

Older adults may be better at listening in noisy social settings than has long been thought

June 8 2022



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Ever grumble about your grandpa's tendency to cheat during a spirited game of gin rummy; or mutter under your breath when grandma asks you to help clean the table at family dinner? Well, you might want to do it more quietly, because there's a good chance they can hear you better than you think.

According to a new, joint study by Baycrest and Western University, older adults may have better listening skills in noisy environments than we think. Whether at a crowded family event or a busy restaurant, older adults may enjoy and process conversations better than research has so far suggested. If so, this would improve their [quality of life](#) and help them make meaningful connections with others in similar situations, ultimately reducing their risk of social isolation and—since social isolation is a risk factor for [cognitive decline](#)—dementia.

Scientists have long thought that compared to younger adults, older adults seem to be less able to use [speech](#) "glimpses" (using the speech they hear more clearly during brief reductions in [background noise](#)) to better understand conversations in noisy settings. However, the Baycrest-Western University study shows that this may only be the case for the relatively boring, disconnected and unnatural sentences that are typically used in laboratory settings, but not for more natural speech. In other words, the difficulties older adults experience when listening to speech in noisy situations of everyday life may be less than long thought.

In the study, published in the journal *Scientific Reports*, younger and older adult participants listened to engaging stories or disconnected sentences without a clear topic—for example, "Smoky fires lack flame and heat." The researchers added two kinds of background noise: one that varied in volume, allowing for glimpses, and one that did not vary. The researchers regularly stopped the speech and background noise to ask the participants to report exactly what they understood. The researchers then calculated how many words were understood correctly.

They found that for more natural speech that mimics speaking in everyday life, such as stories, older adults benefited from speech glimpses as much as, or more than, younger adults. Conversely, they benefited less when listening to disconnected sentences.

"These results suggest that [older adults](#) may be better at listening in noisy social settings than has long been thought. Our study also highlights the importance of cognitive and motivational factors for speech understanding. Older adults who do not perform well on listening tasks in lab settings may do better in real-life settings," says Dr. Björn Herrmann, Baycrest's Canada Research Chair in Auditory Aging, Scientist at Baycrest's Rotman Research Institute and the senior author on this study.

More information: Vanessa C. Irsik et al, Age-related deficits in dip-listening evident for isolated sentences but not for spoken stories, *Scientific Reports* (2022). [DOI: 10.1038/s41598-022-09805-6](https://doi.org/10.1038/s41598-022-09805-6)

Provided by Baycrest Centre for Geriatric Care

Citation: Older adults may be better at listening in noisy social settings than has long been thought (2022, June 8) retrieved 11 May 2024 from <https://medicalxpress.com/news/2022-06-older-adults-noisy-social-thought.html>

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