

Social anxiety and loneliness: The indirect effect of emotion regulation difficulties

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INTRO

- Loneliness is associated with a host of adverse physical and psychological outcomes.
- Social anxiety disorder is a key risk factor for loneliness.
- Perception of loneliness may be affected by emotion regulation (ER) difficulties, which have been linked to both social anxiety and loneliness.
- Hypothesis:** Controlling for depression, social anxiety would be associated with increased ER difficulties, which in turn, would be associated with increased loneliness.

METHODS

- College students ($N = 560$; 71.6% female) participated in this online study for course credit.
- Participants completed self-report measures of social anxiety, ER difficulties, depression, and loneliness.
- The proposed mediation model was tested using the PROCESS macro for SPSS.

RESULTS

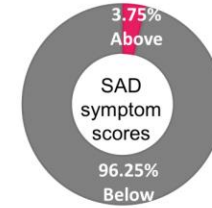
- Analyses revealed the full model accounted for 40.57% of the variance in loneliness ($F [3, 556] = 126.49, p < .001$).
- Results supported the hypothesis. After controlling for depression, social anxiety was indirectly associated with loneliness via ER difficulties.



Emotion regulation difficulties partially explains the association between social anxiety and loneliness.



Fig. 1. Portion of Sample Reporting Symptoms Consistent with Social Anxiety Disorder (SPIN $M \geq 44$)

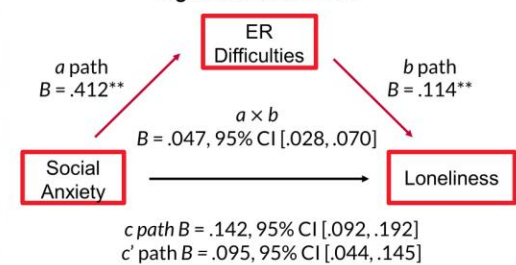


Descriptive Statistics and Correlations for Social Anxiety, ER Difficulties, Loneliness, and Depression

	M	SD	1	2	3
1. Social Anxiety	19.86	13.98	--		
2. ER Difficulties	87.01	22.13	.48*	--	
3. Loneliness	42.75	9.52	.42*	.55*	--
4. Depression	8.47	9.60	.43*	.63*	.58*

Note: * $p < .01$; ** $p < .001$

Fig. 2. Mediation Model



DISCUSSION

- Consistent with prior work, social anxiety was significantly associated with loneliness, and results indicated that ER difficulties may underlie this association.
- These findings add to the literature suggesting that struggling to regulate emotions contributes to loneliness among those with social anxiety.

IMPLICATIONS

- Findings suggest that targeting ER deficits in treatments for social anxiety may yield reduction in symptoms of loneliness.



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Abstract

Background: Loneliness is associated with adverse physical and psychological outcomes, including sleep difficulties (Kurina et al., 2011), cardiovascular disease (Caspi et al., 2006), depression (Cacioppo et al., 2006), and suicidal ideation (Maričić et al., 2015). Social anxiety disorder (SAD) is a key risk factor for loneliness (Cacioppo & Cacioppo, 2014; Lim et al., 2016), with a large population-based study indicating that the odds of experiencing loneliness is 11.66 higher in those with SAD (Meltzer et al., 2013). Perception of loneliness may be affected by emotion regulation (ER) difficulties, which has been linked to both social anxiety (SA) and loneliness (Hofmann et al., 2004; Shi et al., 2016). The current study examined self-reported SA, ER difficulties, and loneliness among a sample of college students. We hypothesized that SA would be associated with increased ER difficulties, which in turn, would be associated with increased loneliness, after controlling for depression (Serin et al., 2010).

Method: College students ($N = 560$; 71.6% female) completed online self-report measures of demographics, SA (Social Phobia Inventory; Connor et al., 2000), ER deficits (Difficulties in ER Scale; Gratz & Roemer, 2004), depression (Depression Anxiety Stress Scales – 21; Lovibond & Lovibond, 1995), and loneliness (UCLA Loneliness Scale; Russell et al., 1978). This sample had a mean age of 18.70 ($SD = 1.40$) and most identified as White (82.9%). The Process macro (Hayes, 2017) was used to estimate the indirect effect using 5,000 bootstrapped resamples yielding 95% confidence intervals (CI).

Results: Approximately 3.75% of this sample reported SA symptoms consistent with SAD (Antony et al., 2006). Bivariate correlations revealed positive, significant relations between SA, loneliness, and ER difficulties ($r_s = .42-.55$; $p_s < .01$). Mediation analyses revealed the total model accounted for 40.57% of the variance in loneliness ($F(3, 556) = 126.49$, $p < .001$). SA was associated with higher ER difficulties (a path; $B = .412$, $SE = .055$, $p < .001$) and ER difficulties was positively associated with loneliness (b path; $B = .114$, $SE = .019$, $p < .001$). The indirect effect was significant ($B = .047$, 95% CI [.027, .070]), supporting the hypothesis that SA symptoms were significantly associated with loneliness via ER difficulties.

Conclusion: Consistent with prior work, SA was significantly associated with loneliness, and results indicated that ER difficulties may account for this association. Findings suggest that targeting ER deficits in treatments for SAD may reduce symptoms of loneliness. Loneliness is prevalent across college campuses (Berman & Sperling, 1991, Wei et al., 2005); therefore, these results may be of particular interest to stakeholders, such as college administrators and educators for whom the well-being and retention of college students is of great importance.

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