



SOCIAL ENGAGEMENT AND COGNITION

WHAT IS ALREADY KNOWN

Social engagement is defined as meaningful and sustained contact with at least one other person that is intrinsically and mutually beneficial and pertaining to a shared interest, activity, or goal. A 2023 report from the U.S. Surgeon General noted that research suggests loneliness – a related construct to social engagement – can shorten a person's life by an estimated 15 years, or the equivalent of smoking 15 cigarettes per day.

Social engagement is considered a key component of successful aging and an integral part of overall health. Its relationship specifically to cognitive decline and dementia remains a subject of study. Of note, social engagement and loneliness are two different concepts. The opposite of social engagement is social isolation. But that is not the same thing as loneliness. Socially engaged individuals can suffer from loneliness and socially isolated people may not feel lonely at all. Both loneliness and social isolation have been associated with increased rates of cognitive decline, but they are not synonymous.

The interconnectedness of social, physical, and cognitive activity – and the tendency of trials to combine one or more elements in a single intervention – makes it difficult to assess social engagement's effect on reducing the risk for cognitive decline.

BACKGROUND AND EVIDENCE BASE

Social engagement in mid-life may help protect against dementia in later life, by protecting cognitive function and slowing cognitive decline throughout the life course. It also may provide benefits to many older individuals, including persons living with dementia. Among older individuals with a genetic risk for dementia, rates of dementia were lower among those who frequently engaged in social activities. Studies have also found that the variety and frequency of social engagement are important for preventing further cognitive decline among those with early-stage memory loss/mild cognitive impairment.

One possible mechanism by which social engagement can facilitate cognitive function and protect against cognitive decline is through cognitive reserve, which is thought to result from increased neuronal connections and more efficient processing in the brain. Greater cognitive reserve may allow the brain to maintain function and cope with conditions associated with

cognitive impairment, such as cerebrovascular disease and atrophy. Cognitive reserve evolves throughout the lifespan and, theoretically, can be enhanced by interventions at any stage of life. One study concluded that social engagement may lower risk of cognitive decline by as much as 70% in those who frequently socially engage.

Multi-site collaborations are needed to examine and scale-up existing community-based strategies to facilitate and foster social engagement, especially among priority populations. Once priority populations are identified, strategies and interventions may be further developed, tailored, and tested accordingly.

IMPLICATIONS FOR PUBLIC HEALTH

To have the greatest effect, social engagement must be culturally appropriate and tailored to individual interests. Several groups may be at increased risk for social isolation/lower levels of social engagement:

- Older women may outlive their spouses and lose the social connections they had as a couple.
- Members of racial and ethnic minority communities may have weaker social ties due to the impact of migration and immigration – and the effects of discrimination across the lifespan can result in exclusion and isolation from the broader community.
- Lesbian, Gay, Bisexual, Transgender, Queer and additional identity (LGBTQ+) individuals may be subjected to discrimination and lifetime stigma – and may be ostracized from family members and other community supports.
- Rural residents tend to live farther apart from other individuals, have less access to transportation infrastructure, and often experience poor and sparse digital connectivity.

For public health strategies designed to impact social engagement in the post-COVID era, hybrid formats (i.e., social engagement activities with both an in-person and remote option) are likely needed for the foreseeable future. Recent novel interventions include community choirs, dance, virtual conversation groups, and storytelling. Investigators may adapt and test international programs in the United States for evidence of efficacy.

The role of social determinants of health

Public health research increasingly recognizes that successful aging is not solely a biological process but one deeply embedded in social contexts that either foster or hinder cognitive resilience. Social and environmental barriers can create chronic stressors and reduce cognitive stimulation, thereby accelerating cognitive aging. Public health efforts must therefore include community- and policy-level strategies that address these upstream determinants. By investing in age-friendly infrastructure, inclusive community programs, and digital access, particularly for historically excluded populations, communities can begin to reshape the conditions that enable or inhibit cognitive vitality in later life.

DISCUSSION

To date, most data on social engagement to enhance brain health comes from observational studies. Few randomized clinical trials or interventional studies exist,

especially those that focus solely on social engagement and cognitive function. Such studies are needed to address causality and the directionality of impact (does social isolation affect cognitive function or does cognitive impairment impede social engagement), the distinct role of social engagement separate from physical and cognitive activity, and the importance of social engagement in midlife and from mid- to late life. In addition, overlapping concepts are often found in the literature (e.g., social isolation vs. loneliness, social participation vs. social contact), confounding a clear understanding of what interventions might be needed and signaling a need for refined studies of social engagement in aging.

Future work should explore the most effective types of social engagement, how much social engagement is needed for cognitive benefit, and the best ways to define and measure social engagement.

Selected References

1. Mayeda ER, Mobley TM, Weiss RE, Murchland AR, Berkman LF, Sabbath EL. Association of work-family experience with mid- and late memory decline in US women. *Neurology* 2020;95(23):e3072-e3080.
2. Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *The Lancet* 2020; 96(10248):413-446.
3. Fratiglioni et al 2020 Fratiglioni, L., Marseglia, A., & Dekhtyar, S. Ageing without dementia: can stimulating psychosocial and lifestyle experiences make a difference? *The Lancet Neurology* 2020;19(6):533-543.
4. James BD, Wilson RS, Barnes LL, Bennett DA. Late-life social activity and cognitive decline in old age. *J Int Neuropsychol Soc*. 2011;17(6):998.
5. Sacyzynski JS, Pfeifer LA, Masaki K, Korf ESC, Laurin D, White L, Launer LJ. The effect of social engagement on incident dementia: the Honolulu-Asia Aging Study. *Am J Epidemiol*. 2006;163(5):433-40.



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