

Study: Brain games don't make you smarter

April 20 2010, By MARIA CHENG , AP Medical Writer

(AP) -- People playing computer games to train their brains might as well be playing Super Mario, new research suggests.

In a six-week study, experts found people who played online games designed to improve their [cognitive skills](#) didn't get any smarter.

Researchers recruited participants from viewers of the BBC's science show "Bang Goes the Theory." More than 8,600 people aged 18 to 60 were asked to play online brain games designed by the researchers to improve their memory, reasoning and other skills for at least 10 minutes a day, three times a week.

They were compared to more than 2,700 people who didn't play any brain games, but spent a similar amount of time surfing the Internet and answering general knowledge questions. All participants were given a sort of I.Q. test before and after the experiment.

Researchers said the people who did the brain training didn't do any better on the test after six weeks than people who had simply been on the Internet. On some sections of the test, the people who surfed the Net scored higher than those playing the games.

The study was paid for by the BBC and published online Tuesday by the journal *Nature*.

"If you're (playing these games) because they're fun, that's absolutely fine," said Adrian Owen, assistant director of the Cognition and Brain

Sciences unit at Britain's Medical Research Council, the study's lead author. "But if you're expecting (these games) to improve your I.Q., our data suggests this isn't the case," he said during a press briefing on Tuesday.

One maker of brain games said the BBC study did not apply to its products. Steve Aldrich, CEO of Posit Science, said the company's games, some of which were funded in part by the U.S. National Institutes of Health, have been proven to boost [brain power](#).

"Their conclusion would be like saying, 'I cannot run a mile in under 4 minutes and therefore it is impossible to do so,' Aldrich said.

Posit Science has published research in journals including the *Proceedings of the National Academy of Sciences* showing their games improved memory in older people.

Computer games available online and marketed by companies like Nintendo that supposedly enhance memory, reasoning and other cognitive skills are played by millions of people worldwide, though few studies have examined if the games work.

"There is precious little evidence to suggest the skills used in these games transfer to the real world," said Art Kramer, a professor of psychology and neuroscience at the University of Illinois. He was not linked to the study and has no ties to any companies that make brain training games.

Kramer had several reservations about the BBC study's methodology and said some brain games had small effects in improving people's cognitive skills. "Learning is very specific," he said. "Unless the component you are trained in actually exists in the real world, any transfer will be pretty minimal."

Instead of playing brain games, Kramer said people would be better off getting some exercise. He said physical activity can spark new connections between neurons and produce new brain cells. "Fitness changes the building blocks of the brain's structure," he said.

Still, Kramer said some [brain training](#) games worked better than others. He said some games made by Posit Science had shown modest benefits, including improved memory in older people.

Other experts said brain games might be useful, but only if they weren't fun.

"If you set the level for these games to a very high level where you don't get the answers very often and it really annoys you, then it may be useful," said Philip Adey, an emeritus professor of psychology and neuroscience at King's College in London.

If people are enjoying the brain games, Adey said they probably aren't being challenged and might as well be playing a regular video game.

He said people should consider learning a new language or sport if they really wanted to improve their brain power. "To stimulate the intellect, you need a real challenge," Adey said, adding computer games were not an easy shortcut. "Getting smart is hard work."

More information: Nature: <http://www.nature.com/nature>

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