts of a traumatic stress reaction, creating hardships in turning over one's will and life to God.

PTSD-associated interpersonal avoidance may also make the fellowship of 12-step groups problematic. Discomfort with crowds, strangers, noise, and emotional closeness is common in PTSD. Because PTSD may create difficulties in getting close to people in general, it may be hard to trust a sponsor. Those diagnosed with PTSD may be reluctant to tell their story at AA meetings for fear of alienating other members. They feel guilt and doubt about decisions they made and acts they committed. The requirement of taking a fearless moral inventory and making amends may also be threatening to those with PTSD. These activities require confronting painful memories, which may exacerbate anxiety and depression and lead to relapse.

In this view, AA is engaging and effective only for the minority of PTSD patients who identify primarily as substance abusers, are comfortable with social situations, and have less severe psychological symptoms. These individuals are able to separate alcohol- or drug-related problems and solutions from their PTSD symptoms and treatment, reflecting an understanding that they suffer from two distinct but interrelated entities. Individuals who exhibit these characteristics should have relatively better outcomes following AA participation than those whose problems are more entrenched. Individuals with substance abuse-PTSD who do successfully affiliate with AA may respond to and benefit from many of same therapeutic elements of AA that others respond to: empowerment through acknowledgment of alcoholism or other drug addiction, installation of hope through contact with others, encouragement of openness, repeated emphasis on shared experiences, and development of a social network (Satel

et al. 1993).

The recommendation is that clinicians should assess substance abuse-PTSD patients' identities regarding addictions and PTSD before referring them to AA. If patients are more identified with PTSD, providers should explore whether AA could still be beneficial, and monitor patients' distress as participation goes along. Even those whose substance abuse-PTSD still allows relatively good functioning may need higher and more sustained "doses" of AA for attendance and involvement to be helpful (Ritsher et al. 2002). Substance abuse-PTSD patients should be prepared for AA during treatment by previewing AA's philosophy and the 12 steps and identifying potential areas of difficulty (Mueser et al. 2003). Some of the 12 steps may need to be reframed; for example, making amends need not involve a formal apology but may entail an internal process of absolution.

Studies support the view that AA may be helpful to individuals having the dual problems of substance abuse and PTSD. Among substance abuse-PTSD patients receiving substance use disorder treatment, involvement in 12-step activities during treatment was associated with more adaptive coping (specifically, more approach coping involving positive reappraisal and problem-solving) and improved psychological symptoms at discharge. In addition, AA/NA attendance during two years posttreatment was related to remission from substance abuse at the 2-year follow-up (Ouimette et al. 2001).

Ouimette et al. (2001) also examined predictors of participation in 12-step groups during the two posttreatment years as well as client characteristics that moderated associations between participation and positive outcomes. Substance abuse-PTSD clients who, at baseline, were more religious and endorsed a disease model of addiction were more involved in AA/NA activities. Endorsement of the disease model of addiction was a moderator between AA/NA participation

and psychological distress. That is, AA/NA participation was associated with less psychological distress only among substance abuse-PTSD patients who self-identified as an alcoholic or addict.

Although dually diagnosed individuals benefit from participation in AA/NA, they may benefit more from participation in dual-focused self-help groups (e.g., Dual Recovery Anonymous, Double Trouble in Recovery), which are designed specifically for persons who have both substance use disorders and mental illness (Hazelden Foundation 1993; Humphreys 2004; Ortman 2001). Dual diagnosis patients who sought help from AA or NA to achieve sobriety before addressing their psychiatric disorders often reduced substance use while deteriorating on psychiatric symptoms (Hamilton and Samples 1994). Laudet found that most attendees of dual focused meetings also attended AA or NA meetings (Laudet et al. 2000; Laudet et al. 2004). However, more frequent and sustained attendance at dual-focused groups was of more benefit to dually diagnosed individuals over 2 years than was attendance at AA or NA in terms of abstinence, amount of substance use, psychiatric symptoms, and personal functioning. Similarly, Magura found that consistent attendance at dual-focused meetings among dually diagnosed individuals was associated with better adherence to psychiatric medication, whereas attendance at AA/NA meetings was not (Magura et al. 2002). A 2-year study of dually diagnosed clients in outpatient treatment who attended dual-focused meetings found improvements in global functioning and housing, and decreases in hospitalizations (Hensley 2004).

Studies have explained that AA/NA may not be as helpful to treated dually diagnosed patients for a number of reasons. As noted above for PTSD specifically, members of some of these groups may view taking psychiatric medication as a form of substance use, or reject the stigma of having members who are labeled mentally ill (Hazelden Foundation 1993; Mowbray et

al. 1995; Ortman 2001). Additional barriers to benefitting from AA/NA include dual diagnosis patients' tendency to deny their substance use problems, their greater difficulty obtaining and maintaining social support in groups (Jordan et al. 2002), and their experience of the use of AA/NA's specialized philosophy and language as alienating and unempathic (Noordsy et al. 1996). For example, dual diagnosis patients saw the traditional approach as minimizing problems of suffering from and living with psychiatric disabilities. Furthermore, dual diagnosis patients may not benefit as much from AA/NA because their psychiatric symptoms (e.g., fear of large groups, feelings that people are watching them, suspiciousness, delusional significance of references to God), medication side effects (e.g., difficulty sitting still), inability to relate to other members' stories of "hitting bottom" (e.g., they never had a spouse, job, or car to lose in the first place), and social deficits are not considered, are misunderstood, or are even responded to in a confrontational manner.

Dual diagnosis patients' primary self-reported reasons for not attending AA/NA were that these groups did not meet their needs or make them feel comfortable, and they had difficulty finding people they felt similar to (Laudet et al. 2003). Dual diagnosis patients' most frequent statements about what dual-focused groups offer that AA does not, involved freedom to talk about their psychiatric illness and to gain new information about psychiatric problems. Dually diagnosed patients were more likely to share personal stories at dual-focused meetings than they were at AA meetings; they were more likely to just listen at AA. Individuals with co-morbid psychiatric problems who attend AA/NA groups often refrain from taking on active roles or responsibilities in the group, although such service to the group is seen as increasing the likelihood of recovery (Kurtz et al. 1995).

The extent to which dual diagnosis patients participate in and benefit from AA may depend

on their psychiatric diagnosis. More specifically, dually diagnosed individuals with non-psychotic disorders may receive more benefit from AA attendance and involvement than do patients with psychotic disorders. Findings are consistent from a number of studies that dual diagnosis patients with schizophrenia as well as with other psychoses (e.g., affective, paranoid) reported less attendance at AA/NA than did patients with non-psychotic anxiety, depression, adjustment, or personality disorders (Bartles and Drake 1996; Jordan et al. 2002; Noordsy et al. 1996; Ouimette et al. 1999; Tomasson and Vaglum 1998). Dual diagnosis patients with schizophrenia were less likely to identify themselves as addicted, and to agree with 12-step philosophy that people with addictions should be considered responsible for their alcohol and drug use, or their own recovery. These patients were also more likely to believe that addiction is a chronic disease that does not get better; that alcohol and drugs are useful for coping with stressful life events, interpersonal problems, and psychiatric symptoms; and that addicted individuals can regulate their alcohol and drug use for social purposes (Handymaker et al. 2002). Thus, as dual-focused groups become more plentiful and known to providers and patients, treatment staff may consider referring substance abuse-schizophrenia patients to those groups rather than to AA or NA.

9. Summary and Directions for Future Research

Does AA attendance and involvement benefit special populations? The studies reviewed here suggest that some special populations, such as women, may participate more in, and benefit more from, AA than their male counterparts' do who represent the mainstream population. More commonly, special populations may affiliate less with AA in comparison to mainstream societal groups, but when they do affiliate, they benefit just as much or even more. This latter finding may apply to older people and to some racial/ethnic groups such as Hispanics. As yet, research has not revealed special populations that may actually suffer negative outcomes as a result of AA participation. (A possible exception, suggested by descriptive observations rather than empirical

findings, may pertain to some Native American tribe members.) Because AA attendance and involvement has been associated with positive outcomes across the special populations of women, youth, older people, Hispanics, and dually diagnosed patients with non-psychotic disorders, how to attract more special population members to attend and stay in AA is an important issue for additional research. It will be helpful to develop and empirically validate approaches that effectively promote special populations' attendance and involvement in AA.

There are other gaps in the research on outcomes of AA in special populations. For example, we have yet to study the outcomes of some racial and ethnic groups (i.e., African-American, American Indian). We have yet to examine even rates of AA attendance and involvement in other racial/ethnic groups (e.g., Asian-Americans) or groups with medical disabilities. Accordingly, we have far to go to answer the questions of if and how special populations use AA, if and how AA practices vary because of differences across populations, and how characteristics of special populations influence the benefits associated with AA attendance and involvement (Tonigan et al. 1998).

We still also know little about the mechanisms of change in AA for special populations. Research is needed to examine explanations of how AA participation benefits outcomes among subgroups. In this regard, Moos and Timko (in press) suggested that the effectiveness of AA in curtailing use of alcohol and other substances is based largely on four key ingredients: (1) support, goal direction, and structure that emphasizes abstinence and the importance of strong bonds with family, friends, work, and religion; (2) participation in substance-free social activities; (3) identification with abstinence-oriented role models and a consistent belief system that espouses a substance-free lifestyle; and (4) an emphasis on bolstering members' self-efficacy and coping skills and helping others overcome substance use problems. Possibly, some of these key ingredients apply more to selected special populations than to others (e.g., self-efficacy and coping may derive

more benefits for adults than for adolescents), and there may be additional mechanisms that are not covered within these four.

Although studies indicate that special populations consider AA less attractive when it is practiced within the dominant culture (Humphreys and Woods 1993; Tonigan et al. 1998), we still are lacking the answer to whether homogeneous groups composed of members of a special population (or at least groups dominated by the special population) achieve better outcomes than groups that are heterogeneous (or in which the special population is not dominant). In this regard, one complication in conducting research on special populations is the marked heterogeneity within each subgroup. Special populations are themselves heterogeneous. For example, Hispanic-Americans are from different countries with different cultures, and women and the elderly vary by education, income, health status, ethnicity, race, and religion. Kelly's (2003) suggestion of the need for more qualitative data regarding special populations' perceptions of and experiences in AA may be especially helpful in terms of understanding differences among sub-populations and their experiences in groups with different mixes of members. Such data may inform efforts of treatment programs to effectively refer patients to AA and other 12-step groups (Timko and DeBenedetti 2007).

To date, studies of AA in special populations have focused mainly, although not exclusively, on alcohol- or drug use-related outcomes. The field needs more consideration of other outcomes such as those related to employment or school, family and social functioning, psychological symptoms, coping strategies, and legal outcomes. In addition, it would be useful to examine the extent to which health-risk behaviors and harm to self and others are reduced in concert with AA participation among special populations as well as mainstream groups. Possibly, encouragement of AA participation in health care and other systems and AA utilization by special populations will reduce reliance on costly health care services for addictions.

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