



Alzheimer's patients' brains boosted by belting out Sound of Music

Four-month study finds mental performance of people with dementia improves after singing classic hits from musicals

Ian Sample, science correspondent, in San Diego
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Dementia researchers chose songs that would be familiar to care home residents, including The Sound of Music. Photograph: 20th Century Fox/Everett/Rex Features

Belting out classic numbers from hit musicals can boost the brain function of people with Alzheimer's disease, according to researchers who worked with elderly residents at a US care home.

Over a four-month study, the mental performance of patients who took part in regular group singing sessions improved compared with others who just listened.

In the sessions, patients were led through familiar songs from The Sound of Music, Oklahoma, The Wizard of Oz and Pinocchio.

The sessions appeared to have the most striking effect on people with moderate to severe dementia, with patients scoring higher on cognitive and drawing tests, and also on a satisfaction-with-life questionnaire at the end of the study.

Jane Flinn, a neuroscientist at George Mason University in Virginia, said care homes that did not hold group singing sessions should consider them, because they were cheap, entertaining and beneficial for patients with Alzheimer's.

"Even when people are in the fairly advanced stages of dementia, when it is so advanced they are in a secure ward, singing sessions were still helpful. The message is: don't give up on these people. You need to be doing things that engage them, and singing is cheap, easy and engaging," she said.

Flinn's colleague Linda Maguire worked with the residents of a care home on the US east coast. Some of the residents with moderate dementia were assigned to an assisted living group. Others, who had more severe Alzheimer's and were kept on a secure ward at the home, formed a second group. Both groups took part in three 50-minute group sessions a week for four months, but only half in each group joined in with the singing. The rest turned up, but only to listen.

Maguire chose most of the songs to be familiar to the patients, and included classics such as *The Sound of Music*, *When You Wish Upon a Star* and *Somewhere Over the Rainbow*.

Scores on cognitive tests given before and after the four months of singing classes showed that mental ability improved among the singers. Those who joined in the singing also fared better at another task that involved drawing the hands on a clock face to show a particular time. The study was described at the Society for Neuroscience meeting in San Diego.

Though memory loss and a decline in brain function are hallmarks of dementia, patients often demonstrate a striking ability to remember the lyrics and melodies of songs from their past. "A lot of people have grown up singing songs and for a long time the memories are still there," said Flinn. "When they start singing it can revive those memories."

But the singing sessions seemed to activate a raft of brain areas. Listening sparked activity in the temporal lobe on the right-hand side of the brain, while watching someone lead a class activated the visual areas. Singing and speaking led to more activity in the left-hand side, Flinn said.

The findings are backed up by other work in the area. In September, researchers at

Helsinki University looked at the [impact of a 10-week singing course on patients with dementia](#). Compared with their usual care, singing and listening to music improved mood, orientation, and certain types of memory. To a lesser extent, their attention and general cognitive skills also improved.

The [UK Alzheimer's Society](#) holds regular group singing sessions nationwide.

"There is much anecdotal evidence that the groups have real benefits for people with dementia," a spokesperson said. "Even when many memories are hard to retrieve, music can sometimes still be recalled, if only for a short while. The sessions help people with dementia communicate, improving their mood and leaving them feeling good about themselves."

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