

Does social cognition impact social health?

Background

In social animals—including humans—social relationships and interactions are inherently beneficial and rewarding (Regan et al., [2022](#); Trezza et al., [2011](#); Reyes-Garcia et al., [2009](#)) and are arguably a precondition for wellbeing (Diener & Seligman, [2002](#); Baumeister & Leary, [1995](#)). For example, Powdthavee ([2008](#)) estimates that increasing social involvement is associated with life satisfaction gains valued at approximately £85,000 per year and is notably stronger than the effect of increasing household income. The benefits of wellbeing extend beyond close relationships and also come from interactions with weak ties and strangers (Sandstrom & Dunn, [2014](#)). However, social relationships impose real costs and can be difficult to maintain (Raihani & Power, [2021](#); Varey et al., [2015](#); Lewis et al., [2015](#)). Indeed, we have to *invest* in our relationships, *spend* time with others, and *commit* ourselves to others (Paul et al., [2013](#); Saffer et al., [2008](#)). Social behaviour can therefore constrain our agency and independence – giving rise to conflicts between our fundamental needs for community and autonomy (Elliott & Turnbull, [2010](#); Abele & Wojciszke, [2007](#); Fox, [1993](#); Young, [1980](#)). As such, social cognition is an important evolutionary tool allowing us to strike a balance between these, while also undertaking critical survival functions such as distinguishing friend from foe and optimizing how we spend our limited social time and energy (O'Brien & Hess, [2020](#); Neuberg et al., [2013](#); Frith & Frith, [2011](#); Fiske et al., [2007](#); Herrmann et al., [2007](#); Carstensen et al., [2003](#)). However, the social environments in which we now exist are dramatically different from those in which we evolved (Akins, [2022](#); Karmaker & Raychaudhuri, [2015](#); Trivedi et al., [2008](#); Simmel, [1903](#)) and some may argue that these changes have created an evolutionary mismatch, in which our evolved cognitive skills are not well adapted for our social environments. Understanding the ways in which our social cognition shapes our social health is therefore important for preventing and responding to contemporary social health challenges.

Purpose

The purpose of this evidence brief is to review how social cognition influences social health, particularly in the context of wellbeing and social functioning.

Evidence from Existing Studies

The existing literature is rife with examples illustrating how patterns of social cognition contribute to suboptimal levels of sociability. For example, Wojciszke ([1994](#)) argued that while we judge our own behaviours in terms of competence we judge the behaviour of others in terms of morality – allowing us to make swift judgements but also supporting tribalistic behaviour. Similarly, researchers have shown that negative interactions and experiences carry far greater weight than positive ones (Harms, [2022](#); Vaish et al., [2008](#); Rozein & Royzman, [2001](#); Baumeister et al., [2001](#); Ito et al., [1998](#); Schuster et al., [1990](#); Rook, [1997](#), [1984](#)) – creating an uneven playing field where we pay outsized attention to risks and negative elements and

discount positive events and experiences (Bebbington et al., [2017](#); Sunstein & Zeckhauser, [2011](#); Vassilopoulos & Banerjee, [2010](#)). Most strikingly, individuals greatly underestimate the value of social connections, despite social factors being among the most important predictors of wellbeing (Haslam et al., [2008](#); Koeske & Koeske, [1991](#)). With respect to this final feature, Kumar & Epley ([2022a](#)) have argued that individuals are systematically biased towards social avoidance and thus get less social connection or interaction than is beneficial for them (Epley et al., [2022](#); Silver & Small, [2022](#)). This maladaptive bias, they argue, arises from our fundamental inability to accurately judge the sociability or social interest of others—leading us to believe that they are less interested in socializing, talking, or befriending than they actually are (Kumar & Epley, [2022b](#); Happe & Conway, [2016](#)). In fact, Eyal et al., ([2018](#)) demonstrate that when we engage in perspective-taking (i.e., trying to understand what others think and feel), we gain confidence at the expense of accuracy (Boven et al., [2013](#); Epley et al., [2004](#)). Illustrating this, researchers have shown that we are notoriously bad judges of whether people like us – usually being less assured than we should be (Mastroianni et al., [2021](#); Wolf et al., [2021](#); Boothby et al., [2018](#); Savitsky et al., [2001](#)). Likewise, we perceive our own social situation and social lives as less rich than those of others (Deri et al., [2017](#); Whillans et al., [2017](#)) – leading to a downward effect on our own self-confidence. In particular, socially anxious and lonely individuals have been shown to be especially pessimistic when interpreting how others think and feel and more likely to perceive social encounters as costly or risky (Hezel & McNally, [2014](#); Rheingold et al., [2003](#); Amin et al., [1998](#)).

In addition to being poor judges of others thoughts and feelings, empirical studies suggest that we are also bad at judging how we might benefit from social interactions (Inagaki & Orenhek, [2017](#); Halpern & Arnold, [2008](#); Ayton et al., [2007](#)). Such studies have shown that people underestimate the benefits of initiating, engaging in, and continuing conversations with others (Liu et al., [2023](#); Kardas et al., [2022a](#); Atir et al., [2022](#); Schroeder et al., [2022](#); Kumar & Epley, [2021](#); Mastroianni et al., [2020](#); Epley & Schroeder, [2014](#); Sandstrom & Dunn, [2013](#); Bell et al., [2009](#)). We overestimate the awkwardness of expressing gratitude (Kumar & Epley, [2018](#); Kumar, [2022](#)); we opt for surface level conversations at the expense of deeper more rewarding ones (Kardas et al., [2022b](#); Hart et al., [2021](#)); we avoid saying and doing nice things for others (Park et al., [2024](#); Kumar & Epley, [2023a](#), [2023b](#); Zhao & Epley, [2020](#), [2021](#); Wang & Xie, [2020](#); Boothby & Bohns, [2020](#); Rzeszotarski & Morris, [2014](#); Zhang & Epley, [2012](#)); we loath asking for help even when doing so can benefit ourselves and our helpers (Dungan et al., [2022](#); Huang et al., [2017](#); Bohns et al., [2011](#); Flynn et al., [2008](#)); we limit our social interactions with diverse others (Mallett et al., [2008](#)); we underestimate our impact on others and their wellbeing (Echelbarger & Epley, [2023](#); Kumar & Epley, [2018](#), [2023](#); Cooney et al., [2022](#); Li et al., [2020](#); Bohns, [2016](#); Cialdini, [2009](#)); and we overestimate the extent to which negative events will impact us (Wilson & Gilbert, [2005](#)). In other words, we appear to systematically let our social fears get in the way of engaging in valuable social interactions with others (Sandstrom & Boothby, [2020](#)). We believe that social interaction is costlier than it really is and these beliefs lead to worse social outcomes (McManus et al., [2000](#); Wei et al., [2020](#)).

Given these outcomes, one might argue that these negative biases represent “maladaptive” patterns of social cognition. This is because they have been widely observed to contribute to and maintain poor social health outcomes (Stevens & Jovanovic, [2018](#); Spithoven et al., [2017](#); Hoertnagl et al., [2014](#); Jawaid et al., [2011](#); Cacioppo & Hawkley, [2009](#); Cacioppo et al., [2006](#); Lucock & Salkovski, [1988](#); Silverman, [1984](#)). Among these, inward attentional focus, social monitoring, fear of negative evaluation, hypervigilance to social threat, rejection sensitivity, and



negative beliefs about one's self or the beliefs of others have all been observed to underlie the emergence and maintenance of loneliness and social anxiety (Baez et al., [2023](#); Floyd et al., [2022](#); Leigh & Clark, [2018](#); Nowland et al., [2018](#); Hall et al., [2018](#); Zhou et al., [2018](#); Cui et al., [2017](#); Norton & Abbott, [2016](#); Lim et al., [2016](#); Vanhalst et al., [2015](#); Lodder et al., [2015a](#), [2015b](#); Cacioppo et al., [2015](#); Bangee et al., [2014](#); Bangee & Qualter, [2018](#); Qualter et al., [2013](#); Watson & Nesdale, [2012](#); Frankel & Prentice-Dunn, [2011](#); Voncken et al., [2010](#); Goswick & Jones, [2010](#); Tsai & Reis, [2009](#); Schulz et al., [2008](#); Gardner et al., [2005](#); Johnson et al., [2001](#); Duck, [1994](#); Levin & Stokes, [1986](#); Williams & Solano, [1983](#); Jones et al., [1981](#), [1983](#); Perlman & Peplau, [1981](#)). For example, Christensen & Kashy ([1998](#)) showed that lonely people were viewed as friendlier by others, but viewed themselves more negatively and thought others viewed them more negatively as well. Similarly, Segrin & Kinney ([1995](#)) demonstrated that socially anxious and lonely people are not objectively less socially skilled – but they do have less confidence in their social abilities and project these insecurities to their conversational partners. While not all studies find that lonely individuals are on equal footing in terms of their social skills (Wittenberg & Reis, [1986](#); Rotenberg & Kmill, [1992](#)), other authors have produced concurring results which underscore the role that negatively biased cognition plays in social performance (Meehan et al., [2018](#); Lodder et al., [2016](#); Bell & Daly, [2009](#); Alden et al., [2008](#)). In this way, it seems that negative social expectations become self-fulfilling prophecies (Downey & Feldman, [1996](#)).

In light of these findings, it seems that maladaptive patterns of social cognition lead to less effective or avoidant coping strategies that contribute to greater harm by trapping individuals in a cycle of loneliness wherein they act to protect themselves from aversive social stimuli by creating social distance, but end up reinforcing harmful behaviours and patterns of cognition (Shrum et al., [2022](#); Layden et al., [2018](#); Rotenberg et al., [2010](#); Boivin et al., [2009](#); Smith et al., [2006](#); Nurmi & Salmela-Aro, [1997](#)). For example, Salano et al., ([1982](#)) observed that lonely individuals withhold self-disclosures, which impairs normal social development (Leung, [2004](#)). Conversely, active social engagement – characterized by extraversion, self-confidence, and prosociality – appear to be the optimal social strategy – resulting in greater happiness and wellbeing (Deckx et al., [2018](#); Sprecher et al., [2013](#); Cheng & Furnham, [2002](#)). Of course, when individuals are feeling down, they may be less interested in socializing (Whelan & Zelenski, [2011](#)) – creating a catch 22 of sorts.

Given this trap, it may be necessary and beneficial to promote active coping (Bouwman et al., [2016](#); Schoenmakers et al., [2011](#); Stravrova et al., [2021](#)) and realistic optimism (Miller et al., [2021](#); Chang et al., [2017](#); Terrill, [2010](#); Lopes & Cunha, [2008](#); Armor et al., [2008](#); Deptula et al., [2007](#); Schneider, [2001](#); Brissette et al., [2002](#); Bosompra et al., [2000](#); Carver et al., [1994](#); Taylor & Brown, [1988](#)) to help limit the adverse effects of social biases which might otherwise reduce one's level of engagement in pleasant and rewarding social interactions. In other words, individuals must overcome their maladaptive beliefs and cognitions by proactively pushing through these to achieve a healthy level of social engagement. This is particularly so for individuals deprived of such social interactions (Ren et al., [2022](#)), though it is equally important that others actively signal their openness and acceptance of others so as to help reduce feelings of bias, rejection, and negative evaluation (Lucas et al., [2010](#)). This active approach encourages individuals to engage authentically (Yu & Chang, [2023](#); Chu et al., [2023](#)) without getting trapped by negative beliefs about what others are thinking. In the context of close relationships, such optimism has been shown to be self-fulfilling (Smith et al., [2013](#); Srivastava et al., [2006](#)). For example, Nurmi et al., ([1996](#)) showed that optimism was associated with a



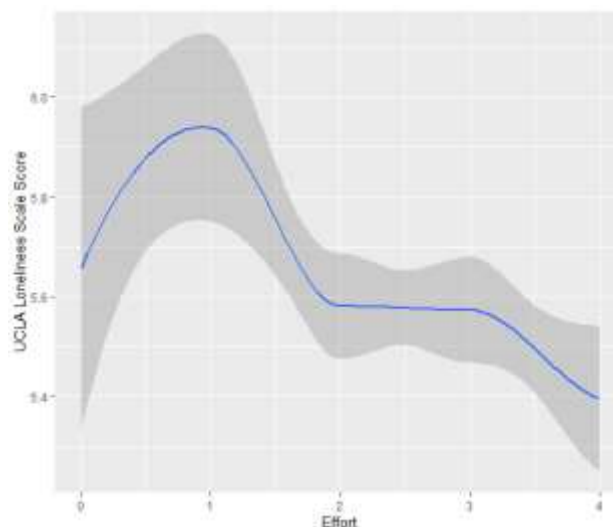
less avoidant social strategy and in turn those who reported less avoidance were more successful in their peer relationships. As well, helping individuals see the positive side of negative social exchanges may help them better deal with these and limit their disruption on social development (Fung et al., [2009](#)).

Of course, optimism and other patterns of social cognition have been observed to relate to neurological features of the brain (Schurz et al., [2021](#); Moser et al., [2021](#); Feng et al., [2019](#); Inagaki et al., [2016](#); Cacioppo et al., [2015](#); Kanai et al., [2012](#); Derntl et al., [2011](#); Cacioppo et al., [2009](#)). As well, the early development of social cognition is not naïve to the very real experiences of one's social environment and as such it is difficult to ascertain the extent to which certain patterns of cognition really are maladaptive (Sweeny et al., [2006](#); Crick & Dodge, [1994](#)). These realities raise questions about the malleability of our social cognitive biases and underscoring the need for some individuals to actively manage or resist biases that might otherwise become maladaptive. Nevertheless, despite the potential durability of such cognitions, individuals can act intentionally to overcome them and studies which have asked individuals to do so indicate that proactive and intentional social behaviour results in positive effects (Ascigil et al., [2023](#); Margolis & Lyubomirsky, [2020](#); Nelson et al., [2016](#); Epley & Schroeder, [2014](#); Dunn et al., [2007](#)) – even among those who are predisposed to believing that such benefits are not likely (Zelenski et al., [2013](#)). Underscoring this, even imagining such social interactions appears to have potential cognitive benefits (Crisp & Turner, [2009](#)). Taken together, these studies suggest that addressing cognitive biases may be possible even when constrained by difficult realities.

Analyses from The Canadian Alliance for Social Connection and Health

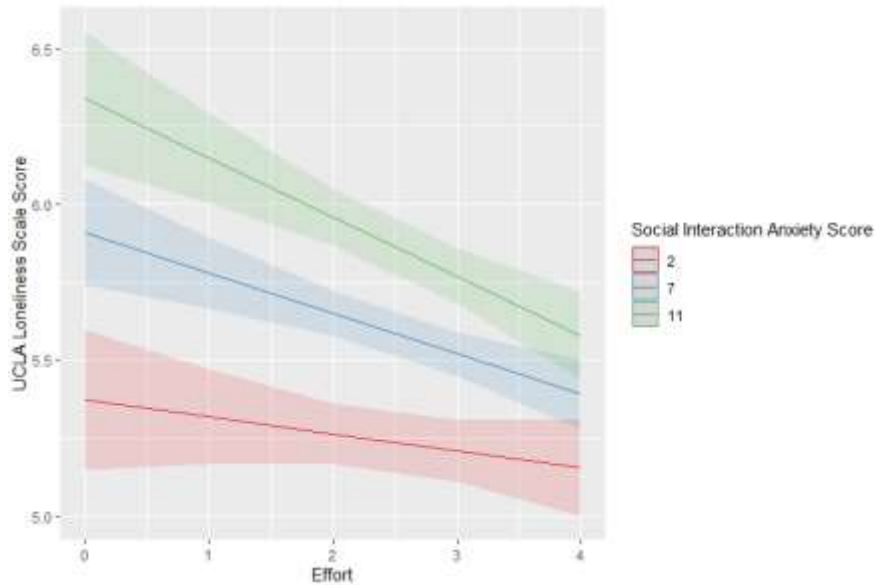
Using data from the Canadian Social Connection Survey, we examined the relationship between the self-reported amount of effort invested in connecting with others and levels of loneliness. Results indicated that greater effort was associated with lower loneliness ($\beta = -0.111$, $SE = 0.031$, $p = 0.0003$). As shown in **Figure 1**, loneliness scores initially increased as individuals went from “No effort at all [0]” to “A little effort [1]”, but thereafter declined as individuals invested “some,” “much,” or “a great deal of effort.”

Figure 1. Social Effort and Loneliness



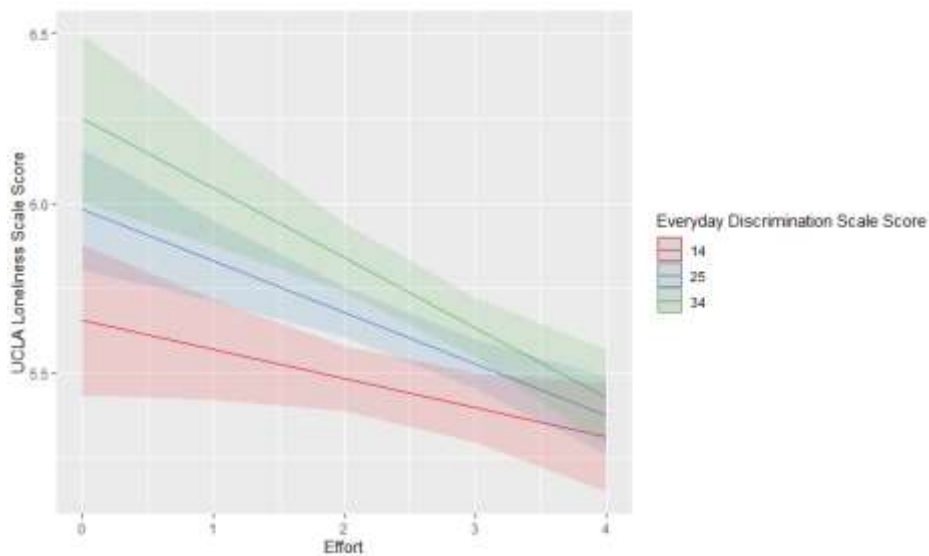
We additionally included an interaction term with Social Interaction Anxiety Scale scores to assess whether declines in loneliness were different for individuals with varying levels of social anxiety. As indicated by a statistically significant interaction effect ($\beta = -0.015$, $SE = 0.006$, $p = 0.009$; See **Figure 2**), these analyses indicated that the decline in loneliness was greater for individuals with higher social anxiety.

Figure 2. Loneliness Declines with Increased Social Effort, by Level of Social Anxiety



Similar results were also observed when testing an interaction with experiences of discrimination. The statistically significant interaction ($\beta = -0.006$, $SE = 0.003$, $p = 0.035$; See **Figure 3**) with Everyday Discrimination Scale scores indicated that increased social effort was more strongly associated with reduced loneliness in those with greater exposure to discrimination.

Figure 3. Loneliness Declines with Increased Social Effort, by Level of Discrimination



Finally, we looked at predictors of social effort, including social interaction anxiety and self-esteem. These models controlled for age, gender, ethnicity, and household income. Results from these models indicated that higher self-esteem ($\beta = 0.017$, $SE = 0.003$, $p < 0.0001$) and lower social interaction anxiety ($\beta = -0.023$, $SE = 0.004$, $p < 0.0001$) were each associated with greater social effort – supporting the existing literature in showing that maladaptive beliefs about one’s self and worries about social interactions with others lead to reduced social engagement, contributing to loneliness.

Discussion

The evidence reviewed above highlights how social cognitions – particularly in lonely or socially anxious individuals – can interfere with optimal patterns of social connectivity by increasing the perceived costs and reducing the perceived benefits of social interaction. Importantly, the literature base includes longitudinal and experimental studies, spanning decades, and is generally robust in its conclusions. Taking these findings into consideration, it is clear that promoting social health requires us to consider patterns of social cognition and actively work to overcome maladaptive beliefs or thoughts that inhibit social connections. In particular, it is important to build self-confidence, overcome social fears and anxieties, actively engage socially, and develop strategies for managing negative thoughts and biases that might otherwise dissuade individuals from engaging with others to build a healthy social life. That said, in some cases, clinical supports may be needed to help individuals achieve these goals – particularly at early stages where overcoming maladaptive patterns might be more difficult. Furthermore, as it is not yet clear which clinical supports are most effective – particularly at scale – further research is needed into effective clinical supports and intervention. However, evaluations of past interventions for loneliness do highlight cognitive behavioural interventions as among those most effective strategies (Masi et al., [2013](#)).

Conclusion

Based on the evidence summarized above, we recommend that individuals be supported to overcome maladaptive social cognitions, through both individual- and population-level interventions. Helping people understand the profound benefits of social connection and overcome negative beliefs will help them achieve their social health goals. Of course, given patterns of human social behaviour and development, achieving change may be difficult. The difficulty may be greater for individuals with adverse social experiences which have served to reinforce the seemingly natural patterns of negative bias that underlie our social cognition. Research is therefore needed to understand how to help individuals with elevated needs.

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