



Chronic pain and cognitive performance in dementia caregivers: Insights from the STELLA and DETECT-AD studies

C. McClure, N. Mattek, J. Kaye, W. Dawson, A. Lindauer

Support via Technology: Living and Learning with Advancing Dementia (STELLA), Oregon Center for Aging & Technology (ORCATECH), Oregon Alzheimer's Disease Research Center (OADRC), Oregon Health & Science University, Portland, OR



BACKGROUND

- About 50% of caregivers experience chronic pain
- 25% experience pain that limits daily activities.
- Dementia caregivers are themselves at increased risk of cognitive decline and the development of dementia
- Physical strain and chronic stress associated with caregiving may exacerbate pain and may adversely affect caregiver health
- Few studies have directly compared pain and cognitive performance between dementia caregivers and non-caregivers over time



Table 2: Participant characteristics

	All Participants	Controls (Non-caregivers)	Caregivers	p-value
N	95	74	21	
Age	76.0 (7.0)	77.3 (6.5)	71.3 (6.8)	<0.001
Female %	68%	69%	67%	0.84
Education	17.1 (2.1)	17.3 (2.1)	16.5 (2.1)	0.16
Race, % non-white	8 (8%)	7 (9%)	1 (5%)	0.68
Marital status, % Married/Domestic Partner	53 (56%)	32 (43%)	21 (100%)	<0.0001
MoCA Scores	24.3 (3.1)	25.2 (2.6)	21.2 (2.5)	<0.0001
Pain Intensity	1.6 (1.6)	1.5 (1.5)	1.9 (2.0)	p = 0.048
Pain Interference	1.7 (0.8)	1.7 (0.7)	1.8 (0.9)	0.77

RESULTS

Caregivers and non-caregivers did not differ by sex or educational attainment. Caregivers were significantly younger than non-caregivers (mean age 71.3 vs 77.3 years) and demonstrated significantly lower MoCA scores (21.2 vs 25.2; $p < 0.0001$). After adjustment for age, caregivers reported significantly higher pain intensity compared with non-caregivers (odds ratio = 1.42, 95% CI = 1.00–2.01; $p = 0.048$).

CONCLUSION

Dementia caregivers exhibited significantly higher pain intensity and lower cognitive performance compared with non-caregivers over a 12-month period. These findings identify caregivers as a potentially vulnerable population for adverse cognitive outcomes and suggest that pain may represent an important, yet understudied, factor contributing to caregiver cognitive health. Further research is needed to clarify the mechanisms linking caregiving, pain, and cognition and to determine whether targeted pain interventions may mitigate cognitive risk in this population.

Supported by NIA grants: P30AG024978, R01AG024059, P30AG008017, DETECT R56074321, T32AG055378-06, and P30AG066518. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

METHODS

Twenty-one caregivers and seventy-four non-caregivers were enrolled in the study. Pain intensity and pain interference were collected on visual analog scales weekly and Montreal Cognitive Assessment (MoCA) scores were collected at baseline and at twelve months.

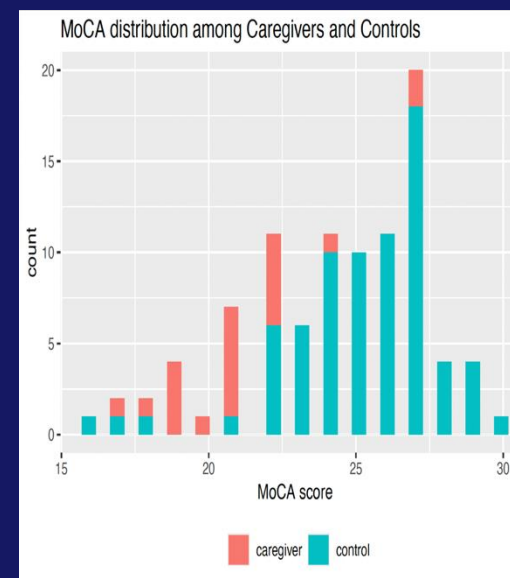
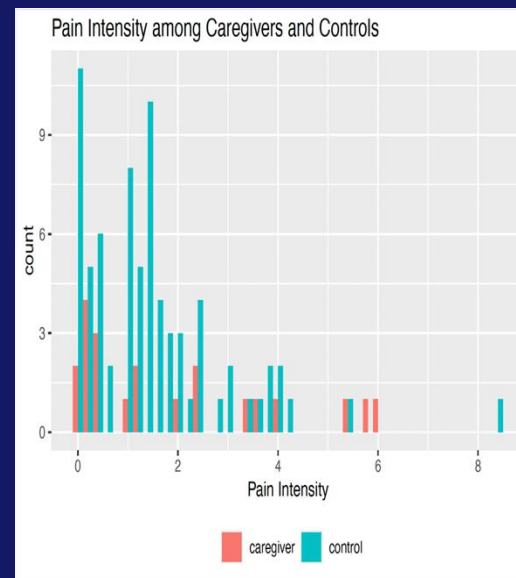


Table 1. Pain indicators queried weekly

PAIN LEVEL (0-10)	Please rate your pain by indicating the number (1-10) that best describes your pain on average.
PAIN INTERFERENCE (1-5)	During the past week, how much did pain interfere with your normal activities or work?

For further information contact: mcclurch@ohsu.edu; stellafid@ohsu.edu; www.orcatech.org