Canadian MSK Rehab Research Network

Active Living inputs into Cognition: Proposing of a Hypothesis

We wanted to know

To what extent do active living factors influence self-reported cognitive ability in older adults?

What is the Problem?

Active living (AL) is a broad concept aiming to address health issues associated with inactivity. Mayo et al. identified that older adults expressed AL as a way of being that goes beyond activities done but influenced by physical and mental capacities, and social determinants of health (SDoH). This is particularly relevant to older people whose physical capacities are declining but who still wish to live actively and maintain cognitive health (CH). Whether AL and its contributors can preserve cognitive ability (CA) is not known, but this knowledge would open avenues for promoting CH in older persons.

How Did I Study the Problem?

I analyzed data from 1,612 adults aged 65 and older living in Canada, the UK, the USA, and the Netherlands. Participants answered questions about their personal and intrinsic capacity factors, social determinants of health (SDoH), AL factors and self-reported CA using the 7-item Communicating Cognitive Concerns Questionnaire. I used logistic regression and classification tree analysis to identify patterns and predictors of low cognitive ability.

What Did I Find?

Risk factors for low cognitive ability included: fatigue, anxiety/depression, difficulty with daily tasks (difficulty with bath transfers, inability to walk for 30 minutes, and difficulty with light household activities), not feeling resilient, not feeling connected, hearing disability, cardiovascular disease, and needing a push to get started on things. Protective factors included: interest in learning, feeling rested, and having a confidant. The highest-risk group had fatigue, anxiety/depression, and low resilience. Addressing hearing loss, cardiovascular health, sleep quality, and social support may help reduce cognitive decline.

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How Can This Research Be Used?
These findings can guide healthcare providers, caregivers, and policymakers in designing interventions that support cognitive health in aging populations—especially by focusing on mental well-being, sleep, and social connection.

Cautions/Limitations
This study is based on self-reported data, which may not reflect clinical diagnoses.
It is cross-sectional, meaning it captures a snapshot in time, not long-term changes.
Results may not apply to all older adults, especially those outside the studied countries.
More longitudinal research is needed to confirm cause-and-effect relationships.

References:

- Mayo, N. E., Auais, M., Barclay, R., Branin, J., Dawes, H., Korfage, I. J., ... & Kuspinar, A. (2024a). Measuring what matters to older persons for active living: part I content development for the OPAL measure across four countries. Quality of Life Research, 1-11.
- Mayo, Nancy E., Mohammad Auais, Ruth Barclay, Joan Branin, Helen Dawes, Ida J. Korfage, Kim Sawchuk et al. "Measuring what matters to older persons for active living: part II cross-sectional validity evidence for OPAL measure across four countries." Quality of Life Research 33, no. 10 (2024b): 2661-2673.

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