The Relationship Between Participation in Alcoholics Anonymous and Social Anxiety

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ABSTRACT. Alcohol use disorders and social anxiety disorders are commonly comorbid. Fear of negative evaluation may impair the ability of socially anxious individuals to participate in treatments such as Alcoholics Anonymous (AA), which is provided in a group format. The current study recruited AA participants (N = 376) anonymously through advertisements on Facebook®. Participants completed a demographic questionnaire, the Michigan Alcohol Screening Test, the Social Interaction Anxiety Scale, and the Mood and Anxiety Symptom Questionnaire-Short Form. Hierarchical regressions demonstrated that higher levels of social anxiety are associated with significantly (p = .04) less AA engagement and with a significantly (p = .04) shorter length of sobriety after controlling for anxiety and depression. Consistent with previous research, AA engagement was predictive of length of sobriety. Results indicated that participants who maintained long-term participation in AA (i.e., 20 years or more) demonstrated significantly (p = .007) less social anxiety relative to those who were in early in recovery (i.e., less than 5 years of participation in AA). Clinical implications are discussed including a need for alternative or supplemental treatments for individuals with alcohol use disorders who are affected by social anxiety.

Elevated rates of social anxiety have been found among individuals with alcohol use disorders (AUD; Abrams, Kushner, Medina, & Voight, 2001; Cludius, Stevens, Bantin, Gerlach, & Hermann, 2013; Terra et al., 2008). Additionally, research has shown that as many as 90% of individuals with an AUD experienced symptoms of social anxiety prior to their difficulties with alcohol (Terra et al., 2008) and might have been drinking to reduce their social anxiety (Buckner et al., 2008).

Unfortunately, social anxiety may interfere with treatment in many traditional chemical dependence programs and self-help organizations like Alcoholics Anonymous (AA) given that these programs are typically administered in a group format. Book, Thomas, Dempsey, Randall, and Randall (2009) found that socially anxious individuals were eight times less likely to participate in group therapy than their less socially anxious AUD treatment counterparts. Social anxiety may also decrease compliance with aftercare programs and pursuing activities involved in establishing a sober lifestyle such as obtaining employment or developing new relationships with individuals who do not drink.

AA is the most widely accessed program by AUD treatment seekers (Weisner, Greenfield, & Room, 1995). Following formal treatment, AA is one of the most effective long-term maintenance treatments for AUD (Groh, Jason, & Keys, 2008). Multiple studies have demonstrated that AA participation is related to reduced alcohol use (e.g., Timko, DeBenedetti, & Billow, 2006). Active, long-term participation in AA involves sharing openly about deeply personal feelings in a group setting and developing healthy friendships with others in the program (Yoder, 1990). Fear of negative evaluation by socially anxious individuals with AUDs may interfere with their ability to complete these tasks.
and, consequently, with their ability to benefit from AA. Book and colleagues (2009), in one of the few studies looking at this issue, found that socially anxious individuals were five times less likely to attend AA meetings and eight times less likely to participate when in attendance.

Book and colleagues (2009) examined a sample predominantly comprised of women who were actively participating in an intensive outpatient treatment program. The current study sought to build upon these findings by examining a more diverse sample of individuals with AUD from the community. The current study further sought to control for anxiety and depression in order to focus more closely on how social anxiety affects individuals throughout the recovery timeline. It was hypothesized that social anxiety would have a negative impact on long-term participation in AA and long-term sobriety, even after controlling for general anxiety and depression. AA attendance is related to positive psychosocial outcomes including reduced social anxiety (Terra et al., 2008). Consequently, it was also hypothesized that participants who maintained long-term participation in AA would demonstrate lower social anxiety relative to those who were earlier in recovery.

**Method**

**Participants**
Participants were 509 individuals recruited through advertisements on Facebook®. Individuals who did not identify as a recovering alcoholic, failed to submit complete surveys, or did not pass data validation checks (n = 133) were eliminated from data analysis. The participants included in data analysis were 376 self-identified recovering alcoholics (185 men, 191 women). Participants reported ages ranging from 19 to 79 years (M = 46.47; SD = 9.52). Participants self-identified ethnicity/race as European American/White (88.6%), Hispanic/Latino (2.9%), Native American (2.1%), African American/Black (1.9%), and other/preferred not to self-identify (4.5%).

**Measures**
A demographic questionnaire included self-reports of basic information (e.g., age, sex, ethnicity). Participants were also asked several alcoholism-related questions (e.g., “How long have you currently been sober?” and “How long have you been attending AA meetings?”). The Michigan Alcohol Screening Test (MAST; Selzer, 1971) is widely used to identify alcohol dependence in clinical and research settings. Participants answered Yes or No to 22 items relating to problematic alcohol use (e.g., “Can you stop drinking without difficulty after one or two drinks?”). A total score of 22 is possible. A score of 0 to 2 indicates no apparent alcohol problem; a score of 3 to 5 is indicative of early or middle problem-drinking behavior; and a score of 6 or more is indicative of problem-drinking behavior. Given that the target population was recovering alcoholics, participants were asked to consider their entire lifetime when responding. The MAST shows high internal consistency (α = .86–.96; Connor, Grier, Feeney, & Young, 2007). Daeppen et al. (1996) found the MAST to have high convergent validity with other scales such as the Addiction Severity Index (ASI; McLellan, Luborsky, Woody, & O’Brien, 1980). The MAST has also been shown to have high convergent validity with the Diagnostic Interview Schedule (Rogers, 2001).

The Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) is a widely used 20-item measure developed for assessing social interaction anxiety (e.g., “I have difficulty making eye contact with others”). Participants rate the degree to which each statement is characteristic or true of them on a 5-point Likert-type scale from 0 (not at all) to 4 (extremely). A total score of 60 is possible. A score of 34 or more is indicative of possible social anxiety disorder. The SIAS is one of the most widely used measures of social anxiety and has been shown to have good internal consistency (α = .88–.94) and high test-retest reliability (α = .92; Mattick & Clarke, 1998).

The Mood and Anxiety Symptom Questionnaire-Short Form (MASQ; Clark & Watson, 1991) is a 62-item measure assessing symptoms that commonly occur in mood and anxiety disorders. Participants rate symptoms on a 5-point Likert-type scale from 1 (not at all) to 5 (extremely). Rather than clinical cutoff scores, the MASQ consists of four subscales that assess mood and anxiety symptoms dimensionally. The General Distress: Anxious Arousal (ANA) subscale assesses anxious mood (e.g., “Was unable to relax”). The Anxious Arousal (ANA) subscale is comprised of items that assess physical arousal associated with anxiety (e.g., “Felt faint”). The General Distress: Depressive Symptoms (GDD) subscale assesses negative affect associated with depression (e.g., “Felt worthless”). And, the Anhedonic Depression (AD) subscale includes items that assess symptoms characteristic of depressive disorders but not anxiety (e.g., “Thought about suicide or death”). The MASQ subscales have
good internal consistency (α = .81–.93). Watson et al. (1995) found that the anxiety subscales show high convergent validity with other anxiety scales such as the Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988) and the anxiety scale of the Profile of Mood States (POMS; McNaire, Lorr, & Dropplemann, 1971). Watson et al. (1995) also found that the depression subscales show high convergent validity with other depression scales such as the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the depression scale of POMS (McNaire et al., 1971).

**Procedure**

Institutional review board approval was obtained before collecting data. All participants gave informed consent and were treated according to American Psychological Association ethical guidelines (APA, 2002).

An advertisement requesting participation appeared on the computer screen of targeted individuals as they navigated Facebook. Targeted individuals were those who lived in English-speaking regions and had indicated an interest in recovery-related topics by “liking” Facebook pages such as *The Big Book of Alcoholics Anonymous*. The advertisement linked participants to the informed consent on SurveyMonkey™. Participants then completed a demographics questionnaire, the MAST, the SIAS, and MASQ. In lieu of debriefing, the conclusion of the survey displayed a link to the Substance Abuse and Mental Health Services Administration website location where individuals could find professional help for substance abuse and other mental health issues.

**Results**

All participants were categorized as problem drinkers on the MAST with a mean score of 15.31 (SD = 3.40). Table 1 shows the mean scores and standard deviations on each instrument along with the correlations between measures. The SIAS was significantly positively correlated with all measures of anxiety and depression, and significantly negatively correlated with length of AA participation and sobriety.

It was hypothesized that social anxiety would predict AA attendance after controlling for anxiety and depression. Hierarchical regression was used to examine the ability of the MASQ subscales and the SIAS to predict months of sobriety. To control for anxiety and depression, the MASQ subscales (GDA, ANA, GDD, AD) were entered in a block in the first step of the regression equation, $R = .14$, $R^2 = .007$, $F(4, 340) = 1.57, p = .18$. The SIAS was a significant predictor when entered into the second step of the regression equation, $R = .18$, $R^2 = .03$, $F_{\text{change}} (1, 339) = 4.37, p = .04$. See Table 2 for a summary of the final regression equation.

It was hypothesized that social anxiety would predict length of sobriety after controlling for anxiety and depression. Hierarchical regression was used to examine the ability of the MASQ subscales and the SIAS to predict months of sobriety. To control for anxiety and depression, the MASQ subscales (GDA, ANA, GDD, AD) were entered in

**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1. SIAS</td>
<td>-.66</td>
<td>.46</td>
<td>.52</td>
<td>.53</td>
<td>-1.18</td>
<td>-1.19</td>
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<tr>
<td>2. MASQ: GDA</td>
<td>-.88</td>
<td>.87</td>
<td>.66</td>
<td>-1.12</td>
<td>-1.16</td>
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<td></td>
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<td>3. MASQ: ANA</td>
<td>-.77</td>
<td>.58</td>
<td>-1.12</td>
<td>-1.15</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. MASQ: GDD</td>
<td>-.77</td>
<td>-1.13</td>
<td>.16</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>5. MASQ: AD</td>
<td>-</td>
<td>-0.8</td>
<td>-1.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. AA Months</td>
<td>-</td>
<td>-</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sober Months</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Note. *p < .05; **p < .01; SIAS = Social Interaction Anxiety Scale; MASQ = Mood and Anxiety Symptom Questionnaire; GDA = General Distress: Anxious Symptoms; ANA = Anxious Arousal; GDD = General Distress: Depressive Symptoms; AD = Anhedonic Depression; AA Months = Months of participation in Alcoholics Anonymous; Sober Months = Consecutive months of sobriety.

**Table 2**

<table>
<thead>
<tr>
<th>Attendance (M = 344)</th>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>156.47</td>
<td>19.66</td>
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<td></td>
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<td></td>
<td>MASQ: GDA</td>
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<td>1.53</td>
<td>.07</td>
<td>.66</td>
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<tr>
<td></td>
<td>MASQ: ANA</td>
<td>-0.45</td>
<td>0.85</td>
<td>-0.06</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>MASQ: GDD</td>
<td>-1.07</td>
<td>1.02</td>
<td>-0.13</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td>MASQ: AD</td>
<td>0.49</td>
<td>0.49</td>
<td>.09</td>
<td>.32</td>
</tr>
<tr>
<td></td>
<td>SIAS</td>
<td>-0.90</td>
<td>0.43</td>
<td>-1.14</td>
<td>.04</td>
</tr>
</tbody>
</table>

Note. MASQ = Mood and Anxiety Symptom Questionnaire; GDA = General Distress: Anxious Symptoms; ANA = Anxious Arousal; GDD = General Distress: Depressive Symptoms; AD = Anhedonic Depression; SIAS = Social Interaction Anxiety Scale.

Correlations of $r > .80$ between predictors may be problematic in multiple regression (Licht, 1995). All analyses were repeated, dropping the GDA and GDD subscales of the MASQ because these two subscales were the most highly correlated with other predictors. A similar pattern of results emerged (contact the corresponding author for detailed results).
a block in the first step of the regression equation, \(R = .17, R^2 = .03, F(4, 339) = 2.47, p = .045\). The SIAS was a significant predictor when entered into the second step of the regression equation, \(R = .20, R^2 = .04, F_{\text{change}}(1, 338) = 4.18, p = .04\). See Table 3 for a summary of the final regression equation.

To test the prediction that individuals who maintain long-term participation in AA demonstrate lower social anxiety relative to those who are earlier in recovery, participants were categorized into 5-year groups based on length of AA participation (i.e., participated less than 5 years, participated 5–9.9 years, participated 10–14.9 years, participated 15–19.9 years, participated more than 20 years). As shown in Figure 1, there was a continuous downward trend in SIAS scores, and an Analysis of Variance comparing these 5-year groups was significant, \(F(4, 371) = 3.59, p = .007, \eta^2 = .04\). Post-hoc comparisons using the Tukey Honestly Significant Difference test indicated that the mean SIAS score for the participants with less than 5 years (\(M = 32.21, SD = 16.38\)) was significantly higher than the participants with more than 20 years (\(M = 23.55, SD = 17.19\)). No other significant differences were found.

**Discussion**

The hypothesis that greater social anxiety would be associated with less AA engagement and a shorter duration of sobriety after controlling for anxiety and depression was supported. These findings built upon those of Book et al. (2009). Furthermore, AA engagement and length of sobriety were highly positively correlated, consistent with other studies showing a relationship between AA involvement and a reduction in alcohol use (Tonigan, Toscoa, & Miller, 1996). Evidence that social anxiety may pose a barrier to AA participation, which may then affect sobriety, suggests a possible need for alternative or supplemental treatments for those affected by social anxiety.

The mechanisms by which social anxiety affects AA involvement and sobriety need additional research. By its very nature of offering help through self-help group meetings, AA’s main benefits may come through the creation of new social networks to support sobriety (Groh et al., 2008), a task that is likely difficult for socially anxious individuals. The fear of social scrutiny that is characteristic of social anxiety may reduce the chances that these individuals will be able to gain the full benefit of participation in AA. It is also possible that social anxiety might be a mechanism by which relapse occurs such as self-medication in order to cope with routine daily tasks that involve social contact. Future research should focus on individuals early in recovery and high in social anxiety to more closely examine how social anxiety affects the trajectory of participation in treatment and sobriety.

It was hypothesized that individuals who maintain long-term participation in AA would demonstrate lower social anxiety relative to those who were early in recovery. As length of sobriety increased, social anxiety decreased. This effect could be due to the attrition of socially anxious individuals from AA participation. Alternatively, it is possible that sobriety itself has a positive impact on social anxiety as it does on general anxiety and depression (Shivani, Goldsmith, & Anthenelli, 2002). It is also possible that, if socially anxious individuals persist with attending AA, attendance serves as a form of exposure treatment, which helps to decrease their social anxiety over time.
A limitation of the current study was the cross-sectional design, which limited the conclusions that could be made regarding the direction of causality. Longitudinal studies examining socially anxious substance abusers are needed. Additionally, problems with alcohol and social anxiety were based exclusively on online self-report measures, which could not control for cognitive and situational factors affecting participants’ responses. Future studies should examine this population with longitudinal methods in order to better ascertain base level mood and anxiety, and also to assess if these personality traits improve with time and AA participation, or if individuals backslide on sobriety goals as is indicated by the current research.

This study had a number of unique strengths. The participants of this study comprised a more diverse sample from the community than has been seen in previous research. A novel method for recruiting a sample of AA members that protects anonymity and allows for recruiting a relatively large number of participants was used. Researchers interested in studying AA participants might find this approach useful.

In summary, social anxiety is predictive of less AA engagement and a significantly shorter length of sobriety after controlling for anxiety and depression, highlighting the unique influence of fear of negative evaluation on those in recovery. As AA is the most widely accessed program by AUD treatment seekers (Weisner, Greenfield, & Room, 1995), understanding the capability of individuals with an AUD and social anxiety to participate in and benefit from the program is vital for recommending the best course of treatment.

References


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Author Note. Jared C. Moser, Cynthia L. Turk, and Jenna G. Glover, Department of Psychology, Utah State University. This research was supported in part by grants from the Washburn University Transformational Experience.

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SUMMER 2015

PSI CHI JOURNAL OF PSYCHOLOGICAL RESEARCH