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Response to Mild Cognitive Impairment: How to Run a Cognitive Rehabilitation Class

Ryan Miller  
*Western Oregon University*

Jesse Kopel  
*Western Oregon University*

Nehala Pullam  
*Western Oregon University*

Katie Mackor  
*Western Oregon University*

Kristoffer Molloy  
*Western Oregon University*

*See next page for additional authors*

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RESPONSE TO MILD COGNITIVE IMPAIRMENT; HOW TO RUN A COGNITIVE REHABILITATION CLASS

By:
Nehala N. Pullam, Katie M. Mackor,
Kristoffer N. Molloy, Jesse L. Kopel, Chelsey C. Grigsby,
Ryan M. Miller, Devan N. Buckingham, Amanda K. Graves
Previous Research

- Those with challenging careers and higher levels of education are more resilient to the onset of dementia (Fratiglioni & Wang, 2007).

- There is evidence that cognitive stimulation may improve memory ability in older adults who have normal age-related memory deficits (as cited in Winningham & Dinius, 2010).
Winningham et al. (2003) found that older adults living in assisted living communities were able to improve their ability to make new memories by about 15% after participating in the cognitive exercise program 2-3 times a week for 3 months (as cited in Winningham & Dinius, 2010).

Older adults who engage in cognitively stimulating activities may be able to prevent or delay the onset of dementia, including Alzheimer's disease (Winningham et al., 2003).

These activities are designed to work multiple areas of the brain with the intent to build long lasting results.
Cognitively Stimulating Activities

- For independent older adults this can range from learning a new hobby, taking a class, and reading a new book.
- Our classes focus on creating and utilizing activities that exercise various aspects of cognition, for example: memory, attention and inhibition.
- WOU’s Cognitive Rehab team has been offering various activities.
Buzz

- Buzz is a group counting game. Participants sit in a circle and begin to count. Each participant says one number, followed by the person next to them saying the next number.

- The people who must say any number with a 7 in it, or a multiple of 7 (7, 14, 17, 21...etc.) must say BUZZ and the counting switches directions.
Buzz

- 7, 14, 17, 21...
- Let’s try it...
Buzz

- Buzz is designed to work attention, inhibition, and working memory.
- Inhibiting the natural process 5 6 7 to say 5 6 BUZZ
- It can be difficult to keep track of when it is your turn, as well as to count ahead.
- Multiples of 7 are particularly difficult when compared to the other single digits.
Sudoku #1

2 5 7 6
4 9 6 2
6 8 4 5

9 8 7 4
5 7 8 2
1 6 3 5
7 5 2 8

8 6 5 1
3 4 5 2
6 8
Why Sudoku?

- The ability to pay attention decreases with age.
- Attention is the gateway to memory, in order for many memories to be encoded some amount of attention is required.
- Sudoku requires active attention in order to complete the task.
- By enhancing and developing attention it paves the way for creating new memories.
“Darrell suspected someone had once again slipped him a spoon with a concave side reversed” …
Mental Rotation

- Participants must mentally rotate the shape and choose which one is the same shape. Mirrored and similar images don’t count.
Mental Rotation

- They start out easy, but on some of the harder difficulties the answer isn’t as apparent.
Brain Activity During Mental Rotation
Verb Generation

- Difficulty in generating verbs has been shown to be a sign of Alzheimer’s, so generating verbs might slow the loss of this verbal ability.

- Generating verbs is a challenging linguistic activity that also exercises attention, executive functioning, and word fluency (all of which decline with age).
Verb Generation

- List the things that athletes do:
A-Z Names

- Participants must come up with a name that starts with every letter of the alphabet.
- This activity is a great activity because it has nearly unlimited possibilities.
Sentence Inhibition

- Participants are supposed to verbally state an answer to the sentence that is different from the typical response.
- This works inhibition and attention.
Sentence Inhibition

- It’s raining cats and ________
- Wow, she got there in the nick of ________
- Could you please pass the salt and ________?
- Three strikes and you are ________
Challenges

- People forget to come to class or to do their homework.
- Motivating people to continue getting cognitive stimulation (e.g., outside of class or after the class is complete).
- Emotional states (mood problems, anxiety) and inhibitory deficits.
- Developing activities that will work for people of varying cognitive abilities.
- Sensory deficits (e.g., hearing and visual impairments).
Benefits

- Social interaction.
- Many people claim that this experience improves their quality of life.
  - Hope
  - Increased self-efficacy
- Benefits for the instructor:
  - Giving back to the community
  - Practicum and hands on experience
  - Meeting a real need in the community
The Future

- Continue running classes in the community.
- Continue making new activities.
- Continue researching the latest studies in this area to create new activities from.
- Ask Dr. Winningham if you are interested in learning more about the Cognitive Rehab Team.
References

