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Social anxiety and communal living: The influence of social anxiety on men and women in substance abuse recovery homes

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Abstract

Research has demonstrated high rates of co-occurrence among anxiety and substance use disorders. However, few studies have specifically examined the relationship between substance use and social anxiety among individuals who are in substance abuse recovery. The present study examined social anxiety as a predictor of substance use among a sample randomized to a sober-living home versus usual aftercare. Given the social nature of many substance abuse treatment and aftercare programs, it was also hypothesized that high levels of social anxiety would reduce the length of stay in the sober-living home and negatively influence participation in self-help groups. Results suggested that social anxiety was a significant predictor of relapse at one time point, and that social anxiety decreased the likelihood for remaining in a sober-living house for six months or more. No significant relationship between social anxiety and participation in self-help groups were found. Implications for further research and substance abuse treatment are discussed.

Keywords

social anxiety; Oxford House; mutual help; gender

Mental health disorders, specifically mood and anxiety disorders, often co-occur with substance abuse and dependence (e. g. Chan, Dennis & Funk 2008; Charney, Palacios-Boix, Negrete, Dobkin & Gill, 2005; Kushner, Sher & Erickson, 1999; Zimmerman, Wittchen, Holfer, Pfister, Kessler & Lieb, 2003). For example, Chan et al. (2008) analyzed the co-occurrence of mental health and substance use disorders across 77 studies and found that two-thirds of both adolescents and adults who were in substance treatment also reported symptoms associated with a co-occurring mental health disorder within the last year. Similarly, Charney et al. (2005) found that many individuals who presented for substance abuse treatment also had other mental health symptoms. Specifically, of a total sample size of 326 participants, 16% had anxiety related symptoms while 32% reported both depressive and anxiety symptoms. Given the high correlation between substance use and anxiety disorders, it is important to examine how anxiety, specifically social anxiety, relates to substance abuse relapse and recovery.

Social anxiety is anxiety provoked by social situations due to an excessive fear of humiliation, embarrassment, or physical symptoms such as blushing or sweating (Carrigan & Randall, 2003). Prevalence rates for social anxiety disorder are estimated at 12.1% lifetime and 7.1% current (Ruscio, Brown, Chiu, Sareen, Stein & Kessler, 2008). Research has indicated that social anxiety may pre-date alcohol use disorders as alcohol use may alleviate anxiety symptoms and increase social confidence (for a review see Carrigan & Randall, 2003). However, most research in this area is focused on alcohol use disorders, and few studies have examined the relationship between social anxiety and substance use in general. One study examined the relationship between social anxiety disorder and substance dependence over a period of 14 years and found social anxiety disorder to be a predictor of both alcohol and cannabis dependence, even when controlling for the presence of other anxiety disorders (Buckner, Schmidt, Lang, Small, Schlauch & Lewinsohn, 2006).

Although several studies have highlighted the co-occurrence of social anxiety and alcohol use, there have also been contradictory findings. In a study examining alcohol expectancies, Ham, Hope, White and Rivers (2002) found no differences in the amount of alcohol consumed among individuals with social anxiety, dysthymia, and control group. However, when the same researchers used a more sensitive scale designed to measure both the obvious and subtle aspects of substance abuse, researchers found that individuals who were socially anxious endorsed more substance use items than those in the panic disorder or control groups (Ham & Hope, 2003). Thus, although there have been some contradictory findings, social anxiety has been demonstrated to co-occur with substance use, particularly alcohol use disorders (Buckner et al., 2006; Kushner et al., 1990; Ham & Hope, 2003; Van Armegian Mancini, Styan & Donisan, 1991).

Social anxiety and relapse

Among individuals attempting to abstain from alcohol and other drug use, untreated anxiety-related symptoms are a significant risk factor for relapse (Charney, et al., 2005; Gil-Rivas, Prause & Grella, 2009; Kushner, Abrams, Thuras, Hanson, Brekke & Sletten, 2005). One study found that trauma exposure, anxiety and depressive symptoms were associated with substance use one year later (Gil-Rivas et al., 2009). Similarly, Kushner et al. (2005) found that individuals who reported anxiety symptoms at baseline were more likely than those with no anxiety symptoms to relapse after 120 days. Yet little research exists on social anxiety as a predictor of substance use relapse.

The relationship between substance use and social anxiety has important treatment implications, as many mechanisms for treatment and sustained recovery include engagement and participation in group therapy or self-help groups. Research has evaluated treatment types (e. g. Cognitive Behavioral, Motivational Enhancement Therapy, etc.) on relapse rates among individuals who exhibited social anxiety disorder and found gender differences for type of treatment on relapse rates, as CBT compared to 12-step aftercare delayed relapse for women but not men (Thevos, Roberts, Thomas & Randall, 2000). Thus, gender and treatment type may influence relapse risk for individuals who exhibit social anxiety. However, as previously mentioned, research has not examined whether social anxiety increases the likelihood of relapse among individuals in recovery.

The impact of social anxiety in aftercare settings

Individuals frequently engage in aftercare following substance use treatment, sometimes in the form of a residential facility or sober-living home. One such option, Oxford House, provides residents with the skills and support for recovery by living in a mutual-help environment. Oxford Houses are democratically-run and self-supported by their residents with no internal or external staff members (Oxford House, Inc., 2011). Residents are expected to work and contribute to house finances (Oxford House, Inc., 2011). Residents also hold elected positions in the house, such as president or treasurer, complete chores, and provide one another with mutual support. Oxford House members are expected to attend Alcoholics Anonymous or Narcotics Anonymous (AA/NA) meetings as no formal treatment is provided in the house. Research has demonstrated favorable outcomes for individuals in Oxford House, such as abstinence from alcohol and drug use (Jason, Davis & Ferrari & Anderson, 2007; Jason, Olson, Ferrari, Majer, Alvarez & Stout, 2007), increased abstinence social support (Majer, Jason, Ferrari, Veneble & Olson, 2002) and self-efficacy to refrain from substance use (Davis & Jason, 2005; Jason et al., 2007). However, the literature demonstrates that the most beneficial outcomes occur after 6 or more months of stay in an Oxford House (Jason et al., 2007).

A recent investigation examined the impact of living in an Oxford House compared to usual aftercare on anxiety-related symptoms. Results demonstrated that individuals who lived in Oxford House for six or more months demonstrated lower levels of anxiety and alcohol use at the one year follow-up than those who were enrolled in more traditional forms of aftercare, such as outpatient treatment (Aase, Jason, Ferrari, Groh, Alvarez, Olson et al., 2006). This finding held true for both men and women. Thus, the mutual social support found in Oxford Houses may help to alleviate anxiety-related symptoms. This finding also suggests that Oxford Houses may not only be beneficial for sustained substance abuse recovery, but may also help protect against certain mental health symptoms.

Because the Oxford House model relies heavily on social support and mutual help, individuals displaying social anxiety symptoms may be less likely to participate as willingly in such settings. Book, Thomas, Dempsey, Randall and Randall (2009) gathered data from 110 individuals in intensive outpatient substance abuse treatment programs to examine if individuals who reported more social anxiety symptoms would report less treatment participation. Results showed that with higher social anxiety were less willing to speak with therapists, attend AA/NA groups, and speak during group therapy (Book et al., 2009). These findings suggest that individuals with social anxiety may not benefit as much from certain types of treatment settings.

Although no existing research to date has examined if social anxiety is predictive of relapse, past research has linked anxiety and relapse risk (Charney et al., 2005; Kushner et al., 2005). Therefore, it is hypothesized that individuals who report social anxiety characteristics are more likely to relapse. In addition, past research has demonstrated that Oxford House produces more favorable outcomes in terms of aftercare than traditional settings (Aase, et al., 2006; Jason, Davis et al., 2007; Jason & Davis, 2005; Jason, Olson et al., 2007). However, the literature also suggested that individuals with social anxiety may not be as

willing to participate in treatment related activities that involve mutual support or groups (Book et al., 2009). Thus, it was hypothesized that individuals who endorse more social anxiety characteristics were less likely to stay in Oxford House for 6 or more months due to the social nature of the environment. Also, in line with this hypothesis, it was predicted that individuals who report more social anxiety characteristics would affiliate less with AA/NA.

Method

Participants

Participants included 150 men ($N = 57$) and women ($N = 93$) with a mean age of 37.03 years ($SD = 7.96$) randomly assigned to either the Oxford House ($N = 75$) or usual-aftercare ($N = 75$) conditions. Most participants were African American ($N = 116$; 77.3%) and Caucasian ($N = 17$; 11.3%; see Jason, Olson, Ferrari, Majer, Alvarez and Stout, 2007 for a detailed description of participant demographics).

Measures

Social Anxiety—Social anxiety characteristics were measured at all data collection points through a 6-item subscale taken from the Self Consciousness Scale (SCS; Fenigstein, Scheier & Buss, 1975). The SCS was designed to measure three factors of self-consciousness: public self-consciousness, private self-consciousness and social anxiety. The current study only included the social anxiety subscale. Respondents rated how characteristic each item was of themselves on a 4-point likert scale from 1 (very uncharacteristic) to 4 (very characteristic) when faced with different social situations (i.e. talking to strangers). Fenigstein et al. (1975) found the test-retest reliability of the social anxiety sub-scale to be 0.73. The means, standard deviations, and alpha coefficients across measurement waves are presented in Table 1.

Relapse and length of stay—Relapse was coded at each wave as 0 (no use) or 1 (use) to indicate use in the last 6 months, see Table 2 for substance use across measurement waves. Length of stay was coded at 24 months as 0 (Oxford House less than 6 months) or 1 (Oxford House more than 6 months). Only data from participants in the Oxford House condition was used to assess length of stay. Approximately 46.6% of the 75 participants randomized to the Oxford House condition resided there for more than six months ($N = 35$).

AA Affiliation—AA Affiliation was measured through the nine item Alcoholics Anonymous Affiliation Scale (AAAS; Humphreys, Kaskutas & Weisner, 1998) at the baseline interview. Items 1 and 2 asked participants how many meetings they had been to in their lifetime and in the last 12 months and answers were coded into a number between 0–1 in .25 increments. Respondents answered yes or no for items 3–9 to determine their personal affiliation with AA (i.e. do you have a sponsor; have you ever considered yourself a member of AA) in which answers are coded as 0 (no) and 1 (yes). Answers were summed to gain a total score of AA Affiliation, and participants reported high levels of AA Affiliation, $M = 6.01$, $SD = 1.44$.

Procedure

Data were collected between 2002–05 as part of a National Institute of Alcohol and Alcohol Abuse (NIAAA) funded study that examined the effects of Oxford House versus usual after-care on recovery outcomes post-substance abuse treatment. Participants were recruited from local substance abuse treatment programs in Chicago, Illinois, and randomized into an Oxford House versus Usual Aftercare condition. Participants were interviewed at baseline, and every six months thereafter over a period of two years. For each completed interview, participants were reimbursed with \$40.00. See Jason et al., (2007) for a full description of the recruitment procedures.

Results

A series of binary logistic regressions were conducted to determine if social anxiety was predictive of relapse at later waves. Social anxiety scores at baseline, 6 months, and 18 months were not predictive of substance use at any following waves. However, we found that social anxiety scores at 12 months predicted substance use at 18 months (OR= 2.1, CI= 1.1–3.8, $p=.019$). Specifically, individuals who reported higher social anxiety scores at 12 months were 2.1 times more likely to use a substance by 18 months. Therefore, our hypothesis that social anxiety characteristics are predictive of relapse was partially supported.

We then tested the hypothesis that social anxiety scores would predict length of stay in Oxford House. Because our sample was biased towards females, we first tested for gender differences. Women had significantly higher social anxiety scores than men at baseline, $t(146)=2.8$, $p<.05$, but by 12 months, these differences were only marginally significant, $t(122)=-1.9$, $p=.055$. Due to the potential effect of gender differences in social anxiety, we controlled for gender when evaluating if social anxiety influenced length of stay in Oxford House. A binary logistic regression revealed that when controlling for gender, individuals who reported higher social anxiety scores were less likely to stay in Oxford House for more than 6 months (OR= .41, CI= .15–1.6, $p=.04$). In other words, for every unit of increase in social anxiety scores, the odds of an individual staying in Oxford House decreased by .41. This supported our hypothesis that social anxiety may decrease the chances of an individual staying in Oxford House for 6 or more months.

The final hypothesis examined the relationship between social anxiety scores and AA Affiliation. There was no significant relationship between social anxiety scores and AAAS scores, even when taking potential gender differences into account.

Discussion

The current study examined the influence of social anxiety on substance abuse relapse risk and length of stay in a peer-based, mutual support setting. The results indicated partial support for the hypothesis that individuals who reported more social anxiety were more likely to relapse. Similarly, individuals who reported more social anxiety characteristics were less likely to stay in Oxford House for 6 or more months. However, there was no significant relationship between social anxiety scores and AA Affiliation.

Individuals who reported higher social anxiety scores at the 12 month follow-up were more likely to use a substance at 18 months. This finding is consistent with past research that anxiety may place individuals at risk for relapse (Charney et al., 2005; Kushner et al., 2005). The present study extends these findings by specifically examining social anxiety and relapse. One explanation that can offer support for this finding is the self-medication hypothesis for substance abuse which states that individuals use substances to relieve themselves of stress or tension (Khantzian, 1985). That is, one may self-medicate to deal with stressful events or emotions. Following substance abuse treatment, individuals are faced with the reality of their old stressors (i.e. old social networks) and often new stressors (i.e. obtaining employment, gaining family trust). For individuals with high social anxiety, social situations may invoke a significant amount of stress, and without treatment, they may utilize coping strategies such as drinking or using another substance.

The literature suggests that the specific setting of Oxford House is beneficial to various recovery outcomes, such as abstinence self-efficacy, social support, and even in reducing anxiety related symptoms than other forms of after-care (Aase, et al., 2006; Jason, Davis et al., 2007; Davis & Jason, 2005; Jason, Olson et al., 2007; Majer et al., 2002). These effects are most pronounced when residents stay for 6 or more months (Jason, Davis et al., 2007). We found that when controlling for gender, individuals who reported higher social anxiety characteristics were less likely to stay in Oxford House for 6 or more months. This finding is consistent with past work that has demonstrated that individuals with high social anxiety are less likely to participate in treatment processes (Book et al., 2009). Oxford House is a mutual help after-care setting that relies heavily on social interaction with other members of the house. Individuals with social anxiety may not have been as willing to partake in activities and meetings with other individuals, which may have impacted their length of stay in the setting. These findings implicate the importance of screening prior to making treatment recommendations for individuals in recovery who have high social anxiety.

Surprisingly, we did not find a relationship between AA affiliation and social anxiety scores. This is contrary to Book et al. (2009) who found that individuals with social anxiety were less likely to participate in AA/NA meetings. However, the AAAS measure was only administered at baseline and therefore did not capture participation in self-help groups over time. Thus, future research should continue to examine the relationship between social anxiety and involvement in 12-step self-help groups among individuals in recovery from alcohol and other drug use.

Although our findings shed some new light on social anxiety and the recovery process, we must interpret these findings with caution due to several limitations. First, we used secondary data analysis where social anxiety was not a primary variable of examination. Second, we did not utilize a clinical screening measure for social anxiety which greatly limits the generalizability of our findings. In fact, it may be that individuals with high social anxiety would not participate in a study that randomly assigns to live in a group setting and participate in a sequence of interviews with researchers. Finally, social anxiety data was collected as self-report, in an interview style format with research staff. Although there are strengths of this method of data collection, individuals may have reported socially desirable

answers as to what they believed the researcher wanted to hear in terms of their progress over the two year period.

Although we cannot draw any causal inferences from the current work because of its exploratory nature, we believe this study has several unique contributions for the field. It is the first of its kind to specifically examine relapse risk and social anxiety in a longitudinal design. Additionally, these findings extend the Oxford House research literature. Future directions should focus on the relationship between gender and social anxiety. We did find significant differences in gender on social anxiety scores; however these differences subsided over time. Future work should clarify the role of gender and should identify other mediating factors on the relationship between social anxiety and treatment outcomes. Another area for future research is the assessment of relapse risk in recovering individuals with a social anxiety disorder. Additional research should further explore the role of AA/NA involvement and affiliation on social anxiety. Further work in this area could help persons in recovery from substance abuse also suffering from social anxiety better acclimate to treatment and real world settings.

In sum, it may be important to assess for social anxiety in substance abuse treatment settings in order to provide treatment approaches tailored to individuals' needs. The findings from the present study suggest that social anxiety may predict relapse and leaving a sober-living home prior to the recommended dose. There are many other ways that social anxiety might impact substance abuse recovery, specifically in terms of participation in self-help groups. Future research should examine these effects, and should continue to examine how gender might impact social anxiety among individuals in recovery from substance use.

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Table 1

Means, Standard deviations, and alpha coefficients for social anxiety scores

Timepoint	<i>M</i>	<i>SD</i>	α	N
Baseline	2.51	0.62	0.70	148
6 month	2.41	0.76	0.76	133
12 month	2.29	0.69	0.64	125
18 month	2.43	0.65	0.72	129
24 month	2.42	0.60	0.69	138

Table 2

Substance use across measurement waves

Timepoint	<i>Use in past 6 months</i>	%
6 month	50	37.3
12 month	45	36.0
18 month	48	37.5
24 month	67	48.6