

Psychological Flexibility Mediates the Relation of Social Anxiety and Alcohol Related Problems

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Alcohol Misuse

- ▶ Prevalence in college students
 - ▶ 58% of college students (age 18-22) report current alcohol use (SAMHSA, 2019)
 - ▶ Full time students drink more than non full-time counterparts (SAMHSA, 2019)
- ▶ Associated with negative consequences
 - ▶ Death (Hingson et al., 2009)
 - ▶ Assault (Hingson et al., 2005)
 - ▶ Sexual Assault (Hingson et al., 2005)
 - ▶ Academic Problems (Thombs et al., 2009)
 - ▶ Alcohol Use Disorder (AUD) (Blanco et al., 2008)

Social Anxiety Disorder (SAD)

- ▶ Lifetime prevalence = 12% (Kessler et al., 2005)
 - ▶ Higher rates in females than in males (American Psychiatric Association, 2013)
- ▶ Typical onset prior to adulthood (American Psychiatric Association, 2013)
- ▶ Interferes with:
 - ▶ Educational achievement (Van Ameringen et al., 2003)
 - ▶ Work productivity (Stuhldreher et al., 2014)
 - ▶ Social relationships (Davila & Beck, 2002)

SAD and AUD

- ▶ College students with elevated social anxiety have increased odds of experiencing alcohol related problems compared to those with lower social anxiety (Mekonen et al., 2017; Lewis et al., 2008)
- ▶ Social anxiety positively correlated with alcohol related problems (Schry & White, 2013)
- ▶ Social anxiety in adolescence uniquely predicts substance related problems in adulthood (Buckner et al., 2008; Schneier et al., 2010)
- ▶ Drinking motives play a role in the relation of social anxiety and alcohol related problems (Stewart et al., 2006; Lewis et al., 2009; Terlecki & Buckner, 2015)

Psychological Flexibility, SAD, and SUD Symptoms

- ▶ Experiential avoidance (EA) is associated with greater social anxiety in healthy and clinical samples (Kashdan et al., 2014)
- ▶ First year college students higher in EA had greater alcohol related problems (Levin et al., 2012)
- ▶ Psychological flexibility is greater among individuals with comorbid SUD and mood/anxiety disorders compared to SUD alone (Levin et al., 2014)
- ▶ However, no research has evaluated PF as a mediator of the relation of social anxiety and alcohol related problems

Present Study

- ▶ Clarify the relation of social anxiety, psychological flexibility, and alcohol related problems in a college student sample.
- ▶ Hypotheses
 - ▶ Social anxiety will be related to high alcohol related problems.
 - ▶ Social anxiety will be associated with low psychological flexibility and, in turn, high alcohol related problems.

Sample

- ▶ Inclusion criteria
 - ▶ Endorsed drinking in the last three months
- ▶ N = 243
- ▶ Female = 179
- ▶ 98.8% full time students
- ▶ $M_{\text{age}} = 19.20$, $SD = 1.42$, Range: 18-28
- ▶ White = 224 (92.2%), Black = 11 (4.5%), Hispanic/Latino = 8 (3.3%), Asian = 6 (2.5%), Middle Eastern/North African = 3 (1.2%), Native American = 2 (.8%), Native Hawaiian = 1 (0.4%)

Measures

- ▶ Social Interaction Anxiety Scale (SIAS) (Mattick & Clarke, 1998)
 - ▶ 20 item scale; $\alpha = .93$
- ▶ Acceptance and Action Questionnaire (AAQ-II) (Bond et al., 2011)
 - ▶ 7 item scale; $\alpha = .92$
- ▶ Young Adult Alcohol Consequences Questionnaire (YAACQ) (Read et al., 2007)
 - ▶ 48 yes/no items; $\alpha = .94$

Procedure

- ▶ Online survey battery
- ▶ Analytic Strategy
 - ▶ Conditional process analysis using path-analytic regression in SPSS using PROCESS Model 4 (Hayes, 2018)
 - ▶ Mediation analysis

Descriptive Statistics

Table 1.

Descriptive Statistics and Correlations for Study Variables

Variable	\bar{M}	<i>SD</i>	<i>Range</i>	1	2	3	4	5
1. Age	19.20	1.42	18 - 28	-				
2. Sex	-	-	-	-.20***	-			
3. Weekly Drink Consumption	11.04	9.60	0 - 55	-.03	-.18**	-		
4. Social Anxiety	27.37	15.48	0 - 68	.01	.08	-.09	-	
5. Psychological Flexibility	20.29	9.37	7 - 47	.07	.15*	.01	.59***	-
6. Alcohol Related Problems	11.68	8.13	0 - 40	.11	-.08	.37***	.11	.19**

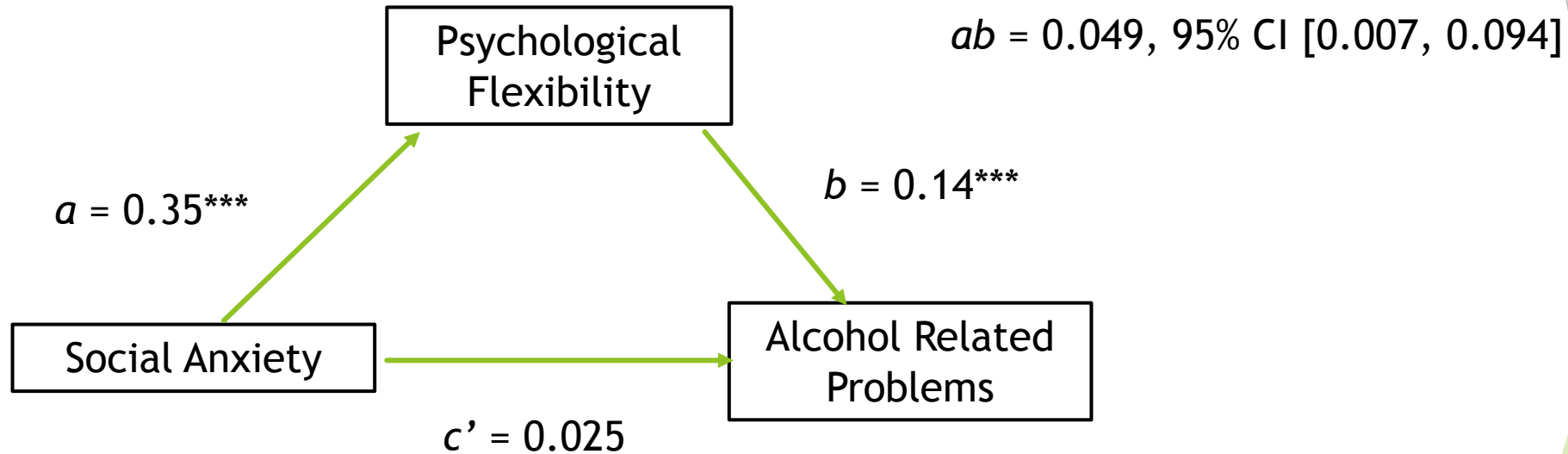
Note. Sex was coded as 0 = male and 1 = female.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Results

Figure 1.

Mediation Analysis Evaluating Psychological Flexibility as a Mediator of Social Anxiety and Alcohol Related Problems



Note. $N = 243$. Mediation analysis examining the relation of social anxiety and alcohol related problems by way of psychological flexibility. Number of bootstrapped samples = 10000.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

- ▶ High social anxiety and low psychological flexibility may be associated with greater alcohol related problems.
- ▶ Controlling for sex and weekly drink consumption, psychological flexibility mediated the relation of social anxiety symptoms and alcohol related problems.
- ▶ No direct relation of social anxiety and alcohol related problems
 - ▶ Contrary to previous nonclinical college student samples (Buckner et al., 2011; Norberg et al., 2009)
- ▶ High social anxiety could protect against alcohol related problems (Ham et al., 2009)

Limitations and Future Directions

- ▶ Sample
 - ▶ Clinical and community samples
- ▶ Measurement
 - ▶ Drinking motives
- ▶ Methodology
 - ▶ Cross-sectional data prevents any causal interpretations.
- ▶ Future directions
 - ▶ Longitudinal studies
 - ▶ Intervention studies

Acknowledgements

- ▶ University of South Dakota
 - ▶ Christopher R. Berghoff, Ph.D.
 - ▶ Rachel C. Bock, B.S.
 - ▶ Lucas D. Baker, B.S.
 - ▶ Emily A. Kalantar, B.A.



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