

# How many friends do you need?

## Background

Several decades of research indicate that having more friends is associated with better health and wellbeing and lower levels of loneliness (Stokes, [1985](#)). Even on social media platforms, such as Facebook, researchers have shown that larger social networks are associated with less loneliness (Brown et al., [2018](#)). The positive effect of having more friends has been identified for young people (Schwartz-Mette et al., [2020](#)) as well as seniors (Rohr et al., [2020](#)).

While having more friends is better, friendships also require maintenance and effort (Cameron et al., [2019](#)). As such, one may wonder how many friendships is enough? In other words, how many close friends *should* one have?

## Purpose

The purpose of this brief is to examine the optimal number of close friends a person should have. In doing so, we distinguish between total network size (i.e., the number of people an individual knows and may, in fact, be friendly to), extended friendship networks (i.e., casual friends, acquaintances, colleagues) and close friendships (i.e., those relationships that offer support and meaning to one's life).

## Evidence from Existing Studies

Ueno ([2005](#)) and Falci & McNeely ([2009](#)) each independently provide a lower bound for the optimal number of friendships one should have by demonstrating that a single close friendship is not sufficient to meet one's social support needs. Similarly, Kovacs et al. ([2021](#)) showed that during the COVID-19 pandemic, individuals with fewer than five close relationships experienced higher increases in loneliness throughout the early stages of the pandemic. Yang et al. ([2013](#), [2016](#)) likewise demonstrate that having four to five social ties reduces health risks arising from obesity, hypertension, metabolic dysregulation and other biomarkers of disease progression.

To determine how many friends are really needed to meet one's needs, Thompson et al. ([2020](#)) explicitly tested for the presence of so called "threshold effects" in the relationship between one's number of friends and one's levels of loneliness, depression, anxiety, and stress. This approach allowed them to ascertain the level at which having more friends does not contribute meaningfully to improvements in health or wellbeing. In other words, it provides a lower limit at which having fewer friends is associated with poorer health. The results of this study indicate that the optimal number of close friendships was 4 to reduce loneliness, 2 to reduce depression, 3 to reduce anxiety, and 2 to reduce stress. Furthermore, Thompson et al. ([2020](#)) show the presence of a curvilinear effect, meaning that more is not always better. In fact, individuals with a very large number of close friends ( $\approx 15$  or more) actually had worse mental health. This pattern has also been observed by other researchers (Falci & McNeely, [2009](#)).

To explain the potential mechanisms by which a large social network might contribute to poorer mental health, Binder et al. (2012) suggests that there may be a natural tradeoff between the quantity of friendships we have and the quality of those friendships. After all, time spent making more friends is time that can't be spent deepening those friendships. In fact, Binder's empirical research show that those with larger social networks really do experience lesser closeness with each friend and therefore experience higher levels of emotional loneliness. This suggests that there may be a natural upper limit on the number of friends one should have.

Providing an estimates for this upper limit, Dunbar (2011) has robustly demonstrated over many studies that there are apparent limits on the size and composition of our social networks (Dunbar & Spoons, 1995; Zhou et al., 2005; Hamilton et al., 2007; Dunbar, 2008; Roberts et al., 2009). They suggest that this is due to limits in cognitive capacity. These limits are hypothesized to create a natural gradient in the composition of our social networks. In fact, they have observed that across cultures, humans tend to have 1-2 intimate relationships, about 5 people they are emotionally close to, and about 15 people they consider as good (albeit not necessarily close) friends. They further find that the total social network size of an individual seems to be capped at approximately 150 or so. While not all researchers agree with Dunbar that there is a cognitive limit on social network size (See Lindenfors et al., 2021), the data does seem to suggest that we gravitate towards a natural equilibrium of sorts that may reflect the point at which our social health is optimized.

Of course, choosing how many people to socialize with is not the only important consideration when aiming to build one's social network. It is also important to consider how one's social network is structured. Research from Stokes (1985) suggests that one of the most important factors impacting loneliness was the structure of the relationships between social network contacts. Namely, denser social networks (i.e., those in which all nodes were more closely connected) were less conducive to experiences of loneliness. Nevertheless, decades of research demonstrates that the broader network of "weak ties" that make up a social network are nevertheless important for between group relations – as such, even though close, tight-knit networks of family and friends may be most important, it is hardly advisable to form completely insular cliques that are cut off from the broader world of relationships within a community (Granovetter, 1973; Rajkumar et al., 2022; Sandstrom & Dunn, 2014).

### Case Study: Both Quantity and Quality Matter

Lodder et al. (2015) investigated the effects of having more and better friendships on loneliness among 1,172 Dutch adolescents. To assess social network size, they asked adolescents to identify their friends and rate the quality of relationships with them. Friendships were characterized as either reciprocal (i.e., both friends in the youth dyad identified one another) or unilateral (i.e., the participant identified a friend who did not identify them in return as a friend). When examining the relationship between these factors and loneliness, the authors found that higher loneliness as associated with reporting fewer friends, reporting more unilateral friendships, and rating reciprocal friendships as having lower quality. Taken together, these findings indicate that both the quantity and quality of friendships is important for creating a sense of social connectedness and wellbeing.

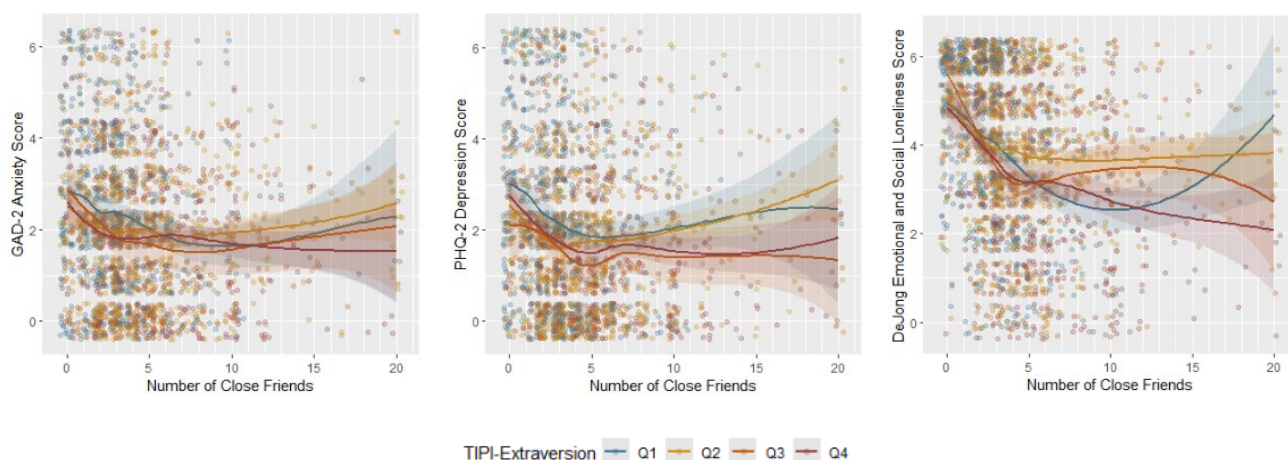


## Analyses from the Canadian Social Connection Survey

Using data from the Canadian Social Connection Survey, we used multivariable linear regression to examine the association between one's self-reported number of friends and three primary outcomes: scores on the two-item generalized anxiety disorder scale (GAD-2), the patient health questionnaire depression screen (PHQ-2), and the DeJong Emotional and Social Loneliness Scale (DESL). Results showed that for each additional close friend reported by participants, there was an associated decline in anxiety ( $\beta = -0.047$ ,  $p$ -value  $< 0.0001$ ,  $N = 2,167$ ), depression ( $\beta = -0.040$ ,  $p$ -value  $= 0.0002$ ,  $N = 2,166$ ), and loneliness ( $\beta = -0.12$ ,  $p$ -value  $< 0.0001$ ,  $N = 2,155$ ), even after controlling for whether participants lived alone, age, gender, ethnicity, and income.

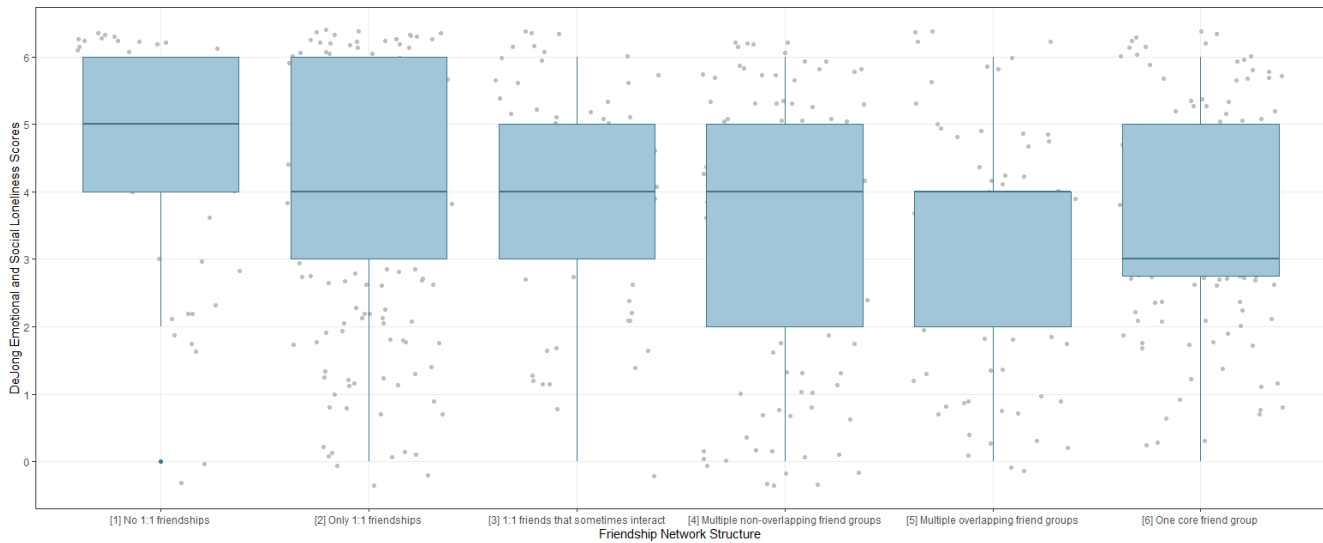
Cut point analyses, based on Youden maximization, indicated that the optimal number of close friendships was 4 to avoid anxiety, 3 to avoid depression, and 4 to avoid loneliness.

Visual plots were created to inspect for the presence of curvilinear effects of the number of close friendships on anxiety, depression, and loneliness. Results were analyzed across levels of extraversion, as measured using the Ten Item Personality Inventory (TIPI). Results demonstrated that across all levels of extraversion, mental health outcomes improved as one's number of close friendships increased to approximately 5. Beyond this point, we observe a stabilization of mental health outcomes among those with larger social networks. However, differing levels of extraversion among those with large social networks appears to change the effect of social network size on mental health outcomes, particularly for loneliness.



In addition to examine the absolute number of friends individuals reported having, we also examined the effect of network structure on loneliness scores. As you can see in the figure below, individuals with no friends or with only 1:1 friendships had higher loneliness scores than those with groups of friends who interacted with one another. This effect remained statistically significant even after accounting for the number of close friends participants reported ( $p < 0.05$ ). This may suggest that individuals with a stronger sense of community within their social network might be better protected from loneliness and social isolation, regardless of the absolute number of friends they have.





## Discussion

The weight of existing evidence suggests that having multiple close friendships is essential for your health and wellbeing. Furthermore, a growing body of literature suggests that having fewer than three to five close friendships may not provide adequate support to meet one’s social health needs. However, it is not necessary to have a large number of close friends to maximize the benefits of these friendships. In fact, there are apparent tradeoffs between the quantity and quality of friendships, suggesting that having fewer close friendships might be better than having many, lesser quality friendships. While much of the existing research on this topic is based on between-person comparisons, there are strong theoretical underpinnings for the hypothesized relationship between one’s number of friends and one’s social and mental health. Nevertheless, it is possible that within-person factors, including extroversion, affect one’s ability to build, maintain, and benefit from friendships.

## Conclusion

Based on the available evidence and our analyses of the Canadian Social Connection Survey, we recommend policies and programs that support the development of friendships such that individuals can build and maintain, at a minimum, three to five close friendships.

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