Can computer use, crafts and games slow or prevent age-related memory loss?

July 11 2019

Credit: CC0 Public Domain

A new study has found that mentally stimulating activities like using a computer, playing games, crafting and participating in social activities are linked to a lower risk or delay of age-related memory loss called mild

cognitive impairment, and that the timing and number of these activities may also play a role. The study is published in the July 10, 2019, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

Mild cognitive impairment (MCI) is a medical condition that is common with aging. While it is linked to problems with thinking ability and memory, it is not the same as dementia. People with MCI have milder symptoms. They may struggle to complete complex tasks or have difficulty understanding information they have read, whereas people with dementia have trouble with daily tasks such as dressing, bathing and eating independently. However, there is strong evidence that MCI can be a precursor of dementia.

"There are currently no drugs that effectively treat mild cognitive impairment, dementia or Alzheimer's disease, so there is growing interest in lifestyle factors that may help slow brain aging believed to contribute to thinking and memory problems—factors that are low cost and available to anyone," said study author Yonas E. Geda, MD, MSc, of the Mayo Clinic in Scottsdale, Ariz., and a member of the American Academy of Neurology. "Our study took a close look at how often people participated in mentally stimulating activities in both middle-age and later life, with a goal of examining when such activities may be most beneficial to the brain."

For the study, researchers identified 2,000 people with an average age of 78 who did not have mild cognitive impairment. At the start of the study, participants completed a questionnaire about how often they took part in five types of mentally stimulating activities during middle-age, defined as ages 50 to 65, and in later life, age 66 and older. Participants were then given thinking and memory tests every 15 months and were followed for an average of five years. During the study, 532 participants developed mild cognitive impairment.

Researchers found that using a computer in middle-age was associated with a 48-percent lower risk of mild cognitive impairment. A total of 15 of 532 people who developed mild cognitive impairment, or 2 percent, used a computer in middle age compared to 77 of 1,468 people without mild cognitive impairment, or 5 percent. Using a computer in later life was associated with a 30-percent lower risk, and using a computer in both middle-age and later life was associated with a 37-percent lower risk of developing thinking and memory problems.

Engaging in social activities, like going to movies or going out with friends, or playing games, like doing crosswords or playing cards, in both middle-age and later life were associated with a 20-percent lower risk of developing mild cognitive impairment.

Craft activities were associated with a 42-percent lower risk, but only in later life.

The more activities people engaged in during later life, the less likely they were to develop mild cognitive impairment. Those who engaged in two activities were 28 percent less likely to develop memory and thinking problems than those who took part in no activities, while those who took part in three activities were 45 percent less likely, those with four activities were 56 percent less likely and those with five activities were 43 percent less likely.

"Our study was observational, so it is important to point out that while we found links between a lower risk of developing mild cognitive impairment and various mentally stimulating activities, it is possible that instead of the activities lowering a person's risk, a person with mild cognitive impairment may not be able to participate in these activities as often," Geda said. "More research is needed to further investigate our findings."

One strength of the study was the large number of participants; however a limitation was that participants were asked to remember how often they participated in mentally stimulating activities in middle-age, up to two decades before the study began, and their memories may not have been completely accurate.

Provided by American Academy of Neurology