Abstract Title: Mentally Stimulating Activities in Late-Life and the Risk of Incident Mild Cognitive Impairment: A Prospective Cohort Study

Press Release Title: Using a Computer, Social Activities Tied to Reduced Risk of Memory Decline

Objective: To test our hypothesis on the association between mentally stimulating activities in late-life and the risk of incident MCI and additionally evaluate the impact of APOE ε4 status.

Author(s): Janina Krell-Roesch, Rosebud Roberts, Anna Pink, Gorazd Stokin, Michelle Mielke, Prashanthi Vemuri, Teresa Christianson, Kathleen Spangehl, David Knopman, Ronald Petersen, Yonas Geda

Background: We previously reported a cross-sectional association between late-life mentally stimulating activities and decreased odds of having mild cognitive impairment (MCI). However, little is known about the risk of incident MCI as predicted by late-life mentally stimulating activities.

Design/Methods: We conducted a prospective cohort study derived from the population-based Mayo Clinic Study of Aging in Olmsted County, Minnesota. We followed 1,929 cognitively normal participants aged ≥ 70 years to the outcome of incident MCI. Participants provided information about mentally stimulating activities within a year prior to baseline evaluation using a questionnaire. Cognitive diagnosis was made by an expert consensus panel. We calculated hazard ratios (HR) and 95% confidence intervals (95% CI) using Cox proportional hazards models after adjusting for age, sex and education.

Results: Over a median follow-up period of 4 years, we observed that playing games (HR [95% CI], 0.78 [0.65-0.95]), reading magazines (0.66 [0.54-0.82]), and engaging in craft activities (0.72 [0.57-0.90]), computer use (0.70 [0.57-0.85]), and social activities (0.77 [0.63-0.94]) were associated with a decreased risk of incident MCI. After stratification by APOE ε4 status, findings remained the same for APOE ε4 non-carriers. However, only computer use (HR [95% CI], 0.65 [0.46-0.92]) and social activities (HR [95% CI], 0.62 [0.43-0.89]) were associated with a decreased risk of incident MCI for APOEε4 carriers.

Conclusion: Cognitively normal elderly individuals who engage in specific mentally stimulating activities have a decreased risk of incident MCI. The associations may vary with APOE ε4 carrier status.

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