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A Review of Alcoholics Anonymous/Narcotics Anonymous Programs for Teens

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Abstract

The investigation of the applicability of Alcoholics Anonymous/Narcotics Anonymous (AA/NA) for teens has only been a subject of empirical research investigation since the early 1990s. In the present review, the author describes teen involvement in AA/NA programming, provides an exhaustive review of the outcomes of 19 studies that used an AA/NA model as part of their formal teen substance abuse treatment programs, and provides data on the effects of AA/NA attendance on abstinence at follow-up, on which youth tend to become involved in AA/NA, and on mediation of the benefits of AA/NA participation. In addition, the author suggests the reasons for somewhat limited participation by teens in more informal, community-based 12-step meetings, and makes suggestions for maximizing participation at meetings in the community. The author concludes that AA/NA participation is a valuable modality of substance abuse treatment for teens and that much can be done to increase teen participation, though more research is needed.

Keywords

AA/NA; treatment; teens

Introduction

Currently, only 10% of the estimated 1.4 million teens with an alcohol or illicit drug problem are receiving treatment compared to 20% of adults (Office of Applied Studies, 2002). In fact, the first systematic investigation of highly regarded treatment programs for teens in the United States has only recently been conducted (Brannigan, Schackman, Falco, & Millman, 2004). The results of this evaluation indicate that there is much improvement needed in existing programs. Because there are potential differences in the nature of teen versus adult substance abuse disorder (e.g., a relatively brief drug use career among teens that may be overlooked using diagnostic criteria), it is also possible that teen-specific substance abuse prevalence is currently underestimated (Sussman, Skara, & Ames, 2008).

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Given the heterogeneous nature of substance use, and the relative lack of adolescent treatment research to date, it is not possible to recommend one specific treatment modality that is likely to be effective for all adolescent patients (Godley & White, 2005). Instead, researchers and clinicians generally recommend the inclusion of specific treatment elements (e.g., cognitive behavior therapy, family and group treatments, motivation enhancement, 12-step meetings) and a continuum of care in all treatment modalities (e.g., U.S. DHHS, 2001). Currently, several treatment modalities are available and have been utilized in the treatment of adolescent substance abuse and dependence. Most of the available adolescent substance user treatment programs are based on adult treatment models; however, they typically include modifications to address the special needs of adolescents.

Alcoholics Anonymous/Narcotics Anonymous (AA/NA) now is considered an effective adjunct to substance abuse treatment among adults, particularly if involvement begins relatively early in treatment (Kelly, Magill, & Stout, 2009; Miller & Hoffmann, 1995; Moos & Moos, 2004; Tonigan, 2009). The status of the effectiveness of AA/NA among teens has been the subject of relatively recent investigation.

This article provides a review of 12-step programming among adolescents. First, I provide a brief description of AA/NA programming. I will refer to the 12-step programming as “AA/NA,” which are the two largest alcohol/drug/substance-related 12-step programs (as in Kelly & Myers, 2007). Next, I provide data on the extent of teen 12-step involvement in formal 12-step–related treatment and informal 12-step community-related settings. Then, I provide the results of a Web site search that examined teen treatment outcomes of 12-step–involved programming, following a previous review by Kelly and Myers (2007). Along with the data on overall outcomes of this programming, I provide information on the effects of AA/NA attendance on abstinence at follow-up, which youth tend to become involved in AA/NA, and mediation of the benefits of AA/NA participation. In the following sections, I suggest possible reasons for limited teen participation in AA/NA, and make suggestions to maximize the use of 12-step programming for teens.

A Brief Overview of Recovery in 12-Step Programs

Bill Wilson and Dr. Robert Smith, both self-proclaimed alcoholics, founded AA in 1935. AA has become one of the most widely disseminated self-help treatment groups, where membership is estimated at more than 2 million. AA begat more than 100 other 12-step programs based on the structure and principles of AA (e.g., NA—Narcotics Anonymous, MA—Marijuana Anonymous, CA—Cocaine Anonymous, etc.). All of the 12-step sobriety-based programs are based on a disease model of addiction and require complete abstinence from drugs. Drug addiction and alcoholism are thought to be “allergies” that are manifested by a baseline subjective sense of restlessness, irritability, and discontent (“r.i.d.”; Alcoholics Anonymous, 1976; Marijuana Anonymous, 1995; Narcotics Anonymous, 1988), in conjunction with (implicit) processes that perpetuate alcohol or drug use in high-risk situations. When drinking or using, there may be a loss of control over the amount used, generally after using for a brief period of hours or days and loss of behavioral control exhibited while drunk or high, leading to a variety of cumulative negative life consequences.

The solution to addiction/negative life consequences in 12-step programs includes conforming to 12 traditions and 12 steps. The 12 traditions outline AA/NA's basic premises about the organization, such as ensuring members' anonymity and protecting the privacy and integrity of the organization, its leadership, and the sobriety of its members (Yoder, 1990). The 12 steps, which involve use of the first-person plural throughout ("we"), provide an internal process of change through which members break through the "denial" that may accompany the addiction, admit to being powerless over alcohol or other drugs, and learn to make lifelong changes in daily living, which include helping others (Kelly et al., 2009; Spiegel & Mulder, 1986). The program of recovery in AA and NA are based on the "12 steps". By following the 12 steps, members learn to trust a "higher power," which could be their "home group" as well as a deity or another form as a means to obtain a daily reprieve from urges or thoughts of using alcohol or other drugs (e.g., Chappel, 1992). Individuals "work the steps" along with other members of the organization, including working closely with a sponsor (generally someone who has obtained a greater length of sobriety and who serves as a pathfinder).

An essential component of 12-step programs is that alcoholics or other drug abusers help one another to stay clean and sober. These programs are built on the principle that a recovering alcoholic or addict can altruistically and effectively help a fellow alcoholic or addict to gain or maintain sobriety. Members openly talk about their struggles and successes and develop problem-solving skills, as well as friendships with others, comforted in the knowledge that they are not alone in their plight.

Twelve-step programs strongly espouse the notion that spiritual experiences are the means to arrest the diseases of alcoholism and drug addiction. Program literature asserts that these diseases are not only physical, mental, and emotional diseases but also diseases of the spirit (e.g., Alcoholics Anonymous, 1976). AA/NA suggests that belief in a higher power, and attempts to conform one's behavior to that of the higher power would help lead to recovery from alcoholism or drug addiction (Galaif & Sussman, 1995; Sussman & Ames, 2008). The 12 steps of AA/NA are depicted in Table 1.

Involvement of Teens in 12-Step Programming

Kelly et al. (2009) differentiate between formal 12-step–oriented treatment and informal 12-step fellowship in the community. Formal 12-step–oriented treatment typically refers to inpatient or outpatient treatment that involves multiple modalities. Young patients may be educated while in a treatment setting about AA/NA, may work some of the 12 steps, and may be encouraged or even transported to 12-step meetings in the community. Approximately, two thirds of formalized inpatient and outpatient treatment programs for teens are constructed at least in part based on the 12-step principles (Kelly & Myers, 2007). Thus, formal treatment for teens currently is very much interlaced with a 12-step component.

Unfortunately, there is relatively little research information regarding AA/NA involvement by teens in informal community-based 12-step programs. In the community, AA and NA are abstinence-oriented, multidimensional, non profit, voluntary, socially supportive, self-help

fellowships for individuals for whom alcohol or other drug use has become problematic. The only requirement for membership in these 12-step programs is the desire to stop using alcohol or other drugs. The 12-step program model is self-supporting, does not accept outside contributions, and expresses no organizational opinions on outside issues. Certainly, these organizations provide a very convenient means to maintain abstinence, as there are many locations and times of meetings, they are free/low cost, and they may provide a source of sober peer networks. Youth are widely recommended to attend the 12-step programs in formal treatment and in the community (e.g., American Academy of Child and Adolescent Psychiatry [AACAP], 2005 [Recommendation 11]; Niven, 1986; Substance Abuse and Mental Health Services Administration (SAMHSA), 2001).

Informal 12-Step Treatment for Teens: Participation Prevalence

Some surveys exist which describe prevalence of youth participation in AA/NA. There is evidence that at present, only approximately 11% of the members of AA, and 14% of the members of NA, are 21–30 years old and only 2% of each organization are under 21 years old (Alcoholics Anonymous, 2007; http://www.aa.org/pdf/products/p-48_07survey.pdf, accessed on June 25, 2009; http://www.na.org/?ID=Home-basicinfo#MembershipDemographics, accessed on June 25, 2009). There is recognition among AA and NA members in the community that youth tend to be underrepresented (http://web.na.org/?ID=Youth-content, accessed June 17, 2009).

Owen and Slaymaker (2003) compared AA involvement of 112 former adult (21–73 years old, average age = 38) versus 23 former adolescent patients (14–20 years old) from Hazelden inpatient treatment, who were attending AA in the community. Both samples were 52% male, and they found that the average number of months attending AA were 9 versus 4.8 for adults versus teens, number of months having a sponsor was 5.3 versus 4.2, and average months of abstinence was 9.3 versus 7.3. Thus, the duration of participation in AA was greater for adults, though perhaps not as much greater as one might expect through membership statistics.

A second study of alcohol abusing/dependent treatment patients from two managed care programs compared young adults to the remainder of the sample who were older (Mason & Luckey, 2003). At the treatment baseline, 26% of the sample of young adults (18–25; n = 98) reported having attended AA/NA meetings at least weekly compared to 35% of older adults (n = 922), also indicating relatively lower attendance of younger age drug abusers, though by only a third (Mason & Luckey, 2003). Kelly and Myers (2007) and Kelly, Yeterian, and Myers (2008) also noted in their work relatively infrequent attendance of AA/NA by teens compared to adults (perhaps one third less attendance at weekly meetings within the first 90 days post treatment; e.g., 60%–75% vs. 90%), and they observed a decrease in attendance by teens by approximately one third from the first 90 days to 1 year post treatment. They compared this dropout rate with adults, suggesting that only one eighth of adults drop out of AA/NA participation over the same duration (Kelly et al., 2008, see pp. 429–430; also see, Godley, Godley, Dennis, Funk, & Passetti, 2005; Mason & Luckey, 2003).

They also noted that relatively fewer teens participated in AA/NA even though treatment staff (N = 114 across five teen program sites) reported being very supportive of teen participation in AA/NA (Kelly et al., 2008; also see Passetti & Godley, 2008, who found the same results with N = 28 staff across eight teen sites). In summary, although AA/NA participation in the community is encouraged among teens, they appear to be one third less likely than adults to be involved in 12-step meetings outside of the context of formal treatment, and their post formal treatment dropout rate from meeting attendance may be higher.

A Rereview of Teen AA/NA Treatment-Related Outcomes

Kelly and Myers (2007) provided the first review of predictors of adolescents' participation in AA/NA and AA/NA behavioral outcomes. After doing a search of PsycINFO and Medline, relevant accessible reference lists using the terms "Alcoholics Anonymous," "Narcotics Anonymous," and "12-step" crossed with "Adolescents," revealed 30, 5, and 32 articles, respectively. After deleting theoretical descriptions and qualitative works, a total of only eight empirical papers were located, which examined teen AA/NA participation or outcomes (Alford, Koehler, & Leonard, 1991; Brown, Mott, & Myers, 1990; Hohman & LeCroy, 1996; Hsieh, Hoffman, & Hollister, 1998; Kelly, Abrantes, & Brown, 2004; Kelly, Myers, & Brown, 2000, 2002; Kennedy & Minami, 1993).

I conducted a rereview of this literature, using a search of PsycINFO, OVID Medline (1950 through first 2 weeks of June, 2009), PubMed, Google Scholar, and relevant accessible references lists using the terms "Alcoholics Anonymous," "Narcotics Anonymous," and "12-step" crossed with "Adolescents" and "Teens" (accessed on June 10–24, 2009). Thus, 24 searches were attempted. The total numbers of Web sites found in each search is shown in the Appendix.

Inclusion criteria were teen age range (12–22 years old), a group sample (n > 4), an AA/NA treatment model explicitly mentioned in the study, and provision of some type of alcohol/drug use behavioral outcomes data. Across all searches, after deleting theoretical descriptions and qualitative works, I located 19 articles, as is shown in Table 2, in which I provide subject characteristics, treatment location and contents, method of investigation, and outcomes. I also went through the reference lists of these articles but found no additional articles.

Seven of eight articles were included from the review of Kelly and Myers (2007). One article was excluded from Table 2 because it did not provide behavioral outcomes data (Hohman & LeCroy, 1996). In addition, I combined two of their works because they mentioned in their review that they reported overlapping samples (Kelly et al., 2000, 2002; no. 13 in Table 2).

My review involved samples very similar in composition to Kelly and Myers (2007). In my review, 4 studies sampled fewer than 100 subjects, 7 studies sampled 100–199 subjects, 5 studies sampled 200–600 subjects, and 3 studies sampled over 600 subjects. Males were the minority gender in only 1 study, composed 50–59% of the sample in 1 study, were 60–69% of the sample in 11 studies, and were 70% or more of the sample in 6 studies. Whites were

the ethnic majority in all but one study (which was 50% White; no. 5 in Table 2). Whites appeared to compose at least 75% of the sample in 15 of the studies. Although most youth tended to abuse multiple substances, marijuana was the drug of choice in eight of the studies whereas alcohol was the drug of choice in five others, and stimulants were the drug of choice in three studies (the drug of choice was not clear in three studies). Youth were sampled from Canada in two studies but the remainder was sampled in the United States from a total of 11 states (two studies had sampled multiple states; regarding the most prevalent states, five studies were completed in California, three in Illinois, and three in Pennsylvania). At baseline assessment, 12 of the studies surveyed inpatients, 1 sampled day treatment patients, 4 sampled outpatients, and 2 sampled a combination of patients. In all studies, treatment clearly involved a variety of modalities in addition to the 12-step meetings or use of a 12-step model, including individual counseling, family therapy, peer group milieu work, recreation, skills training, job, and/or drug or academic education.

A total of 16 of 19 studies used a single-group design from which to draw inferences. Two studies did make use of wait-list control groups using a quasiexperimental design (nos. 9 and 18 in Table 2), comparing them to AA/NA-oriented treatment. One study used a randomized control trial comparing several outpatient treatment conditions; however, community-based AA/NA meeting participation was encouraged across conditions, hence regarding AA/NA participation this was a single group design (no. 7 in Table 2).

Teen AA/NA Treatment Outcomes

The formal 12-step–oriented program evaluation studies were the only studies I found that also mentioned any type of evaluation of youth alcohol/drug use, pertaining to informal 12-step involvement and outcomes. In my review, reported levels of abstinence averaged 30–40% across studies and time points Prevalence of abstinence was at 3 months: 29% and 35% (2 studies); 6–9 months: 30%, 51%, and 24% (3 studies); 1 year: 8 studies ranging from 30% to 66%, averaging 39%; and 2 or more years: 40%, 30%, 30%, 20%, and 50% (5 studies). One study did not report abstinence rates per se but rather reported changes in the number of days of use (King, Chung & Maisto, 2009).

For comparison, I examined reviews of other teen quit data that did not explicitly focus on the 12-step involvement (although it is possible that two thirds of these programs involved an AA/NA dimension to them; see Kelly & Myers, 2007). Clark (2004) inferred based on the studies he reviewed that only 20% of youth treated for an alcohol use disorder will remain abstinent by young adulthood (although approximately 50% will show nonproblematic use in young adulthood). Chung and Maisto (2006) inferred based on the studies they reviewed that between 30% and 45% achieve consistent abstinence from alcohol at 1-year follow-up (although they note that results among inpatient teens may be as low at 15%; also see Grenier, 1985), and they also note that approximately 25% show nonproblematic use at the 1-year follow-up. They suggested a slightly higher abstinence value for other drugs (about 60%), with up to 30% nonproblematic use at a 1-year follow-up (also see Maisto, Martin, Pollock, Cornelius, & Chung, 2002). The results of these reviews pretty well matched the rereview outcomes I report (see Table 2). It would be difficult to try to disentangle the effects of AA/NA from other treatment components. However, it would

appear that programs that explicitly mention AA/NA as part of treatment obtain results comparable to other reviews suggesting that, at minimum, AA/NA-entrenched formalized treatments for teens do as well as other treatments on average.

Of course, results in all of these studies may be optimistic because most examined youth who completed treatment (most did not examine dropouts), and these studies did not provide intent-to-treat type data (Sussman, 2002). Adolescents that are hard to follow-up are relatively likely to show worse outcomes than those easier to follow-up (see Meyers, Webb, Frantz, & Randall, 2003; Stinchfield, Niforopulos, & Feder, 1994). This does not reduce some optimism regarding the effectiveness of AA/NA for teens; only that the overall average recovery rates may need to be lowered when one considers attrition-related issues.

One other notable issue is that most of the studies in Table 2 did not show ethnic diversity in the data; that is, a majority of the patients were White teens. In only four studies did a minority group approach or surpass 20% representation in the sample (nos. 5, 7, 8, and 13, in Table 2). Although results of these four studies did not appear to vary as a function of ethnicity, more research is needed particularly in ethnically diverse or minority settings.

Effects of AA/NA Attendance on Abstinence at Follow-up

Table 2 also reveals that of the 19 studies, 11 examined the effects of informal community-based AA/NA attendance (after discharge from formal treatment) on abstinence at follow-up. All 11 studies (nos. 3, 5, 7, 8, 10, 11, 12, 13, 14, 15, and 17, in Table 2) find that AA/NA attendance predicts abstinence, generally by two- to three-fold, or that those persons that were abstinent attended approximately twice as many meetings per week. These data appear to provide rather strong support that teen attendance at AA/NA facilitates abstinence. Kelly et al. (2000, 2002) and Kelly, Brown, Abrantes, Kahler, and Myers (2008) used temporally ordered, lagged analyses to examine longitudinal prediction of AA/NA participation and outcomes, finding evidence that the 12-step attendance precedes behavioral outcomes (controlling for baseline motivation for abstinence and substance use severity), lending support to the influence of AA/NA participation on outcomes. Retrospective reports also suggest that involvement with 12-step programs may have preceded abstinence/recovery (Alcoholics Anonymous, 2007 [involves the stories of 19 youths/young adults]; Margolis, Kilpatrick, & Mooney, 2000 [involves the stories of 14 young adults]). These data still should be interpreted with caution until more such studies with several different samples of youth are completed.

Which Youth Tend to Become Involved in AA/NA?

Kelly and Myers (2007) indicated that youth who were more hopeless (e.g., about controlling their drinking or using; also see Kelly et al., 2008), more motivated for abstinence, had friends who did not use drugs, received less parental involvement during treatment, were more likely to have had prior treatment, and experienced relatively worse alcohol or other drug problems, tended to become involved in AA/NA. In addition, Kelly, Myers, and Brown (2005) found evidence that youth who attend young persons' meetings rate attendance as important and are more likely to attend AA/NA.

I located five additional papers, all but one published subsequent to the review by Kelly and Myers (2007) that examined which youth tend to be involved in AA/NA. While retrieved during my literature search, only three are represented in Table 2 because two of these five studies did not examine behavioral outcomes. One paper found evidence that teens that tend to externalize their difficulties (i.e.., attention deficit, defiant, conduct disorders; $n = 66$) were less likely to complete formal 12-step-based treatment programs than internalizers (i.e., anxiety and mood disorders; $n = 85$; Winters, Stinchfield, Latiner, & Stone, 2008; a subsample of no. 18). Specifically, 66% versus 85% completed treatment, and externalizers showed 17% less improvement (40% vs. 57% abstinent or no more than monthly use; about 30% less viewed as proportional improvement) at 5.5 years follow-up. This same type of result was found by Yu, Buka, Fitzmaurics, and McCormick (2006; see no. 19 in Table 2), pertaining to attendance among youth not suffering versus suffering from learning disabilities (LD), which is associated with externalizing type disorders.

Another study indicated that teens that reported feeling connected to others, engaged in a higher frequency of meditation and prayer, and endorsed a more spiritual orientation to life were those who expressed a greater preference for spirituality and the 12-step approaches (still adults were more likely overall to endorse spiritual and the 12-step approaches, 23% vs. 14% among a sample of 322 adult and 188 teen inpatients; Aromin, Galanter, Solhkah, Dermatis, & Bunt, 2006). A fourth study indicated that 207 teens staying in a therapeutic community residential treatment (four Phoenix House sites) for 90 days or more were relatively more likely (than youth who stayed for a more brief period of time) to attend the 12-step meetings and have a 12-step sponsor after leaving treatment (Edelen et al., 2007). A fifth study found that female (vs. male) teens were relatively likely to attend the 12-step meetings, and that females most likely to be involved were those who reported relatively more school, legal, and severity of substance abuse problems, and religious involvement, prior to treatment (Hsieh & Hollister, 2004; an additional study completed out of no. 11 in Table 2).

Teens and Mediation of Benefits of AA/NA

I located three studies that addressed mediation of the effects of teen AA/NA involvement and behavioral outcomes, two of which were completed by Kelly et al. (2000, 2002) and colleagues. Kelly et al. found that a key mediator of benefits of AA/NA participation was motivation for abstinence. (In addition, they failed to find that learning coping strategies mediated change.) Possibly, group support processes enhance motivation for abstinence, which then results in longer term abstinence among teens. Chi, Kaskutas, Sterling, Campbell, and Weisner (2009) provided data that suggested that social support and religiosity might mediate effects of AA/NA on abstinence among teens. However, a total of 451 youth recently were assessed (at one time point) by Kelly, Myers, and Rodolico (2008) regarding their experiences with AA or NA. Youth reported liking the group social support processes (identification and hope) the most; however, the authors suggested that the 12 steps per se (e.g., including spiritual aspects) appeared of less value to youth during the early stages of recovery, the time when it might be most important to involve teens in the 12-step programming. Perhaps, group support, motivation for abstinence, and only some aspects of

spirituality, mediate the effects of AA/NA participation. Much more research is needed on mediation of the beneficial effects of AA/NA participation.

Possible Reasons for Limited Teen Participation in AA/NA in the Community

Once teens are out of formal treatment, they tend to decrease their participation in AA/NA, as do adults, although relatively fewer teens participate, as was discussed earlier in this article. There are at least seven possible reasons for or interpretations this finding. First of all, even though there may be up to 2 million teens in the United States with alcohol or other drug problems, approximately 15% of the U.S. adult population or 45 million adults also have alcohol or other drug problems (Sussman & Ames, 2008). Because teens compose only 4% of the total alcohol or other drug abuser population, it is not that surprising that AA/NA attendance would be relatively low. It is true that AA/NA is composed of only half of the percentage of teens (2%) that would be expected on the basis of their representation among alcohol or other drug abusing persons. However, a percentage of teens composing more than 4% of AA/NA would reflect an overrepresentation of teens if it were found. Thus, the absolute percentages involved are small, presenting the possibility that there may be an exaggerated perception of lack of involvement.

Second, admitting to a sense of powerlessness (at least over alcohol or other drugs, if not also persons, places, and things), a key principle of the 12-step programs, may conflict with teens' developmental search for autonomy (Rivers, Greenbaum, & Goldberg, 2001). Third, teens' drug abuse history is more brief than adults, they may experience fewer dependence symptoms, and they may be more resistant to perceiving themselves as having to remain abstinent (i.e., perceive themselves as having "hit bottom"; Kelly et al., 2008; Rivers et al., 2001). Fourth, treatment settings need to grapple with the tendency of teens to engage in a relatively great deal of limit testing (Kaminer, 2001), and teens may be more likely to be placed in treatment involuntarily than adults, which might preclude voluntary involvement in community AA/NA meetings. Fifth, teens can be discouraged by older members as being too young for AA ("I spilled more booze than you drank"; Alcoholics Anonymous, 2007). Even if teens are not directly confronted by adults as "not being ready," developmental and role differences from adults may make teens feel uncomfortable in groups that are composed largely of older adults (Kelly et al., 2005). Sixth, teen drug abusers tend to report a lower level of spiritual orientation than adults (Kelly & Myers, 2007; Solhkhah, Galanter, Dermatis, Daly, & Bunt, 2009). One may speculate that as one grows older and grapples with issues of mortality, spirituality becomes a more salient issue. Finally, teen alcohol and other drug abusers simply may experience structural barriers such as transportation problems, which deter being able to attend (preferred) meetings (Kelly & Myers, 2007; Kelly et al., 2008).

Suggestions for Maximizing Teen Participation in AA/NA

A variety of different means to increase teens' involvement in AA/NA are already being attempted. In this section, I will present an eclectic selection of these. First of all, there have been several attempts to create literature relevant to teens. For example, there exist sources

that instruct teens that they can be alcoholics at their age (e.g., Alcoholics Anonymous, 1988; www.new-life-in-recovery.com/teenagealcoholism.html, accessed on June 16, 2009). AA provides a list of 12 questions in a pamphlet that teens can use to decide whether drinking is a problem for them (Alcoholics Anonymous, 1988). This pamphlet provides cartoons and poses at least two questions specific to young people (e.g., “Are your grades starting to slip? Are you goofing off on your job?” and “Do you drink when you get mad at other people, your friends or parents?”).

Other written materials provide personal recovery stories of teens that young alcoholics/drug abusers may identify with (e.g., Alcoholics Anonymous, 2006, 2007; various articles in the AA Grapevine [see www.aagrapevine.org, accessed June 25, 2009]; Marshall, 2003). For example, in the pamphlet “Young people and AA” (Alcoholics Anonymous, 2007), the stories of 19 young people from 13 to 25 years of age appear to involve themes of alcoholism stemming from depression (three stories), to improve social fit/social influence/social pleasure (eight stories), genetics/lifelong (two stories), being raised in a broken home (two stories), feeling different/insecure/low self-esteem (three stories), or a sense of rebelliousness (two stories). In personal stories in this pamphlet, it is mentioned that alcoholics can always find reasons why they do not belong; but alcoholics do understand the feelings of other alcoholics at any age (Alcoholics Anonymous, 2007). Likewise, NA began to place a renewed priority on the development of literature targeting teens (Youth IPs Project) at their World Service Conference in 2006 (http://web.na.org?ID=conference-youth-index, accessed June 25, 2009). NA has produced pamphlets “For the parents or guardians of young people in NA” and “By young addicts for young addicts” (Narcotics Anonymous, 1983, 2008), which provide detailed information about the contents of the NA program. SAMHSA also promotes materials written for young people to help them refer to AA/NA treatment other young people with drug problems (e.g., “A guide for teens: Does your friend have an alcohol or other drug problem? What can you do to help,” http://ncadi.samhsa.gov/govpubs/phd688/, accessed June 25, 2009; written by Harvard School of Public Health Metropolitan Life Foundation, 1994).

There are also sources that provide substantive information on engaging in a program of recovery. Hazelden Foundation published a text entitled “The Big Book unplugged: A young person’s guide to Alcoholics Anonymous,” by John R. in 2003, which explains the contents of the Big Book (Alcoholics Anonymous, 1976) in language and tempo relevant to teens, as well as a “Twenty four hours a day for teens” meditation text in 2004 (see www.hazelden.org, accessed June 25, 2009). Other written sources exist to assist teens in living drug free (e.g., Youngs, Youngs, & Moreno, 2003).

There also are 12-step groups designed for teens helping teens, including Young People in AA (YPAA), which includes international (United States, Australia, Canada, South Africa, and Sweden) and state (36 states in the United States at present) chapters (e.g., see www.icypaa.org/Links.html, accessed June 25, 2009). Young people’s groups in AA began appearing around 1945 and the International Conference on YPAA (ICYPAA) began in 1958 (www.icypaa.org, accessed June 25, 2009). Another AA organization is Alateen (a component of Alanon), a recovery program for young people to help them cope with alcoholism among their siblings and parents (www.al-anon.alateen.org/alateen.html,

accessed June 26, 2009). There are also some 12-step chat rooms or forums for teens (e.g., www.12stepforums.net/chatroom4.html, for teens affected by drug abuse in their family; http://www.e-aa.org/forums/viewforum.php?f=22, for young people in AA; both accessed on July 4, 2009), and these appear to be well monitored. Some authors have suggested that people should use a simplification of the 12 steps for teens (e.g., Janice Gabe, www.cmcsb.com/12%20Steps%20for%20Teens.html, accessed June 25, 2009), and while potentially quite useful, modification of the 12 steps is likely to meet with much resistance from mainstream AA/NA adult members.

Considering the discussion above regarding correlates of AA/NA teen participation, and reasons for not participating, other novel means to motivate attendance might be examined. In thinking about new directions, I considered the Survey of Readiness for Alcoholics Anonymous (SYRAAP) literature by Kingree, Simpson, Thompson, McCrady, and Tonigan (2006) and Kingree, Simpson, Thompson, McCrady, Tonigan, and Lautenschlager (2007). This assessment device was found to predict AA participation (frequency of meeting attendance, involvement with AA activities and experiences) at a 6-month follow-up assessment among 217 adults (37% that were 18–29 years old at baseline). The measure consists of three factor components, each consisting of five items. These components are perceived benefits of participation in AA (find guidance, feel better about self, know someone who was helped, courage to change, and be understood by others), perceived severity of drug problem (seriousness, friendships suffered, financial problems, hurt other people, and interfered with solving everyday problems), and perceived barriers to participation in AA (embarrassing, will feel depressed, not belong, not want people to know going to AA meetings, and changes expected are too difficult). These three components may map quite well onto the research material on correlates of teen AA/NA participation and reasons for not participating. The benefits component would seem to be related to youths' having friends that do not use, need for support related to less parental involvement, being motivated for abstinence, and being open to spirituality (connection, meditation/prayer, spiritual way of life). The severity component would seem to be related to youths' feeling hopeless, experiencing prior treatment, being involved in relatively long treatment, having worse drug use problems, having worse problems at school, and suffering legal problems. Youth that have already suffered a fair amount may not care as much about autonomy issues or duration of use. The barriers component would seem to be related to a tendency to externalize problems, fear of experiencing rejection by older persons, limit testing on traditions/rituals, and difficulties with transportation to meetings.

Novel solutions to increase teen participation in AA/NA may need to consider enhancing perceived benefits to participation among teens, clarifying or maximizing perceived severity of negative drug use consequences, and minimizing barriers to participation. Enhancing benefits to teens could include adding teens sections in recovery book stores, establishing teen meetings at Alano Clubs throughout AA, increasing the visibility of YPAA (and NA counterparts), and perhaps integrating teen AA/NA in the community even more closely with local Councils on Alcohol and Drug Dependence. Trying to enlist sober teens to start meetings could be of assistance (perhaps with the assistance of an adult mentor). Clarifying the severity of drug abuse could involve confronting teens in treatment with peer use and consequences norms (so they can see that they have incurred many more difficulties due to

substance use; as is done in MET; Sussman & Ames, 2008), making more use of detailed teen-specific consequences checklists in treatment and perhaps as part of recovery literature, and making AA/NA questions for teens more readily available to teens at schools. Reducing barriers may include describing AA/NA as an easier way to obtain social support, emphasizing the anonymity of membership, and enhancing transportation/meeting location options for teens. There is much that the recovery community, professional societies, and parents can do to increase youth participation in AA/NA.

Imbibing recovery movement concepts into standing community organizations is an important means of reaching and assisting adolescent drug abusers (Sussman et al, 2008). For example, “sober schools” have been created to help students continue their studies within the high school educational system while receiving treatment. The first sober high school opened in 1988 in Minneapolis, Minnesota. These schools have very low student–teacher ratios (e.g., 5:1), all students are in a recovery process, some schools use random drug tests, community service and recovery activities often are used, and learning may be personalized (www.recoveryschools.org, accessed on April 30, 2007; also see www.sarcc.com, which provides assistance to those wanting to implement a recovery program on the college campus, accessed on April 30, 2007). Due to the expense of developing and maintaining some of these specialized programs and limited public funding, their application to practice has been slow (there are fewer than 25 state recognized sober high schools to date in the United States). In addition, very little research exists to support or refute the efficacy of these sorts of programs. Due to the potential of increased tailoring to youths’ ecology, their investigation may be important for the future of teen substance abuse treatment and the promotion of sustained recovery.

Facilitating AA/NA involvement among adjudicated youth is another example of a means to increase the reach of 12-step programming. Presently, substance abuse treatment for incarcerated youth is offered in less than half of juvenile detention facilities, yet, about 40% of incarcerated youth meet criteria for alcohol or other drug abuse and dependence (Anglin, Prendergast & Farabee, 1998; Stein, Newcomb, & Bentler, 1986). Dissemination of AA/NA meetings within these facilities would seem warranted. In addition, some states have programs for first and second time offenders that do not require incarceration. For example, the state of California has drug diversion programs for first and second time, nonviolent drug offenders (which may include minors). These programs require the drug offender to attend drug education classes and 12-step program meetings. Drug courts are an alternative to drug diversion; the courts arrange for substance abuse treatment (mostly outpatient treatment) and other services and monitor progress in treatment (e.g., Longshore, Hawken, Urada, & Anglin, 2006). If the offender will comply with treatment, outcomes are promising. No published data, however, are available to indicate success of drug courts specifically with teens.

Certainly, other types of community-based, non-12-step, self-help programming may be considered for teens. Some drug users (alcoholics and addicts) may best regain control of their lives through a program that does not require belief in a Higher Power to gain sobriety. Some individuals do not want to feel powerless or dependent upon others, or to attend meetings for the rest of their lives. Other mutual help treatment alternatives to AA/NA

include Rational Recovery (www.rationalrecovery.org), SMART Recovery (www.smartrecovery.org), and Secular Organizations for Sobriety (www.secularhumanism.org/sos/index.htm; see Sussman & Ames, 2008 for more details). The use of these programs with teens is not yet prevalent, though they do not explicitly exclude teens. Future research should explore whether there is increasing interest and efficacy of these other self-help programs with teens.

Conclusions

As with adults, it appears that substance abuse treatment among teens is superior to no treatment. In addition, as with other types of programming, it appears that participation in AA/NA, both as formal programming and as informal, mutual help meetings post discharge, appear related to enhanced alcohol/drug use outcomes. Much more research is needed, particularly examining ethnic diversity and outpatient groups as predictors of AA/NA outcomes, because most work has focused on White inpatients. Still, current results are quite promising.

Youth compose only 2% of AA/NA members out in the community although they compose 4% of persons with drug problems in the United States. Means to increase participation in AA/NA may be quite helpful for teens. Enhancing perceptions of achieving increased autonomy and power through involvement in 12-step programming might be entertained, particularly because youth learn that they are finding a means to reduce dependence (on substances and others to obtain substances). An emphasis on attempting to stop problematic use as soon as possible, due to already suffering difficulties in several life domains, remains a challenge and the degree to which researchers can discriminate trajectories of different patterns of drug use among teens in the future, thus revealing to them their probability of normalization without treatment, could be helpful. In addition, attempts to instruct older AA/NA members on how to talk with teens in the program may be of great assistance. For example, adults may need to tolerate teens having some fun while reading the 12 steps or traditions at meetings, and may need to learn to say such things as that they wish they had joined the program when they were younger. Welcoming teen involvement really is needed among the elders in AA/NA. Perhaps, consistent with original statements made in AA (Alcoholics Anonymous, 1976), also permitting teens to have a wide net of definitions of Higher Power may be helpful (e.g., as a life force for orderly independence and autonomy). Finally, promotion of teen meetings at numerous community locations easy to travel to (school, local churches, or homes) may demonstrate greater inclusion norms for teens in AA/NA-type programming. These changes are rapidly occurring, as indicated by work at recent AA/NA conferences, and as mirrored by recent research efforts.

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Appendix: Number of Web Sites Found Among 24 Searches With Varying Keywords and 4 Search Engines

Keywords Crossed		Google Scholar	PsycINFO	OVID Medline	PubMed
12-Step	Adolescents	5,830	401	19	23
	Teens	3,010	73	4	4
Alcoholics	Adolescents	9,910	531	18	18
Anonymous	Teens	6,570	78	1	1
Narcotics	Adolescents	2,760	3	6	6
Anonymous	Teens	1,800	0	0	0

NOTES: In Google Scholar only first 500 sites were examined in each search.

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Table 1

The 12 Steps of Recovery

1.	We admitted that we were powerless over our addiction, that our lives had become unmanageable
2.	We came to believe that a power greater than ourselves could restore us to sanity
3.	We made a decision to turn our will and our lives over to the care of God, as we understood Him
4.	We made a searching and fearless moral inventory of ourselves
5.	We admitted to God, to ourselves, and to another human being the exact nature of our wrongs
6.	We were entirely ready to have God remove all these defects of character
7.	We humbly asked Him to remove our shortcomings
8.	We made a list of all persons we had harmed and became willing to make amends to them all
9.	We made direct amends to such people wherever possible, except when to do so would injure them or others
10.	We continued to take personal inventory and when we were wrong promptly admitted it
11.	We sought through prayer and meditation to improve our conscious contact with God, as we understood Him, praying only for knowledge of His will for us and the power to carry that out
12.	Having had a spiritual awakening as a result of these steps, we tried to carry this message to addicts (alcoholics), and to practice these principles in all our affairs

NOTE: In addition, see http://www.aa.org/1212/ or http://www.na.org/admin/include/spaw2/uploads/pdf/BT6E_Webposting.pdf; accessed on July 30, 2009.

Table 2

Nineteen Studies That Investigate the Effects of AA/NA-Related Programming on Drug Use Outcomes

Authors	Subjects	Method	Results
1. AADAC and Harvey-Jansen (1995); Williams and Chang (2000)	*N* = 395, 12–17 years old, 63% M, high% W, most polydrug, alc most common, Alberta, Canada	SG; 83% outpt, skills and 12-step	At 3 months, 29% abstin, 19% abstin all 3 months, meetings not mentioned as being related to success
2. AARC (1994); Williams and Chang (2000); www.aarc.ab.ca/qa.php, accessed June 25, 2009	*N* = 56, 13–22 years old, 76% M, 87% W, most polydrug, mar most common, Alberta, Canada	SG; Day treatment, 12-step, milieu, family, peer	At 1 year, 65% completers abstin since the end of treatment, 33% of dropouts abstin since dropout; Web site reported evaluation of *N* = 100 graduates, 48 continuously sober
3. Alford, Koehler, and Leonard (1991)	*N* = 157, 13–19 years old, 62% M, high% W, DOC = 53% mar, 31% alc, 7% hall., 3% stim (all F), Nebraska	SG; Inpt 12-step 45 days, individual 5 times per week, group 5 times week, daily presentations	At 2 years, 48% of prog. completers and 33% of noncompleters were abstin-minor lapse, 27% versus 23% adequate social function, 84% of high freq 12-step attend (1 + meeting/week) vs. 46% attend 1 meeting/3 months abstin-minor lapse
4. Brown, D'Amico, and McCarthy (2001)	*N* = 162, 14–18 years old, 60% M, 81% W, 11% H, DOC = 56% stim, 32% mar, 2% alc, California	SG; Inpt 12-step, 4 weeks ave stay, intake to 4 years follow-up	At 4 years, overall 13% abstin and 15% minor lapse. From intake to 4 year use in last month: 91% to 66% alc, 85% to 77% cig, 84% to 44% mar, 85% to 20% stim, 32% to 16% oth
5. Chi, Kaskutas, Sterling, Campbell, and Weisner (2009); Sterling, Chi, Campbell, and Weisner (2009)	*N* = 357, 13–18 years old 66% M, 50% W, 19% H, 16% B, all using at baseline but rates not reported, California	SG; Kaiser CD outpt programs, groups (1–3 times per week for 1 year), education, family, 12-step attendance expected	At 3 years, overall 30% absin (38% alc, 57% drugs). At 3 years, *N* = 68 attended any 12-step meetings in last 6 months. Attendance at 3 years (10 or more meetings last 6 months) 2.5 times more likely to be abstin alc or drugs. Potential mediation by social support and religiosity
6. Garner, Godley, Funk, Dennis, and Godley (2007); Godley, Godley, Dennis, Funk, and Passetti (2006)	*N* = 183; 12–17 years old 71% M, 73% W, 18% B, DOC = 53% mar, 27% alc, 18% cocaine or other drug, Illinois	SG; Inpt program (at least 7 days; ave days = 52), 12-step groups, ind, group skills training, education, family groups	At 9 months, overall 24% were abstin. (28% vs. 19% when examining assignment or not to case management aftercare program, ACC; 31% vs. 26% alc)
7. Godley, Godley, Dennis, Funk, and Passetti (2002); Godley, Godley, Dennis, Funk, and Passetti (2004) Godley, Godley, Dennis, Funk, and Passetti (2005) Godley, Kahn, Dennis, Godley, and Funk, 2005	*N* = 552, 12–18 years old 82% M, 62% W, 29% B, DOC = 100% cannabis abuse or dependence (not currently very heavy use of other drugs, though 37% alc, 12% other drug), Illinois, Pennsylvania, Florida, Connecticut	RCT of Outpt, ind. MET, CBT, or Family support or MDFT, or teen community reinforcement, with 2+ days of outpt treatment; 12-step meeting participation was expected/examined	At 30 months, 30% were lowest trajectory subjects (less than 10 days use at 1 year, 14 days by 30 months). At 1 year, 26% of the variance of outcomes explained by recovery environment and social risk; high involvement in 12-step groups, low involvement in victimization or substance-involved activities, predictive of substance use
8. Grella (2002); Hser et al. (2001)	*N* = 810 (358 residential, 270 short-term inpt, 182 outpt), 75% 15–16 years old, 70% M, 62% W, 22% B, 10% H, DOC = 66% mar, 37% alc, 10% stim, 62% comorbid diagnosis, Illinois, Oregon, Minnesota, Pennsylvania cities	SG; Inpt and outpt, daily groups, individual counseling, education, 12-step sessions	At 1 year, 36% residential, 22% short-term inpt, 30% outpt abstin. For comorbid youth 12-step participants were 3 times more likely to be abstin. Over full sample, longer time in treatment important
9. Grenier (1985); Williams and Chang (2000)	*N* = 144 (117 treatment, 27 no treatment wait-list controls [actually 19 with no other treatment]), 9–21 years old, 60% M, mostly W, most polydrug, alc, then mar most common, Louisiana	QE; Inpt AA-family model, focus on first 5 steps; also education, group, individual, recreation, occupation	At a weighted ave of 9.8 months for controls and (maybe) 2 years for program, 66% treatment and 20 (14% is no other treatment)% control abstin
10. Hoffmann and Kaplan (1991); Williams and Chang (2000);	*N* = 826, 15–17 years old 64% M, 90% W, most polydrug, mar most common, facilities distributed throughout United States. States not reported	SG; Inpt programs	At 1 year, 40% treatment completers abstin, regular attendance in support group predicts abstin

Authors	Subjects	Method	Results
11. Hsieh, Hoffmann, and Hollister (1998); Hsieh and Hollister (2004); Kelly and Myers (2007)	*N* = 2,317, 17–19 years old, 63% M, 90% W, 2% H, 2% B, type of drug abuse not reported, but 82% CATOR inpt for alc database in Minnesota, facilities distributed throughout the United States. States not reported	SG; 24 inpt programs; Comprehensive Assessment and Treatment Outcome Research (CATOR) database	At 1 year, 48% abstin last 6 months, best predictors of abstin attendance at AA/NA or other self-help support group, attendance at aftercare, and parental attendance at Alanon/Alateen
12. Kelly, Brown, Abrantes, Kahler, and Myers (2008)	*N* = 139, 14–18 years old, 60% M, 75% W, 5% H, 5% B, DOC = 53% stim, 32% mar, 7% hall, 4% alc, California	SG; Inpt Minn. Model, 12-step meetings, samples at 2 facilities	Across 8 years, 50% days abstin, but not clear % totally abstin at 8 years. From intake to 8-year follow-up, 92% to 31% (65% down to 8%) rate of AA/NA any (weekly) attendance. Early (first 6 months) attendance predicts abstin but effect falls to almost 0 by 8 years, whereas attendance through 2 years maintains abstin
13. Kelly, Myers, and Brown (2000, 2002, 2005); Kelly and Myers (2007)	*N* = 99, 14–18 years old, 40% M, 78% W, 16% H, DOC = 44% mar, 44% stim, 11% alc, 8% hall, 4% opiates, California	SG; Inpt Minn Model, 12-step meetings, overlapping samples at 2 facilities (2000, 2002 studies)	At 6 months, 30% abstin, 59% attending 12-step meetings, those abstin attended 2 times the number of meetings (28 vs. 12 on average, in previous 3 months). Motivation for abstin mediates relation of attendance and outcomes
14. Kennedy and Minami (1993)	*N* = 91, 14–20 years old, 81% M, 92% W, DOC = 89% alc, 80% mar, off the coast of Maine	SG; Inpt 3-day detox, then wilderness location 22 days Outward Bound, challenging activities with AA/NA concepts	At 1 year, 47% maintained abstin, 38% attend AA/NA 1 + times per week, 4 times more likely to be abstin if attend AA/NA
15. King, Chung, and Maisto (2009)	*N* = 142, 14–18 years old, 63% M, 89% W, 6% B, DOC = 80% mar, 47% alc, Pennsylvania	SG; Outpts at six sites, 12-step meetings, relapse prevention, group, family, individual	At 6 months postbaseline, an average 6 days mar (7 days at baseline), and one to two 12-step meetings, in last 30 days; meeting attendance predicted greater diff. abstin; abstin prev not reported
16. Knapp, Templar, Cannon, and Dobson (1991); Williams and Chang (2000)	*N* = 94, 14–17 years old, 67% M, 84% W, 12% H, DOC = 34% alc/mar, 24% stim-mixed, 18% mar, 14% alc, California	SG; Inpt 30–40 days, AA/NA model, ind, group, family, education, recreation, life skills	At unknown follow-up point (had to be at least 1–2 months since intake), 33% alc/39% drug “currently” abstin
17. Ralph and McMenamy (1996); Williams and Chang (2000)	*N* = 172 (108 completers, 65 noncompleters), 13–19 years old, 72% M, 91% W, DOC = not reported	SG; Inpt 45 days, emphasis on AA/NA groups; milieu and token economy; family aftercare	At about 1 year, 33% treatment completers abstin previous 10 months (57% “since discharge” with varying follow-up), aftercare (60% attended)and AA/NA (44% attended) predicted outcome
18. Winters, Stinchfield, Latiner, and Lee, 2007; Winters, Stinchfield, Latiner, and Stone, 2008; Winters, et al. 2000	N = 245 (179 treatment, 66 wait-list controls), 12–18 years old, 56% M, 85% W, DOC = 77% alc, 20% stim, 21% oth, Minnesota. (A small community non-drug abuse control group was involved but no data at 1-year for them; not included here.)	QE; Inpt and Outpt 12-step Minn. Model; intake to 1 year and 5.5 years follow-up	At 1 year, 45% abstin-minor lapses overall in treatment group, 53% completers, 15% non completers, 27% wait-list; at 5.5 years, 35% abstin-minor lapses (up to monthly use) among all in treatment, 5% wait list
19. Yu, Buka, Fitzmaurics, and McCormick (2006); Deykin and Buka (1997)	*N* = 201 (43 LD, 158 no LD), 15–19 years old, 67% M, 87% W, DOC = 8% alc only, 10% drugs only, 82% both, Massachusetts	SG; seven in pt treatment centers, 12-step model, groups, graded level of responsibility	At 6 months post baseline 51% abstin overall (37% LD, 55% no LD), 42% LD, 53% no LD attends 12-step meetings at least 1 time per week

NOTES: M = males; W= White ethnicity; H = Hispanic; B = Black; cig = cigarettes; alc = alcohol; mar = marijuana; stim = stimulants; hall = hallucinogens; DOC = drug of choice; LD = learning disability patients; inpt = inpatients; outpt = outpatients; ind = individual counseling; SG = single group design; QE = quasi-experimental design; RCT = randomized control trial; MET = motivation enhancement training; CBT = cognitive-behavioral therapy; MDFT = multidimensional family therapy; Minn Model = Minnesota Model; abstin = abstinent; ACC = assertive continuing care; diff abstin = difference in abstinence; ave = average.