Subjective Memory Complaints and Cognitive Decline

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Introduction. Approximately two-thirds of Americans experience some level of cognitive impairment at an average age of 70 years. This study analyzed the relationship between Subjective Memory Complaints (SMCs) and cognitive decline in a cohort at the University of Kansas Alzheimer's Disease Research Center (ADRC).

Methods. We examined longitudinal data from 560 participants (average age 72.6 years), with varying levels of cognition, who underwent annual assessments (average 3.9 years). Data collection took place 2011-2022. Assessments included a clinical dementia rating (CDR), cognitive diagnosis, and SMC score. SMCs were assessed using two subjective questions, which were summed to determine a total SMC score (range 2-10), with higher scores indicating more cognitive complaints.

Results. At baseline, individuals with mild cognitive impairment (MCI) had the highest average SMC score (7.9), compared to dementia (7.4) and cognitively normal (CN) (6.4) groups. 298 subjects with complete data sets were CN at baseline. Of those, 226 (75.8%) remained CN throughout the study, while 72 (24.2%) had a decline in cognition at some point. Those who were CN throughout had a baseline SMC score of 6.28 (SD = 1.24, 95% CI = 6.12-6.44, $p = <0.001$) and the decline group had a baseline SMC score of 6.93 (SD = 1.08, 95% CI = 0.33-0.97, $p = <0.001$). Further analysis examined participants who at any point had a diagnosis other than CN and their likelihood of having a baseline SMC score ≥ 7 (ROC AUC = 0.66, odds ratio = 3.91, sensitivity = 0.57, specificity = 0.75).

Conclusions. This study demonstrates the potential of utilizing SMCs to predict future cognitive decline, especially during the pre-clinical phase of disease progression.

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