

What is the role of social anxiety in loneliness?

Background

Reducing loneliness can be challenging, with the most rigorously tested clinical treatment strategies often producing only small reductions in loneliness (Masi et al., [2011](#)). Therefore, to succeed in alleviating loneliness, it will be important to identify the most promising avenues for support and treatment, beginning with the factors that most robustly co-occur with loneliness and have a plausible causal influence upon it. Social anxiety is one such factor.

In conditions where an individual is not socially isolated, social anxiety might be the biggest determinant of loneliness (Bruce et al., [2019](#); Lim et al., [2016](#)) given that many of the mechanisms associated with the maintenance of loneliness are also features of social anxiety (e.g. Cacioppo et al., [2006](#)).

Some degree of social anxiety is a normal part of the human condition, with most individuals feeling some level of social discomfort in some situations. For instance, across our general population sample of Canadians aged 16 to 80 who responded to the Canadian Social Connection Survey (CSCS), 86% reported that experiencing some amount of social discomfort was characteristic of them. Social anxiety can be characterized, for example, as a degree of difficulty making small talk with coworkers, as finding it difficult to disagree with another person's perspective, or by generally having some amount of fear of being negatively evaluated by others. Taken to its extreme, social anxiety can be a persistent debilitating fear of humiliation that causes individuals to retreat and seek safety away from a real or imagined critical gaze, which might be classified as social anxiety disorder. However, even a high functioning person might experience occasional moderate social discomfort that can present an obstacle to accessing the quality and quantity of social connectivity that would be ideal for them and their community, which could contribute to feelings of loneliness. In this evidence brief, we present knowledge about the relationship between social anxiety and loneliness, and assess the plausibility of alleviating one through the treatment of the other.

Evidence from Existing Studies

A number of studies have identified robust correlations between social anxiety and loneliness, with effect sizes of $r = 0.46$ observed across studies in a meta-analysis of child and adolescent research (Maes et al., [2019](#)), $r = 0.20$ in a large study that controlled for risk factors assessed the relationship in a large sample of individuals aged 18 to 80 (Bruce et al., [2019](#)) and $r = 0.37$ in our own CSCS data set that includes responses from Canadians ranging from 16 to 80 years of age.

The relationship between social anxiety and loneliness is likely bidirectional, with an increase in one contributing to an increase in the other and vice-versa. In one direction, feelings of loneliness might result in real or imagined negative attitudes from others that result in feelings of anxiety and fears of negative evaluation (Cacioppo et al., [2006](#); Vanhalst et al., [2015](#)). In the other direction, a causal effect of social anxiety on loneliness is plausible given that, for

instance, social anxiety is characterized by negative affect in and around social interaction that can progress into social avoidance (e.g. Lim et al., [2016](#); Yoon & Zinbarg, [2008](#)) which results in fewer opportunities to build social skills and social support networks. Such deficits can contribute to a poor outlook for a person's ability to close the gap between their desired and actual social connectedness, which is understood to be an important aversive factor that differentiates the possibly neutral experience of social isolation from the unpleasant experience of loneliness (Hawkey & Cacioppo, [2010](#)).

As for evidence of causality, one longitudinal study that tracked both loneliness and social anxiety over time found that past state social anxiety was a good predictor of future state loneliness, and conversely that state loneliness was a good predictor of future state social anxiety (Lim et al., [2016](#)). In a manner also consistent with a causal relationship between social anxiety and loneliness, some effective treatments for social anxiety have also been found to result in reductions in loneliness (Haslam et al., [2019](#), O'Day et al., [2021](#)). And with respect to treatments for loneliness, some of the more effective CBT-based programs (e.g. Käll et al., [2020](#); McWhirter & Horan, [1996](#)) are strikingly similar to established treatments for social anxiety (e.g. Heimberg et al., [1993](#)).

Though loneliness and social anxiety are robustly and likely causally interrelated, it is important to bear in mind that they are distinct constructs (Fung et al., [2017](#), Lieberz et al., [2022](#)), such that individuals can and do vary independently across the two domains.

Analyses from the Canadian Social Connection Survey

When participants were asked what barriers “make it difficult for you to socialize with others as much as you would like to?”, 4 of the 10 most frequently given responses were directly associated with social anxiety, fear of negative evaluation or introversion, with 21.9% of respondents listing social anxiety itself as a barrier. Consistent with this, and with the previous literature, we found a robust correlation between loneliness (De Jong Gierveld 6-item Loneliness Scale) and social anxiety (Social Interaction Anxiety Scale; $r = 0.37$, bootstrapped 95% CI = [0.35 0.41], $n = 3095$), which remained significant even after controlling for age and household income ($r = 0.40$, $p < 0.001$, $n = 2801$).

To further contextualize this relationship, we found social anxiety to be a significantly better predictor of loneliness than a person's reported number of close friends (within the same subsample of $n = 569$, social anxiety $r = 0.33$, bootstrapped 95% CI = [0.26 0.40], number of close friends $r = -0.08$, bootstrapped 95% CI = [-0.14 -0.02], difference in absolute $r = 0.25$, bootstrapped 95% CI = [0.15 0.34]).

Across the cross-sectional age-span of 16 to 80 years provided by our data set, we observed a significant trend towards lower levels of loneliness in older individuals ($r = -0.16$, bootstrapped 95% CI = [-0.17 -0.13], $n = 3095$). However, when we control these data for social anxiety, age no longer significantly predicts loneliness ($r = 0.004$, $p = 0.797$, $n = 3095$). On the other hand, age continues to significantly predict social anxiety after controlling for loneliness ($r = -0.36$, $p < 0.001$, $n = 3095$), suggesting that the progressively lower levels of loneliness observed in progressively older age groups in our data set might be driven by a possible tendency for social anxiety to fade with time (Zsido, Varadi-Borbás & Arato, [2021](#)).



Discussion

Many Canadians face internal barriers to social connection, and social anxiety likely constitutes many of those barriers. Social Anxiety is robustly predictive of loneliness, and its heightened presence in early adulthood could be a contributing factor to the high levels of loneliness experienced by post-secondary students (e.g. one study of Turkish students found that 60.2% of exceeded the cutoff for ‘clinical’ loneliness; Özdemir & Tuncay, [2008](#)) in spite of being surrounded by peers with similar interests and having many opportunities to interact. As such, providing individuals with the means to alleviate their social anxiety might be a critical pathway for addressing loneliness in a large at-risk Canadian subpopulation.

The possible importance of addressing social anxiety should not be understated, but it is also important to note that alleviating all social anxiety would likely not alleviate all loneliness. Some individuals are lonely in spite of feeling no social anxiety, and others feel well connected in spite of being highly socially anxious. As such, support should be provided in accordance with a person’s individual needs.

Though the relationship between social anxiety and loneliness is well documented, there are still substantial gaps in the literature, especially with respect to causality. Since it is difficult to directly manipulate either social anxiety or loneliness in a durable and/or ethically acceptable way, quantifying directionality is a challenge. As such, when evaluating treatment programs for either social anxiety or loneliness, measuring the effect on both would be ideal and could help establish where efficacy does and does not translate in either direction.

Conclusion

Based on the available evidence and our analysis of the Canadian Social Connection Survey data set, we recommend that resources for the treatment of social anxiety be made broadly available such that people experiencing an elevated level of loneliness who also find themselves prone to social anxiety can overcome their internal barriers to creating social connections. We also strongly recommend a continued investment into research in this area to advance our understanding of how loneliness and social anxiety relate and change throughout the lifespan within individuals. And finally, we encourage researchers to keep both social anxiety and loneliness in mind when developing treatments for one or the other. Though the need to address social anxiety is typically discussed with respect to its extreme debilitating clinical manifestations, its strong correlation with loneliness across broad general population samples indicates its value as a nonclinical predictor of loneliness risk, and potential target for treatment and/or support to foster social health in the Canadian population.

Suggested Citation: Adam Frost, Cindy Yu, Jocelle Refol, Pete Bombaci, Kiffer Card. (2022) *“What is the role of social anxiety in loneliness?”* Canadian Alliance for Social Connection and Health.

