

QUESTION: Does completing crosswords help the memory of the elderly?

Ho: Crosswords do help the memory of the elderly

Ha: Crossword do not help the memory of the elderly

My population are people aged 65 or older. My variable of interest is memory. My sample size will be 50 seniors from a local nursing home and I will select it through a systematic sample. I will ask every third senior that I see in the common area. This will be an observational study. Below are some examples of what my questions might be

1) What is your age?

2) What is your gender?

3) How often do you work on a crossword puzzle?

Never Once or twice Every other day Every day Multiple times a day

4) How often do you complete a crossword puzzle?

Never Once or twice Every other day Every day Multiple times a day

5) Where do you find your crossword puzzles?

Newspaper Online Crossword book Other: _____

6) On a scale of 1-10 (with 10 being perfect) How would you rate your memory?

7) Do you do any of the following? (Choose all that apply)

_____ Brain Age/Lumosity

_____ Play Video Games

_____ Read books

_____ Take memory supplements/vitamins (i.e. Ginko Biloba)

_____ Read Newspaper

8) How would you compare your memory now to when you were in your thirties?

Much worse

Worse

Same

Better

Much Better

I made sure to ask different questions about working and then completion to see if completing the crossword has an impact over just doing it. I also made sure to ask about how they ranked their memory so I could directly compare the crossword to the memory. Question number 7 is used in case they are doing other things that affect their memory other than just the crossword. This question interests me because my grandpa has a better memory than me and he does the crossword every day.

QUESTION: Does completing crosswords help the memory of the elderly?

Ho: Crosswords do help the memory of the elderly

Ha: Crossword do not help the memory of the elderly

My population are people aged 65 or older. My variable of interest is memory. My sample size will be 20 seniors from a local nursing home and I will select it through a systematic sample. I will select every third senior that I see in the common area. This will be an experimental study

I will conduct this study for a week. There will be two groups. Each group will take a memory test (concentration) in the morning. An online version can be found at <https://games.yahoo.com/game/concentration-quick-play-flash.html>. I will time how long it take solve the puzzle.

Group 1 (test group): Will work on a crossword puzzle (from USA today) after their morning test. 2 hours later I will ask them do another game of concentration and time them. I will do this for one week.

Group 2: They will take the concentration test and get timed, they will NOT do a crossword, then two hours later will do the concentration game again and get timed.

I plan on doing two comparisons. I will average all the group 1 concentration times and compare it to all of group 2's concentration times to see if there is a difference.

I will also compare each person to themselves (first concentration game to second concentration game) to see if they improved just by getting more practice at a memory game.

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