

Orchestra experiment shows older people can identify and remember musical themes as well as younger people

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A team of psychologists at Memorial University of Newfoundland, in Canada, has found via experimentation, that older people are able to

identify and remember themes in music pieces just as well as younger people.

In their paper [published](#) in the open-access journal *PLOS ONE*, the group describes how they asked random volunteers at a classical music [concert](#) to participate in a music memory experiment, and what they learned from the behaviors of those who agreed.

Prior research has shown that as people age, they tend to lose mental acuity and begin to have trouble with their memory. In this new study, the research team wondered if aging has a similar impact on the way that people process and remember music.

They designed and carried out an experiment that involved asking people attending a concert given by the Newfoundland Symphony Orchestra to use a clicker when they heard a certain theme in a [piece of music](#).

In all, 150 people between the ages of 18 and 86 agreed to take part in the study. Each was given an LCD clicker that they wore around their necks and a form to fill in with their basic information.

Prior to the start of the concert, each of the volunteers was asked to listen to several short pieces of music, each preceded by a short theme that they were asked to focus on and try to remember. They were then asked to click the button on the clicker whenever they heard the theme in whatever piece of music the orchestra happened to play.

The orchestra played Mozart's *Eine Kleine Nachtmusik* to start the concert, which virtually all the volunteers had heard enough times before the concert to know it as soon as they heard it—it had multiple instances of the theme that had been played beforehand. The researchers found that most of the volunteers found it very easy to identify instances of the theme and clicked appropriately.

Later in the concert, the [orchestra](#) played two pieces that had been composed by artists at the University, specifically for the research project. One was fairly typical of [classical music](#), while the other was jarring and hard on the ears. Not surprisingly, the volunteers did well when trying to identify the theme they had been asked to listen for in the first piece, but they struggled with the second.

But one thing the researchers noticed was that there were no age-related differences in the volunteers' ability to remember and identify the theme they had been given before the concert began. The finding suggests music memories are stored differently in the brain and that they remain robust as people age.

More information: Sarah A. Sauvé et al, Age and familiarity effects on musical memory, *PLOS ONE* (2024). [DOI: 10.1371/journal.pone.0305969](#)

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