

# Predictors of Membership in Alcoholics Anonymous in a Sample of Successfully Remitted Alcoholics†

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**Abstract**—This study identifies factors associated with Alcoholics Anonymous (AA) membership in a sample of 81 persons who have achieved at least one year of total abstinence from alcohol and other drugs. Forty-four were AA members, 37 were not. Logistic regression was used to test the cross-sectional associations of baseline demographic, substance-related, spiritual and religious, and personality variables with AA membership. Significant variables from the bivariate analyses were included in a multivariate model controlling for previous AA involvement. Having more positive views of God and more negative consequences of drinking were significantly associated with AA membership. This information can be used by clinicians to identify clients for whom AA might be a good fit, and can help others overcome obstacles to AA or explore alternative forms of abstinence support.

**Keywords**—Alcoholics Anonymous, alcoholism, predictors of Alcoholics Anonymous membership

A number of studies have shown membership in Alcoholics Anonymous (AA) to be among the most important predictors of positive outcomes and sustained recovery from alcoholism (Bond, Kaskutas & Weisner 2003; Vaillant 2003; Morgenstern et al. 1997). Thus, identifying characteristics of AA participants can inform the development of effective interventions. To our knowledge, no previous study to date

has examined predictors of membership in AA among remitted alcoholics. The current study was designed to address this gap in current knowledge by identifying factors associated with AA membership in a sample of remitted alcoholics.

Previous research has followed the behavior of substance abusers involved in 12-Step programs following treatment. Differences in demographics, substance use severity, spiritual

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and religious activity, and social involvement have been observed among those who do and do not participate in AA. One study reported no demographic differences between those who attend AA and those who do not (Humphreys, Mavis & Stofflemayr 1994). Other studies found that certain demographic groups, such as women (Humphreys, Mavis & Stofflemayr 1991), those with higher levels of education (Terra et al. 2007), and African Americans (Kelly & Moos 2003; Humphreys et al. 1991) are more likely to attend or less likely to drop out of AA. Higher substance use severity and more family, social and psychological problems have been shown to be associated with later AA participation (Emrick et al. 1993; Humphreys, Mavis & Stofflemayr 1991). Studies have also found that individuals who participate in more spiritual and religious activity are more likely to later affiliate with AA (Kelly & Moos 2003; Emrick et al. 1993). Certain personality characteristics of those who affiliate with AA have been identified. Janowsky, Boone, Morter, and Howe (1999) found those who had attended meetings had higher levels of extraversion and lower levels of "shyness with strangers." Kelly and Moos (2003) similarly found that individuals who were less likely to drop out of AA reported more interpersonal social involvement with other people in their daily lives.

This study examines predictors of AA membership in a longitudinal sample of alcoholics who three years after entry into a longitudinal survey were abstinent for at least one year and either identified as members of AA or did not. This study has two aims. The first is to identify correlates of AA participation among successful remitters. The specific variables we investigate are those found to be predictive of AA participation in previous literature, including education, gender, race, spirituality, religiousness, extroversion, and addiction severity. The second aim is to examine the relative strength of the correlates within a multivariate framework.

## METHOD

Data from this study are derived from the Life Transition Study (LTS), a longitudinal survey that followed 364 alcohol-dependent individuals for three years during the period of 2004-2009 (Robinson et al. 2010). The LTS was designed to explore spiritual and religious change and its relationship to drinking outcomes and recovery efforts in a diverse sample of alcohol-dependent individuals. Diagnoses of alcohol dependence were based on the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID; First et al. 1997). To ensure demographic, socioeconomic, and substance-use diversity, study respondents were recruited from four sources in a Midwestern city: a university outpatient treatment program ( $n = 157$ ), a VA outpatient treatment program ( $n = 80$ ), an outpatient moderation program designed to help individuals reduce drinking ( $n = 34$ ), and untreated individuals recruited from the local community ( $n = 93$ ).

Individuals were interviewed in person every six months and by telephone during the intervening three-month periods.

The current study focuses on 81 of the 87 original respondents who had achieved a year of abstinence at their final interview and were not involved in other forms of mutual-help groups beyond AA. Six individuals were abstinent and attending other self-help organizations such as Women in Recovery and S.M.A.R.T. Recovery. Abstinence was based on drinking and drug use data assessed by the TimeLine FollowBack Interview (TLFB; Sobell et al. 1996; Sobell & Sobell 1992). The sample was then divided into AA membership status using the following question from the Alcoholics Anonymous Involvement scale (AAI; Tonigan, Connors & Miller 1996): "Do you consider yourself to be a member of Alcoholics Anonymous?" At the final interview, 44 (54.3%) answered "yes." This group formed the AA group. The remaining 37 (45.7%) individuals were neither members of AA nor involved in any other mutual-help abstinence-support groups in the 90 days prior to the three-year follow-up. This sample of 81 came from all four of the original recruitment sites: the university outpatient treatment program ( $n = 47$ , 58.0%), the VA outpatient treatment program ( $n = 22$ , 27.2%), the moderation program ( $n = 3$ , 3.7%), and the community sample ( $n = 9$ , 11.1%). All of the individuals recruited from the community received professional treatment before entry into the study or at some time during the course of the study.

## Measures

**Demographic variables.** Demographic variables included education (in years), race (White or other), and gender (male or female).

**Spirituality and religiousness variables.** Measures of spirituality and religiousness were chosen based on their hypothesized ability to measure openness to the spiritual aspects of the AA program and included measures of belief in God, perception of God as loving, and the experience of being raised in a religious tradition. *Belief in God* was measured with the first item of the Religious Background and Behaviors scale (RBB; Connors, Tonigan & Miller 1996). This single item asks, "Which of the following best describes you at the present time?" The five-point response options were 1 = I do not believe in God (atheist); 2 = I believe we really can't know about God (agnostic); 3 = I don't know what to believe about God (unsure); 4 = I believe in God, but I'm not religious (spiritual); and 5 = I believe in God and practice religion (religious). In the current study, belief in God was defined as endorsement of items 4 or 5, nonbelief by endorsing items 1-3.

*Perceptions of God* were assessed with the Loving God scale (Benson & Spilka 1973). This five-item semantic differential measure uses opposite words as anchors at either end of a seven-point scale. Examples of item pairs are rejecting-accepting, unforgiving-forgiving, and approving-disapproving. The Loving God subscale measures the

**TABLE 1**  
**Demographic and AA-Related Variables at Baseline for Individuals Who Achieved at least One Year of Abstinence with and without Alcoholics Anonymous in a Subset of the Life Transition Study (N = 81)**

	AA Member* (n = 44)	Not an AA Member* (n = 37)	Total Sample (n = 81)
<b>Demographics</b>			
<b>Marital Status</b>			
Never Married	9 (20.5%)	8 (21.6%)	17 (21.0%)
Married/Living with Significant Other	19 (43.2%)	12 (32.4%)	31 (38.3%)
Separated, Divorced, Widowed	16 (36.4%)	17 (45.9%)	33 (40.7%)
<b>Race</b>			
White	36 (81.8%)	33 (89.2%)	69 (85.2%)
Other**	8 (18.2%)	4 (10.8%)	12 (14.8%)
<b>Household Income</b>			
< \$30,000	19 (43.2%)	19 (51.4%)	38 (46.9%)
\$30,001-\$60,000	11 (25.0%)	8 (21.6%)	19 (23.4%)
\$60,000 +	14 (31.8%)	10 (27.0%)	24 (29.6%)
<b>Employment</b>			
Employed	24 (54.5%)	16 (43.2%)	40 (49.4%)
Not Employed	20 (45.5%)	21 (56.8%)	41 (50.6%)
<b>Gender</b>			
Male	26 (59.1%)	30 (81.1%)	56 (69.1%)
Female	18 (40.9%)	7 (18.9%)	25 (30.9%)
Age (Mean, SD)	47.95 (11.44)	46.32 (12.10)	47.21 (11.70)
Education (Mean, SD)	14.52 (2.06)	14.30 (2.28)	14.42 (2.16)
<b>Spiritual and Religious</b>			
Raised in a Religious Tradition	32 (72.7%)	18 (48.6%)	50 (61.7%)
Belief in God	37 (84.1%)	25 (67.6%)	62 (76.5%)
Loving God Scale (Mean, SD)	25.95 (3.80)	23.06 (5.47)	24.66 (4.81)
<b>Substance-Related</b>			
Drinking Consequences (SIP), (Mean, SD)	25.64 (9.47)	20.57 (11.62)	23.32 (10.74)
Total Lifetime # of AA Meetings			
Attended (Mean, SD)	331.77 (590.52)	114.70 (337.99)	232.62 (500.68)
Alcoholics Anonymous Involvement (Mean, SD)	2.80 (2.31)	1.51 (1.56)	2.21 (2.09)
<b>Personality</b>			
Extraversion (Mean, SD)	38.66 (7.33)	35.27 (7.99)	37.11 (7.78)

\*"AA Member" refers to individuals who, at three-year follow up, had achieved at least one year of abstinence and considered themselves members of Alcoholics Anonymous. "Not an AA Member" refers to individuals who, at three-year follow-up, had achieved at least one year of abstinence and did not participate in Alcoholics Anonymous or any other abstinence support group.

\*\*Other includes African Americans (n = 9), Native Americans (n = 1), and multiracial individuals (n = 2).

degree the respondent finds God to be loving (or accepting, saving, forgiving, approving) ( $\alpha = .79$ ). (Note: all  $\alpha$ 's were generated from the current study sample.)

*Religious tradition* was measured using the following single item; "Would you say you were brought up in a religious tradition?" (yes/no).

**Personality variable: Extraversion.** The NEO Five Factor Inventory (Costa & McCrae 1992, 1985) measures the five major domains of personality: neuroticism, extraversion, openness, agreeableness, and conscientiousness. This study used 12 items from the NEO that measure extraversion. These items used a five-point Likert-type response format (1= strongly disagree to 5 = strongly agree;  $\alpha = .82$ ).

**Substance-use variables.** *Drinking severity* was measured by the Short Index of Problems scale (SIP; Miller, Tonigan & Longabaugh 1995). The SIP is a 15-item measure that asks about several negative consequences of drinking.

Sample items are "I have felt guilty or ashamed because of my drinking" and "My family has been hurt by my drinking." The scale uses a four-point Likert-type response format (0 = never, 3 = daily or almost daily;  $\alpha = .91$ ).

**Alcoholics Anonymous variables.** *Alcoholics Anonymous involvement* refers to involvement in AA beyond meeting attendance, including celebrating an AA sobriety birthday, having a sponsor, and being a sponsor. The construct was measured using a modified version of the Alcoholics Anonymous Involvement index (AAI; Tonigan, Connors & Miller 1996). Baseline values of this variable were included to control for previous AA involvement. Scores were rendered by summing the positive responses of seven of the scale's items that used a dichotomous response set, resulting in a range of possible scores from 0 to 7 ( $\alpha = .83$ ).

**TABLE 2**  
**Results from Bivariate Logistic Regression Analyses for Individual Baseline Predictors of AA Membership (N = 81)**

Individual Predictors	OR	95% CI	
		Lower	Upper
<b>Demographics</b>			
Education <sub>10-19</sub> (in Years)	1.050	.856	1.289
Gender (Female = 1, Male = 0)	<b>2.967</b>	1.071	8.218
Race (White = 1, Other* = 0)	.545	.150	1.981
<b>Spiritual and Religious</b>			
Loving God <sub>11-30</sub>	<b>1.147</b>	1.029	1.278
I Believe in God (yes = 1, no = 0)	2.537	.878	7.333
Raised in a Religious Tradition (yes = 1, no = 0)	<b>2.815</b>	1.116	7.099
<b>Personality</b>			
Extraversion <sub>1-45</sub>	1.062	.998	1.129
<b>Substance-Related</b>			
Drinking Consequences (SIP) <sub>1-44</sub>	<b>1.047</b>	1.003	1.094
Alcoholics Anonymous Involvement <sub>0-7</sub>	<b>1.394</b>	1.090	1.782

Note: Each line represents a separate bivariate logistic regression model. OR = Odds ratio. CI = Confidence interval. Values in bold are statistically significant at an alpha of .05. Figures in subscript are the range of values for continuous variables.

\*Other includes African Americans (n = 9), Native Americans (n = 1), and multiracial individuals (n = 2).

*Alcoholics Anonymous attendance* was measured by asking participants to calculate the total number of AA meetings they had attended throughout their lives.

### Analysis Plan

Associations between study variables and AA attendance were compared using unadjusted logistic regression analysis. Associations that were significant at the bivariate level were included in a multivariate logistic regression model. Odds ratios (OR) were computed for all unadjusted and adjusted models and were considered statistically significant if the 95% confidence interval (CI) did not bound the value 1.0.

## RESULTS

### Summary of Demographic and Clinical Variables

Table 1 summarizes the demographic and clinical variables of respondents who had been abstinent for at least one year at their final interview (N = 81). The majority of respondents were either married/living with a significant other (38.3%) or separated, widowed, or divorced (40.7%), White (85.2%), and male (69.1%). The mean age was 47.2 (SD = 11.7), and the mean years of education were 14.4 (SD = 2.16). Almost half the sample earned less than \$30,000 per year (46.9%) and were employed (49.4%).

### AA Attendance and Involvement Prior to Baseline

Table 1 indicates a high level of previous AA attendance in the sample. This is seen in the average number of total lifetime meetings attended (M = 233), although considerable heterogeneity was observed based on the large standard deviation (SD = 500.7). The mean score on the AA Involvement index was 2.21 (SD = 2.29).

### Bivariate Analyses

Table 2 summarizes bivariate analyses between AA membership and other study variables. Women with one year of abstinence were three times more likely to be in the AA group than men with one year of abstinence (OR = 3.0, 95% CI = 1.07-8.22). While believing in God was not predictive of AA membership in this sample, believing in a loving God was (OR = 1.1, 95% CI = 1.03-1.28). Individuals raised in a religious tradition were almost three times more likely to become AA members than those who were not (OR = 2.8). At baseline, increasing drinking consequences (OR = 1.05) and increasing AA involvement (OR = 1.4), predicted greater odds of identifying as an AA member three years later.

### Multivariate Analyses

Table 3 displays significant correlates of AA membership using multivariate logistic regression. All significant variables from bivariate correlates were entered into the model simultaneously. The overall model exhibited a good fit with the data ( $\chi^2 = 24.01$ ,  $p < .001$ , pseudo R-square = .36). Three variables were statistically significant predictors of AA membership at the final interview: The Loving God subscale (OR = 1.2, 95% CI = 1.01-1.32), SIP measure of drinking consequences (OR = 1.1, 95% CI = 1.00-1.12) and previous AA involvement (OR = 1.3, 95% CI = 1.00-1.801). Gender and being raised in a religious tradition were not significantly associated with AA membership at the final interview after controlling for other potentially confounding variables.

## DISCUSSION

To our knowledge, this is the first study that explored correlates of AA membership in a sample of AA and non-AA

**TABLE 3**  
**Multiple Logistic Regression Analysis of Longitudinal Predictors of AA Membership**

Predictors	OR	95% CI	
		Lower	Upper
AA Involvement	<b>1.345</b>	1.002	1.805
Gender (Female = 1, Male = 0)	2.795	.795	9.827
Loving God	<b>1.155</b>	1.009	1.320
Raised in a Religious Tradition	2.619	.842	8.143
Drinking Consequences (SIP)	<b>1.060</b>	1.003	1.119

Note: OR = Odds ratio. CI = Confidence interval. Values in bold are statistically significant based on a 95% CI that does not bound 1.0.

abstinent alcoholics. We found that a number of factors found in previous literature to predict AA participation in samples of alcoholics whose drinking patterns varied were also found in this study to predict AA membership in a sample of abstinent alcoholics. In this study, higher drinking consequences and higher scores on the Loving God subscale were associated with subsequent AA membership. These findings are consistent with prior research that analyzed samples of alcoholics whose drinking patterns varied. Specifically, our study confirmed that even in a sample of successfully remitted alcoholics drinking severity and positive disposition toward religion and spirituality are independently predictive of AA membership. These significant findings make a contribution to the literature on the characteristics predictive of AA membership among individuals successful at achieving abstinence. Following the work of Avants, Beitel, and Margolin (2005), included throughout the following discussion are the words of those respondents included in this analysis as recorded during the baseline interview. These quotes were chosen to verbalize examples of baseline constructs associated with later AA membership.

While female gender was a predictor of AA membership in the bivariate analysis, it was not significant in the multivariate model. Humphreys and colleagues (1991) reported that women would be more likely to affiliate with AA than men despite a recent Alcoholics Anonymous membership survey that found that 67% of AA members are male (Alcoholics Anonymous, 2008). Further research using larger samples would aid in clarifying the role of gender for AA membership.

Findings in the literature related to extraversion suggest that people-oriented, social individuals might be more comfortable at AA meetings and in AA culture. Speaking in front of others, making new friends, calling others on the phone, doing service, going out for coffee, and helping others are all highly interpersonal staples in the AA culture. While these activities are voluntary, the social nature of AA may be more desirable for some people than others. In our study, extraversion was not significantly associated with AA membership. This is contrary to research by Kelly and Moos (2003) and Janowsky and colleagues (1999). One possibility for this negative finding may have been the circumscribed

sample (i.e., all abstinent or within-group heterogeneity). While extraversion was not significantly associated with AA membership, supplemental data from qualitative interviews suggest that it may remain an important area of future study. For example, a 41-year-old White woman who had previously participated in AA was asked the following question, "What do you think has been most helpful in dealing with some of the problems of alcohol?" She said, "Going to AA and getting involved with people because I'm a very social person so I do like people around me and I like to be active and do stuff." Her response indicates that she responded positively to AA in part because she is social and outgoing.

Negative consequences of drinking were predictive of AA membership among abstinent alcoholics in both the bivariate and multivariate analyses. Similar findings have been reported by Emrick and colleagues (1993) and by Tonigan, Bogenschutz, and Miller (2006), who found that Type B (more severe) alcoholics were more likely to have sustained attendance in AA than less severe alcoholics. More severe drinking consequences may be predictive of later AA membership as the AA program encourages an admission of defeat and surrender in the battle with alcohol. Step 1 of the AA program involves admitting that one has become "powerless over alcohol" and that life has become "unmanageable" (AA 1986: 5). AA members routinely self-identify as alcoholics. It might take a greater number of negative consequences to bring an individual to come to accept one's powerlessness over alcohol and to embrace the stigma of the alcoholic label.

Interestingly, in the bivariate model belief in God was not predictive of AA membership in this sample but belief in a loving God was. Further, having been raised in a religious tradition was predictive of AA membership. The Loving God subscale remained significant even when controlling for other variables in the multivariate model. These findings add to evidence found in previous studies that spiritual and religious constructs are predictive of AA participation or retention (Kelly & Moos 2003; Emrick et al. 1993). The current study furthers the understanding of this dimension by controlling for previous AA involvement, ruling out that the findings are byproducts of previous AA involvement. This suggests that a generally favorable view

of God and previous experience with religiosity in childhood may be characteristic of individuals who later affiliate with AA. Those who relate to ideas of religion and spirituality in a positive way might be more open to trying and joining a spiritually-based recovery program such as AA.

A 45-year-old Black male respondent with high scores on measures of spirituality and religiousness found the spirituality of AA to be highly resonant with his attitude and world view:

[The AA founders] got a knowledge [*sic*] of human nature. You know, and it's spiritual. I like to read spiritual a lot, and AA is actually like a next Bible for me . . . You know, they talk about it being a way of living, not just a program . . . It's a way to get along with people, and treat people right. You know, it always tells you: you have to look at yourself, which is a spiritual principle. Turn it, turn it, have an inventory. The inventory is you, not somebody else's, you turn it around, and that's what caught me with AA.

This participant has a positive disposition toward spirituality and religiousness. He finds self examination, a way of being with others, and human nature itself to be implicitly spiritual. In these ways the spirituality of the AA program seems to be a good match with his pre-existing view of spirituality in human life. He is sober and identified as an AA member at the three-year follow-up.

Other respondents were more ambivalent. A 32-year-old White female participant, who at baseline had not yet attended her first AA meeting but who at three-year follow-up was an AA member, conveyed that while she was critical of religion, there were aspects of a spiritual community that she yearned for. She stated:

Religion—it's bad for me and I think it's bad for a lot of people but I think some people really need the structure of it and really need the faith to get through horrible crises. In a way I am jealous of that. I wish I had that because I think it's really helpful, when people die, you have all that support from church but I'd sort of like to be like that but also still be intellectual and smart and know about everything else that's out there.

While she feels religion is bad for her, her desire for structure and the social support of a faith community may portend her later affiliation with Alcoholics Anonymous. Favorable dispositions toward aspects of spirituality/religiousness, such as the Loving God variable examined in this study, may be cloaked in nontraditionally religious terms such as this individual's longing for a supportive community. Clinicians can look for a desire for community in clients and incorporate it when making referrals to AA.

Taken together, our findings indicate that having a more favorable view of God and more negative consequences of drinking may indicate a propensity to be amenable to AA membership, even in a sample of abstinent alcoholics controlling for previous AA involvement. These predictors

suggest that certain individuals may find AA a more comfortable and synchronistic experience. This has important clinical implications. Counselors can explore these concepts with clients and can encourage those with these characteristics to give AA a try as such clients may find AA to be a good fit. Practitioners may also work with individuals who do not have the characteristics associated with AA membership to help them explore whether these obstacles might be overcome or find other sources of support for sobriety with which they would feel more comfortable. The spiritual component of the AA program is a barrier to some. But some clients with negative views of spirituality or religion may in fact be ambivalent. This ambivalence could be resolved using clinical interventions such as motivational interviewing in order to reduce obstacles to trying AA.

### FUTURE RESEARCH AND LIMITATIONS

This study is comprised of a sample of individuals who achieved stable long-term abstinence. It controlled for previous AA involvement, and it used a high standard for classifying AA membership. However, several limitations are important to note. First, the sample size is relatively small. This was a consequence of choosing a sample who had strictly achieved one year of total abstinence by the three-year follow-up period. While this makes a contribution by controlling for favorable drinking outcomes, it is a limitation in terms of sample size. Therefore, results of this study should be interpreted with caution and replicated in larger samples. In addition, there are limitations related to generalizability because participants were recruited in one small Midwestern city.

While there is a literature on untreated alcoholics who experience natural recovery (Sobell, Ellingstad & Sobell 2000), little is known about treated alcoholics who achieve total abstinence without AA participation. Future research on this group can explore the resources used by non-AA members to support their abstinence. This work could help to expand options for sobriety for individuals who are not comfortable in AA meetings.

### CONCLUSION

Prior studies have examined predictors of AA involvement or dropout, but to our knowledge this is the first that focuses on correlates of AA membership among a sample of successfully remitted alcohol-dependent individuals. Some findings of the current study replicate those from previous research and further showed that variables reflecting spirituality and severity of alcoholism are uniquely associated with AA membership. Results enhance understanding of the factors associated with AA participation and suggest that greater attention to spirituality-related constructs might improve the translational impact of research on AA.

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