

Hearing stories slows or halts “cognitive decline”? But: Does having a reading habit lead to a faster decline if you get Alzheimer’s?

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A study (Bartulocci and Batini, 2019) was done with fourteen subjects with “cognitive decline” living in a nursing home (mean age 82.4, sd = 8.2). They were read to daily by “a group of students” in 20-minute sessions, once a day for 70 sessions. Subjects “had the chance” to talk about the story before and after the read-aloud sessions. The study took place in Italy and it is assumed the read-alouds were in Italian.

We are not informed what was read, but we are told that stories “consisted of short sentences so that understanding was accessible” even with memory problems. Longer texts were used as subjects progressed.

Neurological tests (RBANS, 2006) were given after 40 and again after 70 sessions. Presented here are the results of two of the tests administered. The story group did significantly better than controls on these tests, and made progress in catching up to normal subjects of the same age. (1)

STORY MEMORY	pre	Post
Story	6	9.5
No Story	6	7.7
Normal 70-79	17.4	
Normal 80-89	15.3	

LIST LEARNING	Pre	post
Story	10	16
No Story	12	12
Normal 70-79	26.6	
Normal 80-89	23.2	

Normal data from RBANS, 2006

It must be pointed out, however, that there was no gain on several tests (e.g. picture-naming). The story group, however, showed clear improvement on some measures, and it resulted from doing what is probably experienced as a pleasant activity.

Those familiar with the research on pleasure reading will not be surprised to learn of this new and cheerful result. But there may be a problem: A previous study (Wilson, Bennett, Gilley, Becket, Barnes and Evans, 2000) reported that among elderly subjects (mean age 75.5 years) suffering from Alzheimer's Disease, more involvement in reading before the onset of Alzheimer's was associated with a more rapid decline on verbal measures of cognitive function, as measured by the MMSE (the Mini-Mental State Exam). (2,3) In other words, those who were heavier readers were more affected by Alzheimer's Disease.

Wilson et. al. do not interpret this result as demonstrating that having a reading habit makes the effects of Alzheimer's Disease worse. They suggest that life-long reading makes cognitive skills "less vulnerable to disruption by mild levels of brain disease" so "more Alzheimer disease pathology is needed to cause dementia" (p. 1172). Thus, the effects of dementia are not seen until it is at advanced stages and is diagnosed. At this stage, decline is rapid. (I thank Ashley Hastings for clarifying (ok, explaining) this point to me.)

REFERENCES

Bartulocci, M. and Batini, F. 2019 Long term narrative training can enhance cognitive performances in patients living with cognitive decline. *Educational Gerontology* 45 (7), 469-475.

Wilson, R., Bennett, D., Gilley, D. Beckett, L., Barnes, L. and Evans, D. 2000. Premorbid reading activity patterns of cognitive decline in Alzheimer disease. *Arch Neurol* 37, 1718-1723.

Repeatable Battery for the Assessment of Neuropsychological Status. (RBANS). Harcourt Assessment, Inc. 2006.

[http://images.pearsonclinical.com/images/PDF/technical_reports/RBANS.pdf]

NOTES:

1. These figures may not be totally accurate. Bartulocci and Batini only presented bar graphs, so the numbers I used are estimates. I wrote them asking for the raw data, but the email bounced back.
2. The reading measure used was a composite of responses to questions about the frequency of newspaper reading, magazine reading, book reading, number of books in the home, the presence of a dictionary at home, the presence of a bookcase at home, and whether the subject had a library card during adult life until approximately five years before the onset of memory and thinking problems.
3. Controlling for baseline cognitive function, education, age, race, and sex.