Cognitive rehabilitation improves brain function in cancer survivors

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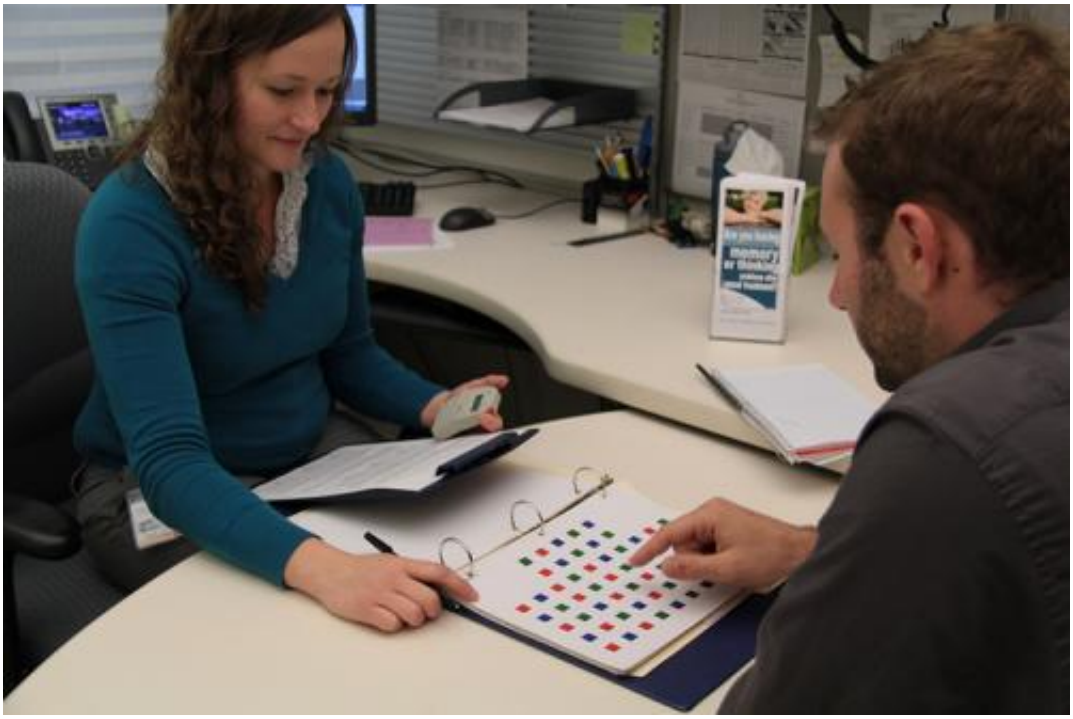

Study participants take several tests before entering rehabilitation sessions. One of these, the Stroop test, measures executive brain functions like multitasking and working memory. Credit: McKenna Princing

Cancer survivors who experience memory and thinking problems may benefit from cognitive rehabilitation, according to a new study led by Monique Cherrier, a UW associate professor of psychiatry and behavioral sciences.

The study, published Sept. 16 in *Life Sciences*, found that participants experienced improved cognitive function and a decrease in perceived cognitive impairments, and also reported a higher quality of life. The study is one of few to examine the effects of cognitive rehabilitation on cancer survivors.

Cherrier and her research team held cognitive rehabilitation sessions for 28 people during a seven-week period. The sessions were held in a group setting.

"There's a sense of connectedness that patients get with other patients who are struggling with a similar problem," Cherrier said. "They also get a chance to practice the skills we teach them while they're in the group each week."

Cognitive rehabilitation is a therapy involving memory aids and skill-based tasks to improve memory and attention – similar to techniques used to treat patients with traumatic brain injury.

Chemotherapy and some anti-cancer medications – such as tamoxifen, which prevents the growth of breast cancer cells – have been associated with memory and attention problems informally referred to as "chemo brain." Many cancer survivors are hesitant to take more medications after treatment, Cherrier said, and would rather find a different way to address any memory and attention problems.

Cognitive impairment is the second-most reported problem among cancer survivors, yet little research has been conducted to find effective treatments. Past studies have explored using medication to treat cognitive impairment in cancer survivors, but most have not demonstrated that drugs can treat these issues effectively.

The results of the recent study reflect emerging understanding of brain

plasticity, the brain's ability to recover from damage, Cherrier said.

"People used to believe that you're born with a certain number of brain cells which can't be replaced after you reach a certain age," Cherrier said. "In fact, what we're finding is that you can make a difference in terms of your cognitive functioning. The brain is very plastic: You can significantly boost and improve your cognitive abilities."

The next phase of the research involves taking functional magnetic resonance imaging scans of cancer survivors' brains to see which areas of the brain are activated during cognitive rehabilitation. Cherrier said she hopes to conduct a larger study of the therapy's efficacy in the future.

More information: www.sciencedirect.com/science/ … ii/S0024320513004773

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