12-Step Therapy and Women with and without Social Phobia: A Study of the Effectiveness of 12-Step Therapy to Facilitate Alcoholics Anonymous Engagement

J. Scott Tonigan, a Sarah W. Book, b Maria E. Pagano, c Patrick K. Randall, d Joshua P. Smith, d Carrie L. Randall

a Department of Psychology, University of New Mexico, Albuquerque, New Mexico, USA
b Charleston Alcohol Research Center, Medical University of South Carolina, Charleston, South Carolina, USA
c Department of Psychiatry, Division of Child Psychiatry, Case Western Reserve School of Medicine, Cleveland, Ohio, USA

Online publication date: 07 April 2010


To link to this Article: DOI: 10.1080/07347321003648596
URL: http://dx.doi.org/10.1080/07347321003648596
12-Step Therapy and Women with and without Social Phobia: A Study of the Effectiveness of 12-Step Therapy to Facilitate Alcoholics Anonymous Engagement

J. SCOTT TONIGAN, PhD
Department of Psychology, University of New Mexico, Albuquerque, New Mexico USA

SARAH W. BOOK, MD
Charleston Alcohol Research Center, Medical University of South Carolina, Charleston, South Carolina USA

MARIA E. PAGANO, PhD
Case Western Reserve School of Medicine, Department of Psychiatry, Division of Child Psychiatry, Cleveland, Ohio USA

PATRICK K. RANDALL, PhD, JOSHUA P. SMITH, PhD, and CARRIE L. RANDALL, PhD
Charleston Alcohol Research Center, Medical University of South Carolina, Charleston, South Carolina USA

Alcoholism treatment often encourages involvement in Alcoholics Anonymous (AA). Little provision is made for women with social phobia (SP), who have been reported to have worse outcomes in 12-step facilitation (TSF) relative to cognitive behavioral therapy. This study examined whether SP moderated the effects of gender for these women in TSF. One hundred thirty-three SP alcoholics assigned to TSF (35 females and 98 males) in Project MATCH were compared to a no-SP control group. SP women drank earlier and

This work was supported by grants from the National Institute on Alcohol Abuse and Alcoholism (K02 AA00326 to Dr. Tonigan), (K23 AA014430 to Dr. Book), (P50 AA010761 to Dr. C. Randall), (K24 AA013314 to Dr. C. Randall), (K01 AA015137-12 to Dr. Pagano). The authors would like to thank Ms. Nancy White, and Mr. Adam G. Mace for their enthusiastic assistance with this project.

Address correspondence to Sarah W. Book, M.D., Charleston Alcohol Research Center, Medical University of South Carolina, 67 President Street, Charleston, SC 29425. E-mail: booksw@musc.edu

151
more intensely than no-SP women and all males, had equivalent completion of Step 5, and were less likely to acquire a sponsor during TSF.

KEYWORDS Social anxiety, social phobia, alcoholism, alcohol dependence, Alcoholics Anonymous, AA Sponsor, 12-step treatment, gender, women, drinking outcome

INTRODUCTION

The 12-step model is the prevailing therapeutic approach for treating substance abuse in the United States, and referral to Alcoholics Anonymous (AA) is common across different kinds of therapeutic approaches. As such, understanding the nature and magnitude of AA-related benefit has been assigned a high priority, especially within the context of the evidence-based movement. In general, prospective studies (e.g., Moos & Moos, 2006; Tonigan & Bogenschutz, 2008; Weiss, Griffin, & Gallop, 2000) and meta-analytic reviews of the extant AA literature (e.g., Forcehimes & Tonigan, 2008; Tonigan, Toscova, & Miller, 1996) are in agreement that AA offers modest yet positive benefit for many problem drinkers. Additional findings converge suggesting that engagement in, and commitment to, AA is a stronger predictor of success than sheer frequency of AA meeting attendance (e.g., Montgomery, Miller, & Tonigan, 1995; Weiss et al., 2000) and that social network support for abstinence found in AA explains, in part, AA benefit (e.g., Humphreys, Mankowski, Moos, & Finney, 1999; Kaskutas, Bond, & Humphreys, 2002; Longabaugh, 1999).

About one in five alcohol-dependent adults have co-occurring social phobia (SP) (Randall, Thomas, & Thevos, 2001). However, it is not clear how, if at all, SP may interfere with the treatment approaches found to promote the highest yields of AA-related benefit. In essence, SP, also referred to as social anxiety disorder, is a fear of scrutiny in social situations. People either endure the anxiety or avoid situations where discomfort may be a problem (American Psychiatric Association, 2000). Given that many of the documented predictors of AA-related benefit emanate from prescribed social interactions, it would appear that individuals with SP would derive less benefit from AA affiliation relative to those people without SP.

Book and colleagues recently reported results of a survey of 103 participants enrolled in intensive outpatient treatment programs for addiction to alcohol or illicit drugs (Book, Thomas, Dempsey, Randall, & Randall, 2009). Seventy-three of the participants were women. They compared the 38 participants (27 women) with high scores on a social anxiety rating scale to those with lower scores on their willingness to participate in addiction treatment activities. Individuals with social anxiety were significantly less
willing to speak up in group therapy, talk to their therapist, attend a 12-step meeting, or ask for a sponsor. Although this primarily female group with social anxiety appeared to have significant barriers to effective treatment in a 12-step model, this study did not evaluate addiction treatment outcome.

Terra and colleagues (2006) examined the impact of having SP on AA participation and alcohol treatment outcomes in a single-group naturalistic study and found mixed results. Specifically, they recruited 300 alcohol-dependent individuals presenting for treatment in Brazil and then interviewed these study participants at 3- and 6-month follow-up. Twenty-four percent of the sample was diagnosed via the DSM-IV criteria as having mild, moderate, or severe SP (no difference in SP rates by gender). AA referral was made through physician advice and did not follow any systematic protocol. Overall, no differences in relapse rate and AA attendance at 3- and 6-month interviews was found between those with and without SP, although SP participants reported chairing AA meetings significantly less frequently at both interviews relative to no SP (NSP) participants. Further, SP participants reported that they did not feel as good after an AA meeting as did NSP participants, and the SP group also reported feeling significantly more shame about going to AA. Acknowledged by Terra et al. (2006), however, rates of AA attendance were extremely low in the current study (e.g., 10 of 64 of SP, and 42 of 202 of NSP), with statistical tests frequently based upon fewer than five adults endorsing a particular AA-related behavior.

Work by Thevos, Roberts, Thomas, and Randall (2000) suggests that the interaction between formal treatment, SP, and AA participation may be more complex than that reported by Terra et al. (2006). In a post hoc analysis of the Project MATCH database, 261 participants (188 males, 73 females) with alcohol dependence were randomized to either 12-step facilitation (TSF) or cognitive behavioral therapy (CBT), were permitted to attend AA during treatment, and were followed during treatment and for 12 months after the completion of treatment. Consistent with Terra et al. (2006), results showed that alcohol-dependent individuals with SP fared equally well as those without SP in terms of alcohol quantity and frequency, and many of these participants received 12-step focused treatment in Project MATCH and attended AA after treatment. Unlike Terra et al. (2006), however, and in line with the findings of Book et al. (2009), Thevos and colleagues (2000) also reported that SP and the gender of the alcoholic interacted such that females with SP fared less well when assigned to 12-step treatment relative to CBT. Males with SP and without SP fared equally well in both treatments.

The current study aims to further investigate the reasons why female alcoholics with SP fared less well when assigned to 12-step therapy. Unresolved by Thevos et al. (2000), for example, was whether the poorer outcome for female alcoholics with SP assigned to TSF stemmed, in part, from their inability to meaningfully engage in AA after treatment, a time of high relapse rates. Cognizant of the Social Phobia and Gender interaction, the current
study offers to map the trajectory of specific AA-related behaviors of four groups of alcoholics (female SP and NSP, and male SP and NSP), all of whom received TSF (Nowinski, Baker, & Carroll, 1994).

**METHOD**

Project MATCH was a large randomized clinical trial ($N = 1,726$) investigating the relative effectiveness of Motivational Enhancement Therapy (Miller, Zweben, DiClemente, & Rychtarik, 1995), CBT (Kadden et al., 1995), and TSF (Nowinski et al., 1994), with the specific objective of identifying what types of alcoholics fared better when assigned to a particular treatment. Alcoholics were recruited at 13 locations in the United States, which were divided according to whether they were presenting for outpatient ($N = 952$) or inpatient aftercare treatment ($N = 774$). Clients in both arms of the study received individualized and manual-guided therapy for 12 weeks, and in-person follow-up interviews were conducted in 3-month increments for 12 months after treatment. Reported elsewhere (Project MATCH Research Group [PMRG], 1997, 1998), the fidelity of the therapeutic protocols was good (Carroll et al., 1998), follow-up rates were excellent (PMRG, 1997, 1998), and self-reported alcohol use was corroborated by collateral report and urine toxicology (PMRG, 1997). The current study sample focuses only on the 133 participants with SP and 133 matched control participants without SP who were randomly assigned to TSF.

Measures

The Alcoholics Anonymous Involvement tool (AAI) (Tonigan, Connors, & Miller, 1996) has 13 items and yields a total score of overall AA involvement as well as program and fellowship scales. AA program behaviors include (1) reading AA literature, (2) progress in working the 12 steps of AA, (3) having or being an AA sponsor, and (4) prayer and meditation. AA fellowship behaviors include (1) AA meeting attendance and (2) celebrating AA birthdays and AA social interactions. The AAI has demonstrated psychometric properties and strong convergence with other measures collecting information on the frequency of AA meeting attendance, (e.g., $r = .70$ between AAI and the Form 90 semistructured interview). The Form 90 (Miller & Del Boca, 1994) was used to measure day-by-day substance use. Primary drinking variables in Project MATCH included percent days alcohol abstinence (PDA) aggregated on a monthly basis and drinks per drinking day (DDD).

Diagnosis of SP was assessed with the C-DIS, which mirrored criteria in the *DSM-III-R* (1987) for SP. The C-DIS is a computerized version of a structured clinical interview designed by the National Institute of Mental Health,
the Diagnostic Interview Schedule (DIS) and has documented reliability and validity (Robins, Helzer, Cottler, & Goldbring, 1989).

RESULTS

A total of 582 alcoholics were assigned to TSF in the outpatient (N = 335) and aftercare (N = 247) arms of the study, and 133 (23%) of these people were diagnosed by the C-DIS as having SP. Table 1 provides selected characteristics of this comorbid subsample along with the characteristics of a matched subsample of alcoholics assigned to TSF who did not have SP (NSP). NSP participants were matched to SP participants on age, gender, and treatment arm. Groups were relatively equivalent in regards to all other nonmatched characteristics shown in Table 1. Importantly, no differences were found in alcohol use quantity and frequency as measured by baseline PDA or DDD. Additionally, no proportional differences were found between those alcoholics with and without SP in baseline rates of marriage, living alone, and prior frequency and engagement in AA. Also of importance, any difference in outcome cannot be attributed to differences in the number of treatment sessions attended because both groups attended an average of about 8 of the 12 sessions.

Treatment Outcome

Figure 1 displays a survival analysis that contrasted, in days, SP and NSP relapse rates to heavy drinking by gender (defined as four standard drinks for females and six standard drinks for males). Indicative of the interaction reported by Thevos et al. (2000), rates of relapse to heavy drinking was relatively equivalent for males with and without SP (about 60% of SP and NSP males had not relapsed prior to the end of treatment). In contrast, by the end of treatment about 60% of the females without SP did not relapse to

<table>
<thead>
<tr>
<th>TABLE 1 Baseline Characteristics of Alcoholics with and without Social Phobia Assigned to 12-Step Facilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Gender % female (n)</td>
</tr>
<tr>
<td>Age (±SD)</td>
</tr>
<tr>
<td>Years education (±SD)</td>
</tr>
<tr>
<td>% Never married (n)</td>
</tr>
<tr>
<td>% Living alone (n)</td>
</tr>
<tr>
<td>% White (n)</td>
</tr>
<tr>
<td>% with Health insurance (n)</td>
</tr>
<tr>
<td>Percent days abstinent (±SD)</td>
</tr>
<tr>
<td>Drinks per drinking day (±SD)</td>
</tr>
</tbody>
</table>
FIGURE 1 Days to first heavy drinking day by gender and social phobia status: Time to relapse among 12-step therapy clients. NSP = no social phobia; SP = social phobia.

Heavy drinking whereas only 40% of the females with SP had not relapsed, $\chi^2(3) = 12.05, p < .03$. Why, then, given the similarity between SP and NSP alcoholics on demographic, drinking, and therapy compliance measures, did females with SP fare so poorly in 12-step therapy?

AA Attendance

Figure 2 shows the mean rates of AA attendance for males and females with and without SP immediately before treatment through the 12-month follow-up. Repeated measure MANOVA with baseline values of proportion AA days used as a covariate, two between-subject factors (Gender and SP Status), and 1 within-subject factor (five levels, proportion days AA attendance) indicated that rates of AA attendance did not differ by gender, $F(1, 239) = 1.22, p < .27$, SP status, $F(1, 239) = 1.74, p < .19$, or by the Gender × SP Status interaction, $F(1, 239) = .36, p < .55$. However, when we consider the natural trajectory from intake to the 15 month follow-up visit, there is a trend for SP-women to attend less AA meetings than non-SP women. This was not statistically significant, perhaps due to the test being underpowered. However, when we consider the natural trajectory from intake to the 15 month follow-up visit, there is a trend for SP-women to attend less AA meetings than non-SP women. This was not statistically significant, perhaps due to the test being underpowered. Overall, high rates of AA attendance were achieved between intake and end of 12-step treatment (3 months). AA attendance appeared to erode across the 12 months of follow-up, with the most rapid decay occurring
FIGURE 2 Proportion days Alcoholics Anonymous (AA) attendance by gender and social phobia status: 12-step therapy and AA attendance. NSP = no social phobia; SP = social phobia.

the first 3 months after treatment ended (months 4–6). This pattern of AA attendance was unrelated to SP status, gender, or the interaction of Gender × SP Status.

AA Engagement

Two core AA prescribed behaviors, ones that emphasize and require intimate social interaction, behaviors expected to be difficult for individuals with SP, were tested, including the percentage of women with and without SP that reported having a sponsor as well as those reported having completed a fifth step (sharing of ones personal inventory, Step 4, with another, generally a sponsor).

A total of six hierarchical logistic regressions were done, one for each follow-up (3-, 9-, and 12-month following end of treatment) for the two AA prescribed behaviors. Intake responses (yes/no dummy coded) were entered in Step 1, Step 2 entered the dummy coded variable indicating SP status, and the criterion measure was the follow-up yes/no response to having a sponsor or completion of Step 5. No relationships between SP status and the completion of Step 5 were found at any of the three follow-up periods nor was there any relationship between whether a woman had completed a fifth step in the past (intake, lifetime) and then reported repeating a fifth step at follow-up. However, consistent with prediction, women with SP were significantly less likely to acquire a sponsor by the 3-month follow-
up relative to NSP women, Wald $\chi^2(1) = 5.23, p < 0.22$. At 9 months, this same relationship was no longer significant, but was observed at the trend level, Wald $\chi^2(1) = 1.87, p < .17$, although the relationship was completely absent at the 12-month follow-up, Wald $\chi^2(1) = 1.47, p < .23$. Figure 3 shows the differences in the percentages of alcoholics with and without SP who obtained a sponsor. These percentages indicate that 12-step therapy was effective in facilitating the acquisition of a sponsor among women without SP who had never had a sponsor in the past. In contrast, the women with SP were less likely to acquire a sponsor during treatment.

DISCUSSION

Alcohol dependency and SP are frequently co-occurring disorders and prior work suggested that 12-step therapy, the prevailing therapeutic model in the United States, may not be equally effective for alcoholic women with and without SP. The current study investigated whether differential AA attendance or commitment to, and practice of, prescribed 12-step behaviors accounted for the relatively poor outcomes of women with SP assigned to 12-step therapy. Overall, the number of similarities in the ways that women practiced prescribed AA behaviors outweighed the differences between women with and without SP. For example, the pattern of decay in AA attendance over 12 months was similar regardless of SP status among women assigned to 12-
step therapy. Likewise, there was no proportional difference in completing a fifth step between the two groups. Although it was not statistically significant perhaps due to being underpowered, it is interesting that SP-women, on the trend level, appeared to go to less AA meetings overall as compared to non-SP women. AA is largely a social and community oriented program, so it would make sense that women in general, who typically are more community and group oriented than men, would feel more comfortable and go to more AA meetings, unless they had social phobia.

Noteworthy, women with SP reported, in general, lower rates of acquiring an AA sponsor during therapy, and rates of getting an AA sponsor for the first time among this group were even lower. Given the documented value of sponsorship for achieving and sustaining abstinence (Sheeren, 1988; Witbrodt & Kaskutas, 2005) this apparent deficit for alcoholic women with SP may be an important factor accounting for relatively poor outcomes for this group. Study findings more clearly amplify the work of Terra et al. (2006) that suggested that adults with SP might engage in AA in ways that are distinct from alcoholics with NSP. Specifically in severely underpowered analyses they suggested that some adults with SP were less likely to assume roles of responsibility in AA and that they viewed the benefits of AA less favorably. Findings from the current study parallel this interpretation but do so from the perspective of a longer term follow-up and a more rigorous prospective design.

Various clinical strategies to address a sponsorship deficit ought to be considered when women with SP are offered 12-step therapy. First, therapeutic efforts to facilitate the acquisition of a sponsor ought to begin in the early phase of therapy for women with SP. Typically, 12-step therapy begins with first promoting cognitive shifts that are consistent with AA ideology, (e.g., accepting powerlessness over alcohol, followed by more behaviorally anchored objectives) such as sponsorship. Work suggests, however, that few AA-related behaviors are initiated after treatment (Tonigan, Conners, & Miller, 2005). Given the apparent difficulties faced by women with SP in acquiring an AA sponsor, it seems prudent to allow sufficient therapeutic time to aid women with SP in this endeavor. Second, and related, women with SP may benefit from focused social skill training aimed at asking an AA member to become a sponsor. Here, training may include effective ways to get phone numbers, dealing with rejection, and understanding the nature of the sponsee–sponsor relationship.

The current study has some limitations. Despite the large sample in Project MATCH, some of the sites were predominately male and the sample of women is small, as is the subsample of women with SP. In addition, the diagnosis of SP was made with a computerized survey, the C-DIS, which has been demonstrated to overdiagnose Axis I diagnoses relative to the Structured Clinical Interview for Diagnosis (SCID), which is considered the gold standard (Ross, Swinson, Doumani, & Larkin, 1995). Further, although it is
not altogether clear from these analyses whether these finding are based on a Gender × Social Phobia interaction, as compared to main effect for SP within the female group, future studies could further clarify this. Additionally, the current study was retrospective in nature, using an existing database, rather than a prospective design, and as such suffers from the same limitations as the parent study, Project MATCH (e.g., excluding most other drug dependence and homeless individuals), which may limit its generalizability.

In sum, findings suggest that the study of SP and AA engagement is complex. Efforts to identify only the main effects of SP on drinking outcomes and AA attendance are likely to miss critical nuances that will result in making erroneous conclusions. The current study, for example, did report that SP by itself was largely unrelated to how frequently one attended AA or how one became engaged in AA. The consideration of alcoholic gender, however, showed that female alcoholics with SP fared significantly worse in 12-step therapy and that this outcome may be related to the failure to acquire an AA sponsor.

REFERENCES


