

Do people have different social needs?

Background

Mental health is the most important determinant of wellbeing – with its effects exceeding those of other chronic health conditions (Acosta-Conzalez & Marcenaro-Gutierrez, [2023](#)). The most important predictor of mental health is one’s social life (Choi et al., [2020](#)). This is why human beings need strong stable interpersonal relationships; why they must develop social connections to survive and thrive; and why they naturally strive for a sense of belonging (Baumeister & Leary, [1995](#)). Conversely, when an individual’s social needs are not met, they experience declines in subjective wellbeing and considerable adverse health effects (Vella-Brodrick et al., [2022](#)). However, individuals clearly differ in how much social connection they attain, or even strive for (Mellor et al., [2008](#)). Understanding how individuals vary with respect to their social behavior and needs is critical to informing the development of interventions that aim to promote social connection.

Purpose

The purpose of this evidence brief is to review the literature examining individual differences in social behavior and needs. In exploring the question of whether and how individual’s social needs differ we recognize that there are a large number of potential factors that might shape the amount of social connection somebody needs. With such a wide range of potential moderators, we recognize that a complete review is difficult, if not impossible. Nevertheless, we will attempt to summarize and synthesize what is known about individual variations in social behavior and need to the extent that it is useful for illustrating the magnitude and significance of such variations. In doing so, we focus on (1) the potential mechanisms that underlie individual difference in social behavior and need, (2) the role of need to belong, (3) the role of introversion-extraversion, (4) the role of attachment style, and (5) the role of individualism-collectivism. These three potential moderators were selected given their preeminence in the extant literature.

Evidence from Existing Studies

Understanding differences in social need

Decades of social science suggest that there is considerable variation in how people connect with their communities (Leary & Hoyle, [2009](#); Gartland et al., [2021](#); Allen et al., [2021](#); Burger, [1995](#)). For example, some individuals (such as those with social anhedonia) exhibit a genuine disinterest in social connection (Silvia & Kwapil, [2010](#)). While, these individuals also exhibit poorer functioning and higher risk for poor health (Silvia & Kwapil, [2010](#)), variation in social behavior is widespread. For example, Roberts et al. ([2009](#)) reports that the average person has about 72 active social contacts in their networks, with a standard deviation of about 33 and a range of 10 to 168. Yet, across human populations patterns of human social behavior are remarkably consistent (Dunbar, [2020](#)) – suggesting that the need for social connection is deeply engrained. For example, in most communities, individuals typically have less than 150 network

ties and organize these relationships into hierarchical layers of varying intimacy (Tamarit et al., [2018](#); Mac Carron et al., [2016](#); Tamarit et al., [2022](#)).

The individual variation around these patterns has been described as a person's "social signature." Studies of these patterns have shown them to persist over time even in the presence of substantial turnover within a person's social network (Li & Bond, [2022](#); Saramaki et al. [2014](#)). The manifestation of these patterns within an individual suggests that, at least to some extent, social behaviour emerges from robust person-level characteristics and is not merely the product of circumstance or environment. In other words, individuals do differ meaningfully, at least to some extent, in how they connect to one another. These differences may reflect variation in social need, preference, ability, or some other relevant trait.

Providing a mechanistic explanation for the phenomenon of social signatures, Matthews & Tye ([2019](#)) introduced the concept of "social homeostasis" to explain the evolutionary mechanisms and neurobiology of social behaviour. Their model posits that we subconsciously monitor our social position and connectivity and respond to perceived deficiencies or surpluses by effecting changes in emotions and social behaviour in order to achieve some inherent setpoint in our level of social connection. This theory aligns well with Cacioppo's evolutionary theory of loneliness, which hypothesizes that loneliness is a neural mechanism intended to motivate individuals to seek out and maintain healthy social relationships in such a way that supports cooperation and survival (Cacioppo et al., [2015](#)). Within the social homeostasis model, the "set point" is the feature that would account for difference in social needs. While these characteristics may be partially heritable (Tena & Denis, [2015](#); Scarr et al. [1969](#); Power et al., [2015](#)), Bales et al. ([2023](#)) suggests a variety of diverse factors that may shape these set points, including stress mechanisms that may closely correlate with experiences of loneliness and its impact on health. In particular, stress reactivity, which is conceptualized as a general biological sensitivity to one's environment, may play an important role (Boyce & Ellis, [2005](#)). Indeed, stress reactivity encompasses sensitivity to both environmental stressors and how much social connections can buffer these stressors. The extent to which we are psychologically activated by our environment is thus hypothesized to underlie how much social connection we need to feel secure and at ease. Bales et al. also argues that how we naturally cope to our stress likely moderates the extent to which stress reactivity correlates with social need and behaviour. Indeed, whether we tend to fight-or-flight or tend-and-befriend may give rise to different patterned responses even among those with similar levels of sensitivity (Taylor et al., [2000](#)).

In addition to variations in stress-reactivity and coping styles, several major psychosocial frameworks have been used to understand the social signatures of individuals. These include (a) need to belong, (b) introversion-extraversion, (c) attachment theory, and (d) collectivism-individualism. Below we briefly review the evidence relating each of these:

The Role of One's Need to Belong

Baumeister and Leary ([1995](#)) proposed the need to belong as a fundamental motive for social behavior (Baumeister, [2012](#)). Even at a young age, children are motivated to interact with peers and those around them (Over, [2016](#); Allen et al, [2021](#)). However, the strength of this motivation differs across individuals (Brown et al., [2007](#)) – with higher need to belong expressed among those with higher extraversion, agreeableness, neuroticism, and social identification (Leary et al., [2013](#)). While measurement issued challenge our understanding of the need to belong construct (Pillow et al., [2016](#)), these differences appear to moderate the severity of impacts



related to ostracism and social exclusion (Over, [2016](#); Beakman et al., [2016](#); DeWall et al., [2011](#); Williams, [2007](#)) such that those with higher need for belong require greater social connectedness in order to experience similar positive outcomes (Barbour et al., [2021](#)). For example, Dienst et al. ([2023](#)) reported that the effect of social disconnection on suicide ideation was moderated by the need to belong – suggesting that unmet social needs more strongly impacts those with a higher need to belong. This example suggests that individuals both vary in their social need and that this variation effects the benefits they derive from social interaction.

The Role of Introversion-Extraversion

First, it is of little surprise that personality traits have been implicated in social behavior – after all personality likely plays an important role in mediating our relationships with others. Examining the effects of personality on loneliness, Schutter et al., ([2019](#)) showed that extraversion, neuroticism, and agreeableness are important predictors of loneliness and Selfhout et al. ([2010](#)) showed that more extraverted adolescents tend to accrue larger social networks – highlighting the impact of personality on social behaviour. Similarly, introverts have been shown to have a greater preference for isolation and autonomy (Burger, [1995](#)). Within the extant literature, introversion-extraversion seems to be among the most commonly identified factors that might influence whether an individual derives benefit from increased social contact. It is sometimes argued that an introvert needs less social connection. However, there is actually considerable evidence that extraverted individuals are, generally speaking, happier and healthier (Deng et al., [2021](#); Diener et al., [2003](#); Kim et al., [2018](#); Smillie et al., [2013](#); Zelenski et al., [2013](#)) and that introverts experience greater loneliness (Buecker et al., [2020](#); Matthews et al., [2022](#); Mund & Neyer, [2019](#); Schermer & Martin, [2018](#); Wiczorek et al., [2021](#)). While it uncertain whether these differences arise from levels of sociability or are simply confounded by a general difference in sensitivity to reward and external stimuli (Feiler & Kleinbaum, [2015](#); Smillie, [2013](#); Lucas, [2000](#)), this does suggest that something about being extraverted is beneficial. In fact, Zelenski et al., ([2013](#)) showed that when introverts act more extroverted, they experience more positive affect. Along these same lines, Duffy et al. ([2018](#)) demonstrated that even introverts experience a boost from socialization (except perhaps those at the most extreme end of introversion). These studies suggest that introverts could benefit from acting more extroverted. Providing further insight into the social behaviours associated with extraversion-introversion, Pollet et al. ([2011](#)) and Malcolm et al. ([2021](#)) each reported that while more extraverted individuals have larger social networks, they are not actually emotionally closer to individuals in their network. This raises a question about whether differences in social style between introverts and extroverts result in meaningful differences in the social fulfillment that individuals derive from their sociality (Roberts et al., [2009](#)). It may be possible that these personality dimensions merely reflect different strategies to achieve the same outcomes given standard restraints of cognitive capacity and time restraints (Tamarit et al., [2018](#); Sutcliffe et al., [2011](#)).

The Role of Attachment Style

The ways that individuals relate to one another is also sometimes described in terms of interpersonal attachment styles (Kaurin et al., [2022](#); Shaver & Mikulincer, [2012](#)). The theory of attachment (Ainsworth, [1978](#); Bowlby, [1969](#)) posits that individuals commonly develop one of three dominant attachment styles (though others exist): **secure attachment** (characterized by the development of healthy and stable relationships in which individuals feel comfortable and



safe), **anxious attachment** (characterized by the seeking out of relationships, but also worries and fears of abandonment or rejection), or **avoidant attachment** (characterized by social withdrawal and emotional distance). Attachment styles provide an important paradigm by which we can understand variance in social benefit (Mikulincer & Shaver, [2014](#)). For instance, securely attached individuals generally have higher social support and lower levels of isolation and loneliness (Spence et al., [2020](#)). These findings present a similar scenario as is described above with respect to the link between introversion-extraversion and social wellbeing. Namely, that the individuals who we would anticipate exhibiting the most prosocial social signatures (i.e., securely attached individuals), experience the least loneliness and greatest subjective wellbeing, while those who we anticipate exhibiting the least social integration and emotional closeness (i.e., avoidantly attached individuals) are at greater risk of loneliness and poor wellbeing. Meanwhile, individuals who seek out relationships, but feel anxiety about them (i.e., anxiously attached individuals) are in-between with levels of loneliness and isolation being lower than compared to avoidant individuals (Helm et al., [2020](#)). In a study conducted during the COVID-19 pandemic, within person analyses examined the link between daily social contact and found that even when controlling for attachment style, social connection was associated with reduced feelings of loneliness within individuals (Lewis et al., [2022](#)). Similarly, Stanton et al. ([2017](#)) reported that among avoidant individuals, positive, intimacy-related relationship experiences reduced negative affect and improved relationship quality; and Debrot et al. ([2020](#)) reported that even among avoidant attached individuals who valued distance and autonomy more frequent interpersonal affectionate touch was associated with greater wellbeing. These studies suggest once more that improving social connections and relationships are beneficial to individuals across attachment styles (Carvallo & Gabriel, [2006](#)). That said, few studies have explicitly explored attachment as a moderator of the effect of social connection on wellbeing. Notable exceptions include neuroscience studies suggesting considerable differences in the way social information is processed in the brain (Vrticka & Vuilleumier, [2012](#)) – however it remains unclear to what extent these differences translate into a blunting or enhancement of social benefit.

In applying attachment theory to the question of variations in social need, it is also important to consider whether attachment styles are themselves modifiable characteristics. This is especially important given that insecure attachment styles are so widely associated with deleterious health and social outcomes. While attachment styles are influenced by parental-caregiver relationships and emerge early in the life course, recent research suggests that they are to varying degrees responsive to changes across the life course and in response to life events (Fraley et al., [2021](#); Fraley & Roisman, [2019](#)). If attachment is implicated in the social homeostasis set point, this may suggest that social need and signatures may likewise be amenable to change. For example, Lee et al., ([2021](#)) suggest that chronic isolation can contribute to a reconfiguration of the social control system, leading to changes in set-point and coping strategy. This would explain the long documented link between chronic isolation and antisocial behaviours and maladaptive social styles. Nevertheless, empirical studies of social signature and attachment style demonstrate that individuals do exhibit considerable variations in social characteristics.

The Role of Individualism-Collectivism

Cultural factors may also be implicated in social needs and behaviours (Surkalim et al., [2022](#)). Among such factors, collectivism (characterized by interpersonal dependence) and



individualism (characterized by personal independence) are likely two of the most relevant (Tiandis, 1988). Traditionally, Eastern cultures, such as those in China, Japan, and Korea, have been associated with collectivism, where the group's welfare is placed above the individual's and relationships within the group are highly valued (Oyserman et al., 2002). Conversely, Western cultures, such as those in the United States and Europe, have traditionally been associated with individualism, where personal freedom, self-reliance, and individual initiative are emphasized. Importantly, these are broad generalizations and there is significant diversity and variation within and across cultures (Voronov & Singer, 2000; Lomas et al., 2022; Green et al., 2005). Further, modern trends also suggest an increasing blending of these values across cultures due to globalization and cross-cultural influences (Santos et al., 2017; Hamamura, 2011). Nevertheless, empirical studies have shown that greater individualism may be associated with lower social connectedness, but also lesser risk for loneliness (Heu et al., 2019; Swader et al., 2019; Lykes et al., 2013) – suggesting lesser social needs among more individualistic cultures. Conversely, collectivism may be associated with reduced willingness to impose on others for social support – creating social vulnerability (Zheng et al., 2021). In terms of the impact that collectivism-individualism may have on social need, studies have shown that the effect of loneliness on health is stronger in more collectivistic environments (Beller & Wagner, 2020) – once again reinforcing the likelihood that collectivists experience higher social need. However, studies report mixed and nuanced findings on these relationships (Pfundmair et al., 2015) These findings suggest that cultural expectations about social embeddedness may be important moderators of social need and behavior.

Analyses from the Canadian Social Connection Survey

Using data from the 2021 Canadian Social Connection Survey, we examined the relationship between personality traits, indicators of social wellbeing, and subjective happiness. First, we compared differences in preferred amounts of time spent with friends across levels of introversion-extraversion and attachment style dimensions. Results from Kruskal-Wallis tests showed that higher extraversion ($p < 0.0001$), lower avoidant attachment ($p = 0.0004$), and higher secure attachment ($p < 0.0001$) were associated with higher odds of wanting to spend five or more hours with friends, but not higher anxious attachment ($p = 0.18$). However, in each case small η^2 (eta squared) values of less than 0.06 indicated that the effect sizes were small – suggesting these factors play only a small role in shaping preferred time spent with friends.

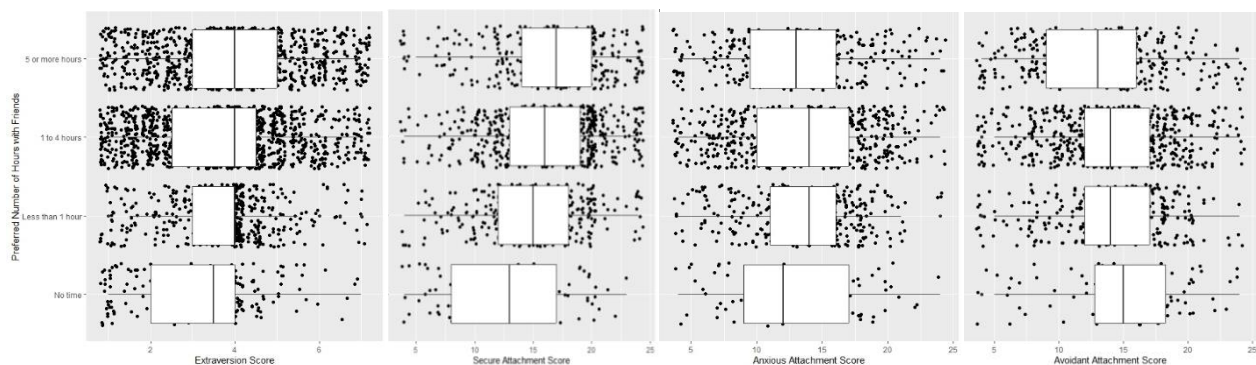


Figure 1. Relationship Between Preferred Time with Friends and Extraversion/Attachment Dimensions



Next, we examined associations with social support and subjective happiness. Results showed that, regardless of extraversion level, higher subjective happiness was associated with higher social support from friends ($\beta = 0.247$, $SE = 0.028$, $t(928) = 8.689$, $p < 0.001$), family ($\beta = 0.301$, $SE = 0.026$, $t(928) = 11.660$, $p < 0.001$), and significant others ($\beta = 0.221$, $SE = 0.026$, $t(928) = 8.549$, $p < 0.001$) – suggesting that social connection has an independent effect of wellbeing across individual differences. Models were re-tested with interaction terms between each social health measures and the extraversion subscale in order to see if the effect of social support differed according to level of introversion-extraversion. **Figure 2** shows interaction plots for each multivariable interaction. These models examined the differing impact of social health measures (the x-axis) on subjective happiness scores (the y-axis) across levels of extraversion (the separate linear effects). Results show that the correlation higher social support from friends ($p = 0.001$) and from family ($p = 0.007$) was larger in predicting subjective happiness for people with low extraversion compared to those with high extraversion (See Panels A and B). The interaction effect between extraversion and social support from significant others was not statistically significant ($p = 0.309$; See Panel C).

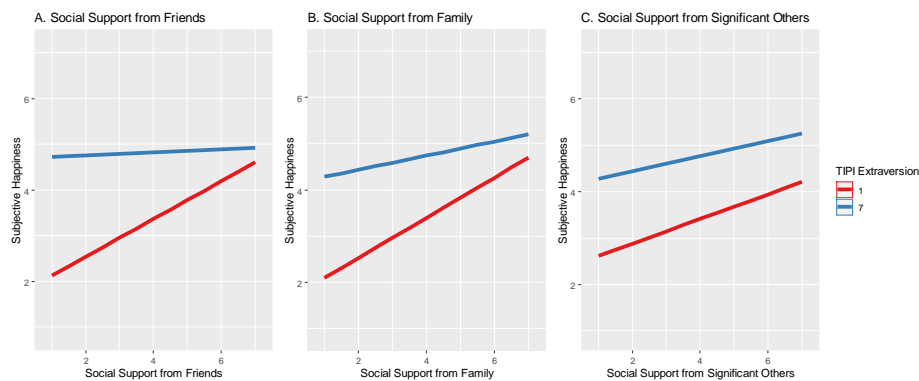


Figure 2. Interaction Plots Testing Interaction Between Extraversion and Social Support in Predicting Subjective Happiness

Next, we examined the effects of attachment variables on subjective happiness. Multivariable models showed that higher secure attachment ($\beta = 0.109$, $SE = 0.006$, $t(1173) = 16.790$, $p < 0.001$), avoidant attachment ($\beta = -0.021$, $SE = 0.008$, $t(1173) = -2.462$, $p = 0.014$), and anxious attachment ($\beta = -0.073$, $SE = 0.008$, $t(1173) = -8.825$, $p < 0.001$) subscales were each correlated with subjective happiness in the expected direction. Additional models were constructed to test whether social support from family, friends, and significant others moderated the effect of avoidant and attachment dimensions on subjective wellbeing. In each case, the results were not statistically significant ($p > 0.05$) – suggesting that the benefits of social support on subjective happiness do not differ across attachment dimensions.

Finally, we tested whether four dimensions of collectivism-individualism moderated the effect of social support from friends on subjective happiness, controlling for age, gender, ethnicity, and income. Results showed that horizontal individualism (i.e., *the extent to which an individual values autonomy and independence*; $\beta = 0.007$, $SE = 0.004$, $t(1094) = 2.03$, $p = 0.042$) had a small moderating effect that was marginally significant, indicating that the effect of strong social support on subjective happiness was stronger among those who expressed stronger values of autonomy and independence. However, the moderating effects of vertical individualism (i.e., *the extent to which an individual values competition and achievement*; $\beta = -0.005$, $SE = 0.003$,



$t(1092) = -1.33, p = 0.183$), horizontal collectivism (i.e., *the extent to which an individual values sociability and interdependence*; $\beta = 0.006, SE = 0.003, t(1096) = 1.71, p = 0.087$), and vertical collectivism (i.e., *the extent to which an individual values adherence to norms, duties, and obligations to their social group*; $\beta = 0.005, SE = 0.003, t(1099) = 1.65, p = 0.099$) were not statistically significant. These results suggest that largely speaking, social support from friends has similar effects on subjective happiness regardless of cultural orientations, with the possible exception of slightly greater importance of social support among those who report stronger valuation of autonomy and independence.

Discussion

Based on existing studies and our analyses of the Canadian Social Connection Survey, it is clear that individuals exhibit variation in how they connect to one another and in their preferred levels of social connection. Sources of this variation likely include differences in stress reactivity, coping styles, attachment styles, personality traits, and other person-level or cultural factors. However, the effect of these variables is likely small and there is little evidence to suggest that individuals differentially benefit from social connection. This is exemplified by our findings that introverted and extraverted individuals alike benefit from social connections and that in some respects strong social connections are even more important for relatively more introverted individuals. While some individuals may not require or want as much social connection as others, we nevertheless find that all of us require at least some basic provision of social support and connection. Further research is needed to understand how much social connection is needed and whether these minimal thresholds are significantly influenced by genetic, cultural, or person-level factors. Importantly, relatively few studies address these questions head-on, and many of those that do fail to specify the magnitude or meaning of these effects. Furthermore, it should be acknowledged that social needs might exceptionally differ for neurodivergent individuals (including highly sensitive people and those with autism), survivors of trauma, and other subpopulations.

Conclusion

While individuals clearly differ in their social behavior, generally speaking, all people benefit from interpersonal connection, social support, and close relationships. Based on available evidence, the magnitude of the effect of social support on individual wellbeing does not vary considerably across levels of introversion-extraversion, attachment style, or collectivism-individualism. Individual differences that do exist are likely small. This suggests that the need for connection and belonging may be a universal experience that supersedes these cultural and personality traits. Of course, some individuals – including neurodivergent people and survivors of trauma – may differ in important respects and ultimately individual preferences must be acknowledged, respected, and supported.

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